

## 2. Telework and its effects in Japan

**Akio Sato**

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### EXECUTIVE SUMMARY

A report from the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) of Japan estimates that, in 2016, 14.2 per cent of workers in Japan engaged in telework, including mobile telework. The government is eager to promote teleworking as one of the measures by which to increase the size of the workforce while improving work–life balance. Several enterprises, led by some of the largest in Japan, have succeeded in supporting employees – especially women with children – by introducing telework systems; and through these systems, workers have secured employment without imposing an adverse effect on their business career.

However, company or organisational rules frequently do not allow the majority of their employed teleworkers to engage regularly in telework. Many employed workers who are not formally allowed by their employers to telework nonetheless continue working on tasks that cannot be finished within regular work hours by teleworking informally. Therefore, many such ‘informal teleworkers’ frequently engage in holiday or late-night teleworking, and this practice tends to lengthen their work hours.

### 1. INTRODUCTION

In Japan, working remotely, including mobile forms of this type of work, is generally called telework. This term encompasses various types of working styles that involve the use of information and communications technology (ICT) equipment, such as telecommuting, mobile work or self-employed home-based work.<sup>1</sup>

In recent decades, the Japanese government and some of its central ministries have been striving to promote teleworking. For example, a statement issued in 2013 by the Cabinet asserts that the promulgation of telework might facilitate the promotion of work–life balance among

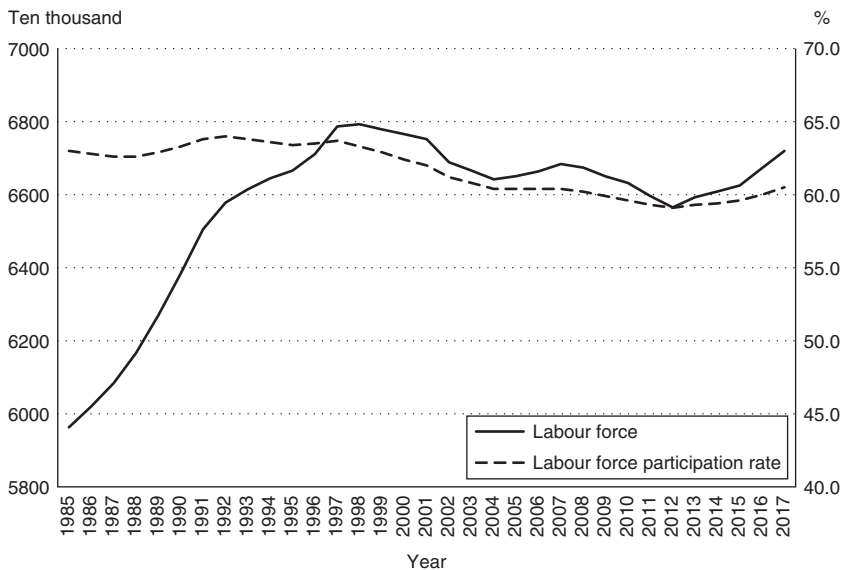
workers and the revitalisation of provincial areas. To that end, it endorses the creation of teleworking models that execute ‘whole-day own-home teleworking’ (Cabinet Secretariat 2013 [2015], p.16) more than a day per week in cooperation with industrial groups for workers who find it difficult to commute (for example, those who have children or health-care responsibilities).<sup>2</sup> Furthermore, it believes that the popularisation of this model will promote female workers’ engagement with society, the security of the workforce in a society that features a declining birth rate and an ageing population, and male workers’ childcare responsibilities, while allowing the combination of both work and caregiving responsibilities (Cabinet Secretariat 2013 [2015]).

To promote telework, the Ministry of Internal Affairs and Communications (MIC) has been undertaking the Telewaku Zenkoku Tenkai Purojekuto (Nationwide Development Project for Teleworking) since 2012 and organising seminars to promote telecommuting. The Ministry of Health, Labour, and Welfare (MHLW) has established the Telewaku Sodan Senta (Telework Consultation Centre) in Tokyo and has been providing subsidies to small and medium-sized enterprises that introduce a new ‘whole-day own-home teleworking’ system or a satellite office system.

The Ministry of Economy, Trade and Industry (METI) has organised many seminars to promote telecommuting. In addition, the MLIT is continually researching telework in Japan and publishes annual reports on the topic (JTA 2013, pp.99–100).

The eagerness of the Japanese government and its central ministries to promote teleworking may be attributed to their intention to address the issue of the declining size of the workforce. The Japanese labour force reached its peak size of 67.93 million in 1998, and has gradually fallen by more than 2 million in the subsequent decades. Furthermore, during this period, the labour force participation rate dropped by 3.5 per cent (Figure 2.1). Since 2013 the labour force size and participation rate figures have been on the rise, but this is likely caused by a decrease in unemployment owing to recent economic prosperity, and is commonly considered a temporary phenomenon. Most experts agree that the scaling down of the labour force will continue in the future, creating a cause of serious concern with regard to Japan’s economy and government.

Decreases in the labour force size and participation rate have resulted from the declining birth rate and ageing population of Japanese society. To compensate for this decline, the government has been undertaking diverse measures to increase the labour force participation rate among women and the elderly. However, emphasis has been placed on the active use of the female labour force, because Japan’s labour force participation rate among



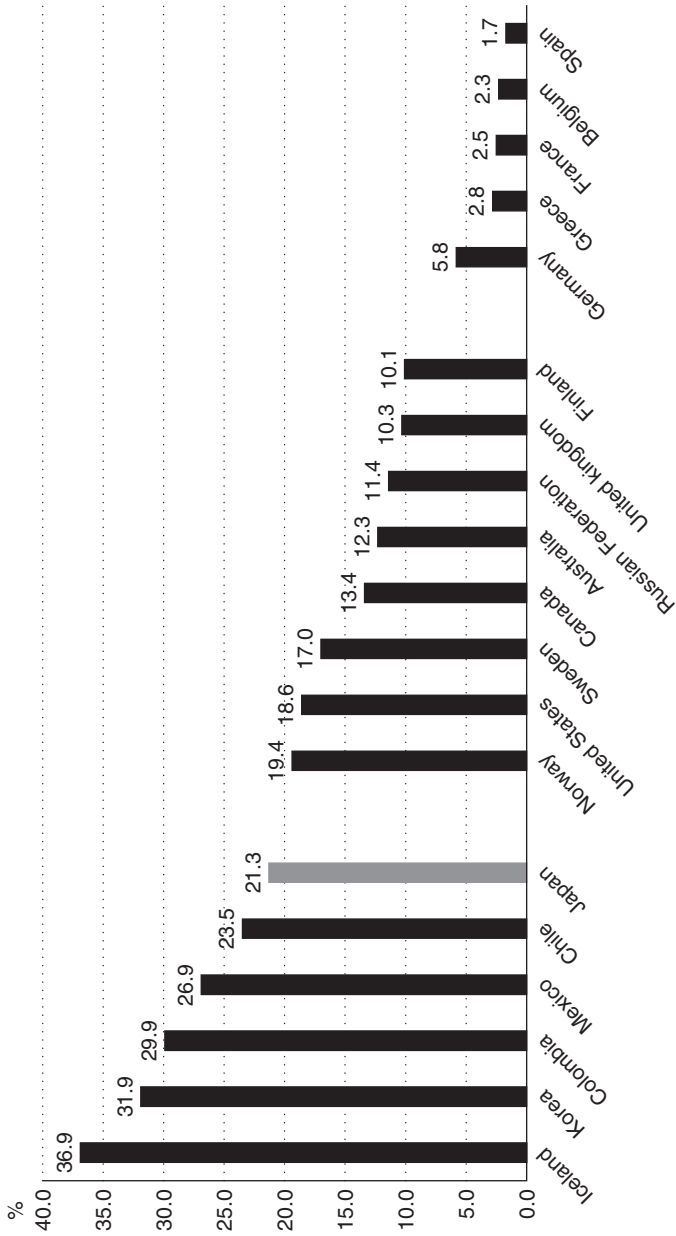
Source: Labour Force Survey website.

Figure 2.1 Labour force and labour force participation rate in Japan

people aged 65 and older is already one of the highest worldwide (Figure 2.2). Thus, it would be very difficult to increase it further.

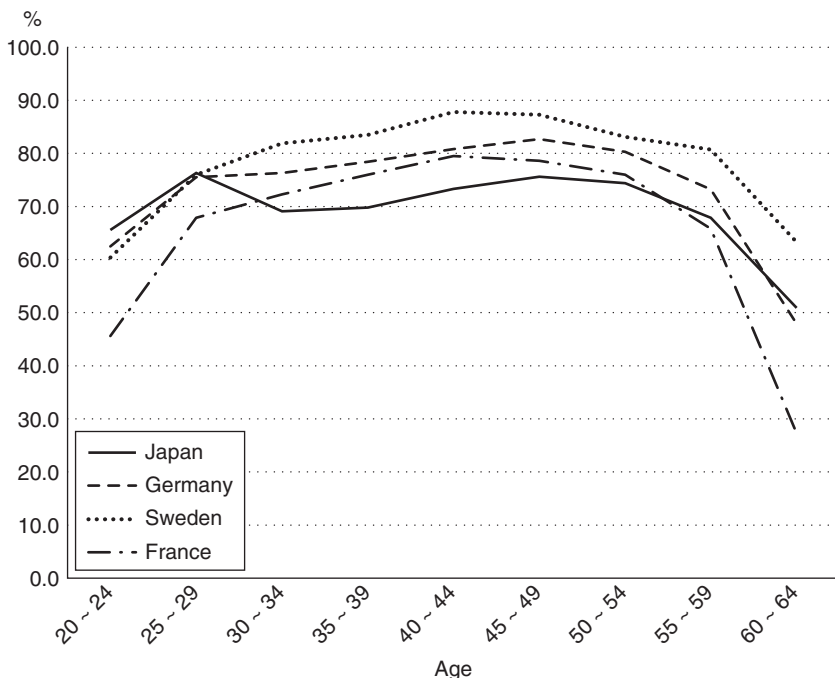
However, the Japanese female labour force has not been utilised adequately. A graph of Japan's female participation rate (plotted by age group) takes an M shape, as shown in Figure 2.3 – although that of advanced countries generally forms an upturned U (as in the case of France) or a trapezoid (as in the cases of Germany and Sweden). The M shape is thought to derive from an excessive gender-based division of labour in Japan. Japanese husbands, on average, spend only 60 minutes per day on housework, and 33 minutes on childcare (Figure 2.4). In total, they spend only one-third of the time on housework spent by men in other developed countries, and only one-half that spent in other countries on childcare (GEBCO 2012, pp. 82–3).

As a result, it is very difficult for Japanese women to simultaneously manage both their career and household responsibilities. A large proportion of Japanese women aged 25–34 years leave the labour market after marriage or bearing children. Later, when their children grow up and no longer require the same level of care, many of these women resume paid work, mostly as part-timers. These circumstances explain the M shape of



Source: Labour Force Participation Rate (from OECD statistics) website.

Figure 2.2 Labour force participation rate of people aged 65 years and over, 2014



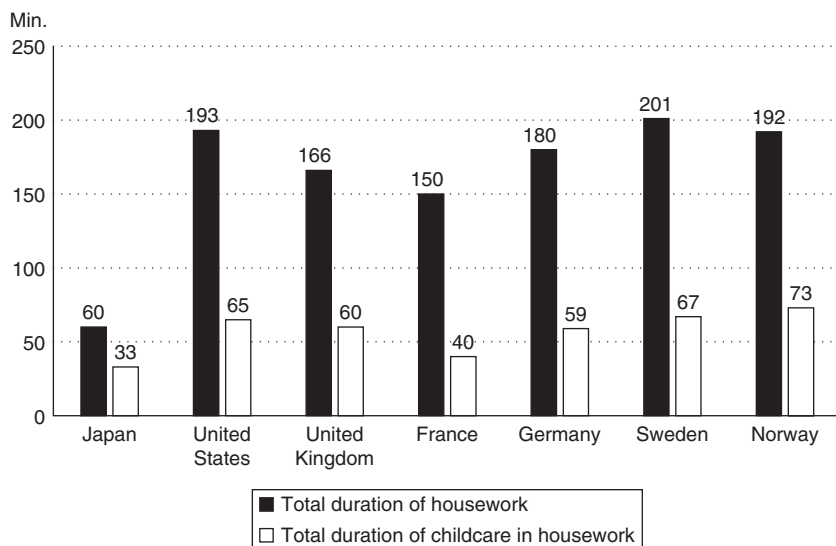
Source: GEBCO (2016, p.8).

