

Japan Labor Review

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Special Edition

Current Employment Situation of Persons with Disabilities and Employment Support

Articles

Japan's Employment Rate of Persons with Disabilities and Outcome of Employment Quota System

Tadashi Kudo

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Article Based on Research Report

Research Study on Diversification of Working Places and Working Hours

Kazuya Ogura

JILPT Research Activities



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NEXT ISSUE (Summer 2010)

The summer 2010 issue of the Review will be a special edition devoted to **Current Situation of Japan's Foreign Labor Policy**.

Introduction

Current Employment Situation of Persons with Disabilities and Employment Support

Recently, based on the concept of international normalization, Japanese government has promoted efforts toward the realization of a society in which everyone, with or without disabilities, can obtain equal employment opportunities. This issue introduces the historical transformation of legal systems on employment of persons with disabilities as well as reviewing the current employment situation of persons with disabilities in Japan. It also introduces papers which discuss the analysis of the effect of levy and adjustment subsidies for increasing employment opportunities for persons with disabilities from the economic viewpoint and the concrete ways and cases of assistance for employment of persons with disabilities in companies.

From an international standpoint, there are two approaches to expand employment opportunities for persons with disabilities: introduction of (i) a legal system on the antidiscrimination law and (ii) an employment quota system. The former approach forces employers to improve working environment for individual disabilities and calls for a penalty to those who breach the order for improvement as discrimination. The typical former approach is Americans with Disability Act (ADA) in the U.S. The latter approach legally provides a certain ratio of employment for persons with disabilities (the legally-prescribed minimum employment rate), obliges employers to hire persons with disabilities and imposes a levy on those who do not meet the minimum employment rate. Japan has introduced the latter approach and the effect of this system is discussed in several papers in this issue.

Kudo reviews Japan's employment situation of persons with disabilities from the perspective of comparisons with statistical surveys conducted by international organizations. Kudo points out that global average of appearance ratio of persons with disabilities is about 10% of the world's population while those in Japan is only 5% of the population according to the data released by the government, which shows that Japan's definition and scope of persons with disabilities are narrower than those in other countries. He also points out that although definitions and scope of persons with disabilities vary in different countries and therefore a strict international comparison is difficult, the employment rate of working-age persons with disabilities in Japan is relatively higher compared with data of OECD and the U.S. He also verifies the increase in the number of employees with disabilities working for private companies covered by the legally-prescribed minimum employment rate system for 16 years from 1993 to 2009 and mentions that total number of persons with disabilities has greatly increased from 2003 to 2009 and Japan's employment quota system has had a positive impact on the employment of persons with disabilities. On the other hand, he points out problems that the number of employed persons with disabilities in companies with less than 56 employees shows a downward trend, the percentage of employed persons with disabilities as general employment is low and many of those are working as welfare-oriented employment. He finally says, "it would be important that companies should more actively improve employment conditions and a working environment for making full use of their abilities in consideration of human-rights protection and disabilities at work and establish a

mechanism to socially monitor the development process and the government and society develop supporting policies.”

Hasegawa reviews various policies on employment of persons with disabilities centered on the historical transformation and specific contents of “Act on Employment Promotion etc. of Persons with Disabilities” which forms the foundation of Japan’s measures for employment of persons with disabilities. Act on Employment Promotion etc. of Persons with Disabilities consists of the following two pillars: (i) a quota system which is introduced by Kudo’s paper and (ii) a levy system for employment of persons with disabilities which charges employers a sanction when they cannot achieve the legally-prescribed minimum employment rate. Hasegawa states that “‘prohibition of discrimination on the basis of disability’ approach including ADA in the U.S. has expanded from an international standpoint while the ‘quota approach’ has been traditionally adopted and has a major impact on the employment of persons with disabilities in Japan. The ‘quota approach’ obliges employers to employ a certain percentage of persons with disabilities and imposes sanctions against those who fail in their obligation. The importance of this quota approach never changes even after the enactment of an antidiscrimination law for persons with disabilities.” She summarizes the enactment, historical transformation and contents of the Act on Employment Promotion of Persons with Disabilities centered on “employment quota system” in which the concept of the quota approach is concretely institutionalized.

Tsuchihashi and Oyama examine the effect of the disability employment levy-grant scheme which is implemented in connection with the employment quota system and the achievement of minimum employment rate from the economic viewpoint. Under Japan’s employment quota system, employers with 56 workers or more should employ persons with intellectual or physical disabilities at least as many as 1.8% of the total employees; upon failing, those with 301 workers or more have to pay a levy of 50,000 yen per person a month for the number short of the quota, or otherwise those who meet the quota receive a grant of 27,000 yen per extra person a month. They demonstrate that it is socially inefficient to uniformly impose an employment quota of rate on all firms due to the fact that different firms have different capacities in employing persons with disabilities depending on their businesses, facilities, or other various factors and, evaluates the current levy-grant system which can be utilized as an instrument that provides each firm with incentives to achieve its optimal employment level. They also introduce “Vickrey auction mechanism” and advocate applying it as a method to determine the levy-grant level to achieve an efficient employment of persons with disabilities.

In order to promote the employment of persons with disabilities, it is necessary to provide information and services so that establishments can positively employ persons with disabilities while increasing the employment rate by implementing legal regulations on the establishments. Yoda introduces results of interview and questionnaire surveys with employers and those in charge of human resources asking what kind of issues on employment of persons with disabilities companies have and what kind of support they need and clarifies that they are concerned about lack of understanding and know-how in sections where persons with disabilities are to be assigned. Then the point is what kind of support is spe-

cifically possible and effective for such companies feeling anxious about it. In this paper, he introduces the Job Coach System as a concrete example of employment support services. Although the visibility of the Job Coach System among companies is not so high according to the survey results, companies which have actually introduced the system recognize the effect. Yoda concludes that employment support services which are profoundly involved in workplaces will prove effective for expanding the competitive employment of persons with disabilities.

Lastly, Inose shows examples that employers' awareness and understanding of persons with disabilities promote the employment of them. This paper analyzes what are characteristics of workplaces where persons with intellectual disabilities can exercise their abilities and work with vigor and enthusiasm based on the cases of several special subsidiary companies. Using some successful cases, he analyzes the way of using persons with intellectual disabilities on the basis of their disability characteristics, organizational operation, acquirement of skills and evaluation methods of their working abilities and then, finds that there are well-defined efforts in the daily business management in which ordinary companies of non-disabled people have never done. With a good understanding of characteristics of persons with disabilities as well as extra care and consideration such as proper work assignment and environmental arrangement, a working environment in which they can exercise their abilities would be achieved.

In order to realize a society where persons with disabilities can live independently, it is necessary to create a mechanism so that they can get jobs and achieve economic independence. To that end, it is important to establish a system to increase the employment rate in companies and establishments, and a legal framework, i.e., Act on Employment Promotion of Persons with Disabilities, has been promoted in Japan. On the other hand, there is concern that persons with disabilities are employed just to meet companies' legally-prescribed minimum employment rate. To realize a true normalization, a proper working environment and support are needed for those with disabilities who are willing to work not only for their economic independence but for satisfaction in their work.

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Japan's Employment Rate of Persons with Disabilities and Outcome of Employment Quota System

Tadashi Kudo

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Although there is no strict international definition of persons with disabilities, I examined the employment situation of persons with disabilities in Japan in this paper using government statistics and statistical surveys by the U.S. and international organizations. The appearance ratio of persons with disabilities is 10% of the world's population while in Japan it is only 5%. It suggests that Japan puts a narrow definition on persons with disabilities. It was also found that Japan's employment rate of working-age persons with disabilities is relatively higher than other countries. From an international standpoint, there are two approaches to expand employment opportunities for persons with disabilities: introduction of (i) a legal system on the antidiscrimination law and (ii) an employment quota system (legally-prescribed minimum employment rate system). Japan has introduced the latter approach. Looking at changes in the number of persons with disabilities working for companies which are covered by the employment quota system for 16 years, the system has brought about substantial results. On the contrary, the employment rate of persons with disabilities in the U.S. which has a typical anti-discrimination law, Americans with Disabilities Act (ADA), is lower than that of Japan and the employment rate has not really increased even after the introduction of ADA. It was confirmed that the strengthening of a typical antidiscrimination law for persons with disabilities does not necessarily bring about the expansion of job opportunities for them.

I. Introduction

The World Health Organization's (WHO) International Classification of Functioning, Disability and Health (ICF) has recently emerged on the basis of a new perspective on persons with disabilities and environmental coordination factors around persons with disabilities have also received attention. In addition, persons with disabilities have been regarded as not non-workforce but participants in the labor market and their employment issues have been emphasized. Partly for that reason, improvement of the legal system on employment of persons with disabilities, government projects and environmental coordination such as companies' correspondence have also attracted attention. However, in Japan, there has been no government statistics introducing this new perspective on persons with disabilities yet.

In this paper, I will reveal the characteristic employment situations of persons with disabilities in Japan utilizing government statistics and statistical surveys by international organizations. First, I will describe the characteristics on definition and scope of persons with disabilities in Japan from an international standpoint. Second, I will examine the level of Japan's employment rate of working-age persons with disabilities except those aged 65 or over from an international point of view. Third, I will examine whether or not the employment quota system for persons with disabilities which plays an important role for the employment of them in Japan

has brought about increase in their job opportunities compared with the government statistics of the U.S. which has introduced a typical antidiscrimination law, Americans with Disabilities Act (ADA).

II. Scope and Definition of Persons with Disabilities

1. Emerging of New Perspective on Persons with Disabilities

Nothing is more varied than the concept of “(persons with) disabilities” in the social science of the 20th century. Different “from attributes like sex and age, the definition and scope of persons with disabilities have drastically changed depending on the country and the period so it is hard to clarify. Recently, aiming to establish a common framework which allows international comparisons, WHO’s (2001) International Classification of Functioning, Disability and Health (ICF) has emerged.

ICF regards “disability” as a comprehensive concept indicating the following three disadvantage levels; (i) impairment, (ii) activity limitations and (iii) participation restrictions. It also considers that disabled states emerge differently depending on the relationship between these three levels or the effect of environmental and personal factors.

Although any definition or classification of (persons with) disabilities which allows strict international comparisons has not been established yet even among developed countries, ICF is expected to expand as a universal language and scale. ICF has been introduced and described at different situations in Japan and the environmental coordination has drawn a lot of attention while there is no new government statistics on disabilities prepared on the basis of this concept so far.

2. Global Average Appearance Ratio of Persons with Disabilities Is about 10%

According to WHO’s statistics, the number of persons with disabilities is 610 million, i.e., 10% of the world’s population (International Labour Organization 2001). In a very difficult situation of international comparison of persons with disabilities, Organization for Economic Cooperation and Development (OECD) collected the government data on persons with disabilities in the late 1990 from member countries (Japan was not included) for international comparisons including the number and employment situations of persons with disabilities (OECD 2003). The ratio of persons with disabilities (appearance ratio) of the total working-age population aged 20 to 64 in twenty countries was 14% on average (11 EU member countries, 16% and the U.S., 11%).

In the survey conducted by EU in 2002, the appearance ratio of persons with disabilities of working-age population aged 16 to 64 is 16.4% (EUROSTAT 2003). The ratio varies depending on the country and shows a wide distribution: the highest is Finland, 32.2%, and the lowest is Italy, 6.6%.

Although a strict international comparison is difficult due to differences on definition and scope of disabilities, it can be said that the appearance ratio of persons with disabilities is gener-

ally the 10% level.

3. Appearance Ratio of Persons with Disabilities Is 5% in Japan

Japanese government has also introduced a new perspective on (persons with) disabilities and emphasized on the environmental coordination in “Basic Programme for Persons with Disabilities” approved in a Cabinet meeting in December 2002. The Basic Act for the Disabled Persons defines persons with disabilities as “persons who are continuously subject to substantial limitations of daily and social living due to physical, intellectual or mental disabilities.” Three welfare acts for persons with disabilities, Physically Disabled Persons Welfare Act, Act for the Welfare of Mentally Retarded Persons and Mental Health Act, correspond to these three disabilities and Japan has had a system of disability certificates issued on the basis of self-certification and judgment by medical staff.

From an international standpoint, Japan's definition and scope of persons with disabilities are narrower and the appearance ratio of them is lower. According to the government's announcement, Japan's total number of persons with disabilities is about 7.09 million (Cabinet Office 2007), i.e., the ratio of them (appearance ratio) is about 6% of the total population, 127.77 million (2005 Census). Focusing on working-age people aged 18 to 64, the number of persons with disabilities is 3.6 million, meaning that the appearance ratio of them is further lower, 4% of the population among that age group, 80.27 million. More than 60% of persons with physical disabilities are elderly people aged 65 or over and the number of persons with mental and intellectual disabilities is equivalent to that of those with physical disabilities. It shows a great difference compared with the U.S. government statistics.¹

Given that there is no significant difference of appearance ratio of persons with disabilities especially among developed countries, since foreign data's scope of persons with disabilities is wider, it is reasonable to compare Japan with foreign countries by the number of persons with severe disabilities.

III. Current Working and Employment Situations of Persons with Disabilities

1. Employment Rate of Persons with Disabilities

It has become very important to recognize modern employment and working issues of persons with disabilities as not welfare problems but problems within the labor market. The best fundamental indicator to understand employment situations of persons with disabilities is

¹ According to the American Community Survey 2006, total number of persons with disabilities aged 16 and over is 38,430,000, the percentage of those aged 65 or over is 37.9% and persons with mental disabilities including those with intellectual disabilities account for 35% of the entire persons with disabilities. These values are significantly different from that of Japan (estimates).

Table 1. Employment Situations of Persons with Physical, Intellectual and Mental Disabilities in 2006

(Unit: 1,000 person, %)

Persons with disabilities	Total	Physical	Intellectual	Mental
a. People aged 15 to 64	2,050	1,344	355	351
b. Employed	826	578	187	61
c. Regular workers	335	280	35	20
d. Workers in welfare setting	172	38	111	23
e. Employment rate (= b/a×100)	40.3	43.0	52.7	17.4
f. Ratio of regular workers (= c/b×100)	40.6	48.4	18.7	32.7
g. Ratio of workers in welfare setting (= d/b×100)	20.8	6.6	59.4	37.7

Note: This table was prepared by the author based on the *Results of Survey on Employment Situations of Persons with Physical, Intellectual and Mental Disabilities 2008* of the Ministry of Health, Labour and Welfare.

“employment rate of persons with disabilities” in which the denominator is the population of working-age persons with disabilities aged 15, 16 or 20 to 64 and the numerator is the number of employed persons with disabilities. Persons with disabilities are often regarded as “non-workforce” due to employment conditions, delayed workplace environment coordination, etc. and therefore, “labor force participation ratio” and “unemployment ratio” which are traditional fundamental indicators to understand the macro-labor market are not effective. EU’s recent statistics also utilized “employment rate of persons with disabilities” (EUROSTAT 2003). “Employment rate of persons with disabilities” should be more emphasized as a numerical policy goal.

Table 1 shows entire employment situations of working-age persons with three disabilities, physical, intellectual and mental ones aged 15 to 64 based on data collected from households with persons with disabilities. Total employment rate of persons with three disabilities is 40.3%. The highest ratio is persons with intellectual disabilities (52.7%) followed by those with physical abilities (43.0%) and mental disabilities (17.4%). In the case of persons with intellectual disabilities, the overwhelming majority is “Workers in welfare setting” (i.e. welfare-oriented employment) who account for 59.4%.

“Welfare-oriented employment”² means activities with income (labor charge, etc.) in welfare facilities such as vocational aid centers and small workshops where staff members (instructors, etc.) are allocated. Since there is no employment agreement, this is not covered in any

² Matsui (2009) positions “welfare-oriented employment” as alternative employment (sheltered employment) for persons with disabilities who can hardly find a job in the labor market and clarifies that their average labor charge is much lower than the minimum wage.

labor relations act and falls into the category of “self-employed individuals,” e.g., “one-man master” with no employee and “individual contractors,” in the government statistics.

Partly for the reason of differences between definitions and scopes of disabilities, there is considerable difficulty in international comparison of statistics on persons with disabilities, especially employment statistics (National Institute of Vocational Rehabilitation 1998). According to OECD (2003), the employment rate of persons with disabilities in 14 OECD member countries in the late 1990s is 41.3%. Focusing on persons with severe disabilities, the employment rate is 24.5%. The employment rate of person with disabilities in 11 EU member countries is 40.8% and that of those with severe disabilities is 24.9%. There is a wide gap of employment rate between persons with and without disabilities and between those with severe and light disabilities. Although there are differences of approaches on policies for expanding employment of persons with disabilities depending on the country, the employment rate of them is low, less than 50%, i.e., there is little difference between countries.

The employment rate of persons with disabilities in Japan is close to above mentioned that of 14 OECD countries and 11 EU member countries, but focusing on persons with severe disabilities, the employment rate is 25%, significantly lower compared with that of Japan's persons with disabilities, 40% (see Table 1). It should be noted, however, that 20% of persons with disabilities in Japan are “welfare-oriented employees” who are not covered in any labor relations act but work with low labor conditions. I will limit “employed” to workers other than “welfare-oriented employees” in the following.

2. Employee Workers with Disabilities

Table 2 was prepared focusing on “employee” workers with disabilities. Currently, there are following two Japanese government statistics which comprehensively clarify situations of employees with disabilities in chronological order: (i) the Survey on the Employment Situation of Persons with Disabilities (latest survey: 2008) which is conducted once every five years by the Disabled Workers' Affairs Division of the Ministry of Health, Labour and Welfare and (ii) the Report on Employee Situations which is conducted in association with the quota system for persons with disabilities. Both collect information from companies and business offices. The former survey is also used for numerical goals of government programs. Since the Survey on Employment Conditions of Persons with Physical, Intellectual and Mental Disabilities used for above employment rate of persons with disabilities collects information from households, the survey method is quite different.

Table 2 summarizes Japan's entire structure of employees with disabilities as of two time points based on fundamental information from these two surveys on the employment of them. It tells that total number of regular workers with disabilities is 488,000 of 2008 including private and public sectors, decreased by 33,000 compared with that in 2003.

More than 90% of employed with disabilities are working for private companies. Focusing on private companies, the number of them decreased by 35,000. According to type of disabilities, the numbers of persons with physical and intellectual disabilities decreased while

Table 2. Situations of Employees with Disabilities: Comparison of 2003 with 2008

		(Unit: 1,000 person)	
Survey		2003	2008
A.	Survey on private establishment with 5 or more employees	483	448
	Persons with physical disabilities	369	346
	Persons with intellectual disabilities	114	73
	Persons with mental disabilities	13	29
B.	Survey on private companies with 56 or more employees	181	242
C.	Survey on public sectors	38	40
	Total (= A+C)	521	488

Sources: Disabled Workers' Affairs Division, Ministry of Health, Labour and Welfare, *Outline of Survey on the Employment Situations of Persons with disabilities 2003, 2008* for A; Disabled Workers' Affairs Division, Ministry of Health, Labour and Welfare, *Report on the Employment Situations of Persons with Disabilities 2003, 2008* for B and C.

Note: Table 2 was prepared by the author based on the above sources. "Public sectors" include the government, local authorities, special public corporations, prefectural education boards, etc.

that of those with mental disabilities increased. The ratio of persons with physical disabilities accounts for 76 to 77% among those working for private companies and there is no difference between two time points.

The highest percentage of disability types among persons with physical disabilities in private companies which is not shown in Table 2 is "crippled" (37%), followed by "internal impediment" (35%), "auditory/language impairment" (17%) and "visual impediment" (5%) (Disabled Workers' Affairs Division, Ministry of Health, Labour and Welfare 2009a). 58% of persons with physical disabilities had disabling conditions before entering the company while 31% of those who had disorders after entering the company.

Table 2 shows that total number of persons with disabilities working for private companies with 56 or more employees and public sectors which are covered by the system of legally-prescribed minimum employment rate (employment quota system) for persons with disabilities is 282,000 as of 2008, accounting for 57% of entire employees with disabilities. Focusing on private companies, the ratio becomes 54% (=242,000/448,000 × 100). This also tells that the legally-prescribed minimum rate system plays an enormous role in employment of persons with disabilities.

3. Employment Placement Situations at Public Employment Offices and Employment Rate of Special Need Education High Schools

Unemployment rate is a fundamental indicator of labor market conditions. Since there is no statistics for unemployment rate of persons with disabilities in Japan, the number of job seekers surveyed by the public employment offices ("Hello Work") is utilized as an acting

Table 3. Employment Placement Situations at "Hello Work" (2000-2008)

	FY2000	FY2003	FY2006	FY2008
Number of applications for new jobs (a)	77,612	88,272	103,637	119,765
Number of effective job seekers	131,957	153,544	151,897	143,533
Number of employed job seekers (b)	28,361	32,885	43,987	44,463
Employment rate (%) (b)/(a)×100	36.5	37.3	42.4	37.1

Source: Ministry of Health, Labour and Welfare, *Employment Placement Situations for Persons with Disabilities*.

indicator. The number of applications for new jobs has increased from 77,000 in 2000 to 120,000 in 2008 (numbers of persons with physical, intellectual and mental disabilities are 65,000, 24,000 and 28,000 respectively) indicating that persons with disabilities have a strong incentive to seek jobs (see Table 3).

The number of employed job seekers exceeds 30,000 a year which is the target value of the government's basic plan for persons with disabilities. Annual number of employed job seekers has recorded a substantial increase from 28,000 in 2000 to 44,000 in 2008. However, partly for the reason of increase in the number of job seekers, the ratio of employed job seekers against new job seekers (= employment rate) shows little change; 36.5% in 2000 and 37.1% in 2008.

Next, I will discuss new entries to the labor market based on the employment situations of new graduates from School Basic Survey conducted by the Ministry of Education, Culture, Sports, Science and Technology. The number of graduates from high schools for the blind, deaf and other disabled which are special support educational institutions with many of persons with disabilities is more than 10,000 a year (see Table 4). The number of those has increased from 11,000 in 2000 to 14,000 in 2007. After the graduation, however, few people went to colleges and the ratio of people employed as general employment except welfare-oriented employment is also extremely low, at the 20% level. On the contrary, it is notable that more than half of the graduates went to welfare facilities/medical institutions including many of those working as welfare-oriented employment.

Although the number of employed people directly out of special support high schools has increased recently, the employment rate is still at a low level and shows little change. In addition, few people are hired as employees. Young people with disabilities directly move from schools into welfare-oriented employment or unemployment. These are serious problems.

Table 4. Career of Graduates from Special Support High Schools (2000-2007)

	Graduation year			
	March 2000	March 2003	March 2006	March 2007
Total number of graduates	11,223	11,480	13,835	14,284
College students	532	175	542	481
Education/training institutions, etc.	386	390	532	512
Employed people	2,609	2,219	3,148	3,304
Welfare facilities/medical institutions	6,175	6,815	7,769	8,256
Others	1,521	1,881	1,862	1,731
Ratio of employed people (%)	23.2	19.3	22.7	23.1

Source: Ministry of Education, Culture, Sports, Science and Technology, *School Basic Survey*.

IV. Results of Employment Quota System and Antidiscrimination Law

1. Employment Quota System (Legally-Prescribed Minimum Employment Rate System) and Antidiscrimination Law for Persons with Disabilities

Developed countries have changed their policies from conventional negative ones centered on income security to positive ones aiming at participation/integration of persons with disabilities in the labor market with environmental coordination.

Every developed country tries to secure and expand job opportunities for persons with disabilities creating legal regulations on the labor market. There are currently two approaches from an international standpoint: (i) a legal system on the antidiscrimination law and (ii) a legally-prescribed minimum employment rate system (Thornton and Lunt 1997; Japan Institute for Labour Policy and Training 2004, table 10-15).

The typical former approach is Americans with Disability Act (ADA) enacted in the U.S. in 1990 and that act has also been introduced in the U.K., Canada, Australia, New Zealand, etc. Recently, EU and the United Nations have also advocated and strengthened this approach (O'Reilly 2007; Hamaguchi 2001). It can be said that this approach is a system of indirect regulation and intervention in the labor market.

The latter approach legally provides a certain ratio of employment for persons with disabilities (employment quota system = legally-prescribed minimum employment rate system). The stronger type of this approach obliges employers to hire persons with disabilities and calls for a penalty to those who do not meet the minimum employment rate and has been introduced by Japan, Germany and France. There are various types of this approach depending on the degree of legal force and many European and Asian countries have introduced it. It is a system of direct regulation and intervention in the labor market and regarded as one of affirmative actions. ILO and EU also admit the existence of this system.

Looking at differences between these two approaches, the former is a system of indirect regulation and intervention in the labor market, forces employers (companies) to improve

working environment for individual disabilities and calls for a penalty to those who breach the order for improvement as discrimination. The latter is a system of direct regulation and intervention in the labor market, sets a legally-prescribed minimum employment rate for persons with disabilities and obliges employers to hire them to meet the minimum employment rate but leaves the decision on whether or not to improve working environment up to companies.

Regarding the employment quota system for persons with disabilities, the following seven weak points are pointed out (National Institute of Vocational Rehabilitation 2002; Waddington 1995): (i) people are labeled as persons with disabilities in the operation of the system, (ii) companies prefer to pay a penalty rather than employ persons with disabilities, (iii) it is difficult to set effective sanctions to force/strengthen the system, e.g., increase in penalty, (iv) since it is not a qualitative but a quantitative regulation for employment, low wages and underemployment are likely to remain, (v) it is difficult to meet the multiple and diversified needs of persons with disabilities, (vi) there is no evidence that it expanded or promoted the employment of persons with disabilities and (vii) it works for full employment but the effect is diminished in the economic recession.

The weak points of Japan's legally-prescribed minimum employment rate system are often pointed out since more than half of companies cannot meet the requirement and the employment rate of persons with disabilities has shown little rise. On the other hand, the approach of antidiscrimination law for persons with disabilities regards additional expenses for individual employment cases of persons with disabilities as companies' burden and the problem how to deal with such unbalanced burden of additional expenses still remains. The expansion of employment for persons with disabilities cannot be expected with this approach from this point of view (Asao 1998).³

I will compare and verify the results of two approaches on the basis of fundamental indicators such as increased/decreased number of employees with disabilities and employment rate below.

2. Japan's Quota System

Japan's quota system for persons with disabilities has strong compelling force to place an obligation of employment on companies (employers), calls for a levy to those who do not meet the minimum employment rate and provides adjustment subsidies and financial incentives from the levy as resource to those who meet the requirement. It also provides grant to companies which improve the working environment, i.e., it has a mechanism to adjust economic burdens associated with employment of persons with disabilities between companies.⁴ It has also made

³ Sekikawa (2000) also points out that the legal system on antidiscrimination law for persons with disabilities is not directly linked to the expansion of job opportunities and it is important to distinguish the two approaches.