Figure 2.3 Labour force participation rate of women

the graph in Figure 2.3, which features a radical drop in the 30–35-year age (MHLW 2002a, p.43).

Several factors influence the imbalance in housework between males and females, such as the large pay differential between males and females in the workforce, long working hours among male workers, and a shortage of public childcare facilities, especially for sick children. Nevertheless, the government has concluded that the most practical means of increasing the female labour force participation rate is to promote ways of enabling women to continue in their paid work without impinging upon their domestic responsibilities.

In this context, the promotion of work–life balance has been proposed as a way to increase the size of the Japanese female workforce. The adoption of telecommuting is expected to increase the labour force participation rate of mothers without affecting the fulfilment of their domestic responsibilities. Moreover, it is expected that if women with heavy domestic responsibilities can continue to work through a telecom-



Source: GEBCO (2012, p. 83).

Figure 2.4 Time spent per day on housework by husbands (with children under 6 years old)

muting system, more companies may adopt the system and more women remain in the workforce while also choosing motherhood, thus helping counter the current decline in the birth rate.

Therefore, the Japanese government has implemented several measures by which to promote the ‘whole-day own-home’ telecommuting system among diverse work styles of teleworking for people who find it difficult to continue to work outside the home because of their childcare or family/elder-care responsibilities.<sup>3</sup>

## 2. METHODOLOGY AND MAIN DATA SOURCES

This chapter is based on existing research data pertaining to Japanese telework/mobile work.<sup>4</sup> Among the sources, only data from the MLIT reports are nationwide in scale. The MLIT began to publish its ‘Telework Jinko Jittai Chyosa’ (‘Teleworking population research’) in 2002. The ministry published similar results in 2005 and 2008, and then annually thereafter.

The MLIT’s research constitutes a project on a larger scale than most other research studies in this field. Although termed population research,

MLIT ceased announcing the estimated population of Japanese teleworkers after the 2014 research report. Further, its questionnaire was significantly changed after 2015, and some important questions were eliminated. Despite these limitations, the surveys cover diverse issues related to teleworking and provide notable insights into the phenomenon within Japan. The annual report provides information on teleworkers' occupation types, working hours, workplaces, willingness to continue in telework, family composition, and other facts. The results of the MLIT research studies are published as reports and data files. Therefore, MLIT's 2015 and 2016 research reports are the most important data sources for this chapter (MLIT 2015a, 2015b, 2017). Nevertheless, descriptions within the MLIT studies are still not sufficient for our purposes, so for the purposes of this chapter some of the data has been recalculated.

The Japan Institute for Labour Policy and Training (JILPT), an independent administrative agency, has continuously published from the latter half of 1980s research reports that relate to teleworking. One of its recent reports is based on research that collected responses from more than 1000 teleworkers (JILPT 2015). The data from that research constitutes another key source for this report.

Among the various types of telework, telecommuting is the most frequently recommended by the government; several related reports have been published annually (MHLW 2014; MIC 2013, 2014). Most of these reports introduce many examples of companies or organisations that have succeeded in adopting telecommuting systems. They detail the reasons for adopting such a system, and offer an outline of the system and the number of employees covered therein; they also relate the advantages and disadvantages experienced by each company.

However, most of these reports never speak to the actual conditions and opinions of telecommuters themselves. Those reports were created from the perspective of the organisations' management or personnel departments and are not suitable for describing the reality of employees' work experiences. Accordingly, the records of interviews from small-scale research are used in this chapter. They are constituted with small numbers of respondents and cannot represent all teleworkers. However, they are the second best way to describe facts pertaining to the telecommuting system from the workers' perspective (Sato 2009).

Similar to other advanced countries, a majority of employed Japanese teleworkers are mobile workers. However, there is no full-fledged research report on this group. Only a few reports based on interviews with a small number of mobile workers exist which describe the nature of their actual work and lives (Sato 2008, 2009).

### 3. INCIDENCE OF TELEWORK/MOBILE WORK

#### 3.1 Population of Teleworkers

In the 'Teleworking population research 2016' report of the MLIT, the criterion used to distinguish teleworkers was simple. Informants were asked, 'For your present main work, do you work in some places different from your usual workplace with ICT devices?' Those informants who answered 'yes' to this question were deemed teleworkers (MLIT 2017, ch. 1, s. 3, p. 8).

Of 40 000 respondents to this study, 5673 (14.2 per cent) were considered to be teleworkers. Extrapolating from that data, from 2016, there were 9.4 million teleworkers in Japan, as the total working population in 2016 was 66.5 million.

The informants classified as teleworkers consisted of 4020 (70.9 per cent) male workers and 1653 (29.1 per cent) female workers (Table 2.1). Unlike Europe and North America, self-employed workers who work away from their own offices using ICTs are also regarded as teleworkers in Japan. Thus, among the informants in the MLIT research, 4761 (83.9

*Table 2.1 Teleworkers' gender and job status*

	Gender		Total
	Men	Women	
Regular employee (private sector)	2619 80.0%	653 20.0%	3272 100.0%
Regular employee (public service)	199 78.7%	54 21.3%	253 100.0%
Regular employee (other sectors)	207 67.4%	100 32.6%	307 100.0%
Temporary worker	236 56.3%	183 43.7%	419 100.0%
Part-time worker	135 26.5%	375 73.5%	510 100.0%
Self-employment (hire some employees)	179 73.7%	64 26.3%	243 100.0%
Self-employment (hire no employees)	434 68.9%	196 31.1%	630 100.0%
Domestic pieceworker and contract worker	11 28.2%	28 71.8%	39 100.0%
Total	4020 70.9%	1653 29.1%	5673 100.0%

*Source:* Telework Population Research 2016, MLIT, recalculated.



per cent) were categorised as employed, while 912 (16.1 per cent) were self-employed teleworkers. However, in accordance with the common definition established for all of the country studies in this volume, the analysis of self-employed teleworkers will be omitted in the body of this chapter; this analysis is included in an Appendix to this chapter.

The MLIT research collected answers from individual respondents; it did not investigate the number of teleworking systems adopted by Japanese companies or organisations. However, since 1990, the MIC has conducted annual research on communications usage trends among Japanese companies, and their questionnaires included some questions related to teleworking.

According to the data captured through the MIC's 2016 study, which reflects replies from 2032 companies, only 13.2 per cent of Japanese companies have adopted some kind of teleworking system; 82.8 per cent have no plans to adopt such a system (Table 2.2).<sup>5</sup> Among the various types of teleworking systems adopted, mobile work constitutes almost two-thirds of all cases, while telecommuting and satellite office work comprise a minority of cases.

The rate at which companies have been adopting mobile work has been gradually increasing in tandem with their scale; however, this tendency is not apparent in the cases of telecommuting and satellite office systems. Therefore, it may be surmised that the majority of Japanese teleworkers are mobile workers. It should also be noted that the rate of companies that indicate 'no plan to adopt teleworking system' is falling in proportion to the scale of surveyed companies.

Even when companies adopt some kind of teleworking system, most employees are not engaging in telework. The MIC report states that in 43.4 per cent of companies, less than 5 per cent of employees are involved in telework (Table 2.3). Further, in only 6.3 per cent of companies do more than one-half of the employees take part in teleworking. The scale of the companies involved seems to scarcely influence this trend.

As mentioned, 14.2 per cent of respondents to the 2016 MLIT study were deemed teleworkers. MIC research shows that 11.3 per cent of Japanese companies have adopted telework systems. If most of their employees engage in teleworking, it is easy to believe that 14.2 per cent of Japanese workers are teleworking. However, MIC's data also shows that even among the companies that most eagerly adopt telework systems, less than 10 per cent of employees are teleworking; thus, it would appear that the total number of teleworking employees does not seem to reach 14.2 per cent of the entire workforce.

It is often thought that such inconsistency is caused by the spread of informal telework. Regardless of the teleworker categories in the MLIT

Table 2.2 Organisational adoption of telework systems

Number of employees	Number of companies	Adopting telecommuting	Adopting satellite office	Adopting mobile work	Adopting some types of teleworking system	Plan to adopt teleworking system	No plan to adopt teleworking system	No answer
100-299	1474	1.3	1.4	5.0	8.3	2.5	88.3	0.9
300-499	236	4.0	3.0	14.5	23	4.7	71.7	0.6
500-999	156	8.5	3.0	15.6	23.7	3.3	73.0	-
1000-1999	79	8.7	4.2	25.4	33	5.7	61.3	-
2000-2999	26	0.7	-	24.4	25.1	-	74.9	-
3000-4999	26	26.8	6.3	29.0	49.1	6.6	44.3	-
5,000+	35	17.1	-	25.3	40.3	24.6	30.3	4.8
Total	2032	2.9	1.8	8.4	13.2	3.3	82.8	0.8

Source: Communications Usage Trend Survey 2016 website.

Table 2.3 Percentage of teleworkers among employees, by workforce size

Number of employees	Number of companies	Less than 5%	5%–less than 10%	10%–less than 30%	30%–less than 50%	50%–less than 80%	80%+	No answer
100–299	124	38.5	6.6	37.9	3.8	4.4	2.5	6.4
300–499	44	37.4	8.1	25.8	13.7	5.3	3.0	6.7
500–999	34	53.4	5.5	30.6	6.6	0.4	3.5	–
1000–1999	25	64.3	1.0	15.2	8.1	11.3	–	–
2000–2999	6	44.0	46.3	9.7	–	–	–	–
3000–4999	13	27.9	30.4	41.7	–	–	–	–
5000+	16	62.3	2.4	32.8	1.2	–	–	1.2
Total	262	43.4	7.9	31.8	6.2	4.1	2.2	4.4

Source: Communications Usage Trend Survey 2016 website.

research, less than one-third of teleworkers were allowed to engage in teleworking on a regular basis. However, the total percentage of those workers 'not allowed' to engage in telework plus those 'not regularly [allowed], but the company or superior allows' to occasionally engage in telework is higher (Table 2.4). Further, including the 22.3 per cent of teleworkers responding 'don't know/not applicable', it becomes apparent that the main part of Japanese teleworkers engage in teleworking based on a personal decision or informal customs. This chapter refers to these types of workers as informal teleworkers. Most Japanese teleworkers engage in telework outside of their company's regulations.<sup>6</sup>

### **3.2 Industries and Occupations**

The MLIT research investigated the industries to which teleworkers' companies or organisations belong (Figure 2.5). The majority belong to tertiary industries such as services, information and communication, or the wholesaling and retail trade.

However, it is also evident that many companies mentioned by informants participating in the survey belong to secondary industries such as 'manufacturing' or 'construction', totalling more than a quarter of represented organisations. In contrast, only a very small percentage of teleworkers are employed in primary industries: 0.9 per cent of them work in 'agriculture and forestry' or with fisheries.

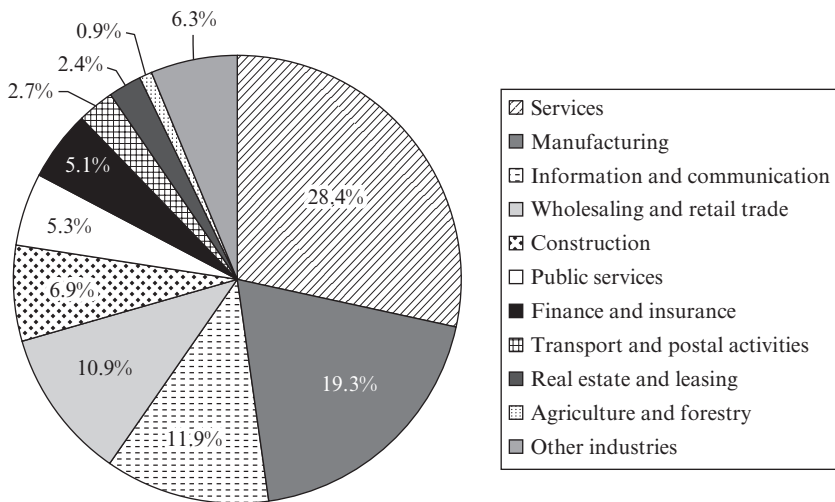
This trend is supported by the MIC's research data. As shown in Figure 2.6, among the 262 companies or organisations that have formally adopted a teleworking system, most are from tertiary or secondary industries. In the tertiary group, the proportions of wholesaling and retail (19.1 per cent) and finance and insurance (16.4 per cent) together exceed 35 per cent. Meanwhile, manufacturing companies constitute 24.4 per cent of those in the secondary group, and construction, 10.7 per cent. However, primary industry companies are not included in the data.

The balance of occupations differs considerably between men and women (Table 2.5). One of the most important differences appears in the ratio of clerical work and sales employees. The female ratio of 'clerical work' (39.9 per cent) is almost double that of males (21.4 per cent). Inversely, males' ratio of 'sales' (20.8 per cent) is more than double that of females (9.7 per cent). Such differences in occupations between the genders has notable effects on the circumstances of teleworking, such as the times and places of telework (see Table 2.7 later in this section).

Table 2.4 Company approval for teleworking systems

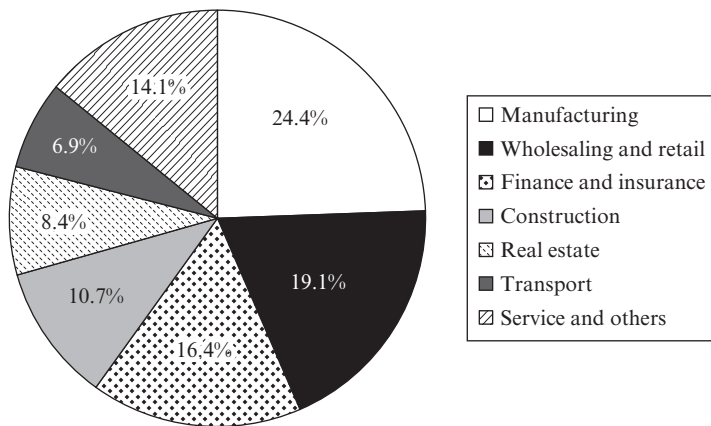
	1. Regularly allowed for all employees	2. Regularly allowed for some employees	3. Not regularly, but the company or superior allows	4. Allowed as a trial system	5. Not applicable 1-4, but allowed	6. Not allowed	7. Don't know/not applicable	Total
Regular employee (private sector)	16.8%	19.8%	24.0%	3.3%	1.6%	16.4%	18.2%	100.0%
Regular employee (public service)	18.2%	9.1%	13.0%	5.1%	2.0%	34.8%	17.8%	100.0%
Regular employee (other sectors)	11.7%	14.3%	23.8%	3.9%	2.0%	21.8%	22.5%	100.0%
Temporary worker	9.8%	14.6%	21.0%	2.1%	1.9%	16.9%	33.7%	100.0%
Part-time worker	7.8%	8.2%	19.6%	1.8%	2.7%	18.0%	41.8%	100.0%
Total	15.0%	17.2%	22.7%	3.2%	1.8%	17.9%	22.3%	100.0%

Source: Telework Population Research 2016, MLIT, recalculated.



Source: Telework Population Research 2016, MLIT, recalculated.

Figure 2.5 Industries to which teleworkers belong



Source: Communications Usage Trend Survey 2016 website.

Figure 2.6 Industries of companies adopting telework system

Table 2.5 Occupations of teleworkers

	Clerical work	Research and development job				Sales	Specialist MD, nurse, teacher	Service, maintenance	Sales	Manufacturing	Design, creative job	Construction, building	Other jobs	Total
		Software electronics, machinery	Electric, machinery	Construction, engineering	Material, foods, medical									
Men	727	475	252	112	64	705	384	199	126	145	45	66	96	3396
	21.4%	14.0%	7.4%	3.3%	1.9%	20.8%	11.3%	5.9%	3.7%	4.3%	1.3%	1.9%	2.8%	100.0%
Women	545	71	13	8	27	132	235	113	118	23	47	3	30	1365
	39.9%	5.2%	1.0%	0.6%	2.0%	9.7%	17.2%	8.3%	8.6%	1.7%	3.4%	0.2%	2.2%	100.0%
Total	1272	546	265	120	91	837	619	312	244	168	92	69	126	4761
	26.7%	11.5%	5.6%	2.5%	1.9%	17.6%	13.0%	6.6%	5.1%	3.5%	1.9%	1.4%	2.6%	100.0%

Source: Telework Population Research 2016, MLIT, recalculated.

Table 2.6 Working hours of teleworkers

		Total working hours/week	Teleworking hours/week	Percentage of teleworking
Employed workers (nationwide)	Total	39.3	–	–
	Men	43.7	–	–
	Women	33.1	–	–
Teleworkers	Total	46.2	17.7	38.4%
	Men	48.2	18.5	38.3%
	Women	40.8	15.8	38.7%

Source: Telework Population Research 2016, MLIT, recalculated.

### 3.3 Times and Places of Teleworking

In MLIT's 2016 study, the teleworking times of informants were investigated in some detail. However, in the research, no questions were asked about the total working time and the percentage of telework time. For that reason, data from the 2015 MLIT survey is considered the most up-to-date for analysing the working time of teleworkers.

As shown in the Table 2.6, Japanese workers, on average, work 39.3 hours per week. Male workers work more than 10 hours more (43.7 hours) than female workers (33.1 hours), likely because more women work as part-timers.

Theoretically, teleworking should neither lengthen nor shorten working times as an inherent feature. However, the numbers in Table 2.6 clearly demonstrate the tendency for telework to result in longer working times in Japan.<sup>7</sup>

In the MLIT's 2016 research, teleworkers were asked about their working times and days at 'places different from your usual workplace' (Table 2.7).

For the teleworkers, the most common alternate workplace is their 'own company's branch office or satellite office' (54.4 per cent). The employee's 'own home' (49.3 per cent) is also frequently used as an alternate workplace, and such employees may be classified as telecommuters. The third most popular alternate workplace is the 'office or co-working space of [a] client' (34.3 per cent), likely because many Japanese companies and organisations offer work space for use by visiting salespeople. Those who telework in the space of a client should be called mobile workers. Since the informants engaging in work 'in motion (in train, station, airport)' (31.6 per cent) or in 'coffee shop, public library, hotel' (26.5 per cent) are also categorised as mobile workers, it is possible to presume that they constitute the majority among Japanese teleworkers.



Table 2.7 *Telemworking hours and working locations (multiple answers)*

Workplace	Gender	Respondents who work in the place	Percentage	Average telemworking time/day
Own company's branch office or satellite office	Total	2430	54.4%	4.1
	Men	1874	55.2%	4.1
	Women	556	40.7%	4.2
Joint-use type satellite office or co-working space	Total	452	10.1%	3.3
	Men	358	11.6%	3.1
	Women	94	6.9%	4.1
Office or co-working space of client	Total	1532	34.3%	2.9
	Men	1212	35.7%	2.8
	Women	320	23.4%	3.0
Coffee shop, public library, hotel	Total	1186	26.5%	1.8
	Men	905	26.6%	1.8
	Women	281	20.6%	1.8
In motion (in train, station, airport)	Total	1414	31.6%	1.1
	Men	1082	31.9%	1.1
	Women	332	24.3%	0.9
Own home	Total	2204	49.3%	2.7
	Men	1510	44.5%	2.7
	Women	694	50.8%	2.6

Source: Telemwork Population Research 2016, MLIT, recalculated.

'Joint-use type satellite office or co-working space' refers to a satellite office or workplace that may be utilised by several companies in tandem or may be rented by multiple companies. Relatively few (10.1 per cent) employed telemworkers use 'joint-use type satellite office or co-working space', as Japanese companies seldom prepare joint-use offices or allow their employees to use rented shared offices like co-working spaces.

When analysing the gender data, some differences between the usage rates of each alternate workplace are found. Except in the case of the 'own home' of employed workers, the female informants' usage rates tend to be less than those of males in almost all workplaces.

One of the most important factors contributing to these differences originates from differences in the genders' occupations. The percentage of female informants employed in clerical work is much higher than males, and conversely, their rate of sales employment is only half that of males. It is thought that the female informants whose jobs require less outside work have fewer opportunities for telemworking at branch offices or clients' offices.

When investigating average teleworking hours/days, considerable differences can be found between each alternate workplace. The informants tended to work longest in their 'own company's branch office or satellite office' (4.1 hours). There are few users of 'joint-use type satellite office', but informants who do use this space report working a relatively long time there (3.3 hours).

Table 2.8 shows the distribution of teleworking days at various working spaces. As the bottom right-hand corner box – whose value is well over 100 per cent – makes evident, many teleworkers use two or more working spaces for teleworking. However, the frequencies of teleworking are not becoming daily routines. In all types of workplaces, '1–3 days/week' or '1–3 days/month' are the largest frequencies.

It must be noted that 5.5 per cent of respondents are teleworking a total of '6–7 days/week'. As in other advanced countries, most of the companies, organisations, public offices and schools in Japan are adopting a five-day-week system. Therefore, the data suggest that some teleworkers are working during company days off or holidays.

Unfortunately, in this study respondents were not asked why they work during holidays. However, as a matter of course, most companies do not officially order their employees to work during a holiday. Thus, major parts of their work conducted over a holiday period are considered to be their 'spontaneous' work, which frequently becomes unpaid overtime work (Sato 2013, p. 60).<sup>8</sup>

The number of respondents engaged in this phenomenon (5.5 per cent) may not seem large, especially given that the question has multiple answers. Nevertheless, if someone must continue to work without stopping throughout a week, their human rights are undoubtedly being infringed upon. The problem of telework during holiday periods is discussed again later in this chapter.

## 4. EFFECTS OF AND PROBLEMS WITH TELEWORKING

### 4.1 Expectations from Teleworking Systems

Before discussing the effects of and problems with teleworking, it is important to examine the expectations surrounding telework, as diverse stakeholders have different expectations regarding its effects.

As described previously, the Japanese government expects teleworking systems to facilitate an increase in the size of the labour force, and especially the labour force participation rate of mothers. Japanese industrial

Table 2.8 Frequencies of teleworking by working locations (multiple answers)

Workplace	6-7	4-5	1-3	1-3	6-11	1-5	Total
	days/week	days/week	days/week	days/month	days/year	days/year	
Own company's branch office or satellite office	72 (1.5%)	370 (7.8%)	687 (14.4%)	704 (14.8%)	114 (2.4%)	483 (10.1%)	2430 (51.0%)
Joint-use type satellite office or co-working space	11 (0.2%)	46 (1.0%)	154 (3.2%)	149 (3.1%)	10 (0.2%)	82 (1.7%)	452 (9.5%)
Office or co-working space of client	24 (0.5%)	247 (5.2%)	501 (10.5%)	470 (9.9%)	60 (1.3%)	230 (4.8%)	1532 (32.2%)
Coffee shop, public library, hotel	4 (0.1%)	35 (0.7%)	340 (7.1%)	472 (9.9%)	70 (1.5%)	265 (5.6%)	1186 (24.9%)
In motion (train, station, airport)	26 (0.5%)	194 (4.1%)	417 (8.8%)	464 (9.7%)	61 (1.3%)	252 (5.3%)	1414 (29.7%)
Own home	125 (2.6%)	267 (5.6%)	866 (18.2%)	606 (12.7%)	83 (1.7%)	257 (5.4%)	2204 (46.3%)
Total	262 (5.5%)	1159 (24.3%)	2965 (62.3%)	2865 (60.2%)	398 (8.4%)	1569 (33.0%)	9218 (193.6%)

Note: The modulus of numbers within () is 4761.

Source: Telework Population Research 2016, MLIT, recalculated.

circles that are suffering from labour shortages welcome such government policy, and they are cooperative regarding its implementation.