⁴ According to the balance of payments for employment of persons with disabilities in fiscal year 2005 (Labor Policy Council, Ministry of Health, Labour and Welfare 2007a, 2007b), total income of payments is

efforts, e.g., a person with severe disability is counted as two people for calculating the number of persons with disabilities and the employment rate can be calculated including special subsidiaries.⁵

The Act on Employment Promotion etc. of Persons with Disabilities stipulates that companies (employers) shall promote the employment of persons with disabilities with the concept of social solidarity and let companies with 301 or more employees which do not meet the requirement pay a “levy.” Since “levy” is different from “fine,” companies are not excused from the employment obligation with the levy (Soya 1998). This is the important difference between “levy” and “fine.”

In order to clarify the effect and results of Japan’s quota system for persons with disabilities, increased number of persons with disabilities working for private companies which are covered by the legally-prescribed minimum employment rate system for 16 years from 1993 to 2009 is summarized and shown in Table 5.

During this time, the legally-prescribed minimum employment rate was raised from 1.6% to 1.8% and the scope of the law expanded from companies with 63 or more employees to those with 56 or more employees. Although persons with mental disabilities are exempt from the employment obligation, they have been able to be counted for calculating the employment rate since 2006 if already working for companies.

Focusing on “actual employment rate” (average of actual/measured employment rate of persons with disabilities), it increased by 0.22 point from 1.41 to 1.63. It has especially increased since 2003. It should also be noted, however, that the ratio of companies which do not meet the minimum employment rate has expanded from 49% to 55%. The ratio shows downward trend compared with 2003 while more than half of companies still do not meet the legally-prescribed minimum employment rate for persons with disabilities even according to the latest figures.

Looking at Table 5 in greater details, the following five things are found:

- (i) “Actual employment rate” shows upward trend consistently while various conditions such as increase/decrease in total number of workers in the entire company which is a parameter for calculating the employment rate are complicated.
- (ii) The percentage of companies which do not meet the legally-prescribed minimum employ-

23 billion yen. Total amount of “adjustment subsidies” and “financial incentives” paid to companies which met the legally-prescribed minimum employment rate is 9.4 billion yen, 2.07 million yen per company. Total grant for companies employing persons with disabilities are 7.1 billion yen and total number of grant is 17,987, 390,000 yen per case.

⁵ The number of special subsidiaries has been significantly increased recently; 109 in 2000, 129 in 2003 and 242 in 2008. The number of persons with disabilities employed there (a person with severe disability is not counted as two people) has also been largely increased; 2,737 in 2000, 3,491 in 2003 and 7,679 in 2008. See Outline of Employment Measures for Persons with Disabilities of the Ministry of Health, Labour and Welfare (<http://www-bm.mhlw.go.jp/bunya/koyou/shougaisha02/index.html#04>).

Table 5. Results of Quota System for Persons with Disabilities in Private Companies from 1993 to 2009

	Survey year (every June)					2009-1993
	1993	1998	2003	2008	2009	
Actual employment rate (%)	1.41	1.48	1.48	1.59	1.63	0.22
Percentage of companies which do not meet the minimum rate (%)	48.6	49.9	57.4	54.1	54.5	5.9
Number of persons with severe disabilities: A	54,267	63,858	65,652	90,134	92,420	38,153
Number of persons with disabilities other than those with severe ones: B	132,451	123,727	115,789	151,702	155,092	22,641
Total number of persons with disabilities: C (= A+B)	186,718	187,585	181,441	241,836	247,512	60,794
Total number of regular workers in companies covered by the system	17,072,450	17,008,306	16,748,964	20,499,012	20,441,198	3,368,748

Note: Table 5 was prepared by the author based on the *Report on Employment Situations of Persons with Disabilities (as of every June)* of Disabled Workers' Affairs Division of the Ministry of Health, Labour and Welfare. The legally-prescribed minimum rate from 1993 to 1998 was 1.6% and the company size was 63 or more employees. The legally-prescribed minimum rate since 1999 is 1.8% and the company size is 56 or more employees. **A** includes both persons with severe physical or intellectual disabilities working for 30 hours or longer a week and part-time (20 hours or longer but less than 30) workers with severe disabilities. **B** includes persons with physical or intellectual disabilities other than those with severe ones and persons with mental disabilities (2008 and 2009). It should be noted that "a person with severe disability" is counted as two people for calculating "actual employment rate" but is not counted as two for "number of persons with severe disabilities (A)" and "total number of persons with disabilities (C)."

ment rate showed upward trend until 2003 but has shown downward trend since 2003.

- (iii) Comparing 1993 with 2009, total number of regular workers working in companies covered by the legally-prescribed minimum employment rate system increased by 19% while total number of persons with disabilities increased by 33%, i.e., the number of employees with disabilities significantly increased.
- (iv) Among persons with disabilities, the number of those with severe disabilities increased by 70%, more than that of those with non-severe disabilities, 17%. The percentage of persons with severe disabilities in total persons with disabilities also increased from 29% in 1993 to 37% in 2009.
- (v) Total number of persons with disabilities (those with severe disabilities are not counted as double) showed slightly downward trend and maintained the 18,000 level for a decade, from 1993 to 2003. It should be noted, however, that it has shown a significant increase by

66,000 from 2003 to 2009. There was a great change in upward/downward trend of the number of persons with disabilities before and after 2003.

According to the latest actual employment rate of private companies by company size (2009) which is not shown in Table 5, the actual employment rate of companies with 1,000 or more employees in 2009 is 1.83, meeting the legally-prescribed minimum employment rate (Disabled Workers' Affairs Division, Ministry of Health, Labour and Welfare 2009b) while that of those with 500 or more employees but less than 1,000, 300 or more employees but less than 500, 100 or more employees but less than 300 and 56 or more employees but less than 100 are 1.64, 1.59, 1.35 and 1.40 respectively. That is, the smaller the company size is, the lower the actual employment rate becomes.

As for characteristics of disability type (Disabled Workers' Affairs Division, Ministry of Health, Labour and Welfare 2009b), out of 247,000 employees with disabilities in 2009 shown in Table 5, the numbers of persons with physical, intellectual and mental abilities are 193,000 (78%), 46,000 (19%) and 9,000 (4%) respectively. The number of part-time workers with severe physical and intellectual disabilities working for 20 hours or longer but less than 30 a week is 6,089 and that of those with mental disabilities is 2,063 out of 8,152. The percentage of part-time workers is extremely low, 3%.

For these reasons, total number of persons with disabilities working for companies covered by the quota system for persons with disabilities has increased for 16 years, especially, that of those with severe disabilities has significantly increased. It can be said that this system has a positive impact on the employment of persons with disabilities. In particular, total number of employed persons with disabilities significantly has increased from 2003 to 2009 showing such trend prominently. It is noteworthy that total number of employees working for companies covered by the legally-prescribed minimum employment rate system has decreased due to global recession since 2008 while the number of employees with disabilities has increased. The actual employment rate has also increased but the percentage of companies which do not meet the legally-prescribed minimum employment rate has not decreased. It means the employment of persons with disabilities is concentrated in particular companies.

Companies' (employers') evaluations of the quota system for persons with disabilities are shown in Table 6. More than half of companies feel the legally-prescribed minimum employment rate level is too high while many of them (92%) support the system. Regarding "levy" in which companies pay when they cannot meet the legally-prescribed minimum employment rate, few companies regard they fulfill their social responsibilities for the employment of persons with disabilities by paying it. It should also be noted that few companies think it is deemed desirable to rely on "special subsidiaries." It tells that companies also attach great importance to the legally-prescribed minimum employment rate in order to promote the employment of persons with disabilities.

Table 6. Companies' Evaluations of the Quota System for Persons with Disabilities

		N=1,063
	Item	Percentage of "Yes"
a.	A law obligating the employment of persons with disabilities is necessary to promote the employment of them.	92.1
b.	Legally-prescribed minimum employment rate is too high to achieve.	52.5
c.	Companies fulfill their social responsibilities by paying a levy for the employment of persons with disabilities even if they do not meet the legally-prescribed minimum employment rate.	17.3
d.	It is desirable that special subsidiaries are mainly in charge of the employment of persons with disabilities.	11.9

Source: National Institute of Vocational Rehabilitation (2009).

3. Americans with Disability Act in the U.S.

I will pick up the U.S. which has the most advanced employment statistics for persons with disabilities among developed countries,⁶ enacted ADA, a typical antidiscrimination law for persons with disabilities and has taken a different approach from Japan and verify the results based on the employment rate.

The Current Population Survey (CPS) is the best statistics to understand situations in the labor market. Special surveys conducted every March since 1980 define works disability (Kudo 1993). Table 7 shows that the percentage of person with disabilities (appearance ratio of persons with disabilities) in working-age population (persons with and without disabilities aged 16 to 64) is 9.7 % in 2000 and 10.4% in 2006, i.e., about 10% of the population is persons with disabilities. While CPS's definition of disability is narrower than other surveys, this appearance ratio is nearly double that of Japan.

The employment rate of persons with disabilities in the U.S. shown in Table 7 is considerably lower compared with that in Japan shown in Table 1, the 40% level. In addition, the employment rate decreased from 27.6% in 2000 to 22.4% in 2006. Although the employment rate of persons with severe disabilities shows any change, 8.3%, it is very low level. These data indicate that the U.S. did not succeed in creating job opportunities for persons with disabilities. The survey clarifies that according to the analysis of time series data from 1981 to 2006, longer period than it, the employment rate of persons with disabilities showed downward trend (Burkhauser & Houtenville 2006).

⁶ In the U.S., there are several surveys to understand working situations of persons with disabilities such as Current Population Survey (CPS), Population Census, SIPP Survey, American Community Survey (ACS) and National Health Interview Survey (NHIS). Although definitions and scope of disabilities are different depending on each survey, they are all designed to be able to compare persons with disabilities and others (non-disabled persons) easily (Kudo 2001; National Institute of Vocational Rehabilitation 1998; Weathers & Wittenburg; 2009).

Table 7. Situations of Persons with and without Disabilities in the U.S.
(aged 16 to 64) (2000 and 2006)

Year/Disabilities	Population (1,000 person)	Percentage (%)				Unemployment rate (%)
		Labor force	Employment		Non- labor force	
			Total	Full- time		
<i>2000</i>						
Non-disabled persons	159,356	82.1	78.0	65.0	17.9	4.2
Persons with disabilities	17,089	30.5	27.6	18.6	69.5	9.5
with severe disabilities	11,306	10.1	8.3	3.4	89.9	17.7
<i>2006</i>						
Non-disabled persons	172,494	80.7	76.8	63.1	19.3	4.8
Persons with disabilities	19,977	25.8	22.4	14.0	74.2	13.1
with severe disabilities	14,298	10.1	8.3	3.0	89.9	18.4

Note: Table 7 was prepared by the author based on the *Current Population Survey 2000, 2006* of the U.S. Census Bureau.

Table 8. Employment Rate in the U.S. by Disability Type (2006)

Disability/Type	Population aged 16 to 64 (1,000 person)	Employment rate (%)
Total (= a + b)	193,568	
a. Non-disabled persons	169,705	75.1
b. Persons with	23,863	37.2
Sensorial disabilities	5,423	46.5
Physical disabilities	14,130	31.7
Mental disabilities	9,234	28.4
Disabilities which need care	4,187	16.9
Outing disabilities	6,215	17.1
Employment disabilities	13,667	17.6

Note: Table 8 was prepared by the author based on the *American Community Survey 2006* of the U.S. Census Bureau.

Unlike above CPS, the American Community Survey (ACS), one of population census, maintains accuracy which can be used by local governments. According to Table 8, the appearance ratio and the employment rate of persons with disabilities are low, 12.3% and 37.2% respectively and there is a huge difference with the employment rate of non-disabled persons, 75.1%.

V. Conclusions

WHO's International Classification of Functioning, Disability and Health (ICF) has recently emerged on the basis of a new perspective on persons with disabilities and environmental coordination factors around persons with disabilities have also received attention. In addition, persons with disabilities have been regarded as not non-workforce but participants in the labor market and their employment issues have been emphasized. However, there has been no government statistics introducing this new perspective on persons with disabilities in Japan. It is often said that global average appearance ratio of persons with disabilities is about 10% of the world's population while those in Japan is only 5% of the population according to the data released by the government, i.e., Japan's definition and scope of persons with disabilities are narrower.

Although definitions and scope of persons with disabilities vary in different countries and a strict international comparison is difficult, it can be said that the employment rate of working-age persons with disabilities in Japan is relatively higher compared with data of OECD and the U.S. Nevertheless, the percentage of employees in entire workers with disabilities is low and many of those are working as "welfare-oriented employment."

From an international standpoint, there are two approaches to expand job opportunities for persons with disabilities, (i) a legal system on the antidiscrimination law for persons with disabilities and (ii) a legally-prescribed minimum employment rate system. Japan has introduced the latter approach. 58% of persons with disabilities have been employed in companies and public sectors covered by the legally-prescribed minimum employment rate system. From this point of view, the legally-prescribed minimum employment rate system is important in Japan.

I verified the increase and decrease in the number of employees with disabilities working for private companies covered by the legally-prescribed minimum employment rate system for 16 years and found that the number of entire persons with disabilities has increased and especially that of those with severe disabilities has significantly increased. Partly for the reason of growing debate on corporate social responsibility (CSR), total number of persons with disabilities has greatly increased from 2003 to 2009.

By above indications, Japan's legally-prescribed minimum employment rate system has had a positive impact on the employment of persons with disabilities. On the contrary, the employment of persons with disabilities in the U.S. which has a typical antidiscrimination law, Americans with Disabilities Act (ADA), is lower than that of Japan and the employment rate has not really increased even after the introduction of ADA. It was confirmed that the strengthening of a typical antidiscrimination law for persons with disabilities does not necessarily bring about the expansion of job opportunities for them.

VI. Future Political Issues

Total number of employed persons with disabilities working for companies covered by the legally-prescribed minimum employment rate system has shown a great upward trend especially since 2003 and even as of June 2009 under the global recession since last fall. However, the entire employment of persons with disabilities including those in companies with less than 56 employees which are exempt from the legally-prescribed minimum employment rate has taken a significant downward turn compared with 2003. That is, the number of employed persons with disabilities in companies with less than 56 employees shows a downward trend.

On “Basic Plan for Persons with Disabilities” approved in a Cabinet meeting in December 2002, the government stated a numerical target, 600,000 employees with disabilities by the Survey on Employment Situations of Persons with disabilities 2008 for private companies. According to the results of the survey in 2008 shown in Table 2, however, the number of employees with disabilities is 448,000, i.e., 152,000 short compared with the numerical target stated by the government.

The Ministry of Health, Labour and Welfare announced “Five-Year Welfare-to-Employment Promotion Program: Improvement of Self-Support System for Anybody” starting from fiscal year 2007 on December 26, 2007. The following three numerical targets on the employment of persons with disabilities were stated on the program: (i) 640,000 employees with disabilities by the Survey on Employment Situations of Persons with disabilities 2013, (ii) 240,000 people with disabilities who can find jobs at public employment offices (“Hello Work”) in the period from 2008 to 2012 and (iii) 9,000 people with disabilities who are moved from “welfare-oriented employment” to “general employment” a year by 2011. Many policy issues still remain in order to achieve these high numerical targets.

Relating to the above target (iii), “promotion of the shift from welfare-oriented employment to general employment” and “increase in labor charge of welfare-oriented employment” including restructuring of welfare facilities have emerged recently as large policy issues under Services and Supports for Persons with Disabilities Act. Matsui (2009) says, “As well as welfare factories and employment continuation support project type A, sheltered workshop should also be separated from welfare measures and positioned as one of employment policies, or closely linked with employment policies by revising the law.” In other words, it is time to clearly reposition “welfare-oriented employment” which has many persons with severe disabilities as not a welfare policy but an employment policy.

Recently, the strengthening of legislative response to discriminations against persons with disabilities has been required. Partly for the reason that the Convention on the Rights of Persons with Disabilities including “Labor and Employment” was adopted by the United Nations in 2006 and Japan signed it in 2007, the legislative preparations have emerged as a big issue. As clarified in this paper, however, Japan’s quota system has made considerable achievements such as expansion of job opportunities for persons with severe disabilities and a significant increase in the number of employees with disabilities since 2003. On the other hand, the employment

rate of persons with disabilities in the U.S. which has an antidiscrimination law for persons with disabilities is lower than that of Japan and the employment rate has not really increased. As Asao (1998) and Sekikawa (2000) say, it was confirmed that an antidiscrimination law for persons with disabilities does not expand job opportunities for them in this paper.

In order to further expand job opportunities for persons with disabilities in Japan, the basic concept would be not the choice between two approaches, antidiscrimination law or quota system, but how to maintain balance and establish a mutually complementary relationship between them.

That is, it would be future important issues that companies more actively improve employment conditions and a working environment for making full use of their abilities in consideration of human-rights protection and disabilities at work and establish a mechanism to socially monitor the development process and the government and society develop supporting policies (Kudo 2004).

In the legally-prescribed minimum employment rate system, the restriction of employment amount is the main issue and the adjustment of employment conditions/working environment which is qualitative aspect, i.e., the implementation of "appropriate employment management" conducted by companies ("Responsibilities of Employers," Article 5 of the Act on Employment Promotion etc. of Persons with Disabilities) is the sub-issue. It has become a modern issue to maintain a balance between them.⁷ Moreover, modern companies have been required to be actively involved in vocational rehabilitation processes and the expansion of participants in "job coach supporting project" and "trial employment" indicate that.⁸

In the approach of antidiscrimination law for persons with disabilities, the important requirement for the prohibition of discrimination is to force companies to make consideration for individual conditions of persons with disabilities (reasonable accommodation) and the contents are almost same as "appropriate employment management" aiming at collective response at each workplace. Such contents have been reported on "Basic Policy for Employment Measures for Persons with Disabilities" (Ministry of Health, Labour and Welfare 2007) and "Code of Practice on Managing Disability in the Workplace" (International Labour Organization 2001) as

⁷ O'Reilly (2007) discusses the employment quality of persons with disabilities from the perspective of descent work.

⁸ See Outline of Employment Measures for Persons with Disabilities of the Ministry of Health, Labour and Welfare (<http://www-bm.mhlw.go.jp/bunya/koyou/shougaisha02/index.html#04>). "Job coach supporting project" is a service to dispatch job coaches to workplaces of companies before or after the employment to provide finely-tuned personal support in order to facilitate job adjustment of persons with intellectual or mental disabilities. The number of allocated job coaches as of March 2009 is 970 and the number of treated people is 3,064 in fiscal year 2008. "Trial employment" is a service to sign three-month terminable employment contract and give them a taste of trial employment aiming at transfer to general employment. 40,000 yen per trial employee per month is paid to the companies. The number of persons with disabilities who participated in this project in fiscal year 2008 is 8,321. In these two service projects, supporting services are provided in workplaces. That is a significant difference from conventional supporting services centered on facilities.

a guideline for companies. The future issue is how to implement the socially-enforced guideline.

It will be important to not only strengthen the enforceability against entrance and exit of employment for persons with disabilities but also deal with the implementation of “appropriate employment management” conducted by companies after the recruitment/employment in the labor-management relationship including labor unions linking normal human resource management (HRM) architecture. From the perspective of emphasizing the viewpoint of individual employees with disabilities, it would be important to solve problems such as discrimination against disabilities at work in the same framework as current “individual labor-management dispute settlement” and “equal employment opportunity between men and women.”

It is also important that not only the results of companies’ various efforts on employment of persons with disabilities (real employment rate) but also to make a mechanism to socially monitor the development processes. Modern companies are required to have corporate governance emphasizing corporate social responsibility (CSR) which makes consideration for environment, human rights and labor, and companies’ compliance including observance of the legally-prescribed minimum employment rate is an important precondition (JILPT 2005). There have been advantages for companies to voluntarily disclose “actual employment rate” of persons with disabilities and information on the process of making efforts toward the realization of it. Some companies have already announced the achievement of the legally-prescribed minimum employment rate and situations of employment of them on their websites.⁹ It is desirable that such movements accelerate and expand more and more and the government should further support the movements.

Lastly, I would like to cite the consolidation of employment statistics for persons with disabilities as the government’s important issue. Because, the employment plan for persons with disabilities including numerical targets has been presented and its progress has been announced at the government level recently. This is also fundamental information when considering employment/working issues of persons with disabilities. It is a prominent role and responsibility for the government to consolidate it. Although Japan’s statistics for persons with disabilities is relatively consolidated among developed countries, there are many things to be improved particularly for employment/working statistics. Like the Population Census and the Current Population Survey conducted in the U.S., it is expected to rapidly implement a government survey from a new perspective on persons with disabilities in the form of reliable nationwide population/household survey, i.e., seeing persons with disabilities from not only with or without “disability certificate” but also “limitation of activity/participation.”

⁹ *CSR Companies List* of Toyo Keizai Shinposha has been issued four times since 2006 placing “number of persons with disabilities” and “employment rate of persons with disabilities” in each company.

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Japan's Employment Measures for Persons with Disabilities: Centered on Quota System of "Act on Employment Promotion of Persons with Disabilities"

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This paper introduces the history and specific contents of "Act on Employment Promotion of Persons with Disabilities" which forms the foundation of Japan's measures for employment of persons with disabilities. The system of "mandatory employment of persons with disabilities" based on the Act on Employment Promotion of Persons with Disabilities consists of the following two pillars: (i) a quota system which obligates employers to employ a certain percentage or more of persons with disabilities and (ii) a payment system for employment of persons with disabilities which charges employers a sanctions when they cannot achieve the legally-prescribed minimum employment rate. In this paper, I will precisely explain the contents of the law which has been amended repeatedly to deal with facing various problems and examine future issues bringing the realities of employment of persons with disabilities and the enactment of an antidiscrimination law for persons with disabilities into view. Readers will be able to obtain an overall grasp of Japan's measures for employment of persons with disabilities.

I. Introduction

1. Convention on the Rights of Persons with Disabilities

The Convention on the Rights of Persons with Disabilities was adopted by the 61st United Nations General Assembly on December 13, 2006. The purpose of the convention is to promote, protect and ensure the full and equal enjoyment of all human rights and fundamental freedoms by all persons with disabilities, and to promote respect for their inherent dignity (Article 1). As a means to accomplish this purpose, the convention upholds the prohibition of discrimination on the basis of disability and requires the states parties to realize it. 142 countries and European Committee have already signed and 76 countries have ratified the convention as of December 14, 2009. This approach, "prohibition of discrimination on the basis of disability," has gradually expanded around the world since the United States legislated Americans with Disabilities Act of 1990. As you can see the number of countries which ratified the Convention on the Rights of Persons with Disabilities, some kinds of "prohibition of discrimination on the basis of disability" have been implemented in many countries.

Japan has signed the convention but not ratified yet. Japan is now developing domestic legislation toward early conclusion of it, but due to regime change which took place in August 2009, discussions on specific contents of domestic legislation which needs for the conclusion have been continued. In the area of employment, discussions on the response to the Convention on the Rights of Persons with Disabilities including the enactment of an antidiscrimination law for persons with disabilities have been held in the Sectional Meeting on Employment of Per-

sons with Disabilities, the Labor Policy Council of the Ministry of Health, Labour and Welfare.

2. Japan's Employment Measures for Persons with Disabilities: Quota Approach

As mentioned above, it is true that "prohibition of discrimination on the basis of disability" approach is of increasing importance. In Japan, however, "quota" approach which obliges employers to employ a certain percentage of persons with disabilities and imposes sanctions against those who fail in their obligation has been traditionally adopted and has a major impact on the employment of persons with disabilities. This quota approach has been implemented under the Act on Employment Promotion etc. of Persons with Disabilities (hereinafter referred to as Act on Employment Promotion of Persons with Disabilities). The importance of this quota approach never changes even after the enactment of an antidiscrimination law for persons with disabilities. Therefore, I will examine Japan's employment measures for persons with disabilities centered on "quota system" of Act on Employment Promotion of Persons with Disabilities as follows: introduction of establishment processes, amendment details (II) and contents (III) of Act on Employment Promotion of Persons with Disabilities, analysis of the employment reality of persons with disabilities (IV) and discussions on the future issues (V).

II. Historical Development: Establishment and Development of Act on Employment Promotion of Persons with Disabilities

1. Process toward "Act on Employment Promotion of Persons with Disabilities" Established in 1960

People need to earn an income for a living in some way. One of the most effective measures for that is working. However, it is difficult for persons with disabilities to ensure employment opportunities equal to those without disabilities. Therefore, various measures have been implemented for the purpose of promoting employment of persons with disabilities.¹

However, it is not so long ago that governments responsibly began to implement a variety of measures for persons with disabilities. It was recognized that the care of persons with disabilities should be addressed by the family or charity relief works in not only Japan but also other countries. Such recognition was changed by a large number of persons with physical disabilities caused by two world wars. As a result, the need of national comprehensive measures for persons with disabilities was recognized (Hori 1961, 20). In Japan, although the government has implemented measures for soldiers with disabilities since around the First World War, measures for general persons with physical disabilities have been implemented far later, after the Second World War (Tezuka 2000, 111). Soldiers-oriented measures were expanded to all the people with disabilities mainly by the policy of the allied forces during their occupation of Japan (Hori 1961, 32).

¹ For disability pension which is essential for life security of persons with disabilities, see Momose (2008).

After the Second World War, measures for employment promotion of persons with disabilities were implemented as an emergency and have been implemented with a unique system since 1952. However, since the measures for employment promotion of persons with disabilities were “administrative measures” at that time, the effect was limited and the employment situation of persons with disabilities remained stagnant (Hori 1961, 53-54; Yamada 1992, 40-42).

In addition to such domestic situation, Japanese government was affected by foreign situations, i.e., many foreign countries have already legislated acts on employment promotion of persons with physical disabilities and International Labour Organization Assembly adopted “Recommendation on Rehabilitation of Persons with Disabilities” (ILO Recommendation No. 99) in 1955 and was driven by necessity to take not only “administrative measures” but also some “legal measures” (Soya 1998, 55).

Discussions on a concrete proposal for the bill began in the spring of 1958 and an outline for Act on Employment Promotion of Persons with Physical Disabilities was finally compiled at the end of the next year. After gaining approval from all committees, this outline was submitted as a proposal for Act on Employment Promotion of Persons with Physical Disabilities from the Cabinet to the House of Representatives in February 1960. Major issues which were especially addressed in the process of discussions on this proposal were: (i) scope of persons with physical disabilities, (ii) pros and cons of mandated employment of persons with disabilities in major enterprises and (iii) securing the effectiveness of the act if the employment of persons with disabilities is not forced (Soya 1998, 55).