However, among those private companies that have introduced teleworking systems, a majority have not done so solely to ensure the future security of their employees. Table 2.9 lists the reasons why companies have formally introduced teleworking systems. Their primary aim is an 'improvement in labour productivity' (60.2 per cent), followed by the 'improvement of efficiency for standard work' (59.8 per cent). These reasons are similar across all industries and company sizes.<sup>9</sup>

Private companies naturally wish to increase their profits, and so they are driven by the 'improvement of efficiency'; the 'reduction of commuting time' bears essentially the same meaning in the context of business efficiency, as any time saved can be assigned to other tasks.<sup>10</sup>

The two major expectations, the 'improvement in labour productivity' and the 'improvement of efficiency for standard work', have no relationship to the security of the female workforce. Furthermore, the data in Table 2.9 indicates that 'employment of commuting disadvantaged' (12.3 per cent) and 'realisation of employees' work-life balance' (9.3 per cent) constitute only minor factors in the introduction of teleworking systems to Japanese companies. That is, the prime expectation of the government and industrial circles (that is, enhancing labour force participation) is not the highest priority of private companies in introducing such systems.

## 4.2 Advantages and Disadvantages of Telework

Table 2.10 is based on nationwide teleworker research data captured by the JILPT.<sup>11</sup> It indicates employees' opinions regarding the advantages of teleworking.

The most frequently cited advantages of teleworking are the 'improvement of business productivity/efficiency' (55.7 per cent) and the 'improvement of customer service' (16.9 per cent). Those two advantages both correspond to companies' primary expectation, namely, the 'improvement of efficiency for standard work'. The third advantage, a 'reduction of physical/mental burden of commuting' (16.7 per cent), is the result of the 'reduction of commuting time'.

Many stated advantages of telework appear to relate to work-life balance, such as an 'increase of time for communication with family' (9.9 per cent), an 'increase of time for housework' (7.4 per cent) and an 'increase of time for childcare/nursing care' (4.9 per cent); however, each of these advantages exhibits a low representational percentage. These data suggest that the expectations of companies for teleworking systems correspond closely with the advantages most frequently cited by employees.<sup>12</sup>

*Table 2.9 Reasons for introducing teleworking systems in companies (multiple answers)*

	Number of companies	Improvement in labour productivity	Improvement of efficiency for standard work	Reduction of commuting time	Improvement of customer satisfaction	Business continuity at disaster
Construction	28	59.8	59.8	44.4	16.5	21.3
Manufacturing	64	64.1	64.1	51.2	16.9	19.0
Transport and postal activities	18	47.5	42.3	39.1	21.9	21.9
Wholesaling and retail trade	50	62.7	62.7	44.2	29.1	21.6
Finance and insurance	43	59.8	54.0	39.3	35.4	44.9
Real estate and leasing	22	55.2	55.2	29.7	16.2	14.3
Other industries	37	55.6	55.6	36.8	18.1	13.6
100–299	124	61.5	61.0	38.1	22.3	15.4
300–499	44	45.4	45.4	51.5	23.6	8.5
500–999	34	67.3	67.3	43.5	11.0	26.0
1000–1999	25	74.2	74.2	47.0	21.1	21.3
2000–2999	6	70.9	70.9	34.7	9.7	63.9
3000–4999	13	69.9	69.0	67.2	28.7	55.1
5000+	16	50.0	48.8	47.7	21.1	17.4
Total	262	60.2	59.8	43.9	20.8	18.7

Source: Communications Usage Trend Survey 2016 website.

*Table 2.10 Advantages of teleworking systems for employees (multiple answers)*

	Improvement of business productivity/efficiency	Improvement of customer service	Reduction of physical/mental burden of commuting	Reduction of mental stress	Increase of time for communication with family	Improvement of time management awareness	Increase of time for housework
Men	58.0%	19.3%	16.1%	14.0%	9.7%	9.6%	3.9%
Women	48.4%	8.6%	18.8%	18.3%	10.2%	8.6%	19.4%
Total	55.7%	16.9%	16.7%	14.9%	9.9%	9.5%	7.4%

Source: JILPT (2015, p. 298).

Employment of commuting disadvantaged	Improvement of creativity for value-added duties	Realisation of employees' work-life balance	Reduction of office costs	Security for capable employees	Counter measure against global warming	Power saving	Others
15.5	6.1	19.0	3.1	7.8	11.4	2.6	14.3
10.0	9.7	6.6	3.1	3.1	2.5	–	17.4
18.6	12.0	5.2	–	–	–	–	10.5
9.4	11.5	7.8	5.8	3.9	–	2.2	17.4
23.3	27.4	26.5	2.4	16.1	–	–	11.3
16.7	5.4	10.8	4.2	15.0	–	–	13.8
15.1	6.1	11.9	11.5	8.6	–	–	20.5
8.9	6.6	10.3	10.8	6.3	0.5	1.2	18.7
11.6	10.0	8.3	2.3	0.6	–	–	17.9
14.3	13.2	0.4	4.4	9.8	3.8	0.6	13.6
12.3	12.7	15.8	–	1.5	5.3	–	7.2
–	–	–	–	–	–	–	26.4
43.8	27.5	15.2	–	15.2	–	–	35.5
21.5	6.1	17.8	1.2	6.1	–	–	20.9
12.3	9.4	9.3	6.1	5.5	1.2	0.6	17.8

Increase of alternatives for dwelling place	Increase of time for childcare/nursing care	Increase of time for hobby/self-enlightenment	Promotion for self-control ability/demonstrate individuality	Increase of time for community/volunteer activities	Increase of wage	Other advantages	No advantages
5.0%	2.9%	4.4%	4.1%	1.1%	0.9%	10.3%	16.4%
4.8%	12.4%	4.8%	2.7%	0.5%	0.0%	10.2%	22.0%
5.1%	4.9%	4.4%	3.7%	0.9%	0.7%	10.3%	17.7%

Table 2.11 *Disadvantages of teleworking systems for employees (multiple answers)*

	Ambiguity of work and time off	Longer work time	Difficulties with evaluation about work	Difficulties with communication with superior/colleague	Difficulties with access to shared information	Dispersion of documents and materials
Men	39.3%	21.9%	18.0%	10.5%	9.6%	8.9%
Women	36.4%	18.5%	12.5%	12.0%	8.2%	10.3%
Total	38.7%	20.8%	16.8%	10.9%	9.3%	9.2%

Source: JILPT (2015, p. 300).

However, the importance of each advantage is not entirely equal between male and female employees. The ‘improvement of business productivity/efficiency’ was selected by 58.0 per cent and 48.4 per cent of male and female employees, respectively. Similarly, the selection of an ‘improvement of customer service’ saw a gap between the genders that exceeded ten percentage points. Conversely, a relatively high proportion of women selected an ‘increase of time for housework’ and an ‘increase of time for childcare/nursing care’, particularly in comparison to male respondents.

It is conjectured that one of the most important factors underpinning this gender gap is the difference in time each gender spends on household affairs. As shown in Figure 2.4, most Japanese husbands spend very little time on housework and childcare. Since they were not concerned with housekeeping from the outset, even if they are engaging in telework, their time devoted to housework does not increase.

Another factor is the difference in occupations between the genders (Table 2.5). The percentage of male salespeople is twice that of females and, inversely, the percentage of female clerical workers is twice that of males. As a result of such occupational differences, male teleworkers more frequently work at their clients’ offices, whereas many females are working in their own homes (Table 2.7). Therefore, male teleworkers emphasise the ‘improvement of customer service’ whereas females accentuate an increase of the time available for ‘housework’ and of ‘childcare/nursing care’ as notable advantages of teleworking.

In the Japanese labour context, the gender-based division of labour exerts very strong influences in many spheres, and telework is no exception.

Table 2.11 shows the disadvantages of teleworking systems according to JILPT’s research respondents. In contrast to the advantages, no major differences were found between the genders in terms of the items selected.

Pressure for result of labour	Disruption from noise in the vicinity	Feeling of solitude/alienation	Difficulties with health care	Difficulties with potential/skill development	Decrease of wage	Other disadvantages	No disadvantages
6.0%	5.9%	5.1%	5.7%	1.8%	0.9%	10.6%	28.2%
9.8%	4.9%	6.5%	4.3%	2.7%	1.6%	11.4%	27.7%
6.7%	5.7%	5.4%	5.3%	2.0%	1.1%	10.3%	28.3%

‘Ambiguity of work and time off’ (38.7 per cent) was the worst disadvantage reported by both male (39.3 per cent) and female (36.4 per cent) employees; and ‘longer work time’ (20.8 per cent) was the second-worst disadvantage for both genders (21.9 per cent and 18.5 per cent, respectively).

For most Japanese workers, ‘ambiguity of work and time off’ likely signifies that their working time erodes their private life, rather than the opposite. Japanese teleworkers work longer hours than average workers (Table 2.6), and many work even on their holidays or company days off (Table 2.8). Thus, ‘ambiguity of work and time off’ and ‘longer work time’ must be considered to have the same root.

Teleworkers feel that teleworking has diverse advantages and disadvantages. In the JILPT research, informants are asked whether they would like to increase or reduce their time for teleworking at each workplace. As shown in Table 2.12, the majority of informants hope to ‘preserve’ their teleworking time in all workplaces. However, percentages of ‘reduce’ their time surpass ‘increase’ their time in all workplaces, and that tendency is similar among male and female respondents.

Though the teleworker’s ‘own home’ is the most frequently used site of teleworking, a reduction in teleworking time at that location is most strongly expected or desired. Also, respondents prefer to reduce the time spent teleworking in a ‘hotel, lodging facility’, ‘in motion (transportation facility, station)’, or at a ‘coffee shop, restaurant’, rather than to increase time spent teleworking at those sites.

Thus, in general, more teleworkers wish to reduce the time spent teleworking away from company offices rather than increase that type of work. This tendency may derive from the fact that work away from company offices (for example, ‘own home’ telework) is typically unpaid for informal teleworkers, since they have not been formally ordered to telework.



Table 2.12 Opinions regarding teleworking participation

		Respondents who work in stated place	Increase	Preserve	Reduce	No opinion
Own home	Men	419	9.1%	49.9%	30.8%	10.3%
	Women	120	16.7%	38.3%	28.3%	16.7%
Own company's branch office	Men	357	6.4%	75.4%	10.6%	7.6%
	Women	88	13.6%	61.4%	10.2%	14.8%
In motion (transportation facility, station)	Men	276	3.3%	63.4%	22.5%	10.9%
	Women	50	6.0%	64.0%	18.0%	12.0%
Office or co-working space of client	Men	249	10.8%	69.1%	12.4%	7.6%
	Women	37	8.1%	54.1%	18.9%	18.9%
Hotel, lodging facility	Men	246	2.8%	66.7%	22.8%	7.7%
	Women	27	–	48.1%	25.9%	25.9%
Coffee shop, restaurant	Men	145	10.3%	61.4%	20.0%	8.3%
	Women	21	14.3%	52.4%	19.0%	14.3%
Others	Men	52	7.7%	44.2%	21.2%	26.9%
	Women	6	16.7%	33.3%	–	50.0%

Source: JILPT (2015, pp.302–8).

### 4.3 Effects of Telework

As mentioned in the previous section, for Japanese teleworkers, improving business efficiency and reducing the burden of commuting are the most important advantages of teleworking (Table 2.10). In the case of mobile workers, it is quite probable that a reduction in commuting time could lengthen the amount of time available for contact with customers, which could improve their business efficiency. However, many companies have also stated that implementing telecommuting systems (instead of mobile work systems) improves teleworkers' business efficiency. How can this be accomplished?

An MHLW report introduces certain companies that have adopted telecommuting systems in order to improve business efficiency (MHLW 2014). For example, Nissan Motor Company Limited (an automobile and ship manufacturing company with 142925 employees) has adopted a telecommuting system for all employees except those in the manufacturing departments. Their telecommuting system has 2400 registered participants. Participants are allowed a maximum of five days or 40 hours per week for

work from home, on the condition that it be requested at least one day in advance. Telecommuters must work at their own homes, and the working time of a telecommuting day must not exceed eight hours. The company claims that telecommuting contributes to enhancements in visualisation of business efficiency in those sectors that use the system well.

The NTT Data Corporation (a company involved in the planning and development of information processing systems, with 1748 employees) has also adopted a telecommuting system. All its employees, without exception, can engage in telecommuting. Telecommuters must work at their own homes, and must report to their superior when they start and finish that day's work. Overtime and late-night work are not allowed in the work from home context. The company claims that its employees tend to adhere more closely to their work plans on their telecommuting days and can finish their work easily, even in cases where workers need to devote time to childcare or nursing care responsibilities.

Several reports and documents have similarly asserted the relationship between telecommuting systems and improvements to business efficiency (MIC 2013, 2014). However, most of them merely report on impressions of an increase in employees' business efficiency; they do not present quantitative data or objective logic to explain precisely how the telecommuting system has achieved this supposed greater efficiency. For example, a report asserts that implementing a teleworking system 'inevitably' improves visualisation and the standardisation of duties (JTS 2015, p.98). Another report finds that working in their own home makes workers 'concentrate on their duties more clearly'; yet this claim is unsupported by any objective data (MIC 2010, p.32).

Moreover, it is difficult to find reports that provide objective data proving that the adoption of a telecommuting system actually increases business efficiency. Certainly, many telecommuters say that teleworking improves their productivity, but no actual data support these impressions. Therefore, under the existing circumstances, we can say nothing academically valid about the relationship between the effects of the telecommuting system and business efficiency. The accumulation of impartial data – which would make it possible to analyse actual phenomena, and not a mixture of sample cases – is essential to research on teleworking and business efficiency.

For employed female teleworkers, the increase in the time for housework and child care is significant (Table 2.10). A Cabinet Office report refers to some cases of companies adopting telecommuting systems as part of their effort to support female employees (Cabinet Office website), which are summarized below.

SoftBank Telecom Corporation (an information and communication service with 4273 employees) offers a telecommuting system to all

employees, which boasts a 44 per cent participation rate. Among the working mothers at SoftBank, 42 per cent engage in telecommuting. Although 43 per cent of workers engage in telecommuting for fewer than four days per month, 34 per cent telecommute for more than 15 days per month. The company allows not only working from home, but also flexible working hours. Many of the working mothers who utilise the telecommuting system frequently 'receive and send e-mails or make arrangements for the work of the day during the early morning, and then bring their children to school or nursery school' (Cabinet Office website).

Johnson & Johnson K.K. (a manufacturer and marketer of medical and health products, with 1533 employees) has adopted a telecommuting system to enhance the security of female employees, support their childcare efforts and promote work–life balance. Employees who have a child younger than elementary (primary) school age or a family member who requires nursing care higher than level 1 are allowed a maximum of 20 days of telecommuting per year. Although 90 employees are allowed to use the system, only seven or eight actually use it; on average, they work in their own home for a week to 10 days per year. Many of them utilise the company's flexi-time system together with telecommuting (website of the Cabinet Office).

These companies assert that the telecommuting system lowers their turnover rate and improves the work–life balance of female employees. The existence of female telecommuters within their workforce who have small children, or family members who require nursing care, may serve as supporting evidence of the effect of telecommuting. However, no statistical data are presented that show a lower turnover rate or improvements in work–life balance in such cases; therefore, we are not able to confirm the effect objectively.

#### **4.4 Problems with Telework**

The worst disadvantages of teleworking, according to survey respondents, are the 'ambiguity of work and time off' and 'longer work time' (Table 2.6 and 2.11). If most teleworking duties are accomplished within normal working times, workers may not experience ambiguity between work time and off time, even if these duties are executed in private spaces such as their own home. Also, since this is simply a working style, teleworking cannot on its own function to shorten or lengthen their working hours; it can only reduce commuting time in certain cases. Therefore, the issues of 'ambiguity' and 'longer work time' are probably not derived from the nature of telework itself, but rather from the peculiarities of Japanese labour systems and practices.

In the most advanced countries, 'pay based on job evaluation' (PB) systems are popular. Under these systems, wages are decided by duty, and when duties change, wages also change. The duties of workers in this system are generally determined in detail by a labour contract, and workers tend to perform these duties within the hours agreed to in their contracts.

In contrast to these conditions, most Japanese companies or organisations adopt 'wage based on job evaluation' (WB) systems. In this system, as long as employees work for the same company or organisation, their wages will not change fundamentally even if their duties change. Their wages are small when they are young and their length of continuous employment in the company is short, but that wage increases year by year. Naturally, capable employees obtain an administrative position within a shorter period than their less capable colleagues, and advance rapidly. However, companies working in this system tend to fix relatively long minimum years from starting work to allow examinations for and promotions to even the lowest administrative positions. The WB system in Japan is always accompanied by wages based on seniority.

Beyond setting wages based on seniority, the lifetime employment system is annexed to the Japanese WB system. Since employees' wages usually reach their peak among those who are 55–60 years old, most do not want to change their company except under extraordinary circumstances. The job separation rate of small enterprises in Japan, as elsewhere, is high, but the percentage of employees who keep working until retirement age is higher in those companies that are large, stable and pay good wages.

The WB system is profitable for the management side, especially as it permits the flexible use of employees. Companies frequently adopt the system to order their employees to redeploy and relocate almost unconditionally. The system has other benefits as well: during the transitional period of the Japanese industrial structure after the first oil crisis in the latter part of the 1970s, the WB system slowed or nearly halted the Japanese unemployment rate by radical labour turnover (Hamaguchi 2014, p. 55).

Under the WB system, an employee's performance is evaluated by subjective methods over a long period. According to analysis by Kumazawa, Japanese employees are evaluated by three standards: (1) degree of duty execution in a past definite period; (2) appropriateness of attitude, volition, and character as a member of the organisation; and (3) potential capability for the duty (Kumazawa 1989, pp. 43–4).

When employees belong to a department in which their duty achievement can be clearly measured numerically, such as salespeople, they are mainly evaluated by standard (1), and thus the relative importance of standards (2) and (3) is not as great. However, for employees who work

in departments that cannot measure outcomes numerically or objectively, such as clerical work, standards (2) and (3) have serious importance.

In order to acquire high evaluations on standards (2) and (3), one of the most popular employee strategies is to give a superior the impression of always being ready and willing to do whatever is needed. To make that impression, one of the most widely distributed behaviours is spontaneous overtime work. When discussing this overtime work, the key term is 'spontaneous'. Since this work is not carried by formal orders of the company, many of these hours manifest themselves as unpaid work.<sup>13</sup>

To measure the extent of unpaid overtime work, Japanese researchers often use two statistics regularly published by the government. One is the Rodoryoku Cyosa (Labour Force Survey) by the MIC, which tallies and collectively amalgamates individual workers' reports about their working hours. Another is the Maitzuki Kinro Tokei Cyosa (Monthly Labour Survey) by the MHLW, which totals reports from companies about how many hours their employees worked.

Table 2.13 shows the averages of weekly working hours in recent years as reported by these two surveys and the differences between them. The average reported by companies is almost six hours less per week than the average reported by employees themselves. Most of this six-hour difference can be attributed to unpaid overtime work.

As in other nations under the rule of law, it is illegal to task employees without payment in Japan. In the 2016 fiscal year, 1349 companies were exposed to 12700 million yen of default judgments for 97978 employees' wages for overtime work (MHLW website). In the current situation, where ordinary workers are carrying out an average of 300 hours of unpaid overtime work per year, such liabilities are only a very small proportion of the problem.<sup>14</sup>

*Table 2.13 Weekly working hours of Japanese workers*

Year	Average working hours/week		(1) – (2)/week	(1) – (2)/year
	(1) by Labour Force Survey	(2) by Monthly Labour Survey		
2012	40.1	33.6	6.5	338.9
2013	39.5	33.5	6.0	311.2
2014	39.1	33.4	5.7	296.4
2015	39.0	33.3	5.7	299.6
2016	38.8	33.0	5.8	303.5

*Source:* MIC's Labour Force Survey website and MHLW's Monthly Labour Survey website.

Recently, thanks to the rise of social criticism of unpaid overtime work, many companies are eager to emphasise their compliance – at least superficially. The disparity between items (1) and (2) in Table 2.13 seems to have decreased slightly over time. However, the amount of unpaid overtime wages for 2016 increased by more than 2700 million yen over the previous fiscal year.

Unfortunately, teleworking which is performed away from company offices has the effect of weakening the attention paid to overtime work. Hence, it is difficult to determine that there is no relationship for the almost simultaneous start of the superficial strengthening of regulations against unpaid overtime and the wider spread of telework systems. To analyse the relationship between working hours and teleworking it is important to recognise this background context.

However, no data currently show changes in informants' working hours before and after they started teleworking; therefore, there is no basis for determining whether or not the use of telework systems lengthens employees' work hours. From the available information, we can confirm only that 20 per cent or more of teleworkers believe that teleworking extends their working time.

Although there is no direct objective evidence that telework prolongs informants' work hours, teleworking on holidays might serve as supporting evidence for this phenomenon. As was noted previously in this chapter, the Japanese government recommends 'whole-day own-home teleworking'. Thus, the MLIT's research contains some questions related to this practice.

Table 2.14 shows the relationship between holiday teleworking and companies' approval for teleworking.

In the cases of companies which formally introduced the telework system, 18 per cent of informants report engaging in holiday teleworking, and one-third work two or more days of their holidays. Furthermore, even in cases where companies expressly forbid it, 11.6 per cent of informants report teleworking during their holidays.<sup>15</sup>

Table 2.15 totals the compensation received by those informants who engaged in 'whole-day own-home teleworking' during their holidays. Even in the cases of informants whose companies regularly allowed teleworking, less than one-quarter (19.4 per cent) were given substitute days off. Among informants who work at companies that do not allow teleworking, that rate is far lower (5.3 per cent). It is ironic that only in the cases of the companies which have adopted teleworking as a 'trial system' is the ratio of substitute day-off acquisition obviously higher.

As a whole, almost 90 per cent of the 'whole-day own-home teleworkers' who work during company days off or holidays are given no substitute days off. Thus, the working hours of those workers who work both

Table 2.14 *Teleworking on holidays*

	Not telework in holiday	1 day/week	2 days or more/week	Total
1. Regularly allowed	776 (82.0%)	112 (11.8%)	58 (6.1%)	946 (100.0%)
2. Not regularly, but the company or superior allows	779 (76.6%)	176 (17.3%)	62 (6.1%)	1017 (100.0%)
3. Allowed as a trial system	140 (82.8%)	20 (11.8%)	9 (5.3%)	169 (100.0%)
4. Not applicable 1–3, but allowed	903 (75.8%)	214 (18.0%)	74 (6.2%)	1191 (100.0%)
5. Not allowed	4626 (88.4%)	488 (9.3%)	119 (2.3%)	5233 (100.0%)
Total	7224 (84.4%)	1010 (11.8%)	322 (3.8%)	8556 (100.0%)

Source: Telework Population Research 2016, MLIT, recalculated.

Table 2.15 *Compensation of teleworking in own home on holidays*

	Given substitute day off	Given overtime allowance	Denominator
1. Regularly allowed	21 19.4%	26 24.1%	108 100.0%
2. Not regularly, but the company or superior allows	19 13.6%	20 14.3%	140 100.0%
3. Allowed as a trial system	6 27.3%	9 40.9%	22 100.0%
4. Not applicable 1–3, but allowed	14 8.8%	7 4.4%	159 100.0%
5. Not allowed	9 5.3%	9 5.3%	169 100.0%
Total	69 11.5%	71 11.9%	598 100.0%

Source: Telework Population Research 2016, MLIT, recalculated.

weekdays and holidays and were not given compensatory days off are inevitably extended.

Table 2.15 also shows the overtime allowance for holiday teleworking. Similar to the situation surrounding substitute days off, only 24.1 per cent of informants were given overtime allowances for holiday teleworking, even if they work in companies where telework is 'regularly allowed'. Almost 90 per cent of holiday teleworkers, therefore, are working without payment. These data provide supporting evidence for teleworking systems often being utilised as a method to make unpaid overtime work invisible.

It is generally believed that there are more mobile workers than telecommuters among Japanese teleworkers. In the cases of most Japanese companies, when mobile work schemes are adopted, the company decides which employees may shift to mobile work; the employees themselves cannot elect whether to become teleworkers or not. As a result, thousands of mobile workers are sometimes so designated on one day at large companies, regardless of employee preferences.