As for (i), there was a problem whether or not persons with physical disabilities include persons who recovered from tuberculosis or persons with intellectual disabilities and it was decided to exclude those persons from the scope of disabilities because of a lack of explicit criterion (Hori 1961, 108-10). Regarding (ii) and (iii), private companies were not forced to employ persons with disabilities but required to make efforts to do from the perspective that since employment relationship is based on human relations, the welfare of persons with physical disabilities is not truly improved by mandated employment and employment settlement and promotion of persons with physical disabilities are secured on the basis of understanding and cooperation of employers (Soya 1998, 56).

After the substantive deliberation and hearing from witnesses in the Committee on Social and Labour Affairs, etc. of the House of Representatives, this bill was enacted on 15 July, issued on 25 July and enforced on 26 July 1960. The Act on Employment Promotion of Persons with Physical Disabilities 1960 legislated through above processes had a significant meaning as Japan’s first law for measures for employment of persons with disabilities. However, this Act had the following serious problems: (i) the quota system should have set up a certain employment rate of persons with disabilities but private companies were required to set a challenge (field work: 1.1%, office work: 1.3%)² only³ and (ii) as indicated by the name of the Act, the scope

² Public corporations were required to set a challenge (field work: 1.3%, office work: 1.5%).

of persons with disabilities is limited to those with “physical” disabilities, i.e., it was lack of attention to persons with severe disabilities (Yamada 1992, 46). Since then this Act has been amended repeatedly in order to solve these problems and improve the contents.

2. Processes toward the Amendment of the Act in 1976: Mandatory Employment and Introduction of Payment System

The employment situation of persons with physical disabilities has gradually developed after the enforcement of the Act in 1960. It is said that this was the result of the Act and also caused by another factor, i.e., a significant impact of young labor shortage which occurred in connection with high economic growth starting from 1960.⁴ The labor shortage associated with high economic growth which turned from the postwar labor glut brought about a change in Japan's employment policy and the Employment Measures Act whose policy objective was “achievement of full employment” was enacted in 1966.

Looking at the employment situation of persons with physical disabilities by company size and industry, however, the larger the company size was, the lower the actual employment rate of persons with disabilities became and the higher the rate of unachieved full employment became. There was also a significant difference of achievement rate of full employment between industries. This caused a sense of injustice on the basis of unfair financial burden accompanied with employment of persons with disabilities while the economic crisis triggered by the oil crisis of 1973 accelerated the escalation of problems on the employment of persons with disabilities.

The government then began serious consideration of the amendment of the Act on Employment Promotion of Persons with Physical Disabilities from 1975 in order to (i) reinforce employers' mandatory employment of persons with physical disabilities⁵ and (ii) set up a payment system to financially back up as the fundamental direction. Based on a report by the Employment Council for Persons with Physical Disabilities, the Ministry of Labour advanced preparations of an amendment bill and submitted it to the ordinary session of the Diet. The bill was passed by a vote in the Lower House plenary session and “Act on the Partial Revisions of Act on Employment Promotion of Persons with Physical Disabilities and Act on Special Measures concerning Employment Promotion of Middle-aged and Older Persons” was enacted (issued on May 28, 1976 and enforced on October 1, 1976).

³ Mandatory employment was adopted by the government and local authorities (governmental organization: 1.4%, clerical organization: 1.5%).

⁴ Persons with physical disabilities who had rarely been regarded as regular workforce before were positively taken by companies, especially small and medium sized ones (see Yamada [1992, 47-48]).

⁵ As for strengthening of mandatory employment, the relationship with free choice of employment including free of business which is guaranteed by Article 22 of Japanese Constitution was addressed as a problem. Contents of “public welfare” in Article 22 of Japanese Constitution, purpose and contents of regulation, property, contents and degree of free of business to be regulated, etc. were considered. The conclusion was that there was no problem unless obliged with punishment (see Soya [1998, 88]).

The basic concept of the Act amended in 1976 was that since only employers who directly manage workplaces can offer employment to persons with disabilities, all employers shall have corporate responsibilities to offer employment to persons with physical disabilities who are willing to and able to work based on the concept of social solidarity and persons with physical disabilities shall make efforts to support themselves as business workers while the government shall play a central role in the implementation of measures as a matter of course (Endo 1976, 32).

From a perspective of this concept, a basic framework for Japan's measures for employment promotion of persons with disabilities was completed. Specifically, the Act amended in 1976 (i) converted the responsibility of private employers from obligation to make effort to employ persons with disabilities to obligation to employ them (at the same time, the legally-prescribed minimum employment rate for persons with disabilities was lifted by 0.2 point, i.e., that of private companies became 1.5%) and (ii) established a payment system for employment of persons with physical disabilities which charges employers a penalty when they cannot achieve the legally-prescribed minimum employment rate and supplies benefit adjustment money to those who employ a lot of persons with disabilities more than that rate. In addition, (iii) a double counting system which regards employment of one person with severe disabilities (first or second grade of disability provided by Act on Welfare of Persons with Physical Disabilities) as employment of two persons with disabilities, (iv) a disclosure system which discloses names of companies employing persons with disabilities less than the legally-prescribed minimum employment rate in order to ensure implementation of mandatory employment and (v) a notification system in which employers must notify when firing persons with disabilities were introduced.

3. Processes toward the Amendment of the Act in 1987: Expanding the Definition of Persons with Disabilities

Since employment of persons with physical disabilities became a legal obligation in 1976, the employment situation of persons with disabilities had been improved year after year. Especially, it showed a drastic improvement around 1981, the International Year of Disabled Persons. Since 1983, however, the actual employment rate of persons with physical disabilities had shown a modest rise and showed little improvement in 1986. Increased turnover rate of persons with disabilities and difficulties of continued employment/return-to-work of persons with acquired disabilities are cited as factors of this situation, and the society began to recognize the need for the improvement of measures for the stabilization of employment. At the same time, expansion of the quota system to persons with intellectual disabilities became a problem. In addition to such domestic situation, the law amendment became unavoidable due to international relationship.⁶ The international movements on concerns of persons with disabilities were

⁶ During this time, legal changes were conducted in 1980, i.e., subsidies based on the payment system

U.N. resolution on “International Year of Disabled Persons” in 1981 and the adoption of ILO Convention No. 159 on Vocational Rehabilitation and Employment (Disabled Persons) in 1983, and its accompanying Recommendation No. 168.

Following these requests from home and abroad, the government advanced preparations of an amendment bill from July 1986. The amendment bill submitted to the 108th ordinary session of the Diet was unanimously approved and enacted in February 1987 and issued on June 1, 1987. The major revised points of the Act in 1987 are as follows: (i) the coverage of the Act is not only persons with physical disabilities but expands to all persons with disabilities including those with intellectual and mental disabilities and (ii) in accordance with this expansion, the name of the Act has changed from Act on Employment Promotion of Persons with Physical Disabilities to Act on Employment Promotion etc. of Persons with Disabilities. Although the obligation of employment was postponed, the number of persons with intellectual disabilities was included for the calculation of actual employment rate.⁷ Moreover, in order to deal with issues of persons with acquired disabilities, a subsidy system for continued employment of them was newly created.

According to a survey on the actual employment of persons with physical disabilities conducted in 1986, the percentage of persons with disabilities which is the standard of setting legally-prescribed minimum employment rate showed a gradual increase and looked set to exceed 1.6% in the near future. Therefore, the governance ordinance was revised, i.e., the legally-prescribed minimum employment rate for persons with disabilities was lifted by 0.1 point (1.6% for private companies) from April 1, 1988.

4. Processes toward the Amendment of the Act in 1997: Mandatory Employment of Persons with Intellectual Disabilities

Although mandatory employment of persons with intellectual disabilities was not legislated at the stage of the amendment of the Act in 1987, there was an exception that the number of persons with intellectual disabilities who are currently employed is included in the calculation of the actual employment rate and that had an impact on the employment of persons with physical disabilities. The need for additional consideration on mandatory employment of persons with intellectual and mental disabilities arose and meetings of the Employment Council for Persons with Disabilities were held in September 1996 and January 1997. According to opinions from the council, since the understanding of persons with intellectual disabilities has been deepened and the employment has been developed, it is time to add them to the standard for

for employment promotion for persons with severe disabilities expanded and the payment amount increased. After that, the law was amended again in 1984 aiming at transfer of payment-related operations and expansion of the scope of persons with disabilities.

⁷ Concerning mandatory employment of persons with intellectual and mental disabilities, however, since judgment of vocational capability is difficult, occupation field is limited, it takes time and effort for occupational adjustment and vocational training, etc., it was determined not to apply the quota system immediately (See Soya [1998, 202]).

calculating legally-prescribed minimum employment rate. The council also expressed an opinion on persons with mental disabilities that the history of measures for them is short so it is too early to apply the employment rate system.

In accordance with the opinions from the council, the Ministry of Labour advanced preparations of an amendment bill and submitted it to the ordinary session of the Diet. The bill was passed by a vote in the Lower House plenary session and the amended Act was enacted (issued on April 9, 1997 and enforced on July 1, 1998). The major revised points of the Act in 1997 are as follows: (i) the scope of the mandatory employment system expands to those with intellectual disabilities, (ii) the legally-prescribed minimum employment rate of private companies arises from 1.6% to 1.8%.

5. Processes towards the Amendment of the Act in 2005: Strengthening of Employment Measures for Persons with Mental Disabilities

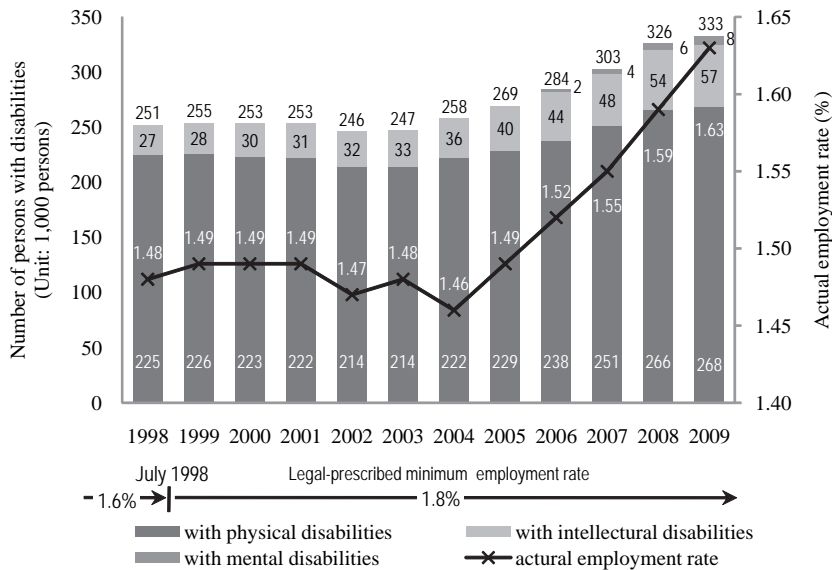
The Labor Policy Council of the Ministry of Health, Labour and Welfare came out with “future improvement and strengthening of measures for employment of persons with disabilities” on December 15, 2004. Based on this, a bill to amend the Act on Employment Promotion of Persons with Disabilities was approved in a Cabinet meeting on February 10, 2005 and enacted on June 29, 2005 (enforced on April 1, 2006 with some exception). The amendment of the Act in 2005 was aimed at promoting various measures for expansion of employment opportunities for persons with disabilities in order to support workers with disabilities and those who want to work.

The major revised points of the Act 2005 are as follows: (i) measures for employment of persons with mental disabilities was strengthened; although mandatory employment was rejected, currently employed persons with mental disabilities who hold certificates of mental disabilities were included for calculating the actual employment rate, and (ii) the Act encourages companies to place orders in order to support work-at-home employed persons with disabilities. Regarding (i), given the fact that many of persons with mental disabilities get tired easily so it is difficult to work long hours, a part-time worker who works for 20 hours or over but less than 30 a week is counted as 0.5 persons for calculating the actual employment rate. Since persons with mental disabilities are included in the calculation of the actual employment rate, raising of the legally-prescribed minimum employment rate should be considered. However, since many companies still have a poor understanding of the employment of persons with mental disabilities and do not quite understand how to manage their employment, the government left the legally-prescribed minimum employment rate unchanged, 1.8%.

6. Processes toward the Amendment of the Act in 2008: Employment Promotion of Persons with Disabilities in Small and Medium Sized Companies and Review of the Employment Rate System Corresponding to Part-Time Workers

As shown in Figure 1, although the actual employment rate of persons with disabilities dropped to 1.46 in 2004, thereafter it showed upward trend due to increasing corporate social

Japan's Employment Measures for Persons with Disabilities



Source: Ministry of Health, Labour and Welfare, *Press Release* (November 20, 2009), p. 6.

<http://www.mhlw.go.jp/stf/houdou/2r9852000002i9x-img/2r9852000002ibf.pdf>.

Notes: 1. Companies with 56 or more of employees which are obliged to employ persons with disabilities were surveyed.

2. ‘Number of persons with disabilities’ means total number of the following persons:

Up to fiscal year 2005:

Persons with physical disabilities (a person with a severe physical disability is counted as two people)

Persons with intellectual disabilities (a person with a severe intellectual disability is counted as two people)

Part-time workers with severe physical disabilities

Part-time workers with severe intellectual disabilities

From fiscal year 2006:

Persons with physical disabilities (a person with a severe physical disability is counted as two people)

Persons with intellectual disabilities (a person with a severe intellectual disability is counted as two people)

Part-time workers with severe physical disabilities

Part-time workers with severe intellectual disabilities

Persons with mental disabilities

Part-time workers with mental disabilities

Figure 1. The Actual Employment Rate of Private Companies and the Number of Employed Persons with Disabilities

responsibility of major companies and utilization of special subsidiary system (to be described below), especially many companies with 1,000 or more of regular workers achieved the high actual employment rate. On the other hand, the actual employment rate of small and medium sized companies with 300 or less of regular workers remained low (see Figure 2) and the government had to focus on employment promotion of persons with disabilities in small and medium sized companies. The mandatory employment of persons with disabilities was based on regular employment with 30 or more working hours a week and that interfered the acceptance

Table 1. Counting Method for Actual Employment Rate

Scheduled working hours a week	30 hours or longer	20 hours or more but less than 30
Persons with physical disabilities	○	△
With severe disabilities	◎	○
Persons with intellectual disabilities	○	△
With severe disabilities	◎	○
Persons with mental disabilities	○	△

Revised points of the law 2008

○: Counted as one person

◎: Counted as two people (double counting)

△: Counted as 0.5 persons

Source: Ministry of Health, Labour and Welfare.

of persons with disabilities who had a difficulty in working full-time and wished to work part-time into private companies.⁸

In order to solve these problems, a bill to amend the Act on Employment Promotion of Persons with Disabilities was submitted to the 169th ordinary session of the Diet on March 7, 2008. After the continuous deliberation, the amendment bill was passed into law at the 170th ordinary session of the Diet (enacted on December 29, 2009 and will be enforced from April 2010 in stages).

The major revised points of the Act 2008 are as follows: (i) Although private companies with 300 or less of regular workers were exempted from the payment system for employment of persons with disabilities before in consideration of their capacity, in order to promote the employment of persons with disabilities at small and medium sized companies, the payment system has also been applied to companies with 101 or more of regular workers but 300 or less⁹ and (ii) part-time workers with disabilities working for 20 hours or more but less than 30 a week have been included in the scope of mandatory employment so that the quota system can be applied to part-time work and a part-time worker with a disability is counted as 0.5 persons for calculating the actual employment rate (see Table 1).¹⁰

⁸ For the background of the amendment of the law in 2008 and discussion at this stage, see Fujii (2008).

⁹ It will be applied to companies with 201 or more of regular workers but 300 or less from July 1, 2010 and to those with 101 or more of regular workers but 200 or less from July 1, 2015.

¹⁰ Part-time workers with mental disabilities were counted as 0.5 persons for calculating the actual employment rate before the amendment of the law in 2008 (see II. 5).

III. Act on Employment Promotion of Persons with Disabilities

As mentioned above, since Act on Employment Promotion of Persons with Physical Disabilities was enacted in 1960, the law has been amended repeatedly to improve the contents. I will detail measures for employment of persons with disabilities based on the current Act on Employment Promotion of Persons with Disabilities below while I briefly mentioned them at above processes toward the amendment of the law:¹¹

1. Quota System and Payment System for Employment of Persons with Disabilities

(1) Quota System

In accordance with Act on Employment Promotion of Persons with Disabilities, private companies, the government, local authorities, etc. are required to employ a certain percentage (legally-prescribed minimum employment rate) or more of persons with disabilities (quota system). This system charges employers a penalty when they cannot achieve the legally-prescribed minimum employment rate and supplies benefit adjustment money to those who employ persons with disabilities more than that rate (payment system for employment of persons with disabilities). As above, measures for employment of persons with disabilities on the basis of Act on Employment Promotion of Persons with Disabilities roughly consists of two systems, (i) quota system and (ii) payment system for employment of persons with disabilities.¹²

The current legally-prescribed minimum employment rate for private companies is 1.8%, i.e., private companies' employers are obliged to employ one person with disabilities per 56 employees.¹³ The method of calculating the percentage of employed persons with disabilities is slightly complicated as a result of repeated amendment of the law (see Table 1). Regular employment with 30 or more working hours a week is the basis of calculating the actual employment rate and a person with a disability with such employment status is counted as one person for the employment rate. Given that employment of persons with severe disabilities is generally difficult, an employed person with a severe physical or intellectual disability is counted as two people (double counting).¹⁴ A part-time worker with a severe disability is counted as one person for the employment rate. A part-time worker with a disability working 20 hours or more but less than 30 is counted as 0.5 persons.

¹¹ Regarding employment system for persons with disabilities, see Kudo (2008, 4-16) and Cabinet Office (2009, 56 ff.).

¹² Act on Employment Promotion for Persons with Disabilities also defines vocational rehabilitation, but that is not discussed in this paper.

¹³ The legally-prescribed minimum rate of special public corporations, the government and local authorities is 2.1%. That of prefectural education boards is 2.0%.

¹⁴ Since there is no classification of "severe," a person with mental disability is not counted as two people.

(2) Persons with Disabilities Covered by Quota System

This quota system covers persons who hold certificates of disabilities in principle and the law providing a legal basis depends on class of disabilities. That is, in the case of persons with physical disabilities, the law providing a legal basis is Physically Disabled Persons Welfare Act, the class of disabilities is determined in the light of Appendix No. 5 of the Ordinance for Enforcement of the Act on Welfare of Physically Disabled Persons and the physical disability certificate is issued by the prefectural governor. Concerning persons with intellectual disabilities, although there is no legal definition on intellectual disabilities, under a notification, “Implementation of Therapeutic Education” from the Ministry of Health and Welfare in 1973, child consultation offices and welfare consultation offices for persons with intellectual disabilities judge and issue a certificate to persons under 18 years of age and those aged 18 or over respectively. Regarding persons with mental disabilities, the prefectural governor issues a certificate of mental disabilities in the light of definitions of the Act on Mental Health and Welfare of the Mentally Disabled (persons with integration disorder syndrome, acute poisoning caused by psychotomimetic agent or its addicted, intellectual disabilities or mental disorder including psychopathy).

(3) Payment for Employment of Persons with Disabilities

The purpose of the payment system for employment of persons with disabilities is to adjust economic burdens associated with employment of persons with disabilities between employers as well as offering subsidies to raise the entire employment level. The monthly penalty amount are paid by employers who cannot achieve the legally-prescribed minimum employment rate for persons with disabilities (1.8%); $50,000 \text{ yen} \times \text{number of persons below the rate}$. The monthly penalty to employers of companies with 300 regular workers or less who are newly included in the scope of the payment system by the amendment of the Act in 2008 will decrease to 40,000 yen for the first five years as a special exception.

The monthly benefit adjustment money is supplied to employers who employ persons with disabilities more than the legally-prescribed minimum employment rate; $27,000 \text{ yen} \times \text{number of persons over the rate}$.

Due to the characteristic of the payment system aimed at adjusting economic burdens associated with employment of persons with disabilities, it does not charge any penalty to the government, local authorities and education boards.

2. Special Subsidiary System

The special subsidiary system is that when an employer establishes a subsidiary with special consideration to persons with disabilities (hereinafter referred to as special subsidiary), workers who are employed in the special subsidiary can be regarded as employed in the parent company for calculating the actual employment rate under given requirements.

There are advantages for employers: jobs taking into account the property of disabilities can be secured and arrangement of work environment becomes easier. As a result, it brings out

the latent potential of persons with disabilities and employers can expect an increase in job retention rate of persons with disabilities and improvement of productivity. There are also advantages for persons with disabilities. Job opportunities expand and they can work under ideal working environment. The special subsidiary system has received attention mainly from major companies and the number of those which introduce this system has increased.¹⁵

3. Various Subsidy Systems for Employers

Various subsidies are provided to employers who employ persons with disabilities. A representative one is the subsidy system based on the payment for employment of persons with disabilities. In particular, when employers establish or arrange working facilities/equipment for persons with disabilities, take administrative measures for employment such as commission of sign-language interpret or assistance at workplace or foster in-house personnel who are familiar with working environment or work contents as job trainers to support for work commitment, subsidies are provided on the basis of the payment for employment of persons with disabilities in order to reduce economic burdens of these employers and promote and continue the employment of them (Cabinet Office 2009, 65).

In addition, various measures to support the employment of persons with disabilities have been taken, e.g., subsidies are provided to employers who established special subsidiaries, special tax benefits are provided to employers who employ many people with disabilities, etc.

4. Administrative Guidance toward the Achievement of Legally-Prescribed Minimum Employment Rate for Persons with Disabilities (Public Announcement of Company Names)

In order to ensure the achievement of legally-prescribed minimum employment rate for persons with disabilities and charge penalties for failure to employ persons with disabilities, each employer is obliged to report the employment situation of persons with disabilities as of June 1 every year. In accordance with the report, if the actual employment rate is lower than the minimum employment rate, the employer is ordered to prepare a three-year plan of employing persons with disabilities by the director of local public employment office. Companies which default the implementation of this plan will be advised to properly implement the plan and especially those which are delayed in improving the employment situation for persons with disabilities will receive a special guidance. If companies cannot achieve the legally-prescribed minimum employment rate and there is a huge gap between the minimum employment rate and actual employment rate, names of the companies may be eventually disclosed in public. The number of companies whose names were disclosed in public is: one in fiscal year 2003 and 2004, two in fiscal year 2005 and 2006, three in fiscal year 2007 and four in fiscal year 2008

¹⁵ However, it is pointed out that the special subsidiary system which separates workplace of persons with disabilities from that of persons without disabilities hinders understanding of persons with disabilities and the system itself is a discrimination against persons with disabilities.

(Cabinet Office 2009, 63).

IV. Other Measures for Employment of Persons with Disabilities

1. Special Reduction of Minimum Wage

In Japan, the Minimum Wage Act was made for the purpose of improving labor conditions by ensuring minimum wages. Prefectural minimum wage is determined in consideration of cost of living of local workers, wages and normal solvency of local companies. The highest minimum hourly wage is 791 yen in Tokyo and the lowest one is 629 yen in Okinawa, Miyazaki, etc. as of October 1, 2009.

Employers must pay wages higher than the minimum wage to workers who are guaranteed the minimum wage. However, when employers obtain a permission from the director of Prefectural Labour Standards Office, they can pay wages lower than the minimum wage to persons with disabilities who are regarded as “persons whose capacity to work is significantly low due to mental or physical disabilities” (Article 8 of Minimum Wage Act).¹⁶ This provision is criticized by some people as a discrimination against persons with disabilities while some people positively accept it as a contribution to employment expansion for persons with disabilities.

2. Trial Employment

In order to find out adequacy and job performance for employment or transfer to regular employment, a trial employment system has started since April 2003. It provides a financial incentive to employers hiring job seekers who are difficult to find jobs due to less work experience, low skills or less knowledge for a short period (three-month in principle) as a trial. There is a certain requirement to become a target worker of this system¹⁷ and persons with disabilities meet the requirement. The financial incentive is provided to the employer, monthly 40,000 yen per trial worker for up to three months. It is pointed out that the trial employment system is effective since it may trigger employment of persons with disabilities for employers with less experience of employing them and for persons with disabilities who obtain employment for the first time.

3. Support by “Hello Work,” Public Employment Offices

“Hello Work” is a national administrative agency which introduces careers, provides career guidance, administers unemployment benefits, etc. under the Employment Security Act as well as introducing careers to persons with disabilities. As for employment placement, it regis-

¹⁶ Employers are also allowed to pay wages lower than the minimum wage to workers during the trial period and those working on light duty as well as persons with disabilities.

¹⁷ Target workers include middle-aged and older persons, young people, mothers of single-mother families, day workers, homeless people, etc. as well as persons with disabilities.

ters job-seeking persons with disabilities, provides vocational counseling based on the skills, vocational aptitude, knowledge, desired type of business, physical ability, etc. and tries to introduce stable workplace. For this reason, senior supervisors who are in charge of persons with disabilities are allocated to major "Hello Work" offices (Cabinet Office 2009, 68).

In addition, "Hello Work" deals with the following so that persons with disabilities can transfer from welfare working to general employment. When persons with disabilities using welfare facilities (vocational aid center, small-sized workplace, special-needs school, etc.) wish to work for private companies, "Hello work" can provide support for employment in cooperation with the welfare facilities. In that case, "Hello Work" establishes an employment support team consisting of local supporters including welfare facilities for each target person with disability and the team consistently supports the person from preparation for employment to settlement of workplace. In fiscal year 2009, 10,442 people were supported by the teams and 5,202 people were employed (Cabinet Office 2009, 73-74).