Most of these mobile workers have a main office to which they commute on weekdays, just like non-teleworkers. However, during the past decade, there has been an increase in the number of companies introducing office-less mobile work systems. These companies have sought to abolish or scale down their local branch offices, concurrent with the adoption of mobile work systems. In these cases, employees must hold monthly or weekly sales meetings in a rented conference room or meeting room of a hotel (Sato 2008, p. 86).

The office-less type of mobile work system offers companies two substantial advantages. The first is a reduction of office costs, including rent, fuel and lighting expenses. The second is a reduction of personnel-related expenditures for office clerks who engage mainly in sales support paperwork. When local branch offices are closed, office clerks are dismissed or transferred to other offices, and so companies succeed in reducing their personnel costs. In these cases, the paperwork that had been done by office clerks is passed on to the mobile workers themselves; thus, mobile workers may frequently engage in holiday teleworking in their own homes to deal with the additional paperwork. Under these circumstances, holiday teleworking definitely lengthens employees' total working hours. However, their additional burden is not accompanied by an increase in wages, as most are working under an 'imputed working-hour system' (Sato 2008, p. 89).<sup>16</sup>

The relationship between mobile work and the extension of work hours can be corroborated by the data that show sales workers more frequently chose 'longer work time' (26.7 per cent) as a disadvantage of teleworking than did people from other occupations (Table 2.16), as most mobile workers work in sales fields in Japan.



Table 2.16 *Disadvantages of teleworking, by occupation*

Occupation	Longer work time	Ambiguity of work and time off
Men	21.9%	39.3%
Women	18.5%	36.4%
Sales workers	26.7%	42.7%
Service workers	20.0%	32.0%
Professional and engineering workers	18.7%	43.8%
Clerical workers	18.3%	36.2%
Other workers	25.0%	28.0%
Total	20.8%	38.7%

Source: JILPT (2015, pp. 300–301), recalculated.

Another serious disadvantage of teleworking systems that can be seen from the JILPT research is ‘ambiguity of work and time off’; many respondents in other research studies cite similar disadvantages. For example, in the 2014 research data of MHLW drawn from 199 employees from 30 companies, 43.5 per cent of the respondents chose ‘difficulties with drawing a line between work and family life’ as the most serious disadvantage of teleworking (MHLW 2014, p. 33).

Numerous studies suggest that teleworkers frequently have trouble dividing working time and family life; that is, teleworking sometimes encroaches on workers’ private lives. Some companies that adopt a teleworking system formally forbid their telecommuters from working overtime or doing late-night work, since they consider improvements to employee work–life balance to be among the purposes of introducing the system (MHLW 2014, p. 8, 16). However, it should also be remembered that most Japanese teleworking is informal and often not sanctioned by company regulations.

The JILPT research also investigated the teleworking period of employed teleworkers. Survey respondents were asked to select two periods of the day during which they mainly engaged in teleworking. As shown in Table 2.17, 12.0 per cent of respondents work from 22.00 until 24.00, and 3.2 per cent from 24.00 until 03.00. There is not much difference between the genders in terms of the ratio of late-night work hours.

The research data also include the frequencies and the number of hours of late-night teleworking. The respondents who mainly engage in teleworking from 22.00 to 05.00 reported the number of days and hours during which they engaged in late-night telework within a month. On average, they engage in telework for a total of 5.0 days and 8.2 late-night hours per month (Tables 2.18 and 2.19).

Table 2.17 Time periods of teleworking (multiple answers)

	Number of respondents*	05.00–12.00	12.00–16.00	16.00–20.00	20.00–22.00	22.00–24.00	24.00–03.00	03.00–05.00
Men	642	41.9%	52.5%	31.0%	21.5%	11.5%	3.7%	0.9%
Women	177	39.0%	55.4%	26.6%	19.8%	13.0%	1.7%	1.1%
Total	831	41.0%	52.9%	30.3%	21.2%	12.0%	3.2%	1.0%

Note: \* Total number of respondents does not accord with sum of men and women, since some of the included respondents declined to cite their gender.

Source: JILPT (2015, p.288).

Table 2.18 Late-night teleworking days per month

	Number of informants*	1–2 days	3–4 days	5–9 days	10–14 days	15–19 days	20+ days	Average
Men	49	38.8%	22.4%	12.2%	14.3%	8.2%	4.1%	5.6 days
Women	15	50.0%	37.5%	6.3%	6.3%	–	–	2.9 days
Total	67	41.8%	25.4%	10.4%	11.9%	7.5%	3.0%	5.0 days

Note: \* Total number of informants does not accord with sum of men and women, since some of the included respondents declined to cite their gender.

Source: JILPT (2015, p.288).

Table 2.19 Late-night teleworking hours per month

	Number of respondents*	<4 hours	4–8 hours	8–12 hours	12–16 hours	16–20 hours	20–30 hours	30–40 hours	40+ hours	Average
Men	53	52.8%	11.3%	13.2%	11.3%	–	7.5%	–	3.8%	9.3 hours
Women	15	40.0%	33.3%	20.0%	6.7%	–	–	–	–	4.8 hours
Total	70	51.4%	15.7%	14.3%	10.0%	–	5.7%	–	2.9%	8.2 hours

Note: \* Total number of respondents does not accord with sum of men and women, since some of the included respondents declined to cite their gender.

Source: JILPT (2015, p.288).

This type of late-night telework not only makes the line between work time and personal time ambiguous, but also raises complications for the work–life balance of respondents.

As noted previously, Japanese teleworkers who must frequently work during late-night hours in their own home see their wage-based work encroach upon their family or personal life. If teleworking results in late-night work within these workers' normal work schedules, then it can create ambiguous demarcations between work and family life and hence disrupt work–life balance.

The Japanese government claims that teleworking improves the work–life balance of workers. However, teleworking often results in extended work time, holiday work and late-night work. The possibility that teleworking could encroach upon work–life balance should not be neglected.

## 5. POLICY RESPONSES TO TELEWORKING

The Japanese government has been trying to promote teleworking systems for several decades. However, it seems that the government has put little effort into regulating telework/mobile work systems. Therefore, there are no national policies that drive enforceable laws to regulate teleworking or the use of ICTs away from the employer's premises.

In such situations, only one guideline for telecommuting, as indicated below, comprises the rules determined by the government to regulate teleworking.<sup>17</sup> However, it is only 'goals to strive for' among the companies that adopt telecommuting; this guideline has no legally binding power over companies.

In March 2004, the MHLW published a guideline for telecommuting: 'Joho-tsushin-kiki o Katuyo shita Zaitaku-kinmu no Tekisetsu na Donyu oyobi Jissi no tameno Gaidorain' ('Guideline for appropriate adoption and execution of telecommuting with telecommunications equipment') (MHLW 2004). It was amended in July 2008.

The government has asserted that telecommuting systems are able to contribute to higher productivity among workers, while promoting desirable work–life balance. However, telecommuters often fail to draw a line between work and family life, and currently, personnel labour management cannot address this problem appropriately. The guideline is expected to resolve this problem.

The target audience of the guideline comprises the companies or organisations that have adopted or will adopt telecommuting systems. It is expected that if many companies adhere to the guideline requirements, telecommuting systems will spread more widely.

The major requirements of the guideline are listed below:

- 1) Observance of the Labour Standards Law
  - a. Elucidation of labour conditions of telecommuters
  - b. Defrayment of overtime pay for telecommuters who work under the ‘imputed working-hour system’
  - c. Accurate understanding of the working hours among telecommuters
- 2) Observance of the Industrial Safety and Health Law
  - a. Health care for telecommuters
  - b. Observance of ‘VDT Sagyo ni okeru Rodoese-Kanri no tameno Gaidorain’ (Guideline for Labour Hygiene Administration of VDT Operation)<sup>18</sup>
- 3) Observance of the Workers’ Compensation Insurance Law
- 4) Other precautions for appropriate adoption and execution of telecommuting
  - a. Sufficient consultation about the aim of adoption, extent of work, and ways of executing telecommuting systems
  - b. Documented clarification of work content and methods of execution
  - c. Establishment of evaluation and wage systems for telecommuters
  - d. Arrangement of expenses for communication and ICT equipment
  - e. Provision of employee training for telecommuters (as a substitute for on-the-job training)
- 5) Autonomous execution of work (requirement for telecommuters). (MHLW website)

This guideline does not have legal force, but it is expected to influence many companies that have adopted telecommuting systems, as it is backed by the government. However, it is important to note once again that most Japanese telecommuters engage in telework informally. Therefore, it is improbable that companies that do not officially allow their employees to engage in telework will revise their regulations according to this guideline.

## 6. CONCLUSIONS AND RECOMMENDATIONS FOR ACTION

As mentioned repeatedly in this chapter, there is a relative dearth of research data pertaining to Japanese telework, including mobile telework. Thus, it is very difficult to make firm assertions regarding many teleworking or teleworker matters, and even more difficult to make any policy proposals. Despite this situation, it is necessary to make some recommendations.

The central ministries of the Japanese government – such as the MIC, the MHLW and the MLIT – have long undertaken various telework/mobile-work promotion policies, asserting their effectiveness in several White Papers and reports. They have argued that telework is one of the best ways to increase labour participation among the female and

older-aged workforces, and simultaneously improve the work–life balance of workers at a time when Japan’s population is decreasing and its labour force shrinking.

The government’s reports suggest that, currently, 14.2 per cent of workers engage in some type of teleworking – which is equivalent to 8.5 million workers. If we believe this figure, it could be said that telework has spread considerably throughout Japanese society.

One of the most important problems related to telework in Japan is the demonstrated absence of legal regulations regarding this work style. The government has been eager to promote telework, but has almost completely neglected legal regulations in this area. Since there is no law regulating teleworking with any compelling force, far too many teleworkers are working without any appropriate protections.

The prevalence of informal teleworking causes serious problems: among Japanese employed teleworkers, 17.9 per cent are not allowed to telework regularly, and another 22.3 per cent are unaware of whether their company even has rules for teleworking (Table 2.4). The companies that have not formally adopted a teleworking system cannot regulate the telework of their employees. Such unregulated, unmonitored telework situations are commonly considered to have created many problems, such as unpaid overtime and late-night and holiday work. To resolve such issues, in addition to drafting laws that regulate formal teleworking with compelling force, rules that can control informal teleworking might also prove indispensable.

## NOTES

1. Since self-employed ICT workers are not viewed as teleworkers in most European and North American research studies and statistics (this type of work is typically considered to be part of the so-called ‘gig economy’), the situation of self-employed teleworkers in Japan is discussed separately in the appendix to this chapter.
2. The ‘whole-day own-home teleworking’ is one type of telecommuting. It means the worker stays in his or her own home all day long for teleworking without commuting to an office. It is the reason for the government’s recommendation of this type of teleworking to reduce the burden for commuting and to promote increasing the workforce.
3. Between 2004 and 2016, the labour force ratio of Japanese women increased from 60.2 per cent to 68.1 per cent (MIC 2017, p. 3). However, the study was unable to find data indicating the contribution of teleworking to this increase, if any.
4. In Japan, ‘mobile work’ is included in ‘teleworking’ in a broad sense. Therefore, the words telework or teleworking as used in this chapter have the same meaning as ‘telework/mobile work’.
5. Overall, 98.5 per cent of Japanese business establishments have fewer than 99 employees, and 71.6 per cent of all Japanese workers work in this type of business establishment (Economic Census 2012 website). Therefore, the data captured through the

Communications Usage Trend Survey must be analysed with caution, as it covers a very small proportion of Japanese teleworkers – even after considering the fact that the telework adoption rate of small companies is typically lower than that of large companies.

6. As written in the latter part of this chapter, the large population working as informal teleworkers is related to various problems as such holiday working and unpaid overtime work.
7. The factors related to lengthy working hours among teleworkers are explained further in conjunction with the discussion on holiday working and unpaid overtime work later in this chapter.
8. The data of the Teleworker Population Research study in 2015 also supports the increase of teleworking in holiday periods. The research asks employees about teleworking during holidays. According to the data, 15.9 per cent of male employees and 14.6 per cent of females work with ICT devices during office holidays or days off.
9. In Table 2.9, ‘business continuity at disaster’ has a value of 18.7 per cent; it is the third most commonly cited advantage of teleworking. After the Great East Japan Earthquake of 2011, many companies and organisations attempted to introduce teleworking (particularly telecommuting) systems to establish business continuity in the event of a natural disaster (JTA 2013, p. 11). However, as shown in recent research data, the number of companies that actually established telework systems did not increase significantly after the earthquake. Recent research shows that the greatest proportion of companies that have a teleworking system do not refer in their corporate social responsibility reports to the system in relation to business continuity in the event of disaster (Torido 2014, p. 65). Therefore, it is thought that ‘business continuity at disaster’ is a secondary rather than primary factor among companies when introducing teleworking systems.
10. Teleworking systems that have been introduced with the aim of reducing commuting time can be found more frequently in the case of mobile work systems than the case of telecommuting.
11. The MLIT’s Teleworker Population Research studies in 2015 and 2016 asked only a small subset of informants about the advantages and disadvantages of teleworking, and therefore it is necessary to cite other research data. Hence, JILPT’s data in 2015 is considered the most adequate for this theme among the available data sources.  
 For its research, JILPT sent out questionnaires to 10000 companies and their 60000 employees; they received answers from 1616 companies and 5058 employees. In all, 3.5 per cent of the respondent companies had formally adopted some kind of a teleworking system, and 13.2 per cent informally allowed their employees to telework when their superiors permitted it or when it was part of the custom of the office (JILPT 2015, p. 9). Among the 5058 employees that responded, 989 were engaged in teleworking; 762 (77.0 per cent) of them were men and 227 (23.0 per cent) were women (JILPT 2015, p. 210, recalculated).  
 Among the teleworking employees in this study, 90.7 per cent were employed as full-time workers; 9.3 per cent were temporary transfers, workers from a temporary employment agency, or part-time employees.
12. We must carefully consider the correspondence between employees’ opinions and their companies’ policies, as the personnel divisions in most Japanese companies are very strong and workers tend to follow company policies. For example, employees can cite an ‘improvement of business productivity/efficiency’ without concrete evidence, as long as their company expects it, but they would never be allowed to formally assert that the teleworking system has brought a decline in productivity or efficiency. In this context, the 17.7 per cent of respondents answering ‘no advantage’ must be considered seriously.
13. As a matter of course, ‘spontaneous’ is not spontaneity by its true definition. Kumazawa instead names it ‘compelled spontaneity’ (Kumazawa 2007, p. 117).
14. The most important motivation for spontaneous unpaid overtime work is the desire to achieve a good wage and high status in the future, ignoring short-term losses or pains. It has a certain rational basis. However, this particular labour practice may have spread in Japan, as some researchers note, owing to the effect of a cultural background that gives

- priority to group tasks over individual interests. However, no data exists to prove this supposition.
15. The fact that regularly allowed teleworkers engage in much more holiday teleworking than those who are not allowed must be interpreted carefully, as most companies or organisations that have a regular telecommuting system do not formally allow employees to work during holidays. Therefore, even among employees who work for companies that formally allow telework, there is the strong possibility that their holiday teleworking itself is informal.
  16. The imputed working-hour system is a legitimate payment system for workers who frequently work away from their company office, as employers cannot accurately calculate their working hours. Under this system, the worker is considered to work for normal working hours, even if the actual number of working hours is smaller. However, if the worker must work more than the normal working time or during holidays, under this system, Japanese labour laws require the employer to pay overtime and holiday allowances. Notably, though, many companies pay only a small sum called a 'sales allowance' to their mobile workers instead of granting them overtime and holiday allowances, and force them to work longer or during holidays. This kind of system abuse is considered a disguised form of unpaid overtime work.
  17. In addition to this guideline, the MIC published the 'Telework security guideline' in 2004, which has been revised three times up to and including 2018. However, this is a guideline for 'reference of the examination about information security'; it is not intended to address workers' security (MIC 2018, p. 5).
  18. The 'Guideline for labour hygiene administration of VDT operation' was formulated in April 2002 by the MHLW (MHLW 2002b).

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## APPENDIX: ZAITAKU WORK IN JAPAN

### Executive Summary

In Japan, self-employed ICT workers are seen as performing telework by both the government and researchers. There are few legal protections for these self-employed teleworkers, as most are considered contract workers to whom many labour laws, such as the minimum wage, do not apply. Therefore, many self-employed teleworkers work at wages far lower than the prevailing minimum wage and for longer hours – at times, even during the late night. This night work harms their health and personal lives.

### 1. Self-Employed Telework in Japan

It is well known that self-employed workers who perform their work with ICTs are not generally viewed as teleworkers in European and North American studies (this type of work is typically considered to be part of the so-called ‘gig economy’). However, home-based self-employed workers working with ICT equipment were considered to be the first ‘teleworkers’ in the Japanese workforce. They have since made up the majority of formal Japanese teleworkers, as most Japanese companies’ labour practices and evaluation systems forbid their employees from teleworking.

Further, such home-based teleworking is associated with the most serious types of problems in Japan. Even in Western societies, the low wages and other problems related to ‘crowd workers’ and freelance ICT workers are becoming serious issues. However, Japanese self-employed and home-based telework started before the spread of the Internet, and its problems are particularly serious because they arise from fundamental defects in Japanese worker protection laws. Therefore, self-employed teleworkers are the subject of analysis in this appendix.

As the main text in this chapter analysing Japanese teleworking illustrated, almost 16 per cent of Japanese teleworkers are considered to be self-employed according to research by the MLIT. However, the MLIT’s data do not recognise the division between two types of work. The first is freelance work, which requires work spaces different from usual workplaces involving ICT devices. This type of work is not especially different from typical freelance work, particularly from those jobs that frequently require outside work.

Another type of self-employed telework is *zaitaku* work (stay-home work). *Zaitaku* work is a very peculiar form of work. The majority of Japanese stay-home teleworkers are not employees of any company, but work in their own homes as contract-based freelancers, that is,

*zaitaku*-workers. Generally, *zaitaku* work is organised by specific private agencies via the Internet, and candidates who register with the agency apply for specific orders by negotiating wages, deadlines and the required skills for individual projects. Most telecommuters and mobile workers are male, but most of the *zaitaku* workers are mothers of young children.

*Zaitaku* work is often characterised by extremely low wages and unstable work flows. The Japanese government, which seems eager to promote the telecommuting form, tends to ignore its existence. However, in the early period of the spread of *zaitaku* work, it was regarded as a good source of home-based income.

In Japanese telework studies, *zaitaku* work has long been studied, and an abundance of research on the topic has accumulated. Since most *zaitaku* workers are mothers with young children, some of the earliest questionnaire surveys of this group were conducted by the Women's Bureau of the Ministry of Labour (WBML 1989, 1992).

One of the first studies of *zaitaku* work was conducted in 1988. It found that 97.6 per cent of 207 informants were women, and the majority were aged 30–39 years. Furthermore, 98.4 per cent of the informants were not employed, but worked under a piece rate contract. More than 90 per cent of them engaged in input jobs, such as word processing and data entry, while a smaller percentage were involved in software programming and trace drawing (WBML 1989).

These data show that most *zaitaku* work involved contract jobs performed by mothers with small children from its beginning. However, from the late 1980s and during the first half of the 1990s, their wages were on average not lower than those of non-teleworkers. A WBML study from 1991 shows the wage data for *zaitaku* workers. Among the approximately 1000 respondents, the average monthly income was 93 200 yen, with the average number of working days in a month being 16.2 days, and the working hours per day being 4.4 hours. The hourly wage was on average more than 1300 yen (WBML 1992, pp. 11–13).

Japanese minimum wage varies by prefecture, currently from 762 yen to 958 yen per hour, and it is frequently revised. In 1989, the minimum wage was 575 yen in the Tokyo area, which was the area with the highest minimum wage in Japan (website of Hitome de Wakaru Saitei Chingin). Therefore, at that time many *zaitaku* workers received more than twice the minimum wage per hour, and hence were not low wage earners.

One of the primary reasons for acquiring these higher wages was the scarcity of their ICT skills. In addition, many *zaitaku* workers obtained contracts from former employers, which probably prevented their compensation from decreasing dramatically (WBML 1989, p. 14)

However, as computer skills became more common owing to school

education and widespread adoption of technology, the scarcity value of the skill declined rapidly. By the late 1990s, most *zaitaku* workers were unable to acquire contracts from former employers, as companies chose to employ younger clerks with elementary computer skills.

To address this situation, in the mid-1990s, many *zaitaku* work agents appeared, who mediate between customers and *zaitaku* workers. Most *zaitaku* work agents have their own websites where they continually invite applicants for *zaitaku* work to register for membership.

When an agent receives a contract from a customer, certain pieces of information – such as the job details, compensation and due date – are sent to registered members by e-mail. *Zaitaku* workers who receive the e-mail, after considering their own skill levels, the proffered compensation and the due date, decide whether or not they would like to undertake the job. If they wish to accept the job, they e-mail their decision to the agent. The agent then chooses members suitable for the job from among the applicants by considering their past performance. Following the emergence of *zaitaku* work agents, the oversupply of *zaitaku* workers gradually worsened, and as a result, the fees associated with the work rapidly declined.

Furthermore, a new type of agent has recently appeared that contributes to additional reductions in the rewards for *zaitaku* work. These agents do not declare how much will be paid for the work in question; rather, payment for the *zaitaku* work is determined on the agent's website through a bidding system. In this system, customers tend to select the *zaitaku* worker who offers the lowest bid, and workers who are eager to receive the job compete with one another to reduce their own compensation in order to be selected for a particular task (Sato 2013, p. 64).

There are currently no detailed research studies on the agents that adopt this bidding system, and therefore it cannot be proven whether they cause a greater decrease in *zaitaku* workers' income. However, a review of some contracts made through one agent suggests a decline in compensation.

For example, when a bidding system was employed, the lowest pay level of a concluded contract for translation from English to Japanese was 667 yen per page, and from Japanese to English was 500 yen per page. Even the most skilled and efficient translators would not be able to earn more than the 878 yen of the recent average hourly minimum wage from those projects, since these languages have quite different structures and translation requires considerable time and effort. Thus, it appears that relatively high value-added skills such as translation are now losing their higher compensation owing to the spread of these bidding systems (Sato 2013, p. 65).

## 2. Problems of *Zaitaku* Work

*Zaitaku* workers suffer diverse problems, such as extremely low wages, long working hours and late-night work, because Japanese labour laws do not sufficiently protect contract labourers. However, after these problems became clear, it seemed that the Japanese government tended to ignore research into *zaitaku* work. Therefore, the analysis in this section must rely on older data acquired from small numbers of informants.

### 2.1 The problem of low wages

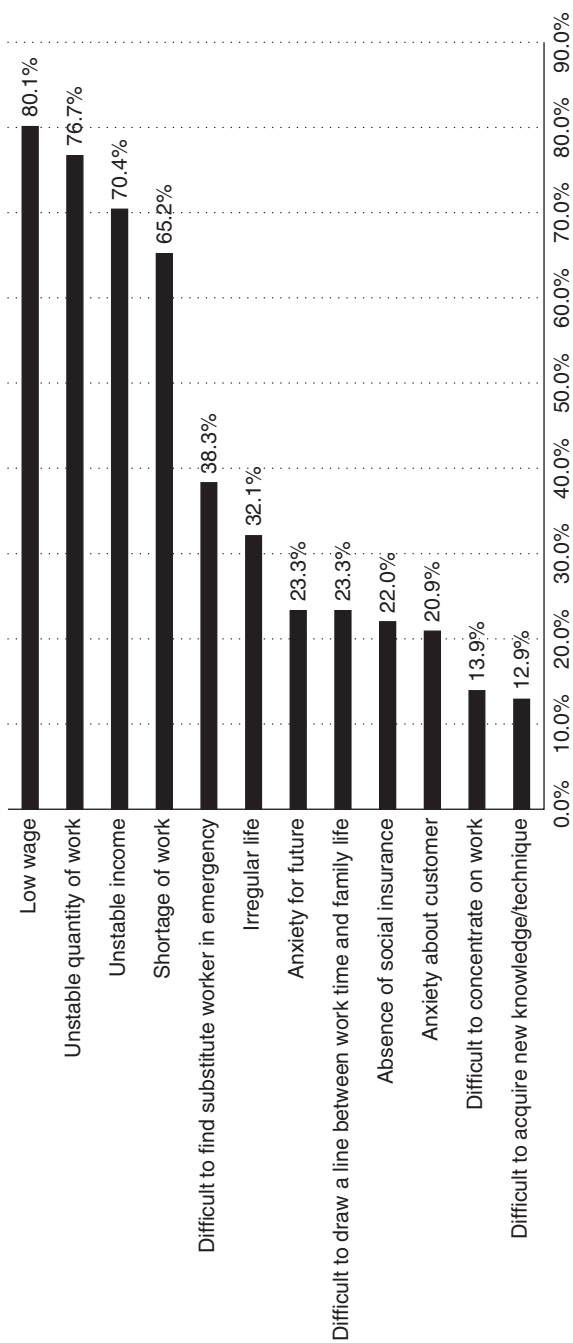
Figure 2A.1 makes use of research data collected from 186 *zaitaku* workers in 2002. These workers were asked about the reasons for their discontentment with teleworking. They most frequently cited ‘low wage’ (80.1 per cent), ‘unstable quantity of work’ (76.7 per cent), ‘unstable income’ (70.4 per cent) and ‘shortage of work’ (65.2 per cent) as negative factors (Sato 2006, pp. 120–1). It may be surmised that their unstable income is created by the unstable quantity of work. Furthermore, the unstable quantity of work frequently refers to an unexpected shortage of work – surplus work is almost never anticipated. That is, their unstable income is caused by a constant or unexpected shortage of work. In addition, a shortage of work accompanied by a low wage led to income shortages.