V. Actual Conditions of Employing Persons with Disabilities

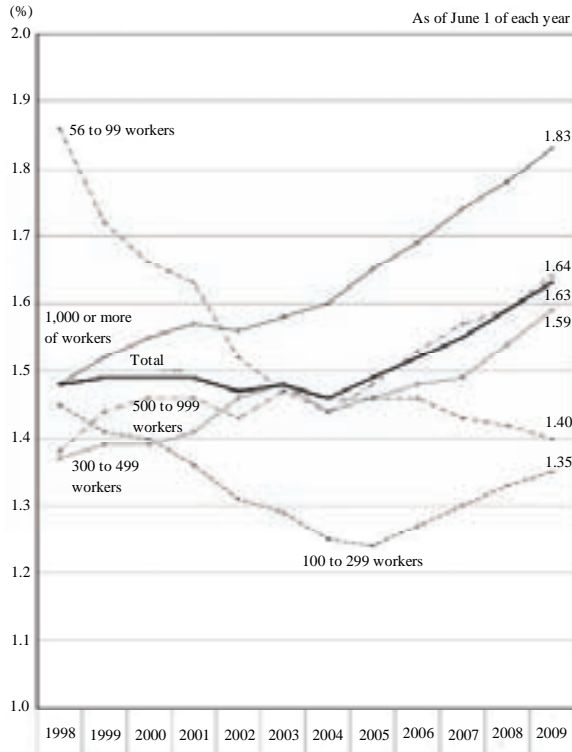
Act on Employment Promotion for Persons with Disabilities requires employers who are obliged to employ one or more persons with physical or intellectual disabilities to report employment situations of persons with physical, intellectual or mental disabilities as of June 1 every year and the results are released by the Ministry of Health, Labour and Welfare. Therefore, I will introduce actual conditions of employing persons with disabilities in Japan based on data released by the Ministry of Health, Labour and Welfare (Ministry of Health, Labour and Welfare 2009).

Although Figure 1 does not show, the first actual employment rate after the amendment of Act on Employment Promotion for Persons with Disabilities in 1976 was 1.09% (legally-prescribed minimum employment rate was 1.5% at that time). After that, the actual employment rate increased year after year and reached 1.49% in 1999. Since then it showed slightly downward trend until 2004 (1.46%), but rose rapidly and became 1.63% in 2009. The number of employed persons with disabilities has also increased year by year and reached 333,000 (those with physical disabilities: 268,266, intellectual disabilities: 56,835 and mental disabilities: 7,710.5) in 2009.¹⁸

Rises in the actual employment rate after 2004 are largely caused by increase in employment of persons with disabilities in large-sized companies with 1,000 or more of regular workers (see Figure 2).¹⁹ The actual employment rate of companies with 1,000 or more of

¹⁸ The number of employed persons with disabilities below includes double counting and 0.5 counting. See Table 1 for the counting method of actual employment rate.

¹⁹ The employment of persons with mental disabilities has been counted for calculating the actual employment rate since 2006 and that has an impact on increased actual employment rate and increased number of employed persons with disabilities, but even if the employment effect of persons with mental dis-



Source: Ministry of Health, Labour and Welfare, *Press Release* (November 20, 2009), p. 7 (3).
<http://www.mhlw.go.jp/stf/houdou/2r98520000002i9x-img/2r98520000002ibf.pdf>.

Figure 2. Actual Employment Rate of Private Companies by Company Size

regular workers reached 1.8%, i.e., exceeded the legally-prescribed minimum employment rate for the first time in 2009.

However, even at the stage of 2009, the percentage of companies which achieved the legally-prescribed minimum employment rate is 45.5%, i.e., more than half of companies are not able to achieve it. The downward trend in employment of persons with disabilities has recently been obvious especially among small and medium sized companies. In order to deal with this problem, the Act on Employment Promotion for Persons with disabilities was amended in 2008.

Regarding special subsidiaries, the number of companies which are certified to have special subsidiaries is 265 as of June 1, 2009 and the number of persons with disabilities employed by these special subsidiaries is 13,306.0.

abilities is neglected, the actual employment rate has increased (The actual employment rate in 2009 without persons with mental disabilities is 1.60%).

VI. Future Issues

I will briefly discuss future issues on Japan's measures for employment of persons with disabilities in the following:

(i) It is time to consider mandatory employment of persons with mental disabilities which was passed over for legislation. It is not enough to place an obligation to employ on employers. The government should provide adequate support for employers who have no experience of hiring persons with mental disabilities.

(ii) Although certificates of persons with disabilities are not issued by the current recognitions system for persons with disabilities, we should consider whether or not the quota system covers persons who are difficult to work due to injuries or diseases including persons with developmental disorders (except those with intellectual disabilities) and serious disease patients.

(iii) Since the number of persons with disabilities is on an upward trend and currently employed persons with mental disabilities can be counted for calculating the actual employment rate, the increase in the legally-prescribed minimum employment rate which has been left unchanged since 1997 should be considered.

(iv) We should consider how to coordinate the antidiscrimination law for persons with disabilities²⁰ with current quota system in Japan. From this aspect, the Convention on the Rights of Persons with Disabilities allows to promote the employment of persons with disabilities in private section through appropriate policies and measures including affirmative action, incentives and other measures in express terms (first paragraph [h] of Article 27 of the Convention on the Rights of Persons with Disabilities). Therefore, the coexistence of the quota system with the antidiscrimination law is possible. However, given that the quota system protects persons with disabilities while the antidiscrimination law requires an equal treatment, there may be some contradictions between them. For instance, the quota system does not regulate that employers hire persons with disabilities as special entries which are different from general employment and treat them differently from general employment after that. Rather, some people regard that as a contribution to the employment promotion for persons with disabilities²¹ and many companies have introduced such system. Such treatment, however, may be deemed to discriminatory treatment based on disabilities. These issues are also related to the problem how to coordinate quantity with quality of employment of persons with disabilities and are being discussed by the section meeting on employment of persons with disabilities, the Employment Council for Persons with Disabilities of the Ministry of Health, Labour and Welfare. We should watch the direction of the discussion.

²⁰ Although the provision set forth in Section 3, Paragraph 3 of the Basic Act for Persons with Disabilities describes "No person shall discriminate against or violate the rights or benefits of persons with disabilities for reasons of disabilities," it is nothing more than a basic concept and considered to be ineffective.

²¹ The Nippon Soda case (dehiring) (Tokyo District Court, April 25, 2006, *Rohan* 924-112).

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Disability Employment Levy-Grant Scheme from an Economic Viewpoint

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This paper discusses the disability employment quota-levy policy from an economic point of view. Based on the standpoint that the goal of the policy is to promote employment of disabled people in the society as a whole and the employment quota for each firm should be adjusted according to its capacity or opportunity cost associated with the employment, we underline that the levy-grant system can be utilized as an instrument that provides each firm with incentives to spontaneously achieve its optimal employment level. It is demonstrated that levy and grant can work as Pigouvian tax under complete information and that a levy-grant scheme akin to the Vickrey auction mechanism achieves efficiency even when the cost structure of the firms is private information.

I. Introduction

In Japan, there are 7.2 million people with intellectual, mental and physical disabilities (Cabinet Office, Annual Report on Government Measures for Persons with disabilities in 2008). For the 3.9 million disabled people of age 18 or over, the Ministry of Health, Labour and Welfare (MHLW) introduces several employment promotion schemes, such as the *Employment Quota System for Persons with Disabilities* (EQSPD) and the *Levy and Grant System for Employing People with Disabilities* (LGSEPD). Under these systems, employers with 56 workers or more should employ persons with intellectual or physical disabilities at least as many as 1.8% of the total employees; upon failing, those with 301 workers or more have to pay a *levy* of 50,000 yen per person a month for the number short of the quota;¹ otherwise, they receive a *grant* of 27,000 yen per person a month (independent of the size).

One way to view these levies and grants is that

- a law should be obeyed, and
- a levy is a punishment to employers who fail to obey the law, while a grant is a reward to those who follow it.

Differentiating from such a view, we base our argument on the view that

- the goal of the employment policy for disabled persons is to promote a certain level of total employment in the society as a whole, and
- different firms should employ different numbers of disabled persons depending on

¹ After July 2010, employers with 201 workers or more will have to pay a levy as well, but no levy is imposed on employers with 300 workers or less for the moment.

their capacity.

From this point of view, we show that the levy-grant scheme can lead employers to achieve the optimal employment *voluntarily*.

Only 325,000 out of 3.9 million disabled persons aged 18 or over are employed by firms with 56 workers or more (MHLW, Situations of Employments for Persons with Disabilities in 2008).² The actual employment rate of disabled persons is 1.59% in 2008, still lower than the socially required rate 1.8%, and only 44.9% of firms achieve the employment rate 1.8%. The current situation thus suggests that we need to further promote employment of disabled persons. In this paper, we discuss optimal disability employment levy-grant schemes from an economic viewpoint.

II. Analysis of the Levy-Grant Scheme

As we noted, the current policy uniformly imposes an employment quota of rate 1.8% on all firms with 301 workers or more. In this section, we demonstrate that such a uniform quota is socially inefficient, resulting in wastes of resources and hence losses in social welfare. The point is that it fails to appreciate the fact that different firms have different capacities in employing disabled people due to their businesses, facilities, or other various factors. For example, consider employing a physically disabled person who uses a wheelchair. Facilities then needed to be installed would be significantly different whether the person is employed as an office worker to work at a desk or he is employed as a factory worker to engage in manufacturing work. The difference in capacities thus leads to the difference in costs to bear upon employment, which in turn entails the difference in optimal employment across different firms. In what follows, we formalize this point based on a simple theoretical model.

1. Simple Case

In order to understand the essence of our analysis, let us first consider the simplest case where there are only two firms (*A* and *B*) of same size and two disabled persons. As a matter of fact, other things being equal firms would prefer to employ a person having no disability rather than a disabled person; indeed, even with the current regulation, the employment rate for the disabled lies below 1.8%. For example, when employing a disabled person a firm may have to install facilities that would not have been necessary if it had employed a person with no disability, and in some businesses, the productivity will inevitably be lowered. In economic terms, these are counted as *opportunity costs* (or simply, costs) of employing disabled persons. Let c_1^A denote the cost for firm *A* of employing one disabled person and c_2^A denote that of employing an additional one; thus, firm *A* incurs cost c_1^A to employ one person and

² 448,000 disabled persons are employed by firms with 5 workers or more (MHLW, Survey of Situations of Employments for Persons with Disabilities in 2008).

$c_1^A + c_2^A$ to employ two persons. Similarly, let c_1^B and c_2^B denote the costs for firm B of employing a first and a second disabled persons, respectively. These costs, of course, depend on the nature of the business. The opportunity cost may be almost zero (and can even be negative, that is, the benefit can be positive) when the disabled employee conducts office work, while it can be huge when the work is one of construction. From now on, we assume that $c_1^A, c_2^A < c_1^B, c_2^B$.

Let \bar{x} be the employment quota, the number of disabled persons that each firm is required to employ. We assume that $\bar{x} = 1$, so that the target total employment is $2\bar{x} = 2$.

If the firms comply with the employment quota, the social cost is equal to $c_1^A + c_1^B$. In contrast, the socially efficient employment in the sense of total cost minimization is that firm A , the firm with lower costs, employs both of the two persons. In this case, the total cost is $c_1^A + c_2^A$, which is lower than $c_1^A + c_1^B$ by the assumption that $c_2^A < c_1^B$.

Now suppose that the authority applies levy T^* and grant T^{**} such that $c_2^A < T^*$, $T^{**} < c_1^B$. Then, firm A is willing to employ two persons and receive a grant T^{**} , since

$$c_1^A > c_1^A + c_2^A - T^{**},$$

so that the grant compensates the cost of employing the second person. On the other hand, firm B prefers to pay a levy T^* instead of employing one person, since

$$c_1^B > T^*,$$

so that for firm B the levy is smaller than the opportunity cost of employment. In this way, social efficiency obtains as a result of voluntary, or even opportunistic, decisions of the firms once levies and grants are properly designed. It has to be noted that this levy-grant scheme achieves the social target, employment of two disabled persons, by socially efficient employment here, as opposed to the previous case of employment quota.

2. The Model

We more generally consider a case where there are n firms of same size. Denote as previously by \bar{x} the employment quota for each firm, so that the social target of employment is $n\bar{x}$. Let $c(x^i; \theta^i)$ be the (total) cost for firm i of employing x^i persons with disabilities, where the parameter θ^i represents the cost structure of firm i . For simplicity, we regard x^i as a continuous variable. We assume that $c_x > 0$, $c_{xx} > 0$, and $c_{x\theta} > 0$. Thus, a lower θ corresponds to a more efficient firm (i.e., a firm with lower marginal costs). Each firm i determines x^i so as to minimize its cost.

Here, we assume that the authority completely knows the firms' cost functions. The objective of the authority is to achieve employment of $n\bar{x}$ disabled persons while minimizing the sum of the costs the n firms incur. We consider the Pigouvian taxation where the authority charges each firm i a levy t per person if x^i is below \bar{x} and subsidizes a grant t per person if x^i exceeds \bar{x} .

3. Analysis

First, let us derive the socially optimal employment. The authority's minimization problem is given by

$$\begin{aligned} \min_{x^1, \dots, x^n} \sum_{i=1}^n c(x^i; \theta^i) \\ \text{s. t. } \sum_{i=1}^n x^i = n\bar{x}. \end{aligned}$$

Assuming the solution lies in the interior, the first order condition is given by

$$c_x(x^{1*}; \theta^1) = \dots = c_x(x^{n*}; \theta^n)$$

along with the constraint $\sum_{i=1}^n x^{i*} = n\bar{x}$. Notice that, by the assumption that $c_{x\theta} > 0$, if $\theta^i < \theta^j$, then $x^{i*} > x^{j*}$. That is, at the social optimum, more efficient firms should employ more persons than otherwise.

Now suppose that the authority exercises the Pigouvian taxes as described above. The minimization problem of each firm i is then

$$\min_x c(x; \theta^i) + t(\bar{x} - x).$$

The first order condition is given by

$$c_x(x; \theta^i) = t.$$

Thus, by setting the levy-grant level t^* so that

$$t^* = c_x(x^{i*}; \theta^i)$$

for all i , the authority can achieve the efficient employment (x^{1*}, \dots, x^{n*}) .

Importantly, that the society as a whole achieves employment of disabled people at rate 1.8% does *not* imply that each firm should uniformly achieve employment at rate 1.8%. Uniform employment would force extra costs, giving rise to social inefficiencies. In contrast, levies and grants, appropriately designed, drive firms to voluntarily determine their employment levels through their own optimization problem, as a consequence of which the socially efficient employment is attained. The levy-grant scheme can thus be utilized as a means of achieving social efficiency.

III. The Optimal System under Asymmetric Information

As we discussed above, it is socially inefficient to impose a uniform employment quota on all firms. At the social optimum, firms with lower marginal costs should employ more disabled persons than those with higher costs. A properly designed levy-grant scheme will

work to attain the social optimum.

In practice, however, it is not a trivial task for the authority to determine the optimal levels of levy and grant; as opposed to the premise in the previous analysis, the authority most likely does not have complete knowledge about the cost structures of the firms, that is, they are *private information* of the firms. Notice that the result in the previous section crucially depends on the assumption that the firms' cost functions are known to the authority. One might think, then, that the authority should just tell the firms to inform it of their cost functions, for example upon annual reporting of their employment. However, firms will have no incentive to report their cost functions truthfully, unless the authority appropriately designs a mechanism to induce the firms to do so.

1. Gradual Adjustment of Levies and Grants

One way to attain the desirable employment and social efficiency under private information is to adjust the levies and grants gradually by trial and error until the employment reaches the desirable level. The current employment rate of the disabled, 1.59% in 2008, is fairly below 1.8%, suggesting that the authority should raise the amounts of levies and grants.

In fact, they have been raised. The levy has been set 30,000 yen in 1977, 40,000 yen in 1980, and 50,000 yen in 1991; and the grant 14,000 yen in 1977, 20,000 yen in 1980, 25,000 yen in 1991, and 27,000 yen in 2003 (Nakajima, Nakano, and Imada 2005). Despite the increase in these instruments, the employment rate has remained largely unchanged, which suggests that they should be raised further. Eventually, the target employment of rate 1.8% will indeed be attained by adjusting the levies and grants in every period based on the rate in the previous one (notice that even in this case, firms will not establish the same average employment).

However, such a policy of gradual adjustment is hardly an ideal one, since adjustment is likely to take a very long time, and the social situation may change during the time. Moreover, anticipating a future increase in grants, firms may strategically postpone their employment. In order to achieve the target employment immediately, therefore, the authority anyway needs to obtain information about firms' cost structures to establish an appropriate institution. Is it possible, then, for the authority to design such an institution giving firms right incentives to report their private information truthfully? In fact, auction theory (more generally, the theory of *mechanism design*) helps to solve this issue. In the following sections, we study a mechanism called the Vickrey-Clarke-Groves mechanism, especially the Vickrey auction.³

³ Vickrey (1961) proposed the second-price auction for both cases of single and multiple objects. Clarke (1971) studied a similar mechanism for provision of public goods, while Groves (1973) unified and generalized these ideas.

2. Auction

How do auctions relate to our issue of determining the optimal levy and grant levels under private information? Consider selling one unit of an object through an auction. Specifically, we consider the sealed-bid second-price auction, also known as the Vickrey auction.⁴ In a Vickrey auction, the bidder with the highest bid wins the auction (i.e., obtains the object) and pays the second highest bid, rather than the bid he himself submitted. A participant is thus unsure ex ante how much he will pay in case he wins. What is the optimal bid for a participant in the Vickrey auction? Let v^i be participant i 's valuation of the object, and denote his bid by b^i . The Vickrey auction is known to have a nice property that $b^i = v^i$ is a weakly dominant strategy for each participant i . That is, *it is optimal for every participant to bid his valuation truthfully*. Hence, the Vickrey auction achieves efficiency in that the object is obtained by the participant who values it most. See any textbook on auction theory, e.g., Krishna (2002), for details. The point is that the winner pays the price equal to the valuation of the participant that would have obtained the object if he were absent. Note that the price the winner pays does not depend on the bid he made.

Let us apply the Vickrey mechanism to our problem. Consider the case where there are n firms, $1, \dots, n$, and one disabled person to be employed. Let c^i be the cost for firm i , which is firm i 's private information, and suppose that the firms report their costs to the authority. Denote firm i 's report by b^i , and rename the firms so that $b^1 \leq b^2 \leq \dots \leq b^n$. According to the idea of the Vickrey auction, the scheme that serves for our goal is such that firm 1 which makes the smallest report employs the person and then either (i) each of firms $2, \dots, n$ pays an amount b^1 of levy, or (ii) firm 1 receives an amount b^2 of grant.⁵

Exactly as in the auction situation above, under this scheme it is optimal for each firm to report its cost truthfully. By applying the Vickrey mechanism, the authority can thus induce the firms to report truthfully and hence achieve social efficiency in that the firm with the lowest cost will employ the person.

In order to deal with the more realistic case where there are more than one disabled persons to be employed, we consider the multi-object Vickrey auction in the next subsection.

3. Vickrey Auction with Multiple Objects

We first explain the multi-object Vickrey auction (see, e.g., Krishna 2002). Suppose that there are K units of a homogeneous object to be sold through an auction. Each participant i submits a profile of his marginal valuations of the first through the K th units, i.e., a bid vector \mathbf{b}^i of K elements, which can be different from his true valuation profile \mathbf{v}^i (where we

⁴ More familiar is perhaps the first-price auction, where the bidder with the highest bid obtains the object and pays the price he submitted.

⁵ More generally, the scheme works such that each firm i pays an amount T_i^* of levy when it is not to employ the person and receives an amount T_i^{**} of grant when it is to employ, where T_i^* and T_i^{**} are such that $T_i^* + T_i^{**} = \max_{j \neq i} b^j$.

assume $v_1^i \geq v_2^i \geq \dots \geq v_k^i$). In other words, he reports his demand curve, a list of his willingness to pay for the first unit, the second unit, ..., and the K th unit. Based on these bids, the objects are allocated to the bidder with the highest bid, the one with the second highest, ..., and the one with the K th highest. Thus, bidder i obtains k^i units of the object if k^i elements of his bid vector \mathbf{b}^i are in the top K bids among all the bids. The payment of bidder i is given by

$$\sum_{k=1}^{k^i} b_{K-k^i+k}^{-i} \quad (1)$$

where \mathbf{b}^{-i} is the vector of all bids of all bidders except i and its elements are arranged in a descending order. That is, he is charged the amount of the highest rejected bid (other than his own) for his first unit, the second highest rejected bid for his second unit, ..., and the k^i th highest rejected bid for his k^i th unit. The basic idea here is the same as that of the Vickrey auction in the single object case: bidder i is charged the amount of the bids by the bidders who would have obtained the k^i objects if i were absent.

The Vickrey auction is known to have the following nice property.

Theorem 1. In the Vickrey auction, $\mathbf{b}^i = \mathbf{v}^i$ is a weakly dominant strategy for each participant i .

The theorem says that no participant can gain a positive benefit by making a false report (i.e., by submitting a list of marginal valuations that are different from his true ones), and as a result, the bids are precisely the participants' true marginal valuations. We therefore have the following.

Corollary 2. The Vickrey auction allocates the objects efficiently.

That is, the objects are allocated to the participants who value them most. The Vickrey auction thus succeeds in maximizing the social surplus, hence achieving social efficiency, even in the presence of private information.

In the next subsection, applying the multi-object Vickrey auction explained above, we propose a mechanism that achieves socially efficient employment of disabled persons.

4. Vickrey Auction Employment Scheme

We consider a case where there are n firms of same size. Denote as previously by \bar{x} the employment quota for each firm, so that the social target of employment is $n\bar{x}$. Let $\mathbf{c}^i = (c_1^i, \dots, c_{n\bar{x}}^i)$ be the cost vector for firm i , where an element c_j^i represents the marginal cost of firm i to employ the j th disabled person, which is firm i 's private information, and we assume that $c_1^i \leq c_2^i \leq \dots \leq c_{n\bar{x}}^i$. That is, for firm i , employing one disabled person costs c_1^i , employing two disabled persons costs $c_1^i + c_2^i$, and so on. We consider the following procedure.

- (i) Given \mathbf{c}^i , each firm i reports a vector of marginal costs $\mathbf{b}^i = (b_1^i, \dots, b_{n\bar{x}}^i)$.
- (ii) Arrange all the elements of the reports in an ascending order. Firm i employs x^i disabled persons if x^i elements in its report are in the top $n\bar{x}$ elements among all the reports.

(iii) If firm i employs $x^i > \bar{x}$ disabled persons, the grant for firm i is $\sum_{x=1}^{x^i-\bar{x}} b_{n\bar{x}-x^i+x}^{-i}$, where \mathbf{b}^{-i} is the vector of all reports of all firms except i and its elements are arranged in an ascending order.

(iv) If firm i employs $x^i < \bar{x}$ disabled persons, the levy for firm i is $\sum_{x=0}^{\bar{x}-x^i-1} b_{n\bar{x}-x^i-x}^{-i}$.

As previously, we obtain the following result.

Proposition 3. In the Vickrey scheme, $\mathbf{b}^i = \mathbf{c}^i$ is a weakly dominant strategy for each firm i .

The proposition says that no firm can gain a positive benefit by making a false report $\mathbf{b}^i \neq \mathbf{c}^i$, and thus the firms report their cost structures truthfully. We therefore have the following.

Corollary 4. The Vickrey scheme achieves the efficient employment.

That is, the outcome of the scheme minimizes the total cost of employment.

In order to see how the Vickrey scheme works, let us consider the following simple example.

Numerical example

Consider the case where there are three firms (i.e., $n = 3$). Suppose $\bar{x} = 2$, thus the social target is $n\bar{x} = 6$. The cost vectors for the firms are given by

$$\mathbf{c}^1 = (1, 3, 4, 6, 9, 10)$$

$$\mathbf{c}^2 = (2, 5, 6, 7, 8, 9)$$

$$\mathbf{c}^3 = (1, 4, 7, 10, 11, 12).$$

Let \mathbf{b}^i be the report vector of firm i , and \mathbf{b} be the vector of reports of all firms and its elements are arranged in an ascending order. When all firms truthfully report their costs, we obtain

$$\mathbf{b} = (\underline{1}, \underline{1}, \underline{2}, \underline{3}, \underline{4}, 5, 6, 6, 7, 7, 8, 9, 9, 10, 10, 11, 12),$$

and

$$\mathbf{b}^1 = (\underline{1}, \underline{3}, \underline{4}, 6, 9, 10)$$

$$\mathbf{b}^2 = (\underline{2}, 5, 6, 7, 8, 9)$$

$$\mathbf{b}^3 = (\underline{1}, \underline{4}, 7, 10, 11, 12),$$

where the 6 smallest “bids” are underlined. Thus, in this case, firm 1 employs 3 persons, firm 2 employs 1 person, and firm 3 employs 2 persons. Firm 1 is given a grant for its third employee, which equals 5, the fourth element of

$$\mathbf{b}^{-1} = (1, 2, 4, \underline{5}, 6, 7, 7, 8, 9, 10, 11, 12).$$

If firm 1 did not employ the third person, then firm 2 would have employed one additional person incurring cost 5, as firm 2’s report contains the smallest “rejected bid” in \mathbf{b}^{-1} .

On the other hand, a levy of 4 is imposed on firm 2 since

$$\mathbf{b}^{-2} = (1, 1, 3, 4, 4, 6, 7, 9, 10, 10, 11, 12).$$

If firm 2 employed the second person, then firm 1 (or firm 3) would not have employed the third (or second) person, saving cost 4.

The remaining firm 3 is assigned no levy or grant since it employs \bar{x} (= 2) persons.

The important point is that no firm can manipulate the amount of levy or grant by making a false report, since these are determined by the *other* firms' reports. Consequently, the Vickrey scheme achieves the efficient employment even if the authority does not know the actual cost structure of each firm.

IV. Conclusion

According to the Employment Quota System for Persons with Disabilities, firms have to offer equal employment opportunities to people with disabilities as well as those having no disabilities. The actual employment is still lower than the socially desired rate 1.8%, which suggests that we need to further promote employment of disabled persons. We argued that the current policy of *uniform* quota is inappropriate since it leads to inefficiency, giving rise to wastes of resources and hence losses in social welfare. Different firms have different capacities for employing disabled persons due to the difference in their businesses, facilities, and so on, so that firms with lower employment costs should employ more persons than otherwise in order for the social cost to be minimized. Levies and grants can thus be used as an instrument for Pigouvian taxation, provided that the firms' cost structures are known to the authority.

When the cost structures are firms' private information, one has to design an appropriate mechanism that gives the firms incentives to reveal their private information. We proposed such a mechanism building on the insights from *mechanism design theory*. There, levies and grants are designed based on the idea of the Vickrey auction so that firms have incentives to report truthfully their marginal costs for employing disabled persons, and as a consequence, employees are efficiently assigned to firms with the lowest marginal costs. One shortcoming of this mechanism is that the amount of information to be processed increases rapidly as the numbers of firms and employees increase. It may thus be practical to use this mechanism at a provincial level.

We restricted ourselves to simple cases to isolate the theoretical essence of the optimal levy-grant scheme, and hence we neglected many factors. First, we focused exclusively on pecuniary motives derived by levies and grants. Non-pecuniary factors such as reputation effects may also discipline firms to employ disabled people.⁶ Second, we considered only the incentives of employers and abstracted from heterogeneity of employees. People are heterogeneous in their characteristics or preferences and hence desirable jobs. Matching between

⁶ However, Nagae (2007) reports evidence from the disclosure policy in Tokyo and Osaka that reputation does not effectively work for promoting employment of the disabled.

employers and employees is without doubt an important issue. Finally, our discussion has been static. Obviously, investment in infrastructures will decrease future costs of employment of disabled people. Such dynamic effects should be taken into account. Further research is called for on these issues.

Appendix: Proof of Theorem 1

Consider any bidder i , and fix the vector \mathbf{b}^{-i} of bids of all bidders except bidder i , arranged in a descending order. Denote by $u^i(\mathbf{b}^i; \mathbf{v}^i)$ bidder i 's (ex post) payoff when he submits a vector \mathbf{b}^i . Let k^i be the number of units that bidder i obtains when he submits \mathbf{v}^i ; that is, k^i is the number of elements in \mathbf{v}^i that are in the top K bids among all the bids. It therefore holds that $v_k^i \geq b_{K-k^i+1}^{-i}$ for all $k \leq k^i$ and $v_k^i \leq b_{K-k^i}^{-i}$ for all $k > k^i$. Bidder i 's payoff upon truth-telling is given by

$$u^i(\mathbf{v}^i; \mathbf{v}^i) = \sum_{k=1}^{k^i} v_k^i - \sum_{k=1}^{k^i} b_{K-k^i+k}^{-i}.$$

Now consider any $\mathbf{b}^i \neq \mathbf{v}^i$. We want to show that i does not obtain a positive gain by submitting \mathbf{b}^i , i.e., $u^i(\mathbf{b}^i; \mathbf{v}^i) \leq u^i(\mathbf{v}^i; \mathbf{v}^i)$. Let ℓ^i be the number of units that i receives when he submits \mathbf{b}^i . Then the payoff is given by

$$u^i(\mathbf{b}^i; \mathbf{v}^i) = \sum_{k=1}^{\ell^i} v_k^i - \sum_{k=1}^{\ell^i} b_{K-\ell^i+k}^{-i}.$$

There are three cases: (i) $\ell^i = k^i$, (ii) $\ell^i > k^i$, and (iii) $\ell^i < k^i$.

Case (i): i is assigned the same number of units and the same amount of payment (recall that the payment does not depend on one's own bid), so that his payoff becomes no larger than that under truth-telling.

Case (ii): The payoff is computed as

$$\begin{aligned} u^i(\mathbf{b}^i; \mathbf{v}^i) &= \left(\sum_{k=1}^{k^i} v_k^i + \sum_{k=k^i+1}^{\ell^i} v_k^i \right) - \left(\sum_{k=1}^{k^i} b_{K-k^i+k}^{-i} + \sum_{k=-(\ell^i-k^i)+1}^0 b_{K-k^i+k}^{-i} \right) \\ &= u^i(\mathbf{v}^i; \mathbf{v}^i) + \sum_{k=k^i+1}^{\ell^i} (v_k^i - b_{K-\ell^i-k^i+k}^{-i}) \\ &\leq u^i(\mathbf{v}^i; \mathbf{v}^i) + \sum_{k=k^i+1}^{\ell^i} (v_k^i - b_{K-k^i}^{-i}) \leq u^i(\mathbf{v}^i; \mathbf{v}^i), \end{aligned}$$

where the last inequality follows from $v_k^i \leq b_{K-k^i}^{-i}$ for all $k > k^i$. That is, for the $(k^i + 1)$ th through the ℓ^i th units, i has to pay more than his valuation.

Case (iii): The payoff is computed as

$$\begin{aligned}
 u^i(\mathbf{b}^i; \mathbf{v}^i) &= \left(\sum_{k=1}^{k^i} v_k^i - \sum_{k=\ell^i+1}^{k^i} v_k^i \right) - \left(\sum_{k=1}^{k^i} b_{K-k^i+k}^{-i} - \sum_{k=1}^{k^i-\ell^i} b_{K-k^i+k}^{-i} \right) \\
 &= u^i(\mathbf{v}^i; \mathbf{v}^i) - \sum_{k=\ell^i+1}^{k^i} (v_k^i - b_{K-\ell^i-k^i+k}^{-i}) \\
 &\leq u^i(\mathbf{v}^i; \mathbf{v}^i) - \sum_{k=\ell^i+1}^{k^i} (v_k^i - b_{K-k^i+1}^{-i}) \leq u^i(\mathbf{v}^i; \mathbf{v}^i),
 \end{aligned}$$

where the last inequality follows from $v_k^i \geq b_{K-k^i+1}^{-i}$ for all $k \leq k^i$. That is, for the $(\ell^i + 1)$ th through the k^i th units, i saves less than his valuation.

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Japanese Support System for Competitive Employment of Persons with Disabilities

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The purpose of this paper is to investigate and discuss the reality, issues and future directions of employment support for persons with disabilities which employers receive from external specialized agencies for their employment of disabilities. First, this paper outlines, from the viewpoint of employers, employment-related issues of persons with disabilities, based on interview surveys and large research studies. Then it reviews businesses' in-house problem-solving efforts and refers to employment support services provided by external agencies. While companies are trying to achieve the quota stipulated in the Employment Quota System, there still remain a number of challenges. In the future, coupled with the implementation of the Employment Quota System, more companies are expected to actively make use of employment support services, and this will lead to the increasing employment of persons with disabilities.

I. Corporate Needs for Employment Support

This paper, first, identifies issues concerning corporate employment of persons with disabilities and verifies what kind of employment support companies need, based on findings from interviews and mail surveys.

1. Comments of Employers

The following is a quick list focusing on four topic commonly talked about during interview surveys with those in charge of human resources at 11 companies listed in major stock exchanges in Japan, which were conducted in November, 2009 by National Institute of Vocational Rehabilitation.^{1,2} Companies surveyed were businesses in major industry sectors such as the automobile sector, the electronics sector and the elderly care sector that currently underpin the Japanese economy and employment, including a semiconductor-manufacturing equipment maker, an automotive parts supplier, an auto equipment distributor, a precious metal manufacturing, wholesale and retail business, a women's shoes planning and consignment sale business, a baby supply planning and retail business, a medical supplier, a foods supermarket, a staff agency and outplacement service business, an elderly care service business and an IT-related service business.

¹ A research institute in charge of vocational rehabilitation established by the national government, responsible for training programs for professional supporters, advices to bodies concerning vocational rehabilitation, and recommendations on the national government's policies to promote employment of persons with disabilities.

² Unfinished manuscript (to be published in 2010).

Comments of Those in Charge of Human Resources in Listed Companies Concerning the Employment of Persons with Disabilities and the Employment Quota System

(1) Gaps between the ideal model of job seekers and the reality of job seekers

When we look for job seekers with disabilities, it is rare that persons with disabilities that we have envisioned apply for positions at our company. We would like to employ motivated job seekers with slight disabilities who will serve to achieve our target Actual Employment Rate.³

Those considered to contribute to the achievement of an employer's legal employment quota of disabled workers are persons with disabilities who possess statutory Identification Booklets for Persons with Disabilities.⁴

Persons with slight disabilities include those with loss of part of a finger capable of working on a light duty, persons with lower limb disability capable of going up and down stairs with the aid of canes, persons with heart disease capable of going to work everyday, and hearing-impaired people capable of smoothly making speech-based communication with their superiors, colleagues, clients and customers. In B to B (Business to Business) sectors, of particular importance is the communication skill to be able to bring out the need of clients. Many of job applicants with disabilities that "Hello Work"⁵ (Public Employment Security Offices) have recommended are the severely disabled.

Sufficiently motivated job seekers with disabilities are those willing to contribute to the increase in profit and to make concrete suggestions concerning market strategies, who are able to adapt to human resource development programs and socialize well with their coworkers, without feeling self-conscious with disabilities.

(2) How those in and out of companies concerning the employment of disabled persons consider the reality of employment of disabled persons

We can understand the importance of normalization of disabled people through employing persons with disabilities. Yet some of those in and out of our company are not willing to understand the importance, including, the top management, superiors and coworkers of workers with disabilities, corporate shareholders such as main financing banks and individual shareholders, customers (both corporate and individual

³ The percentage of the number of persons with disabilities actually employed by the company among the total number of employees in the company.

⁴ Identification of a person with disability is, in principle, carried out based on the possession of the Identification Booklet for Persons with Disabilities. The Booklets are smaller than passport in design, vary according to physical, intellectual, or psychiatric disability, and that vary according to local governments which issued the booklets.

⁵ Outpost agency of the Ministry of Health, Labour and Welfare in charge of reception desk services concerning employment insurance and job placement services, and 589 offices of Hello Work were installed around the country as of 2009.

customers), and owners of buildings in which we have our offices.

Those in sections where persons with disabilities are assigned say “I don’t know how to communicate with them as our co-workers,” “He/she does not work as a full-fledged worker, and I am afraid that it will affect the job performance of our section,” “He/she cannot adapt to human resource development programs designed for new university graduates and strays from the programs,”⁶ “Because of him/her, it takes longer time for business meetings and for giving job instructions.”

While relevant government agencies require us to achieve the target Actual Employment Rate with their focus on the target value, our staff in charge of personnel affairs have to work out concrete measures to employ persons with disabilities. These staff are sometime caught between government agencies requiring the achievement of the target and their top management.

(3) Human resource development for persons with disabilities

I do not think that we can develop him/her as an employee in our company. I don’t know how to teach him/her methods of work.

I think that it will be no use applying our human resource development programs to persons with disabilities. Now that every job duty increasingly takes much knowledge and persons in charge have to learn a lot about their job duties. As a company, we would like to train and develop wage-earning human resources in a long term. It will be too late to learn that it is impossible to train and develop those with disabilities as our staff after having spent a lot of resources on their training.

(4) What kind of job duties persons with disabilities perform

Personnel affairs departments have no knowledge about the details of job duties that persons with disabilities perform at sections where they have been assigned to.⁷ When persons with disabilities are assigned to their workplaces, managers of these workplaces sometimes tell personnel affairs departments that they have no idea about what kind of job will suit those with disabilities. Staff in personnel affairs departments has no idea about this question either. In ordinary circumstance, those in personnel affairs departments need not learn the details of job duties. Before assigning persons

⁶ In Japan, students graduate from universities in March, and many leading companies conduct periodic hiring for new graduates in April every year as full-time workers. Those new graduates hired and trained as full-time workers in April include those with disabilities. According to findings from a survey on member companies conducted in 2009 by Nippon Keidanren (Japan Business Federation) with more than 1,600 member leading corporations (Response rate: 34.8%), companies where the ratio of experienced workers among the total number of persons newly employed every year is 30% or less account for 78.9% of the companies surveyed. 13.9% of the respondents answered that they never employ experienced workers. (Nippon Keidanren 2009)

⁷ In Japan, generally, when Japanese companies newly hire employees, first, those in charge of human resources hire people and then assign them to each section.

with disabilities to their workplaces, however, they have to learn such details and suggest what kind of job will suit these persons. This is burdensome for those in charge of personnel affairs.

It is difficult to appoint employees with disabilities to posts such as front line sales representative positions or retail positions where they are to directly contact our customers. In recent years, with internal demand slowing down and increasingly diversified customer and client needs (accordingly, it is increasingly difficult for us to know what they need), and in the face of faster delivery requirements (accordingly, we are required to get work accomplished in a shorter time period with a sense of urgency), even workers with no disabilities sometimes suffer from sickness after being overwhelmed by customer complaints or by too much work. I am afraid that those with disabilities are more likely to suffer from sickness under such circumstances.

While, in back-office sections such as sections in charge of logistic support for marketing or those responsible for general affairs, personnel affairs and development, the cost for human resource development is low and the pressure at workplaces is more manageable. Those at Hello Work often advise us to assign employees with disabilities to back-office sections. Companies, however, have been streamlining their operations in Japan and reducing personnel expenses incurred in connection with back-office sections, which are not directly contributing to corporate profitability, in order to relocate our production bases and marketing bases to Asian countries where their market share has been on the rise. Accordingly, in the future it will be more difficult to appoint disabled person to back-office sections.

The above can be summarized in the following.

Whether a person with disabilities will be employed or not depends on whether he or she can adapt himself/herself to circumstances in general job duties and to general human resource development. In order to achieve an employer's legal employment quota of disabled workers, each company has to employ a certain number of persons with disabilities. As a desperate measure, persons in charge of personnel affairs consider whether it is possible to appoint persons with disabilities to back-office sections such as sections in charge of logistic support for marketing or those responsible for general affairs. However, these sections now face the need to reduce personnel costs following the downsizing of corporate operations, and accordingly, some respondents suggested that such measures would have their limitations. It is too superficial to simply attribute the difficulty in employing persons with disabilities to the discrepancies between qualifications of each person with disabilities and job duties assigned to them. Threats of external and internal conditions of business, including corporate structures, human resource development systems and sectors and stakeholders surrounding companies, hinder the employment of persons with disabilities.

It is true that the number of companies surveyed (11 companies) was too small. Yet it is noteworthy to read comments, shared by persons in charge of human resources concerning

the employment of persons with disabilities, which undoubtedly reflect their common concerns about the employment quota, based on findings from interviews with a number of companies in different industry sectors, and to learn what is needed in employment support for persons with disabilities.

2. Challenges to Companies in the Employment of Persons with Disabilities

According to a nationwide survey of some 7,000 private companies with five or more employees conducted by the Ministry of Health, Labour and Welfare, as challenges and issues to be addressed in the employment of persons with disabilities, for persons with physical disabilities,⁸ 26.9% of the companies surveyed cited concerns over “whether persons in our company will understand and get to know disabilities;” for persons with intellectual disabilities, 35.8% of the surveyed, and for persons with psychiatric disabilities, 38.7%, respectively (Ministry of Health, Labour and Welfare 2009). These findings are consistent with the comments of the companies, as I noted at the beginning of this paper. If, from the viewpoint of the top management and those in charge of human resources, those in sections where persons with disabilities are to be assigned lack understanding of the significance of the employment of disabled persons (employment philosophy) and know-how (job accommodation techniques), persons with disabilities will still find it difficult to be employed.

According to a survey of some 5,000 private companies with 30 or more regular employees across the country conducted by National Institute of Vocational Rehabilitation, 34.2% of the companies responding to the survey cited, as a reason for not recruiting or employing persons with disabilities, “lack of support systems for persons with disabilities” (National Institute of Vocational Rehabilitation 2007). In addition, according to the same survey, when asked about what it takes to increase the employment of persons with disabilities in the future, 50% or more of the companies responding answered “injection of additional funds into the environmental improvement at workplaces (material and/or human support measures),” and 20% or more, “education of employees.” Then, asked whether they had made use of Grant Systems applicable to the employment of persons with disabilities during the past three years, only 14.3% of the companies responding answered that they applied “intra-firm Job Coaches” (which will be discussed later).

Players involved in the employment of persons with disabilities should recognize the

⁸ In Japanese laws regarding welfare and employment issues, “physical disabilities” is a collective term defined in terms of medical models which refers to the following five disability groups: (i) visual impairments, (ii) functional impairments in hearing or equilibrium, (iii) functional impairments in voice, speech or chewing, (iv) orthopedic impairments and (v) functional impairments of the heart, kidneys, respiratory organs, bladder, rectum or small intestine, or the disorder of immunological functions induced by human immunodeficiency virus (HIV). Each of these definitions just describes the disabilities only in terms of physiology, anatomy and pathology. Accordingly, it is very difficult for companies to know what are to be addressed in the employment of persons with such disabilities. Experts were aware of this problem in the 1980s at the latest, yet, it still remains unsolved.

significance of systematically organizing human support measures in their companies for assisting persons with disabilities who require special accommodations (i.e. persons with disabilities, excluding those with only slight disabilities). Unlike physical facilities improvement including buildings and machinery, human support measures have not attracted sufficient attention. The details and the significance of physical facilities improvement, such as the installation of ramps and the adjustment of the heights of desks and tables accessible to wheelchair users, and the installation of screen readers for persons with visual impairments who use personal computers as network terminals, are easier to be intuitively understood and it is readily possible to calculate the extra cost for them. On the other hand, it requires some expert knowledge to understand the details of human support measures, such as the arrangement of interpreters for the deaf and hard of hearing who use sign languages and study meetings to learn sign languages, and special accommodations required to give instructions and communicate with persons with severe intellectual disabilities and persons with developmental disabilities at workplaces. The significance of them is more difficult to be understood, and it is harder to estimate the extra cost for them. In order to be able to succeed in human support measures carried out for the employment of persons with disabilities, there are limits to what general human resource management alone can do. If one tries to provide special accommodations for persons with disabilities in the framework of general human resource management, it will heavily strain those in charge of human resources and supervisors of those with disabilities who teach work methods to them at workplaces and therefore, the employment of disabled persons will not last long. If those in charge of human resources are concerned about such things before hiring persons with disabilities, the employment of persons with disabilities will seldom take place. Only a limited number of companies express their intention to make use of highly-professional employment support services by shouldering extra costs for the services. I cannot say that it is sufficient to assign the role of supporters for persons with disabilities to a certain number of employees. It is believed that, in preparation for personnel relocation of persons in charge, it is necessary to systematically address this issue in a company-wide manner so that employees can retain, disseminate and enhance the expertise on the employment management of persons with disabilities. It is preferable that external employment support will be of some help. In other words, the main player in the employment of persons with disabilities is companies which employ them and not external bodies. The employment support is expected to support companies that employ persons with disabilities, from the viewpoint of professional organs, by playing the role of consultants to in-company support systems which are in charge of solving individual problems.

II. Utilization of Job Coach System

In Japan, experts in various fields, including those specializing in education, welfare, labor and medical services, are involved in the employment of persons with disabilities, and they also provide employment support to companies. In this paper, I would like to present the Job Coach System as a typical example of such employment support services. Yet, only minorities of companies use employment support services. However, those companies which actually use the system have recognized the positive effects of the system. In this section, I would like to present such effects, by referring to the findings from mail surveys.

1. With Whom Companies Are Willing to Consult

In this section, I would like to present the findings from a national survey of 3,049 private companies conducted by National Institute of Vocational Rehabilitation in 2007 (National Institute of Vocational Rehabilitation 2008).⁹ According to the survey, 43.0% (425 companies) of the companies responding (the total of 988 companies) said that they had consulted someone or had used some sources of information concerning the employment of persons with disabilities. The largest percentage of the 425 companies cited Hello Work as sources of information, followed by Internet and other sources (Table 1). “The use of internet” here includes the use of private-sector employment agency services for persons with disabilities, and not mere information gathering.¹⁰

Among the sources listed above, Employment and Life Support Centers for Persons with Disabilities¹¹ and Local Vocational Centers for Persons with Disabilities¹² are agencies to which extra-firm job coaches (which will be discussed later) belong.

⁹ The number of companies surveyed in this study was 3,049 and the number of valid responses was 988. The companies surveyed can be grouped into three categories: a group of companies interested in employment support services, and two groups of companies having significant needs for employment support services. From the viewpoint of questionnaire items in this paper, differences between the groups do not matter. Accordingly, in this paper, they were referred to as “companies interested in employment support services or those having needs for employment support services” collectively.

¹⁰ Recruiting via the internet by major companies is now very popular for job applicants, including job seekers with disabilities, new graduates and mid-career job seekers. According to the survey above mentioned conducted by Nippon Keidanren (2009), 77.3% of the companies accepted job seekers’ applications only via the internet, and 89.0% of the companies which accepted applications via the internet said that the use of the internet worked well.

¹¹ As of April 2009, 246 Employment and Life Support Centers for Persons with Disabilities were put in place nationwide, and more will be established in the future. They are organs serving the employment of persons with disabilities, operated by private nonprofit corporations such as social welfare juridical persons.

¹² 52 Local Vocational Centers for Persons with Disabilities have been put in place nationwide. They are bodies serving the employment of persons with disabilities operated by Independent Administrative Agencies which conduct duties commissioned by the Ministry of Health, Labour and Welfare.

Table 1. Comments of Those in Charge of Human Resources in the Listed Companies Surveyed Concerning the Employment of Persons with Disabilities and the Employment Quota System (M.A., n=425)

Consulting Hello Work	79.5%
Use of Internet, participation in seminars and literature searches	28.9%
Consulting other companies, affiliated companies, employer's associations, and industry associations and collecting information from them	19.3%
Consulting educational establishments, Vocational Ability Development Centers, and welfare facilities	18.1%
Consulting Prefectural Associations for Employment of Persons with Disabilities	16.2%
Consulting Employment Support Centers for Persons with Disabilities and Employment and Life Support Centers for Persons with Disabilities	16.0%
Consulting Local Vocational Centers for Persons with Disabilities	14.6%
Consulting management consultants and specialists in social insurance and collecting information from them	5.6%
Consulting municipal offices and municipal welfare offices	3.8%
Consulting other sources and collecting information from other sources	2.6%
Companies that have already consulted some sort sources and/or collected information from them	100%

2. Job Coach System

The Job Coach System is an institutional system unique to Japan which was inspired by the Job Coach model in the U.S. Supported Employment. In Japan, there exists no employment status, such as Supported Employment in the United States. In addition, in terms of the content of duties and of their positions in the employment of disabled persons, the Japanese Job Coaches are somehow different from Job Coaches in the United States, while they share some aspects common with U.S. counterparts. Japanese Job Coaches have three missions as listed below.

First, they provide employment support for companies. More precisely, they get would-be supervisors and would-be coworkers of persons with disabilities to learn how to teach work methods to them, suggest what kind of job will suit employees with disabilities, and encourage those in charge to assign persons with disabilities to such jobs.

Secondly, Japanese Job Coaches support persons with disabilities. They serve as coaches for persons with disabilities at workplaces, on behalf of their employers. In addition, Japanese Job Coaches provide essential education to persons with disabilities so that they can make professional progress, for example, by teaching them how to change buses or trains to go to work, how to deal with the situation when buses or trains get delayed, good manners at workplace, how to observe rules concerning health and safety, how to receive instructions from their superiors and how to report to their superiors, how to pass the time during rest breaks, how to deal with their coworkers, how to care for their own health at home, and how to prepare for the next business day.

Thirdly, they support families of persons with disabilities. Job Coaches ask families of disabled employees to maintain a normal and healthy daily rhythm by attaching importance to sleep and eating in preparation for performing their job duties, and also ask family members to treat with care people with disabilities so that they can take more pride in their contributions to the society. Experts specializing in employment support in Japan share a common understanding that family members of persons with disabilities are important factors supporting the employment of disabled persons.

As above listed, Japanese Job Coaches ask companies, persons with disabilities themselves and their families to change the way they think and act, so as to ease the concerns of persons with disabilities and of their employers. They also serve to allow persons with disabilities to make professional progress and contribute to their employers in spite of disabilities and aim to realize the long-term stable employment of disabled persons. In so doing, Job Coaches will squarely respond to comments of those in charge in companies, as mentioned in the list at the beginning of this paper ([1] through [4]). In other words, in order to deal with the gaps between the ideal model of job seekers with disabilities and the reality of disabled job seekers, Job Coaches will specifically demonstrate that persons with disabilities are able to perform some job duties. In order to enhance understanding among those in and out of companies, Job Coaches will explain them individually what is going on. For the purpose of human resource development for persons with disabilities, Job Coaches themselves teach persons with disabilities how to perform job duties, or they tailor and adapt training programs of each company to disabled employees, based on the understanding of characteristics of each disability, so that the employer can provide human resource development for employees with disabilities. In order to determine what kind of job duties persons with disabilities will perform, Job Coaches conduct job analysis and development, which will be discussed later in this paper. These are the roles Job Coaches have to play.

However, there exists no legal status for Job Coaches which will allow the exclusive use of the title of “Job Coach” or the monopoly of Job Coaches’ job duties. Not all of those referred to as “Job Coaches” in Japan perform the job duties above mentioned and conversely, some perform job duties very similar to those mentioned above though their job title is not “Job Coach.” Some municipalities and welfare purpose training institutions support the employment of persons with disabilities by corporations, through fostering their own Job Coaches.

Meanwhile, the Ministry of Health, Labour and Welfare has already established the job title called “Job Coaches.” The Job Coaches can be divided into the following three categories.

The first category is Job Coach stationed in Local Vocational Centers. These Job Coaches are assigned to 52 Local Vocational Centers for Persons with Disabilities nationwide and shall undergo designated training programs.

The second category is Type 1 Job Coach. They are persons who have been appointed from among staff by directors of Employment and Life Support Centers for Persons with

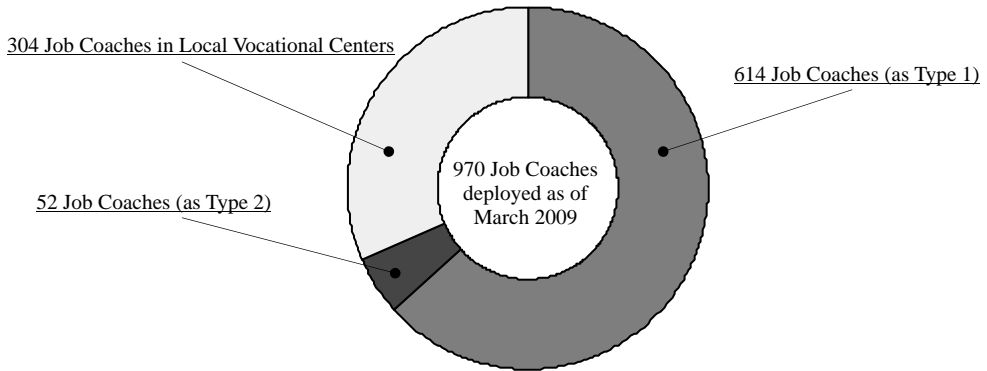


Figure 1. The Number of Job Coaches Deployed

Disabilities or of social welfare facilities mainly established by social welfare juridical persons or by nonprofit organizations. These directors have those appointed persons undergo designated training programs after having submitted applications to authorities. In order to be eligible for these programs, applying Employment and Life Support Centers or facilities have to meet the requirements in terms of experience in employment support for employers and in collaboration with Local Vocational Centers for Persons with Disabilities.

The third category is Type 2 Job Coach stationed at employing companies (intra-firm Job Coach). They are persons who have been appointed from among staff by corporate managers of companies meeting the requirements and hiring persons with disabilities. These corporate managers have those appointed persons undergo designated training programs after having submitted applications to authorities.