Table 2A.1 shows the rewards of *zaitaku* work. As might be expected, the rewards related to the work differ by the type of work involved. The highest paid *zaitaku* workers are those who do ‘system design/analysis’, who earn 5714 yen per hour, and earn an average of more than 266 000 yen per month for 46.7 hours of work.

‘Data entry’, which accounts for the largest proportion of *zaitaku* work, earns workers only 498 yen per hour. The second-largest group of workers comprises those who undertake ‘data correction’, but this generates an even lower wage: *Zaitaku* workers who do ‘data correction’ earn 16 600 yen through almost 70 hours of work, corresponding to just 239 yen per hour. Considering that the Japanese minimum wage is 664 yen per hour at the time of the research, these are extraordinarily low earnings.

The compensation paid to most *zaitaku* workers can be lower than the minimum wage fixed by the law for two reasons. First, the minimum wage law does not apply to *zaitaku* work. Almost all *zaitaku* workers are working in their own homes as contract labourers, and their workplace and hours are not restricted. They are not protected through the minimum wage system, because they are not employees.

However, the Home Labour Law of Japan does define the minimum labour charge for home work by contract, but the law does not regulate the minimum labour charge for all types of work at home. By determining



Source: Sato (2006, p. 120–21).

Figure 2A.1 Discontentment with zaitaku work (multiple answers)

Table 2A.1 Rewards of *zaitaku* work, by occupation (multiple answers)

	Number engaged	Rate of engagement	Average hour/month	Average reward (Yen)	Average wage/hour (Yen)
Data correction	79	27.5%	69.5	16600	239
Data entry	116	40.4%	49.0	24300	498
Tape transcription	10	3.5%	54.9	34500	629
Other work	33	11.5%	47.8	48300	1010
CAD operation	7	2.4%	38.6	40100	1041
Web design	13	4.5%	40.5	57900	1432
Desktop publishing	11	3.8%	17.1	25000	1459
Other design	1	0.3%	56.0	110000	1964
Programming	10	3.5%	89.0	193700	2176
Translation	1	0.3%	8.0	40000	5000
Article writing	12	4.2%	21.3	107100	5020
System design/analysis	3	1.0%	46.7	266700	5714

Source: Sato (2006, p. 110).

the minimum charge for some types of typical homework, such as button-sewing and hemming, the law precludes a free-fall decline in the rewards associated with home-based work.

Nevertheless, not even this legislation protects the vast majority of *zaitaku* workers. That is because the minimum labour charge fixed by the Home Labour Law applies only to the production or processing of materials. In contrast, most *zaitaku* workers are producing or processing information, which is not included in physical materials. For this reason, the law cannot determine the minimum compensation for *zaitaku* work.

The second factor contributing to the low compensation for *zaitaku* work is the imbalance between demand and supply. Until the early 1990s, *zaitaku* workers were relatively well-compensated. However, as computer skills became more common, the scarcity of their skills rapidly declined, and their wages concurrently declined. Especially after the entrance of many *zaitaku* work agencies, huge numbers of *zaitaku* workers entered the workforce, which resulted in an oversupply of these workers.

If the *zaitaku* workers who earn less than half the minimum wage were to work away from their own homes, they would be able to earn more than the legally fixed minimum. However, as it stands, they are barely protected by extant labour laws owing to their work-from-home contract-based situations.



## 2.2 Health problems and night work

Health problems and night work are two serious and closely related problems for many *zaitaku* workers.

A survey report from the Japanese Institute for Labour (JIL) on 270 *zaitaku* workers found that 81.4 per cent reported eyestrain, 70.8 per cent suffer from stiff shoulders, 49.2 per cent from lower-back pain and 16.1 per cent from stomach ache (JIL 1998, p. 152). A later JIL report announced that among 92 *zaitaku* workers, 48.9 per cent have complained about eyestrain, lower-back pain or stiff shoulders (JIL 2002, p. 57). These data confirm the seriousness of the health problems related to these work systems.

The JIL reports do not clarify the relationships between the teleworkers' physical problems and their working conditions; indeed, it seems that almost no research has been conducted on this relationship in Japan.

Only one study has analysed the relationship between the physical and mental fatigue of *zaitaku* workers and their working conditions (Takahashi and Kawai 2002, pp. 191–6). That study – which collected responses from 95 female *zaitaku* workers – shows that with respect to physical fatigue, 11.6 per cent 'always feel fatigue', while 13.7 per cent felt that 'fatigue remains even in the morning'. Furthermore, 9.5 per cent of the respondents felt that 'fatigue remains at bedtime', and 40.0 per cent complained about the 'fatigue remaining after work'. Regarding their mental condition, 10.5 per cent of respondents were suffering from 'strong fatigue', and 28.4 per cent felt 'somewhat tired'.

In total, 44.6 per cent of the respondents were affected by mental fatigue, 25.3 per cent were suffering from some degree of physical fatigue and 17.9 per cent had both physical and mental ailments.

The research data indicate relationships between physical/mental fatigue and long work times or late-night work. Regarding long work times, 34.4 per cent of the respondents who felt an 'accumulation' of 'physical fatigue' had worked more than 50 hours per week, whereas only 16.9 per cent of the 'no accumulation' group had worked more than 50 hours. Furthermore, 30.6 per cent of the respondents who felt an 'accumulation' of 'mental fatigue' had worked more than 50 hours, whereas just 17.4 per cent of the 'no accumulation' group had worked more than 50 hours (Table 2A.2).

Many *zaitaku* workers not only work long hours but also work late into the night because they often need to balance childcare or elder care with wage work. This night work harms worker health, and further promotes difficulties in distinguishing between working time and free time.

Research data from 186 *zaitaku* workers shows that 68.9 per cent usually work in their own home from 21:00 to 24:00, and 39.3 per cent work from

Table 2A.2 *Fatigue accumulation and working hours per week*

Teleworking hours/week	Physical fatigue		Mental fatigue	
	No accumulation	Accumulation	No accumulation	Accumulation
Fewer than 9 hours	16.9%	21.7%	17.4%	22.2%
10-19 hours	8.5%	8.7%	6.5%	13.9%
20-34 hours	39.0%	17.4%	39.1%	25.0%
35-49 hours	18.3%	17.4%	19.6%	8.3%
More than 50 hours	16.9%	34.8%	17.4%	30.6%

Source: Takahashi and Kawai (2002, p.192).

Table 2A.3 *Night telework of zaitaku workers*

	18.00–21.00	21.00–24.00	24.00–4.00
Usually work at (multiple answer)	30.6%	68.9%	39.3%
Mainly work at (single answer)	6.1%	24.5%	11.2%

Source: Sato (2009), recalculated.

24:00 to 4:00. In addition, for 24.5 per cent of *zaitaku* workers, 21:00 to 24:00 is the main teleworking time period (Table 2A.3). Mothers of small children comprise a major proportion of *zaitaku* workers, and they choose to engage in teleworking to ‘combine childcare and wage work’. They more frequently work during late-night time periods because they wish to work after their children have gone to bed.

The relationship between late-night work and physical fatigue is easily identifiable: in the research of Takahashi and Kawai (2002), 79.2 per cent of the respondents who had accumulated ‘physical fatigue’ had worked until late at night, but the proportion of ‘no accumulation’ respondents who had worked during that time period was almost 20 percentage points lower (Table 2A.4).

These data are collected from the answers of a limited number of respondents, and so they cannot represent the overall picture of night teleworking. However, it is clear that night teleworking often leads to serious health problems.

Table 2A.4 *Fatigue accumulation and working time period (multiple answers)*

Time period of teleworking	Physical fatigue		Mental fatigue	
	No accumulation	Accumulation	No accumulation	Accumulation
Early morning	18.3%	25.0%	23.9%	21.6%
Late morning	53.5%	45.8%	47.8%	56.8%
Afternoon	77.5%	75.0%	73.9%	78.4%
Evening	36.6%	33.3%	32.6%	32.4%
Midnight	60.6%	79.2%	65.2%	62.6%

Source: Takahashi and Kawai (2002, p.192).

### 3. Policy Responses to *Zaitaku* Work

As has been noted, there is no law protecting home-based ICT contract workers in Japan. Only the following guideline made by the MHLW has proposed some rules for private companies and other organisations who make contracts with *zaitaku* workers. However, this guideline contains only recommended goals and has no legally binding power.

The MHLW decided in June 2000 on a guideline dealing with *zaitaku* work and amended it in March 2010; the guideline is titled ‘*Zaitaku-waku no Tekisei na Jissi no tameno Gaidorain*’ (Guideline for Appropriate Execution of *zaitaku* work). According to the MHLW, the purpose of this guideline is to prevent conflicts that relate to contract-based *zaitaku* work in order to make it a satisfactory type of working arrangement. To protect workers, the guideline sets concrete requirements with which employers of *zaitaku* workers should comply.

The major requirements of the guideline are:

- 1) Elucidation and preservation of contract terms, in document form, including: contents of ordered work, amount/date/means of payment, treatment of necessary expenses, deadline/place/means of delivery, treatment on the occasion of changes in contract conditions, treatment of imperfect products/missed deadlines, treatment of intellectual property rights of product, and treatment of personal data.
- 2) Fairness of contract terms: fairness of payment day, compensation, and deadline of delivery. (MHLW 2000, pp.9–11)

One of the most important problems relating to this guideline is the ambiguity of the word ‘fairness’. The minimum wage and labour charge

regulations do not apply to *zaitaku* work, and therefore, there is no impartial standard for the compensation offered for such work.

After the announcement of the guideline, the MHLW established some policies to support *zaitaku* workers. For example, as a part of the MHLW's 'Zaitaku Syugyosya Sogo Shien Jigyo' ('General support project for home-based workers'), the Home Workers website was established, which recommends *zaitaku* work. Further, as a project of 'Hitori-oya Kate Sogo Shien Jigyo' ('General Support program for mother-child families'), the MHLW executes 'Hitori-oya Kate no Zaitaku Syugyo Suishin Jigyo' ('Home-based work supporting project for one-parent families') (MHLW 2015). This project primarily targets single mothers who have small children, aiming to support them by enabling them to engage in *zaitaku* work.

However, these support programmes for *zaitaku* work have been severely criticised. The rewards of *zaitaku* work are generally very low and highly unstable. If many mother-child dyad families were to rely exclusively on this type of work, it is very likely that they would become members of the working poor (Takano 2011, p. 19).

#### 4. Conclusion

In the case of *zaitaku* workers, extremely low compensation, health troubles and late-night work are typical problems. *Zaitaku* workers are not protected even by the legal minimum wage and industrial safety and health laws. Instead, it seems that *zaitaku* work has come to be used as a method of evading laws that would protect non-teleworking home workers or information workers who work in a standard office employment environment. In this context, developing legal frameworks that protect home workers who engage in producing or processing information – and not just materials – is an urgent issue.