The number of Job Coaches has been on the rise. Figure 1 shows the number of job coaches nationwide as of March 2009. In order to be eligible for the job title of each category of Job Coaches, applicants have to have experience of having carried out employment management of persons with disabilities at companies or of having supported the job hunting of students with disabilities at educational institutions, or have to meet designated requirements, and at the same time, they have to pass through a nine-day training program including lectures, exercises and actual project working. There already exists a mechanism which can be referred as “Job Coach System,” where the three categories of Job Coaches work together where necessary, using companies, Local Vocational Centers for Persons with Disabilities and other facilities as their bases. For example, these supporters ask family members of persons with disabilities to facilitate the adaptation of specific persons with disabilities to their workplaces, organize case conferences on a given person with disabilities to support him/her in rotation, or hold study meetings in order to improve their expertise.

Personnel costs and activities expenses for Job Coach System are funded by two sources. First, funds are allocated, as activities expenses for Local Vocational Centers for

Table 2. Reasons for Not Deploying Type 2 Job Coaches (M.A., n=950)

Lack of the need to provide special accommodations to persons with disabilities they employ and their human resource management for ordinary employees being sufficiently effective for persons with disabilities	56.9%
Having heard nothing about the system	38.2%
Never recommended to use the system	16.1%
No one is eligible to be appointed as a Job Coach	13.6%
Having no disabled employee	8.7%
Not knowing where consultation services are available	4.4%
Other reasons	4.6%
Companies that have never deployed intra-firm Job Coaches	100%

Persons with Disabilities, to Job Coaches stationed in Local Vocational Centers. These financial resources are portions of employer’s contribution of the central government’s special account for Employment Insurance. On the other hand, funds allocated to Type 1 and Type 2 Job Coaches are levies collected from companies which fail to comply with the stipulated employment quota. When Type 1 and Type 2 Job Coaches have performed job duties which meet certain requirements, according to their performances, grants up to a certain maximum amount will be provided by the central government to juridical persons or companies to which these supporters belong. The grants to Type 1 and Type 2 Job Coaches are designed to enhance support services for the employment of persons with disabilities in non-governmental sectors, by partly subsidizing personnel costs and activities expenses for Type 1 and Type 2 Job Coaches.

3. Intra-Firm Job Coaches

In this section, I would like to present other findings from the above mentioned survey conducted by National Institute of Vocational Rehabilitation (National Institute of Vocational Rehabilitation 2008). Among the companies responding to the survey, only 0.8% answered that they had experience of having deployed Type 2 Job Coaches (intra-firm Job Coaches) and only 0.3% said that they were deploying them at the time of the survey. In addition, 25.3% of them said they had no experience of having deployed Type 2 Job Coaches, but they said they were willing to learn more about the details of the Type 2 Job Coach System. Furthermore, 56.9% of the companies having no experience of deploying Type 2 System cited, as the reason for not deploying them, “the lack of the need to provide special accommodations to persons with disabilities they employ and their human resource management for ordinary employees being sufficiently effective for persons with disabilities” (Table 2), and a slightly smaller percentage of them, 36.7%, cited “having heard nothing about the system,” while a further smaller percentage, 16.1%, cited “never recommended to

use the system.” 89.4% of the companies responding to this survey hired at least one person with physical disabilities, intellectual disabilities or psychiatric disabilities.

According to a survey of 280 member companies conducted Japan Association of Employers of Persons with Severe Disabilities,¹³ 50% of the companies responding to the survey said that they considered the deployment of Type 2 Job Coaches in their countries. Only 5.4% of the companies responding to the survey deployed Type 2 Job Coaches (Japan Association of Employers of Persons with Severe Disabilities 2007). 30% said that they had ever been supported either by Job Coaches stationed in Local Vocational Centers or by Type 2 Job Coaches, and around 80% of those having ever supported by them was those which had experience of being supported for their employees with intellectual disabilities. 60% of the companies employing only persons with intellectual disabilities cited, as the role they expected Type 2 Job Coaches to play, “facilitating the relation with employees with disabilities and other employees.”

4. Extra-Firm Job Coaches

According to the above mentioned survey conducted by National Institute of Vocational Rehabilitation, asked about their awareness of Job Coaches stationed in Local Vocational Centers and of Type 1 Job Coaches, in other words, their awareness about employment support services provided by extra-firm Job Coaches, more than half (56.3%) of the companies responding said that they knew them (Table 3) (National Institute of Vocational Rehabilitation 2008). At the same time, only 11.2% of the companies responding said that they had ever used the services (Table 4).

As above mentioned, this survey explored awareness and experience of companies that were interested in employment support services and of companies that really needed employment support services. Accordingly, as Table 4 shows, it is a matter of course that some of the companies surveyed said that they “like to know more about this system.”

In addition, the largest percentage, or 57.0%, of the respondents that had not deployed extra-firm Job Coaches cited “the lack of the need to provide special accommodations to persons with disabilities they employ and their human resource management for ordinary employees being sufficiently effective for persons with disabilities,” as the reason for not deploying Job Coaches (Table 5). The above tendency is also recognized in the findings from the above mentioned survey concerning intra-firm Job Coaches (Table 2).

¹³ Nationwide non-profitable body organized by business owners of small and medium-sized companies, mainly in manufacturing sectors, which hire a number of persons with severe disabilities, including persons with motor disorders affecting the whole body such as cerebral palsy, persons with severe intellectual disabilities and persons with schizophrenia, for a longer period of time. This association holds training workshops for job duty improvement, recognizes the accomplishments of companies of good standing and organizes enlightenment programs for the public.

Table 3. Companies' Awareness of Job Coaches Stationed in Local Vocational Centers and of Type 1 Job Coaches (n=976)

Having known the system	56.3%
Not having known the system	42.5%
N.A.	1.2%
Total	100%

Table 4. Companies' Experience of Having Used Job Coaches Stationed in Local Vocational Centers or Type 1 Job Coaches and Whether They Are Interested in These Supporters (n=958)

Never used the system: (a)+(b)	85.7%
Like to know more about the system (a)	19.1%
Not interested in the system (b)	66.6%
Having ever used the system: (c)+(d)–(e)	11.2%
Used the system before (c)	8.5%
Using the system at present (d)	3.3%
Used the system before and using the system at present (e)	0.6%
Subtotal: (a)+(b)+ (c)+(d)–(e)	96.9%
No response to this question	3.1%
Total	100%

Table 5. Reasons for Not Using Support Services Provided by Job Coaches Stationed in Local Vocational Centers and by Type 1 Job Coaches (M.A., n=847)

Lack of the need to provide special accommodations to persons with disabilities they employ and their human resource management for ordinary employees being sufficiently effective for persons with disabilities	57.0%
Having already addressed human resource management for employees with disabilities and for staff with disabilities	25.7%
Having heard nothing about the system	24.9%
Difficult to entrust human resource management to any third party outside of the country	15.0%
Never recommended to use the system	11.9%
Having no disabled employee	9.7%
Being able to get support and help from other companies, industry associations and employer's associations for the employment of persons with disabilities	2.5%
Other reasons	5.7%
Companies that have never used service provided by Job Coaches stationed in Local Vocational Centers and by Type 1 Job Coaches	100%

Table 6. Comparison of Different Types of Supports (Unit: %, n=111)

	Had ever used such support services (a)		(b)/(a)	Never used such support services	
		Respondents found them effective (b)			Found these supports necessary for the company
Support for employers and employees/staff at workplaces					
Job coach support for special accommodations concerning disabilities	73.9	62.2	84.2	14.4	4.5
Job coach support for job analysis and development	46.8	38.7	82.7	33.3	9.9
Support for employees with disabilities and for staff with disabilities					
Support provided by Job Coaches for job-related capacity building	83.8	70.3	83.9	5.4	0.0
Job coach support for commuting and healthcare management	45.0	37.8	84.0	20.7	7.2
Job coach support for promoting cooperation with other employees and staff	67.6	54.1	80.0	11.7	4.5
Companies that have used support services provided by Job Coaches stationed in Local Vocational Centers and by Type 1 Job Coaches	100				

11.2% of the companies responding to this survey said that they had ever used extra-firm Job Coaches. Asked about the effectiveness of extra-firm Job Coaches (Table 6), a significant percentage (80.0 to 84.2%) of these companies that “had ever used such support services” found “these support services effective” (The value of (b)/(a) in Table 6). The largest percentage, or 83.8%, of them received “support provided by Job Coaches for job-related capacity building.” At the same time, the largest percentage of them cited, as “services they had never used,” “support provided by Job Coaches for job analysis and development.” Yet 9.9%, or nearly 10%, of the respondent companies said that “the service for job analysis and development was necessary” for them.

“Job coach support for job analysis and development” means support services designed to review job duties that are being carried out at workplaces in order to find jobs that persons with disabilities, for whom support is being sought, can readily perform, find jobs that persons with disabilities can perform merely with the aid of special accommodations in the

process of development of human resources and of job duties, and develop new job duties that contribute to profitability improvement of the entire section by helping coworkers with job duties. Generally, job opportunities information lists only core jobs as examples, while peripheral jobs around the said core jobs are often simply not specified. Unlike the U.S. companies that have to develop job descriptions in preparation for individual labor-related disputes, there is no need to develop such descriptions for Japanese companies. In some cases, it takes some time for newly hired employees to learn some details about peripheral job duties. “Job coach support for job analysis and development” consists of employment support services designed to facilitate the execution of job duties and human resource development by analyzing job duties and workplaces and clarifying the entire picture of them, including peripheral job duties, at earlier stages. This type of support has been carried out by Job Coaches stationed in Local Vocational Centers, as part of support provided through Local Vocational Centers for Persons with Disabilities, and has proved effective.

III. Integration between Employment Support and the Employment Quota System

In this section, I would like to discuss the relationship between the Employment Quota System and employment support already mentioned in this paper.

The specific operational procedures of the Employment Quota System consist of (i) Employment Situation Reports prepared by companies and (ii) Guidance for Meeting the Employment Quota provided by Hello Works. Employment support is to be carried out together with Guidance for Meeting the Employment Quota above mentioned.

1. Employment Situation Reports

The number of persons with disabilities to be hired in compliance with the Employment Quota System varies with companies. The law requires each company to submit, to Hello Work with jurisdiction, Employment Situation Reports which contain data on the number of the total employees and of persons with disabilities among them hired by each company as of June 1 each year.¹⁴ At the time of this paper being issued, the employment rate of handicapped persons set under Cabinet Order is 1.8%. Accordingly, any company that hires more than 55 employees, as 55 is the inverse number of 1.8%, is obliged to submit Employment Situation Reports. For example, a company with 100 employees is obliged to hire at least one person with disabilities because $100 \times 1.8\% = 1.8$. (Any digits after the decimal point shall be rounded down to zero.)

2. Guidance for Meeting the Employment Quota

Guidance for Meeting the Employment Quota consists of four stages: (i) an order to

¹⁴ Law for Employment Promotion etc., of the Disabled.

develop a three-year program, (ii) a recommendation to comply with the program, (iii) special guidance and (iv) announcement of the names of companies. Companies having failed to meet the quota are required to make efforts to promote the employment of persons with disabilities so that they can avoid progressing through all of these stages as far as possible. Hello Work shall require companies to comply with the legal employment rate and at the same time, shall provide employment support to companies through cooperation with Local Vocational Centers for Persons with Disabilities and other relevant agencies.¹⁵

(1) An Order to Develop a Three-Year Program and the Implementation of the Program

Companies having failed to meet the quota shall be ordered, in writing, by the Hello Work director with jurisdiction, to develop a three-year program aimed at the achievement of the required employment rate of persons with disabilities and submit the program to Hello Work, by following procedures established by the Ministry of Health, Labour and Welfare, if such companies meet certain conditions. When a three-year program submitted does not meet conditions established by the ministry, a company having submitted the program shall be required to prepare again and again a new program until it satisfies the requirements, and then shall be asked to put into practice the program.

However, not all of companies which have failed to comply with the stipulated employment quota shall receive this Order to Develop a Three-Year Program.

First, the companies that are required by the law to newly employ persons with disabilities are those which are willing to increase their staff or those willing to fill vacant posts following the resignation of staff.

Secondly, companies shall be ordered to develop a three-year program, when they satisfy the conditions stated in the above and at the same time, meet certain conditions established by the Ministry of Health, Labour and Welfare, (For example, a value obtained by subtracting the number of persons with disabilities now being employed by such a company from the number of employees with disabilities legally required is equal to or more than a certain value.) Authorities impose stricter requirements on companies following their revision in 2006. More precisely, (i) a company for which the legally required number of employees with disabilities is three or four and when it has actually employed none of them, (ii) a company where a value obtained by subtracting the number of persons with disabilities now being employed by such a company from the number of employees with disabilities legally required is equal to or more than 10 persons, or (iii) a company of whose Actual Employment

¹⁵ Local Vocational Centers for Persons with Disabilities and Employment and Life Support Centers for Persons with Disabilities have to report, to administrative agencies, the number of persons with disabilities subject to their support, the number of such persons being employed and the number of persons with disabilities whose employment is being maintained after a certain period of time. These figures will be annually published on web pages and by press lease, together with the performance of Hello Work, as part of the results of the government's employment promotion measures for persons with disabilities.

Rate is less than 1.2% and at the same time where a value obtained by subtracting the number of persons with disabilities now being employed by such a company from the number of employees with disabilities legally required is equal to or more than five, shall be subject to the above mentioned order. Furthermore, wording has been revised from “whose Actual Employment Rate is less than 1.2%,” as referred to in the above (iii), to “whose Actual Employment Rate is less than the national average value” following the revision in 2007.

During the first quarter of the second year in a three-year program, Hello Work shall in the name of its director, release the Hortative Document which explains that if the progress situation of the program fails to meet certain requirements,¹⁶ a company may undergo the next stage (Good Practice Recommendation), or the third stage (special guidance) or even the fourth stage (announcement of its name). In this way, companies are asked to comply with Employment Quota System.

(2) Good Practice Recommendation of a Three-Year Program and Special Guidance

When the second year in a three-year program is about to end, Hello Work shall, in the name of its director, make Good Practice Recommendation in writing to companies where the progress situation of the program fails to meet certain requirements. Then Hello Work shall, to companies where the progress situation of the program fails to meet certain requirements when the three-year program is completed, provide nine-month-long Special Guidance.¹⁷ This special guidance is designed to give a moratorium period to these companies in order to prevent these companies from progressing through the next stage, announcement of their names.

(3) Announcement of the Names of Companies

When a company fails to comply with certain requirements established by the ministry, for example, by having failed to achieve the stipulated employment quota even after having undergone the nine-month-long Special Guidance, the Minister of Health, Labour and Welfare shall publicly announce the company name, the location of its head office, details of its business, the progress of Guidance for Meeting the Employment Quota and others. The content of the public announcement will be annually published on web pages or by press lease. While the announcement of the names of companies is one of the strongest measures, it is not a last resort measure. This is because, until such a company satisfies a specified quota concerning the employment of persons with disabilities, it shall continuously undergo Guidance for Meeting the Employment Quota provided by Hello Work and the company’s

¹⁶ This level is set at a level lower than the one required for the achievement of the stipulated employment rate of persons with disabilities.

¹⁷ Special Guidance shall start six months after the termination of a three-year program, and Hello Work is required to report to the Ministry of Health, Labour and Welfare why the employment of persons with disability has not progressed in a company in question and improvement plans that Hello Work has developed and shall recommend to the company in question.

name and other data may be publicly announced again.

In 1975, the first public announcement ever of the names of companies took place for 115 companies. More recently, the number of companies whose names were publicly announced was on the decline, two companies in 2007, one company in 2008 and four in 2009. In addition, the company of which data was publicly announced in 2008 was the same company which was already named in the public announcement in 2006. Among the four companies publicly announced in 2009, one was ordered to prepare a three-year program for the fourth time and the remaining three were publicly announced after having undergone the recommendations and the guidance following an order to prepare a three-year program for the second time, individually.

IV. Conclusion

The employment support services are characterized as part of vocational rehabilitation. The Employment Quota System and vocational rehabilitation are sometimes considered as a “twin-track approach” and they are referred to as “two wheels of one cart.”

Strict measures taken by the administration against companies in accordance with the Employment Quota System are what are behind the comments listed at the beginning of this paper. Together with these measures, Hello Work provides employment support, including job placement services for persons with disabilities seeking employment at companies in question, job development, advices concerning special accommodations, provision of adequate description of characteristics of disabilities, and introduction of good practices conducted by other companies. Employment support is to be put into practice with the collaboration of the above mentioned Local Vocational Centers for Persons with Disabilities, Employment and Life Support Centers for Persons with Disabilities and other related agencies. Extra-firm Job Coaches are representative examples of employment support services.

The need for employment support provided by Job Coaches stationed in Local Vocational Centers and Type 1 Job Coaches in line with Guidance for Meeting the Employment Quota conducted by Hello Work will be on the rise in the future. In 2008, the Diet decided that the levies shall be collected from “an employer with more than 200 employees” starting from July 2010, and from “an employer with more than 100 employees” starting from 2015, instead of “an employer with more than 300 employees” under existing law. According to this, the levies shall be collected from companies with 101 to 300 employees as well, and attention will focus on what kind of effect the above revision will have in the future. Employment support services including the Job Coach System which is profoundly involved in workplaces will prove effective for expanding the competitive employment of persons with disabilities.

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Way of Working and Environment for Persons with Intellectual Disabilities to Create Labor Values: From Analyses on Success Cases of Special Subsidiary Companies and Vocational Training Workshops

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It is extremely difficult for persons with intellectual disabilities to create labor values. However, there are success cases of special subsidiary companies which have tried to do this and have shown successful results. Special subsidiary companies analyze vocational capabilities of persons with intellectual disabilities working there, find out jobs which can be done by them from parent or associated companies and let them form groups to mutually complement each other in order to secure the minimum employment rate for persons with disabilities of their major parent companies. On the other hand, there is a vocational training workshop in Kagoshima which manages the business focusing on manufacturing of Buddhist altars, the local industry. It narrows the working area down to a high value-added traditional craft which is competitive and can be manufactured by even persons with intellectual disabilities who have acquired competitive skills. In both cases, the works of persons with intellectual disabilities have been incorporated into the social division of labor as an economic system, and mutually complementary and mutual aid relationship with surroundings has been generated.

I. Introduction

Working makes a strong contribution to human dignity. As a matter of course, persons with disabilities shall be no exception to the participants. When persons with disabilities are divided into those with physical, mental and intellectual disabilities, persons with intellectual disabilities would be the farthest from working site. Because, persons with intellectual disabilities have some disabilities in vocational capabilities, e.g., thinking, recognition, judgment, perception, language, memory, creation and voluntary movement, and their work rate changes depending on physical conditions so it is hard to maintain vocational life alone. In fact, many working persons with intellectual disabilities receive some assistance for both life and work from those around.

It is very difficult for companies and organizations to maintain business activities competing against other companies with persons with intellectual disabilities. However, although it is only a part of companies, there are some workplaces in which business proceeds smoothly and there is not much difference between wages of persons with intellectual disabilities and people without disabilities even though many of those with intellectual disabilities are in charge of operations in the organizations. We can find an “exceptional business model” there.

In this paper, I will discuss what environment and what conditions are needed for continued work of persons with intellectual disabilities by analyzing success cases of a part of special

subsidiary companies¹ and a vocational training workshop.²

II. Special Subsidiary Companies and Vocational Training Workshop C Which Are Successful at Utilizing Persons with Intellectual Disabilities

I have watched some workplaces utilizing persons with intellectual disabilities. In this paper, I will find out future direction of work and employment of persons with intellectual disabilities focusing on the following three special subsidiary companies doing general businesses (surveyed in 1999) and Vocational Training Workshop C which is a welfare-oriented facility in Kagoshima working on coating of high value-added Buddhist altars³ (surveyed 2005).

1. Working Conditions of Persons with Intellectual Disabilities in Special Subsidiary Companies

(1) Factors behind the Employment Promotion for Persons with Intellectual Disabilities in Special Subsidiary Companies

Special subsidiary companies accept secure jobs from the parent companies, contribute to the achievement of the employment rate⁴ (1.8%) for persons with disabilities of the parent companies by involving those with disabilities in the own companies and secure a certain profit.

In the early days of the special subsidiary company system, advantages for establishing special subsidiary companies for parent companies were focused on the hardware side, e.g., when placing wheelchair ramps for employees with disabilities, it is better to bring employees

¹ General companies (subsidiary companies) which employ many people with disabilities and manage independent business. When the parent company establish a subsidiary company with special care for employment of persons with disabilities and it meets certain requirements, the persons with disabilities employed by the subsidiary company are regarded as employment of the parent company and counted for the calculation of the minimum employment rate of the parent company for persons with disabilities (discussed later). In general, special subsidiary companies possess a deep understanding of disabilities of employees and the compensation is more than minimum wage of people without disabilities. Many of them receive 10 times the number of applications for the positions.

² Welfare-oriented employment facility which provides workplace for people who can hardly work normally due to physical or intellectual disabilities. Users (persons with disabilities) work and receive vocational training there toward normal employment. Since it is different from normal employment facilities, the compensation is often lower than 10% of general wage for people without disabilities.

³ Buddhist altars are holly storage furniture to enshrine Buddha statues and family's ancestors' posthumous names. Since the arrival of Buddhism in Japan, it absorbed Japanese cultures such as Shintoism, the religion of Japan from time untold, and developed uniquely. Although cheap exports from China have increased recently, Japanese consumers prefer to buy domestic lacquer-coated quality products as religious holly furniture. Many of them are traditional crafts.

⁴ This is one of employment obligation system. It obligates employers of companies with given number of employees to employ persons with physical/intellectual disabilities more than the legally-prescribed minimum employment rate (private companies: 1.8%, government/local authorities and government-affiliated corporations: 2.1%). (Persons with mental disabilities are exempt from the system but counted for the calculation of the employment rate.) Companies which do not meet the legally-prescribed minimum employment rate face penalty and company name may be disclosed in public in the worst case.

Table 1. Outline of Surveyed Special Subsidiary Companies

(As of 1999)

	Company R	Company F	Company R
Foundation	April 1994	March 1994	October 1997
Parent company	Major office automation equipment vendor	Major electronics manufacturer	Japan-US- partnership diversified chemicals company
Main business	Packaging/packing parts of copy/fax machines for service after the sales	Printing, binding, mailing, manufacturing support and in-plant cleaning	Inspection/manufacturing support for parent company's products and labeling and boxing of imported medical devices
Number of persons with intellectual disabilities	16 out of 23 employees	18 out of 26 employees	16 out of 26 employees

in wheelchairs together in a specific office to focus on improving the facility there rather than dispersing them to many offices. It is easy for persons with disabilities themselves to work in such a specific office and companies are also able to hold down spending for improving facilities.

Therefore, persons with intellectual disabilities who do not need any special facility for work must be beyond the scope of the initial assumption. Recently, however, the employment of persons with intellectual disabilities has been promoted in special subsidiary companies. The main reason would be people deeply understand that "effective utilization of persons with intellectual disabilities becomes possible" by making efforts at the software side as analyzed in this paper.

Some sensitive issues, e.g., human rights, are inherent in unique efforts such as intensively hiring persons with disabilities and leaving subsidiary companies to take care of that. However, as far as I know, persons with intellectual disabilities are working with vigor and enthusiasm there and stable economic performances are obtained there. Judging from these things, it is rather preferable direction as a corporate social responsibility (CSR).

(2) Outline of Surveyed Special Subsidiary Companies

How do special subsidiary companies succeed in business employing persons with intellectual disabilities? How to use them is particularly explained in Table 1.

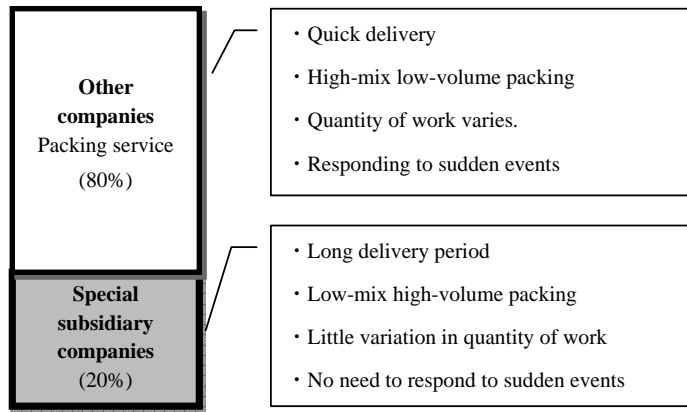


Figure 1. Orders from the Parent Company to Company R

(3) Implementation of Each Company's Main Business

Approach of Company R

When establishing Company R, the parent company secured a part of packing work of after-sales parts of copy/fax machines which are core products of the parent company for company R. Nevertheless, the parent company does not give any special treatment to Company R regarding the contract price of the packing work. For instance, the parent company solicited competitive bids for unit-price contract.

As a result, Company R accepted works with few fluctuation factors from the parent company which is about 20% of parts packing work in the group (Figure 1). Procurement of parts often requires an urgent response on the site of maintenance. However, some parts can be shipped in large quantity at once (stable profit can be secured) having plenty of time for delivery. The parent company's department in charge of parts procurement placed orders with Company R adjusting to a certain amount of work not to be too much or too small for persons with intellectual disabilities. Such consideration (providing work) is little burden to the parent company.

Then, how about the other 80%, relatively formidable work? The parent company gives other companies working with Company R the rest of contracts. Those companies played a role of cushion for Company R when adjusting quality and quantity of work.

Since persons with intellectual disabilities are difficult to respond to changing situations, when quick-delivery work continues or individual employees are overburdened due to rapid increase in quantity of work, their quality of work may decrease or they may get panics and it could lead to industrial accidents. Therefore, the company must always keep the quality of work constant to keep up employees' (with intellectual disabilities) mental stability.

Cleaning Service of Company F

Company F mainly accepts cleaning service from the parent company. Before Company

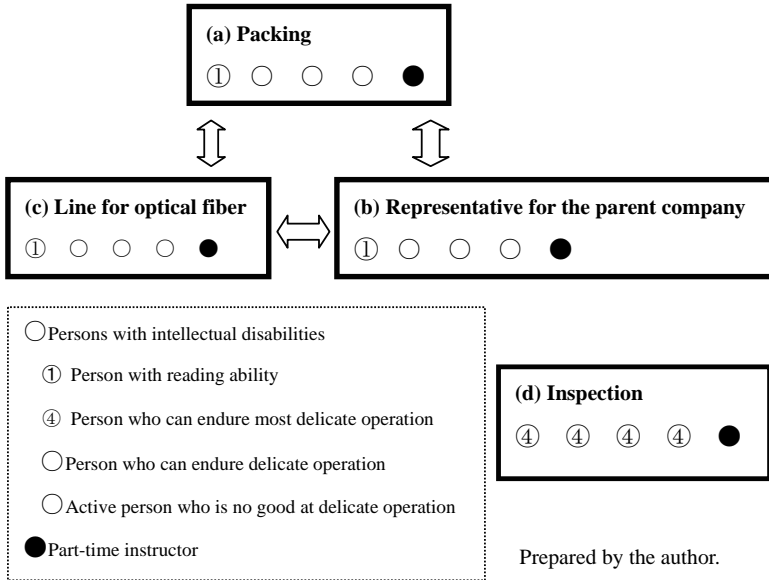


Figure 2. Working Composition Image of Company S (Work Rotation)

F accepts the cleaning service, the parent company delegated it to two contractors outside the company. The parent company initially asked those two companies to add persons with intellectual disabilities to the cleaning service in order to expand job opportunities for them, but they refused. Therefore, the parent company terminated the contract with the two, made Company F as a prime contractor of the cleaning service and additionally contracted with external cleaning service companies which showed understanding of employing persons with intellectual disabilities as partners of Company F. Advantages of making Company F as a prime contractor and grouping with other cleaning service companies are as follows:

Generally, there are two kinds of company cleaning, daily cleaning and special cleaning which is needed a couple of times a year. As for daily cleaning, since the ground of the parent company is large and the garbage quantity varies daily, it seems difficult for Company F with persons with intellectual disabilities alone to respond to such changes. Regarding special cleaning conducted a few times a year, organic solvents and special cleaning machines which are not normally used are needed.

As a prime contractor, Company F has become able to put external cleaning service companies to work with its persons with disabilities at a reasonable pace, which enables Company F to conduct cleaning service for the headquarters smoothly.

Combination Example of Persons with Intellectual Disabilities in Company S

Company S mainly provides inspection and packing services for products of the parent company, a diversified chemicals company, and manufacturing support service for it. The working system is shown in Figure 2.

Table 2. Facilities of Social Welfare Corporation K and Main Vocational Training Items

Facility	Foundation	Capacity	Main vocational training item
First vocational training workshop (Stay)	April 1993	50 people	• Manufacturing of Buddhist altars (patching with putty, coat and polishing)
Second vocational training workshop (Ambulatory)	April 1997	30 people	• Work on light duty (bagging operation for packets of dried sardine and making carton cases) • Practical training outside the workshop, etc.
Welfare Factory M (Welfare factory)	April 2002	20 people	• Manufacturing of Buddhist altars (patching with putty, coat and polishing) • Making wooden crafts, processing raw materials for seasoning, etc.

Prepared by the author based on interview survey.

In principle, Company S does not set a person with intellectual disability to work alone. 16 people with intellectual disabilities are divided into four groups by disability property, working ability, character and sex and the work is completed by each group. Such combinations eventually lift performance of the entire company.

Three out of the four groups basically conduct the following work by rotation: (a) packing service which requires little perseverance, (b) representative service for various works on light duty of the parent company and (c) production line duty for optical fiber.

In addition, ① a person with reading ability, ② a person who can endure delicate operation and ③ an active person who is no good at delicate operation are allocated to each group. The person with reading ability reads a duty slip when starting work and makes a work arrangement to some extent.

Group (d) consists of ④ people who can endure most delicate operation. This group (women only) only inspects quantity and defects of small buffer materials which is a basic work for Company S. The administrative manager explained that, “since it is a simple work requiring delicate operation, it takes full advantage of them and probably it is hard for people without disabilities to do the same operation.”

Their operations are checked by part-time instructors who are allocated to each group to work with them, but the instructors are not much involved in their daily work arrangements.

2. Success Case of Employing Persons with Intellectual Disabilities in the Local Area: Vocational Training Workshop C

(1) Outline of Vocational Training Workshop C

Vocational Training Workshop C was established in April 1993 with 30 people for stay and 30 people for ambulatory (Table 2). The annual gross profit of the entire vocational training workshop was 40 million yen as of 2005 and about 15 million yen of them was from Buddhist altars, i.e., it contributed most to the management stably securing a certain profits. Regarding other services, about 10 million yen was from contracts outside the workshop and the rest was

from work on light duties. The workshop energetically continued operating activities in order to constantly obtain new jobs from outside the company even at that time when the business relatively became stable.

Although activities of Vocational Training Workshop C contain factors of cooperation with Welfare Factory M which is attached to it, I analyze them as solo activities in this paper as the activity contents seem to be almost stand-alone.

(2) Manufacturing of Buddhist Altars

Since it is an important service for Vocational Training Workshop C to manufacture (especially coat) Buddhist altars from the perspective of facility management and it contains an important factor for seeking a direction of employment for persons with intellectual disabilities described below, I would like to explain how to manufacture Buddhist altars here.

There are six manufacturing processes for Buddhist altars in Vocational Training Workshop C: (i) puttying, (ii) base coat, (iii) primer coat with sealer, (iv) coat with surface, (v) manual coat/polishing and (vi) coat/polishing by machine. Especially, it maintains its monopoly in the undercoating technique for doors in this area. The reason comes from that there was only one company which had this coating technique in Kitakyushu City and the president passed on his technique to this facility living under the same roof with persons with intellectual disabilities because he reached an advanced age and had no successors. This allowed it to make transactions with 20 to 30 Buddhist altar dealers, about half in the local area, and obtain about 60 to 70% of related Buddhist altar manufacturing processes except assembly and gilding.

Vocational Training Workshop C is also active in capital investment such as introduction of a large polishing machine and a far-infrared drying chamber. This led it to get away from domestic handcraft industry in which many vocational training workshops still remain and develop into a modern production site in which efficiency can be sought.

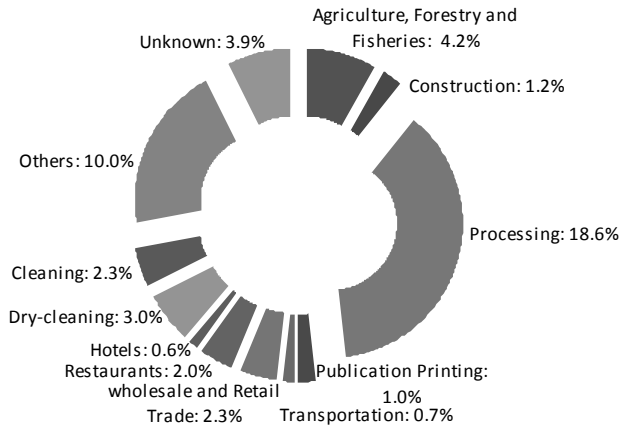
III. What Can Be Done and What Cannot? What Is Needed?

Persons with intellectual disabilities who are difficult to complete their work independently need some assistance in order to produce working results. In fact, many people with intellectual disabilities engage in relatively simple work receiving assistance from surroundings at labor-intensive workplaces (Figure 3).

1. A Theory of Intellectual Skills and Working of Persons with Intellectual Disabilities

(1) Intellectual Skills at General Workplace

Continued employment of persons with intellectual disabilities is based on the premise that they have a certain level of basic abilities, e.g., physical strength, ability to understand instructions, willingness to work, enduring strength, accuracy, ability to concentrate, emotional security,



- Notes: 1. Chart was compiled by the author from *Survey on Persons with Intellectual Disabilities 2000* by Ministry of Health, Labour and Welfare.
2. Workshops (50.1%) are not included.

Figure 3. General Workplace for Persons with Disabilities

sense of responsibility, initiative, daily greetings, cooperative behavior and mobility capability. It is also important how to deal with various troubles which occur daily at workplace.

People without disabilities can successfully deal with “skill” factors such as experience and ability to guess based on that and flexible judgment. However, persons with intellectual disabilities are not good at doing such things.

Before considering how to deal with persons with intellectual disabilities, I would like to look at the skills which are important factors for ordinary people (without disabilities) to continue their works.

As for job skills, I have to mention the theory of intellectual skills by Professor Kazuo Koike. I quote his “intellectual skills” below:

Intellectual skills are know-how for handling problems and changes. Even mass productive assembly line, if you observe it for at least half a day, you can find out ‘usual operation’ and ‘unusual operation.’ Usual operation seems to be monotonous and repetitive and able to be done with little skill. However, even on mass productive assembly line with repetitive work, changes and unexpected problems including small ones frequently occur surprisingly. In order to keep producing smoothly, it is always required to deal with such changes and problems. Such operation is called ‘unusual operation.’ There are two types of unusual operation, response to problems and response to changes.

Regarding response to problems, the following three know-hows are required: (i) investigation into the cause of problems, (ii) resolving the cause and (iii) check. Concerning response to changes, know-hows are required for: (i) changes in production method, (ii) changes in production volume, (iii) changes in product type and (iv) changes in personnel organization” (Koike 1997, 1-3).

Next, what response is needed for smooth operation in a general workplace? Take a look at the following description regarding “problem handling” in Koike theory:

“There is an opinion that you should not expect production workers to acquire annoying intellectual skills but leave it to qualified workers. There may be two specialization systems, ‘separation’ and ‘integration.’ The former is that production workers are committed to usual operation and ask qualified workers to do unusual one. On the other hand, the latter is that production workers are in charge of a part of unusual operation as well as usual one. The question is which specialization system is more efficient” (Koike 2005, 21).

As seen from the above, it turns out that an operator and a person who deals with problems are not necessarily the same person and it may be unnecessary to solve problems right there.

(2) Response at Workplace of Persons with Intellectual Disabilities

Then, how do they actually deal with “changes and problems” at workplace where persons with intellectual disabilities are working smoothly? As same as Koike theory, these responses are divided into (i) response to changes and (ii) response to problems (troubles) as follows:

Response to Changes

First, as for response to changes at organization level, this reduces the occurrence of changes at individual operation level by removing factors of changes as much as possible at the stage of organization.

Looking at the case of parts packing service in Company R, (i) service is limited to the work with relatively long time for delivery of parts, (ii) orders are relatively constant and (iii) other formidable work is undertaken by other cooperative companies. That is, the scope of Company R’s service is specified among the group to avoid the occurrence of temporal, quantitative or qualitative changes as much as possible.

Company F’s cleaning service is also in the same situation. Company F became a prime contractor of the cleaning service for the parent company and provides cleaning service with other cleaning companies which consist of non-disabled people. This allows Company F to undertake relatively simple and stable work, i.e., other cleaning companies play a role of buffer for the quantitative (fluctuation of garbage quantity) and qualitative (special cleaning) changes. Overall, this enables smooth cleaning service for the parent company.

As for jobs with quantitative or qualitative fluctuation factor, except temporal factor, the mechanism does not rely on individual abilities of working persons with intellectual disabilities as much as possible.

Response to Problems (Troubles)

Next, I would like to discuss problem handling. The first one is response to machine troubles. Basically, there is no complicated or dangerous operation when persons with intellectual disabilities use machines. Even if original machines are complicated or dangerous, they

have been altered to avoid such things by utilizing subsidies. Nevertheless, since the use of machinery may lead to a big accident, people using machines are limited at most of workplaces. When doing “unusual operation” such as model change and maintenance/repair, the company does not allow persons with intellectual disabilities to do but people without disabilities substitute for them. This is “separated system” according to Koike theory.

It is a lifeline for business activities to prevent defective products from occurring (frequency and level) when accepting work. To take work on light duty in Vocational Training Workshop C as an example, at each workplace, (i) there is a sample of finished product, (ii) “operating instruction” describing detailed procedures such as who does what, weight and how to pack and “confirmation note” are displayed for instructors, and (iii) various checks, e.g., examination of foreign body and reweighing after packing in the cardboard boxes, are conducted (iv) to conduct double checkups.

2. Composition of Response to Changes and Troubles

As above, at organization level, troubles can be eliminated by identifying scope of work and people involved in the work at each workplace and expecting changes in the following five aspects: production method, production volume, type of product, composition of operators and operation for new product.

Concerning troubles, in addition to the organizational structure where troubles are hard to occur, even at the individual operation level, there is a thorough job design so that persons with intellectual disabilities are not involved in the area in which troubles are expected as much as possible. For this reason, all processes from occurrence of troubles to analysis, response and check are non-disabled people’s (organization’s) side. It can be said that discovery of defective products/mistakes does not rely on individual abilities but operations to check defective products/mistakes are incorporated in the work process.

In other words, because surveyed companies expect when, where and how changes and troubles happen, they thoroughly eliminate the factors in advance and persons who respond to changes and/or troubles are limited.

They narrow down the working area (width of work) in which persons with intellectual disabilities can work with relatively few changes and troubles and let them improve their skills (depth of work). If they are difficult work by themselves, instructors (without disabilities) support that part. What is clear is that they never let persons with intellectual disabilities find, analyze or respond to troubles but non-disabled people do instead. Probably at workplace, it is a key for employment of persons with intellectual disabilities to narrow down the width of work and support it according to the plan, and seeking of the depth of work would lead to ensuring of profits utilizing persons with intellectual disabilities (Figure 4).

3. Craft-Type Skills and Problem Resolution-Type Skills

I considered skills at mass production site based on Koike theory. Then, how should the case of traditional craft (manufacturing of Buddhist altars) in Vocational Training Workshop C

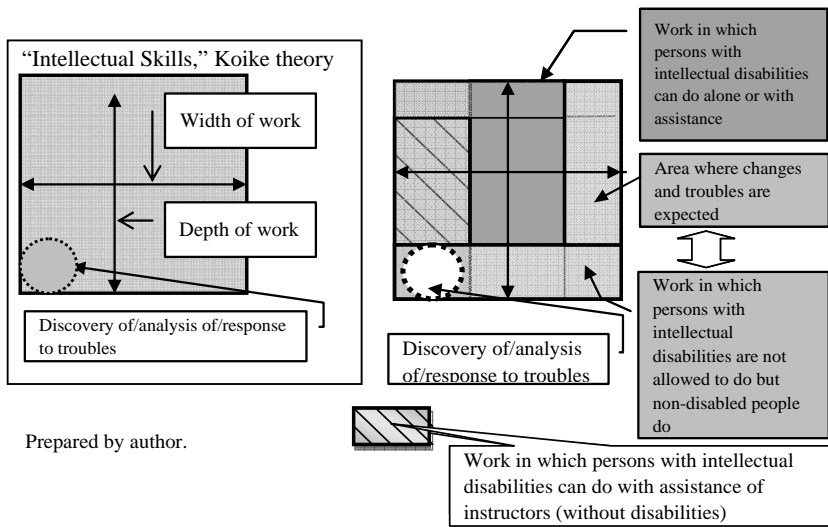


Figure 4. Image of Workable Area for Persons with Intellectual Disabilities

be considered? I would like to consider it on the basis of the concept of skills by Innovation Center, Hitotsubashi University.

According to Hitotsubashi University Research Center (2004, 248-49), “in order to understand skills which characterize manufacturing, it is crucial to understand by dividing them into two, craft-type (professional) skills and problem resolution-type (intellectual) skills and craft-type skills are handling/assembly skills exploring the upper limits of tools, machinery and equipment. Problem resolution-type skills are ones to promptly and accurately determine the causes of defective products and the production processes.”

Applied this to the process of Buddhist altars in Vocational Training Workshop C, persons with intellectual disabilities have obviously craft-type skills and people without disabilities have problem resolution-type skills, i.e., their roles are clearly divided. As for craft-type part in which persons with intellectual disabilities are in charge of, although they accept the assistance from non-disabled people for some difficult work such as operations of machinery and equipment, they have improved their quality of proficient skills which is not so different from that of non-disabled people and increased added values for the craft-type work which is determined as workable.

4. Intellectual Skills at Workplace of Persons with Intellectual Disabilities

Like the examples of special subsidiary companies, parts packing service of Company R, cleaning service of company F and work in Vocational Training Workshop C, the existence of businesses achieving a certain result by utilizing persons with intellectual disabilities shows the effectiveness of Koike theory. However, there is a crucially different part regarding skills.

That is, the subject of skills of non-disabled people is working individuals according to

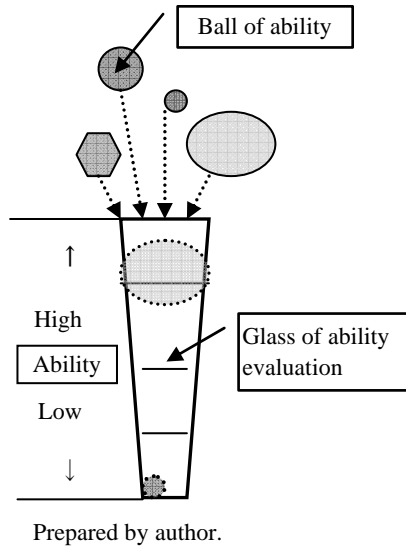


Figure 5. Relationship between Abilities and Evaluation

Koike theory, but skills at workplace of persons with intellectual disabilities are in the organization. At workplace of persons with intellectual disabilities, factors of skills are not left to individual abilities of those working there but are established in the mechanism of support by instructors so that the management side can always manage the factors.

The reason is that it is difficult for persons with intellectual disabilities to respond to changes and troubles and they can hardly maintain their skills. Therefore, organizations need a system to acquire, accumulate and manage their skills as precious resource, in the daily business.

IV. How to Find out Labor Values of Persons with Intellectual Disabilities

1. Relationship between General Abilities and the Evaluation

I would like to abstract the relationship between general working abilities and the evaluation using ability balls and an ability evaluation glass (Figure 5). Assume balls showing individual working abilities and a glass which indicates the evaluation tool (I call it “ability evaluation glass”).

Shapes of balls may be balanced sphere or distorted depending on strong and weak abilities. Sizes of balls (abilities) shall be also varied.

The shape of glass which indicates the evaluation shall be upside-down triangle. There is a vertical scale of evaluation on the side of the glass. The upper the scale is, the higher the evaluation value becomes. Various balls are dropped from the top and the point where the ball stops shall be the evaluation value of the ability.

There are various sizes of balls: some larger balls stop at near the top, some smaller ones stop at near the bottom and some reach the bottom. Such evaluations may be carried out in an open general labor market by occupation or on companies' own accord (as an internal labor market). It is very likely that balls stop at the upper position when evaluations are carried out on companies' own accord.

The timing to throw a ball in the glass (evaluation opportunity) would vary depending on individual working life, e.g., company entrance exam, valuation of bonus, judgment for promotion and evaluation of previous work experience when changing jobs. Therefore, even if the evaluation is low at one time, it may become higher along with improved abilities or carrier in a few years.

2. Creation of Labor Values of Persons with Intellectual Disabilities

According to above cases, balls of abilities of persons with intellectual disabilities are small and many of them may reach the bottom of the glass. That is why many people with intellectual disabilities working for vocational training workshops receive a few to ten thousand yen as a monthly income (less than one tenth the general Japanese monthly income).

Then, why balls of above mentioned three special subsidiary companies and Vocational Training Workshop C stop at the middle of the glass, i.e., why they can create a certain labor value? The shapes of their balls may differ from that of people without disabilities.

(1) Case of Special Subsidiary Companies

According to the case of Special Subsidiary Company S, in order to create the labor value utilizing persons with intellectual disabilities, this company (i) analyzes workable abilities of individual persons with intellectual disabilities, (ii) combines individual abilities to make groups and (iii) they complement each other in each group.

If they would not have disabilities, their self-contained abilities would be one ball. The company combines works of persons with intellectual disabilities so that the operation can be done by more than one person (Figure 6).

However, a mutually complementary group would not be established by simply combining them from the perspective of abilities. In order to establish such a group, a role of adhesive which binds people would be required.

Since it is harder for persons with intellectual disabilities who lack in communication skills to collaborate with peers than non-disabled people, this role is especially important. Each special subsidy company has prepared unique know-how and system to maintain a good relationship between them in order to cooperate with each other in the company.

The reason why such grouping is possible is because one person with intellectual disability whose working ability is relatively high has been hired from among 10 to 20 times more applicants. There is a favorable situation for special subsidiary companies. Even if there is

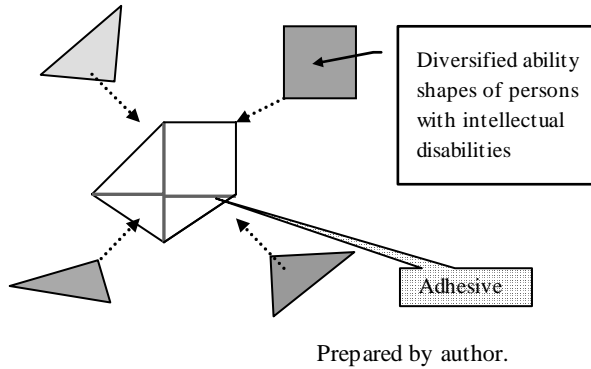


Figure 6. Ability Combinations in Special Subsidiary Company

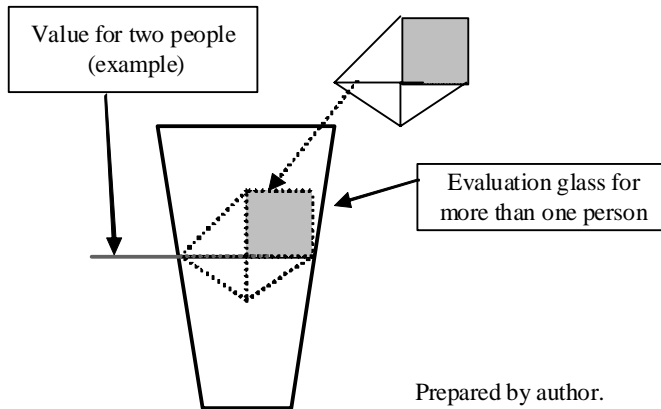


Figure 7. Creation of Labor Values of Persons with Intellectual Disabilities

a great difference between their abilities or properties, provided that each of them has a certain level of working ability for specified work, the companies are able to screen/hire them expecting mutually complementary (or optimal) grouping by efficient combinations of their abilities.

In particular, when accepting them from senior high schools for disabled persons, since they have practical work experience for a couple of weeks while in schools, the companies hire them based on their individual abilities, characters and problems.

Then, how do special subsidiary companies like Company S reflect their abilities summarized as above in the value evaluation? The size of the ball (abilities) is larger than that of one healthy person since the ball consists of more than one person. However, the values are not based on the number of them. The value of four people with intellectual disabilities may be equal to that of two non-disabled people and the value of five may be equal to that of three non-disabled people. Nevertheless, people whose balls reach the bottom of the glass alone and who can create little working results are able to create a certain level of labor values here (Figure 7).

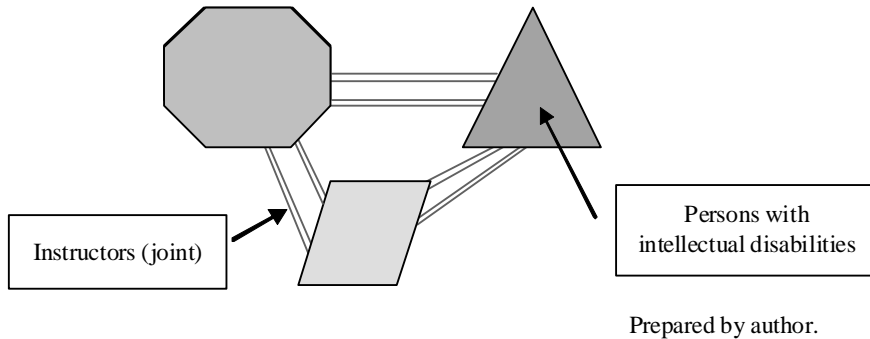


Figure 8. Collaboration of Abilities in a Vocational Training Workshop

(2) Ability Combination and Work Assistance in Vocational Training Workshop

How about vocational training workshops which basically do not screen when hiring them? Since differences of individual properties and abilities are greater than that of special subsidiary companies, it is relatively difficult to directly let persons with intellectual disabilities collaborate together and therefore instructors at working sites should play a role of joint which connects them (Figure 8).

It would be appear that the efficiency of work on light duty of special subsidiary companies is higher than that of general vocational training workshops due to the difference between direct and indirect collaborations with persons with intellectual disabilities and the different levels of instructors' intervention.

(3) Screen of Personnel and Selection of Work

When hiring persons with intellectual disabilities, work choices are different between special subsidiary companies which can screen them and general vocational training workshops which basically do not. In other words, special subsidiary companies choose people to suit the work but vocational training workshops choose work to suit the people.

This difference has a great influence on the security of company's profitability and the stability of business regardless of difference in abilities of members (persons with intellectual disabilities) working there. Because, special subsidiary companies can choose the work (from the work area of the parent company) to secure the profit while general vocational training workshops have to choose the work to suit the abilities of facility users (persons with intellectual disabilities) and the work could be unprofitable "avocational operation" which is far from the market demand in some cases (regarding Vocational Training Workshop C, see "Acquirement of work" [selection and concentration]).

V. Setting of Local Environment for Maintaining/Improving Labor Value of Persons with Intellectual Disabilities

1. Product Value and Expectation from Market/Local Area

In order to increase the value of manpower which is a derived demand, products and services must be highly valued. However, there is little high value-added work of persons with intellectual abilities in the market. From this standpoint, the manufacturing of Buddhist alters in Vocational Training Workshop C has some favorable terms to maintain high added-values.

In particular, although Japan's Buddhist altar industry is on the decline as a domestic industry due to increased cheaper imports from China, (i) Japanese consumers are eager to buy domestic products (traditional craftwork) due to religious reasons so there is a certain demand and (ii) since the price range of Buddhist altars is wide, from around 3 million yen to about 10 million yen, high profits can be produced depending on the quality of products.

Also, (iii) since Buddhist altar industry is a comprehensive traditional industry which requires accumulation of high-level skills, new entry into the market is extremely difficult while (iv) once high-level traditional skills are obtained, the role to maintain the industry is expected by domestic industries. Specifically, (v) the role to maintain the local industry is expected from the aspect of human resources since local young people have gone to urban areas.

For these reasons noted above, Vocational Training Workshop C secures a certain level of profits as well as creating an environment where persons with intellectual disabilities are accepted and can maintain their working life.

2. Sophistication of Craft-Type Skills in Vocational Training Workshop C

How does Vocational Training Workshop C maintain and improve high-level skills utilizing persons with intellectual disabilities?

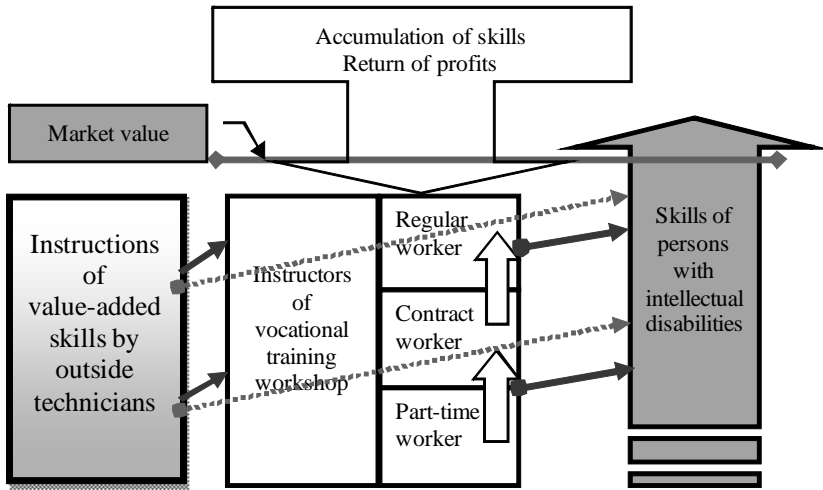
(1) Evaluation of Instructors' Contributions

In order to improve working abilities of persons with intellectual disabilities, what cannot be overlooked is to improve abilities (skills) and generate motivation of part-time employees and facility staff who instruct the work in the vocational training workshops. It is essential for persons with intellectual disabilities who can hardly improve abilities themselves to improve abilities of instructors who constantly and strongly develop abilities (skills) of persons with intellectual disabilities.

Therefore, as a mechanism of improving techniques and skills of the entire facility, Vocational Training Workshop C provides incentives for improving abilities of persons with intellectual disabilities to regular employees and part-time employees in the shape of adjustment of their status or return of profits to them.

(2) Improvement of Instructors' Leadership Abilities

There are two abilities of instructors in Vocational Training Workshop C. One is operating



Prepared by author based on interview survey.

Figure 9. Circular Composition of Skills and Compensation of Persons with Intellectual Disabilities in Vocational Training Workshop C

ability and another one is teaching ability to facility users (persons with intellectual disabilities).

In order to manufacture products with market value, the manufacturer must have a certain level of skills. It is almost impossible to acquire high-level skills which exceed the market value by a vocational training workshop alone especially for high value-added products like craft work. Therefore, Vocational Training Workshop C has directly received skill transfer from outside instructors in order to acquire skills.

Concerning teaching ability, instructors must teach not only operating procedures but also independent operations to some extent depending on disability characteristics.

In the case of Vocational Training Workshop C, outside technicians with manufacturing skills collaborate with facility staff with knowledge of persons with intellectual disabilities such as their characteristics to instruct them producing a better effect.

In short, constant instructions are needed to improve abilities of persons with intellectual disabilities who can hardly obtain intellectual skills. In order to manufacture high value-added products in the market, a two-stage instruction system, skill transfer from outside technicians to instructors and daily instructions from instructors to facility users (persons with intellectual disabilities), is effective in tandem with direct instructions from the technicians to the facility users (Figure 9).

The important point is to establish a mechanism and incentives which lead to own interests when instructors at working sites improve skills of persons with intellectual disabilities.

VI. Working Framework of Persons with Intellectual Disabilities

1. Working Framework of Special Subsidiary Companies

(1) Organizational Structures against Market Competition

I verified the way of using persons with intellectual disabilities based their disability characteristics, organizational operation, acquirement of skills and evaluation methods of their working abilities using success cases. As expected of companies/groups with disadvantages of human resources for daily business management, there are well-defined efforts in which organizations of people without disabilities have never done.

However, there is no way to explain how to produce work outcome utilizing persons with intellectual disabilities with above managerial efforts only. I believe the big factor is, taking special subsidiary company as an example, three organizational protecting functions against market competition. The functions can be summarized as follows:

- (i) Exclusion of sector peer companies' entry and reduction of burden on business activities
- (ii) Security of a certain level of profitability (security of work area where profits can be maintained not getting involved in competition for lower prices)
- (iii) Security of work pace for disability characteristics

I realize that above functions are very "defensive." Needless to say, business management always needs both "offense" and "defense." In order to counter the rigors of general product market competition with persons with intellectual disabilities, "defensive" factor is especially important more than general companies. Consequently, special subsidiary companies whose mission is to have many people with disabilities have a framework in the organization so that they can counter the market.

Then, what is the source which allows such small companies to have an organizational power that can counter the market?

(2) "Working Framework" of Major Companies and Failure of Labor Market of Persons with Disabilities

Major companies generally have a (social) mission to achieve "minimum employment for person with disabilities" apart from "economic transactions in goods and services." However, there are some issues when employing persons with disabilities (especially those with intellectual disabilities) in major companies' main bodies.

The issues are, in Japan today, (i) major companies themselves are internal labor markets on the basis of high wages and long-term employment and (ii) social changes, i.e., labor-intensive workplaces for mass production have been rapidly reduced due to automation and overseas transfer. Especially in Japan facing more than 5% of unemployment rate (as of October 2009), (iii) internal labor markets require those who are without disabilities as well as with outstanding specialist capabilities and the people who do not meet companies' requirements have to go out into external labor markets.

Under the circumstances, it is a significant risk for major companies with high average

wage to employ persons with disabilities with high asymmetry of information. It is even more difficult to directly employ persons with intellectual disabilities.

As collateral evidence, as of June 2009, the actual employment rate of private companies is 1.63% while the legally-prescribed minimum employment rate is 1.8%, i.e., the percentage of companies which achieved the minimum employment rate is only 45.5%.

(3) External Consolidation Solution in Special Subsidiary Companies

As above, it is extremely difficult for major companies to directly employ persons with intellectual disabilities. However, the larger the company size becomes, the greater the social responsibility is and they cannot afford to ignore. Then special subsidiary companies come to the front.

As for employment of persons with disabilities in major companies, it is better to let their special subsidiary companies employ on behalf of them since there is a system that the number of persons with disabilities employed by the special subsidiary company can be counted for the calculation of the employment rate of the parent company. In addition, as mentioned above, special subsidiary companies are not heavily dependent on assistance from parent companies.

Parent companies can ask special subsidiary companies to manage business independently with little financial burden. What parent companies take responsibility for is just to seek work for persons with intellectual disabilities from own companies or related companies, adjust quality and quantity of work and provide job opportunities like always filling a glass with water.

In addition, when placing orders with special subsidiary companies for such work, economic transaction costs can be kept lower than that through the market due to lower wages of special subsidiary companies compared with that of parent companies and general sector peer companies. As above, parent companies take few risks and enjoy a considerable amount of benefits, e.g., social transaction as employment of persons with disabilities and cost reduction.

That is, it is highly likely that major companies, in the two markets, goods and service market and labor market, enjoy an advantage by using special subsidiary companies as “semi-internal organization” rather than general markets. This is the case that “although market failure occurs, if two parties are consolidated, the market failure associated with externality will be processed within the organization and disappear” (Imai, Itami, and Koike 1982, 4-5).

Special subsidiary companies are “external consolidation solution” against market failure.

2. Slow Assistance Environment in Vocational Training Workshop C

(1) Role of Local Industry as “Working Framework”

How about welfare-oriented employment site which is represented by vocational training workshops? I would like to see the situation of securing work in general vocational training workshops.

Vocational training workshops which do not receive any jobs from parent companies like

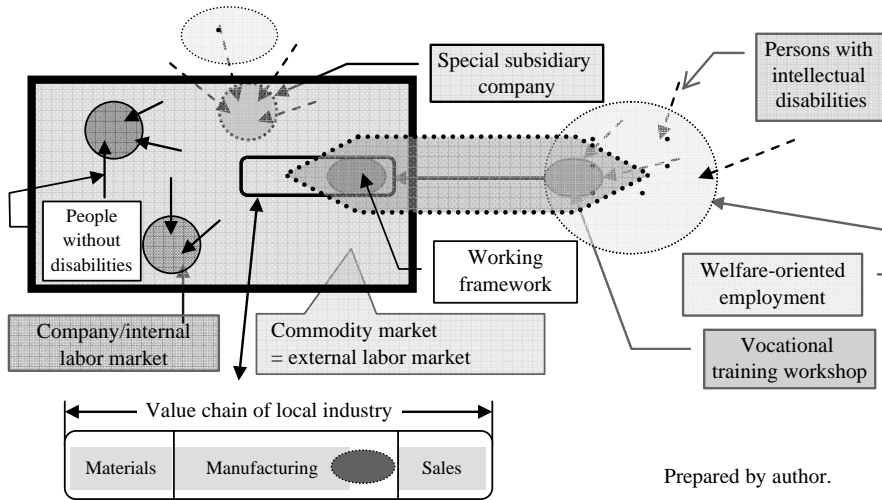


Figure 10. Entry of Welfare-Oriented Employment into External Labor Market

special subsidiary companies must obtain a certain amount of work to fill the vacant time for work of persons with intellectual disabilities. However, many of jobs' unit prices are low so a large profit cannot be expected as a result. Many of them are highly likely involved in competition for lower prices. Moreover, unlike special subsidiary companies, persons with intellectual disabilities are not carefully screened by vocational training workshops when accepting them so there is a lot of individual variation in working abilities between members. After all, many welfare-oriented employment sites like vocational training workshops undertake mindless jobs which do not contribute to the improvement of working abilities in order to fill the vacant time for work and the security of profits comes second as a result.

On the other hand, how about Vocational Training Workshop C covered in this paper? As same as other general vocational training workshops, there is no support organization like a parent company for special subsidiary companies. The members would be seated in the welfare-oriented employment area which is far from internal labor market or even external labor market under normal circumstances. They have no labor value alone.

However, if there is an excellent leader who focuses on the competition area and makes groups of their abilities as "working framework" (internal organization) toward goals, e.g., obtaining a part of value chain, their dispersed and eccentrically-located abilities have an organic link and produce labor values as an organization. This allows the organization to break the wall of external labor market, enter into general labor markets and fill a place in the internal labor market as a full part of the local industry. That is why Vocational Training Workshop C places itself in the environment in which it can be easily expected and supported by the local area (Figure 10).

In other words, Vocational Training Workshop C obtains "defense" from both organization and market by functioning as "working framework" (internal organization) in the local

industry. If there is no factor of such “slow assistance environment”, Vocational Training Workshop C would also be pressed by unprofitable work with low unit prices and the organization would be unstable as same as other vocational training workshops.

Then, what obtained the position as “working framework”? It is that the leader of the organization is not oriented toward maintaining the status quo but has a character of innovator who always developmentally lead and the innovator properly select and concentrate on the work.

(2) Acquirement of Work (Selection and Concentration)

Regarding acquirement of work, Vocational Training Workshop C also fundamentally have to acquire work from outside to avoid any vacant time for work as same as other general vocational training workshops. And the work must be within the range of abilities of members (persons with intellectual disabilities).

Then what is the advantage of Vocational Training Workshop C over other general ones? It is that it builds up the “defense” by making its business as Buddhist altar manufacturing to be a part of “value chain of products” in the local industry and obtain support from the local area while managing “aggressive” business, i.e., repeatedly making a choice of work which can be operated by facility members and are profitable for the facility taking advantage of limited opportunities of selecting work.

Its flexible business management, building up the defense and conducting business aggressively, can be seen.

“Selection” of Work

Focusing on “selection” of work, work obtained from outside is divided into (a) “work which only some persons with intellectual disabilities can do” and (b) “easy work in which most of them can participate in.” The “work which only some persons with intellectual disabilities can do” is also divided into (a)-1 “work making profits in a short time” and (a)-2 “work contributing to facility management from the middle- to long-term viewpoint.”

If such relationship is compared to field athletes, selected athletes are (a), other normal athletes are (b), selected sprinters are (a)-1 (spot short transaction) and long-distance athletes are (a)-2 (long-term continued transaction).

Depending on the competition (team ball sport or individual sport like athletics), members are selected by physical conditions at one stage and some members are fixed for a specific competition at another stage. In some cases, they change competitions to participate in by looking at characteristics of members. This would be the clever method of using players (human resources) to secure profits utilizing handicapped human resources.

“Concentration” of Work

Next is “concentration” of work. The characteristic of Vocational Training Workshop C is to focus on a traditional craft, Buddhist altar, as a new opportunity. Initially, it had tried various

jobs and finally it focused on the coating of Buddhist altars. The reasons are mainly the following three points:

- (i) In the Buddhist altar industry, due to social changes and competition with China, it is difficult to settle the compensation for manufacturers and they are leaving. However, the needs never disappear.
- (ii) Under above circumstances, the number of competitors decreases in a declining industry while Vocational Training Workshop C's contributions to the local industry is acknowledged and it can easily receive support by taking responsibility for a part of operating processes as a vocational training workshop.
- (iii) Although local young people do not want to inherit skills since it takes long time to obtain, as a community-based vocational training workshop, profits can be expected for a long time once skills are acquired.

As above, the reason why Vocational Training Workshop C focused on the coating of Buddhist altars as a main business is because "if it were a company with people without disabilities, even if it can obtain this job, there would be little advantage or business would not work out. As a vocational training workshop for persons with intellectual disabilities, there are many advantages to acquiring and continuing this job."

Many vocational training workshops are bound by the security of work at hand (short-term work on light duty) and involved in endless competition for lower prices while Vocational Training Workshop C living in the local area puts its attention on high value-added work from relatively long-term perspective to secure the steady profits and stabilize the organization.

This has become possible as it secures the range of work where the advantage of organization/group with many people with intellectual disabilities can be exerted and due to the method of using human resources making effective use of limited members.

VII. Conclusions

Finally, I would like to look back on above mentioned analyses of successful cases of special subsidiary companies and Vocational Training Workshop C.

First, special subsidiary companies complete the work by specializing the range of work in which they can do, understanding strong and weak points of individual members, bringing out their individual limited abilities and organizing mutually complementary groups.

Concerning the relationship with the parent company, the parent company gives job opportunities so that the subsidiary company can secure stable profits regarding burdens generated by having persons with intellectual disabilities as compensation for securing the minimum employment rate for persons with disabilities. For this reason, the economic rationality is established in both parent and subsidiary companies.

On the other hand, while many other vocational training workshops have a tough time at the management and vocational guidance sides, Vocational Training Workshop C works on

Buddhist altar manufacturing which is a local industry to secure performances on par with special subsidiary companies. As a result of analyzing the reason for the success, I see that there are some efforts to overcome the handicap, i.e., strategy of putting its attention on the local traditional crafts to improve the skills for a long time without support from outside unlike special subsidiary companies with the parent company, as well as management in common with special subsidiary companies such as specification of range of work and mutual complement between persons with intellectual disabilities.

These are organizational structure, mechanism, efforts and organizational environment in order to realize work and employment of persons with intellectual disabilities. These are all important factors when they work, and especially important factors are conversion of “labor value criteria” for persons with intellectual disabilities (placing value on results after the mutual complement with teamwork, not regarding individual abilities as same as people without disabilities, etc.) and “working framework.”

Because, it is an extremely hard act for persons with intellectual disabilities who can hardly complete work alone to discover individual labor value applying standards of non-disabled people and persons with intellectual disabilities are vulnerable workers and need “defensive factors” more than non-disabled people.

Some people may have doubt about the fact that persons with intellectual disabilities can work and continue a certain economic activity. However, in the organizations which I picked up as cases for the verification, there are very natural relationships, just like parent birds bring food into the nest to feed the chick there.

Both special subsidiary companies which contribute to the maintenance of the employment rate for persons with disabilities of the parent company and Vocational Training Workshop C which contribute to the maintenance of the local industry place themselves in a good environment regarding the organizations (nests) as “working framework.” Because there are external circumstances protecting from such competitions and/or outside enemies, unique and various employment efforts and approaches prove effective and individual working abilities of persons with intellectual disabilities are acknowledged as worthwhile.

A give-and-take (two-way) relationship is seen from persons with intellectual disabilities working and living there who are warmly accepted by the local community through maintaining their vocational life unlike many other persons with intellectual disabilities who receive (one-way) support from the local community.

It is significantly important for persons with intellectual disabilities that their work outcome (value) is acknowledged beyond comparison with people without disabilities’ labor value. It is not the problem of wages or outcome size. What is important is the fact that results are produced and persons with intellectual disabilities are involved in it (the ball stops at the middle of the evaluation glass).

In these organizations, individual persons with intellectual disabilities are, indeed, constituent members of the community or society, their work is incorporated into the social division of labor as an economic system, and mutually complementary and mutual aid relationship with

surroundings has been generated accordingly.

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Research Study on Diversification of Working Places and Working Hours

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This paper investigates and discusses the reality and issues of the diversification of working places and working hours. I conducted a questionnaire survey involving approximately 6,400 regular employees and carried out interviews with companies that already put in place the home-based work system. In this study, I found the following: The apparent flexibility of working hours leads to longer hours of works. In Japan, the “flexibility” of working hours contributes to longer working hours for many regular employees. In addition, a worker having more than one working place or a worker working at his/her own home tends to work longer. Many of those who work at home, in reality, perform, at their discretion, “overtime work at home.” Measures to reduce such overtime work at home include the utilization of the home-based work system which allows workers to perform their jobs at their homes. Yet, in order to avoid lack of communication, to alleviate a sense of unfairness and to prevent long hours of works, the flexibility in designing and implementing the home-based work system will be of importance.

I. The Aims and Objectives of This Study

If the “diversification” means more options for working people and if such “diversification” can more appropriately address their needs for work and lifestyle, the “diversification” would benefit them. It seems that, in discussion of the “diversification,” its “positive effects” are frequently emphasized. A major issue concerning “the diversification of employment types” is, of course, the equal treatment of regular employees and non-regular employees, and the reality of “the diversification of employment types” by far falls short of “equal pay for equal work.”

The introduction of “de facto working hours (deemed working hours)” stipulated in the Labor Standards Act as revised in 1987 is intended to relax the working time management of regular working hours in a certain number of job categories for which it would be inappropriate to measure job performance based on working hours.¹ According to the General Survey on Working Conditions conducted by the Ministry of Health, Labour and Welfare, the ratio of enterprises with 30 or more employees adopting a “de facto (deemed) working hour system”² rose from 8.1% in 2003 to 10.5% in 2008. In addition, the wider use of information communication devices and the development of information and telecommunication infra-

¹ It is still necessary that increased wages for overtime work are paid for hours worked at night and on statutory holidays.

² The total of companies that have adopted the system of “de factor working hours outside the workplace,” “discretionary labor systems for specialists” and “discretionary labor systems for planning-type jobs.”

structures allow workers to carry out their jobs without always having to go to work. “Telework,” including home-based work systems, also attracts increasing attention. Traditionally, many of on-the-go salespersons have more than one workplace. In short, in recent years, “working hours” and “workplaces” as well as “employment types” are increasingly “diversified.”

To date, however, few research studies clearly identified the reality and problems of the “diversification” of workplaces and of working hours. “The diversification of working places” attracts attention mainly for so called “telework” which provides various ways of work by allowing workers to flexibly arrange when and where to work with the use of telecommunications equipment. Preceding research studies focused mainly on “working at home,” which is typical among independent contractors and SOHO workers.³ In other words, few have studied the “diversification of working places” for those employed by companies or organizations. While some preceding research studies referred to home-based work (telecommuting) systems adopted by certain companies, it is still necessary to discuss, in the context of “the diversification of working places,” ways of working for on-the-go sales representatives and others whose working places are not always fixed and for managers and those in professional positions who often perform overtime work at home at night or on holidays. In addition, although a number of studies and discussions have been carried out concerning “the diversification of working hours,” little is known about actual conditions of a wider range of workers, including managerial employees who often work overtime without receiving regular overtime payments as well as sales representatives and those engaged in discretionary labor to whom “the de facto working hour system” applies.

Aren’t there problems associated with the “diversification” of workplaces and of working hours? A few studies on “the diversification of working hours” already pointed out that the superficial “diversification” would rather lead to longer working hours.⁴ Then, how about “the diversification of working places”? If it is possible to work at home without having to go to work several days a week, workers’ needs for both work and living may be satisfied. Yet, in the case where a worker working at a workplace during regular working hours takes his/her work home, the work performed at home outside of regular working hours may result in longer working hours.

The main purpose of this study is to examine the reality of the “diversification” of workplaces and working hours for workers employed by companies and organizations to identify problems associated with the “diversification,” based on the awareness of the issues mentioned above. In order to achieve the main purpose, I used questionnaires involving regular employees. I also carried out interviews with companies that already put in place the home-based work system for their regular employees to understand the details and the cur-

³ Ogura and Fujimoto (2008) reviewed preceding studies on “telework,” and this paper reflects the findings from Ogura and Fujimoto (2008).

⁴ In this regard, Ogura and Fujimoto (2007) concluded that “workers under relaxed control of working hours” tend to work longer hours.

rent circumstances of their home-based work arrangements that could not be identified by the questionnaires. Companies interviewed in this study are generally considered as “forward-thinking” companies in terms of the introduction of the home-based work arrangements. This study attempts to examine, by investigating the reality of “the diversification” in details, what kind of system and what kind of application of the work-at-home system will really benefit workers and their employers and what kind of issues should be addressed in introducing and implementing the system.

II. Summary of Research Results

1. Summary of the Questionnaire Survey of Workers

(1) Purpose

The purpose of the questionnaire survey is to understand the reality of the diversification of working places and of working hours for employed workers (regular employees) to identify issues to be addressed.⁵

(2) Method of the Survey

As evident from previous studies (Ogura and Fujimoto 2008), only a small number of businesses adopted the “home-based work” system, and accordingly, the number of employees who are permitted to “work at home” is estimated to be small. For this reason, it is appropriate to conduct a relatively large-scale survey. I conducted a survey by mail, with due consideration to budgetary considerations.

(3) How to Select Survey Respondents

I set the sampling rate to survey “regular employees,” according to the distribution by age and sex of “employed people” aged between 20 and 59 years who responded in the census “engaged in work” based on the National Census findings in 2005. Then I selected 8,000 people among all survey cooperators (mail survey cooperators only, excluding Internet survey cooperators) who were thought to be “regular employed workers.”⁶ There was no indi-

⁵ This survey targeted only regular employees. Though non-regular employee also experience the diversification of working places and working hours, in this paper I limit the discussion on regular employees, who represent the majority of workers, because no survey of this kind (concerning employed workers) has ever conducted before and because I give due consideration to the efficiency of the survey. I expected that, in so doing, I could, to a certain degree, eliminate outliers in terms of working hours, incomes and the like, from survey responses to enhance the reliability of the survey results.

⁶ There was no individual attribute category of “regular employee” in the survey cooperators surveyed by a research firm, so I selected those who were grouped by the research firm as “company employees (general),” “company employees (managerial positions),” and “public servants” only, and sent questionnaires to them at a ratio of 8:1:1. I also took into account the possibility that they were no longer regular employees at the time of the survey, and for this reason, I included, in the questionnaires, questions concerning their working styles and employment type as of the time of survey. In this way, I

vidual attribute category of “regular employee” in the survey cooperators, yet I identified details of individual attributes as far as possible to select survey targets. Unlike a complete enumeration such as a national census, I cannot say that the representativeness of such survey samples is not questionable at all. I can, however, say that this survey is meaningful enough when due consideration is given to different constraints in carrying out the survey and other constraints, based on findings from previous studies concerning the validity of findings from research studies which also employed mail-in surveys (The Japan Institute for Labour Policy and Training 2005).

(4) Timing of the Survey and the Number of Responses Collected

I sent the questionnaires by mail and collected responses in September, 2008. I collected 7,057 responses from 8,000 people surveyed. (The response rate was 88.2%.) The number of valid responses (i.e. the number of responses from those considered to be regular employees) obtained was 6,430. The survey results presented in this report are based on the responses of these 6,430 regular employees.

(5) Major Survey Items

Basic attributes of individual workers and companies they work, items concerning working hours (including the working hour system applied, how the times to start and finish work are being managed, the length of working hours, etc.), items concerning places to work (including “whether one has jobs at places other than his/her regular workplaces,” types of workplaces other than regular workplaces and how often jobs are performed at workplaces other than regular workplaces, working hours spent to perform such jobs, etc.) and workers’ attitudes concerning their works and lifestyles. (For more details, see the questionnaires at the back of this paper.)

(6) Distribution of the Survey Respondents

Tables 1 and 2 show the distribution of the survey respondents in this survey. Table 1 demonstrates that, according to this survey, there was not so much difference, in spite of a relatively high age distribution. As Table 2 shows, there was not so much difference, either, in spite of some differences among “manufacturing,” “wholesale and retail trade” and “financial and insurance.”

2. Major Survey Results

(1) Diversification of Working Hours

I took into account that “the diversification of working hours” leads to the workers’ freedom to “work whenever they want” to a certain extent, with no fixed time to start or finish

selected only regular employees for aggregation and analysis. The total of more than 300,000 mail survey cooperators are being registered with the research firm.

Table 1. Responses Collected in This Survey and Comparison with Findings from Employment Status Survey (Regular Employees) by Age and Sex

	Survey Results in This Study			Employment Status Survey (2007)		
	Total	Men	Women	Total	Men	Women
20 to 29 years old	18.3	14.4	27.8	22.0	18.5	30.1
30 to 39 years old	25.7	26.1	24.9	30.4	31.6	27.7
40 to 49 years old	28.7	30.6	23.9	24.2	25.5	21.3
50 to 59 years old	27.3	28.9	23.4	23.3	24.3	21.0
Total	100.0	100.0	100.0	100.0	100.0	100.0
(N)	(6430)	(4562)	(1868)	(32122)	(22410)	(9713)

*Figures in parentheses in Employment Status Survey are in thousands of persons.

Table 2. Responses Collected in This Survey and Comparison with Findings from Employment Status Survey (Regular Employees) by Sex and Industry Sector

	Survey Results in This Study			Employment Status Survey		
	Total	Men	Women	Total	Men	Women
Agriculture, forestry, fisheries, mining	0.3	0.3	0.3	1.0	0.9	1.4
Construction	6.4	7.0	5.0	8.7	10.9	3.7
Manufacturing	24.1	27.9	15.0	21.7	24.9	14.3
Electricity, gas, heat supply and water	2.1	2.6	0.9	1.0	1.3	0.2
Information and communications	5.6	6.5	3.5	4.5	5.2	2.9
Transport and postal services	5.9	7.4	2.2	6.2	8.1	1.9
Wholesale and retail trade	10.1	9.6	11.1	14.3	13.7	15.4
Finance and insurance	6.3	4.7	10.4	3.5	2.7	5.2
Real estate/Goods rental and leasing	1.3	1.3	1.2	1.1	1.0	1.2
Eating and drinking places, accommodations	1.5	1.5	1.6	2.4	2.2	2.8
Education, learning support	4.5	3.5	7.0	5.2	4.0	7.7
Medical, health care and welfare	8.5	3.8	20.0	10.3	3.7	25.4
Compound service (post office, cooperative associations)	0.6	0.6	0.5	1.1	1.2	1.0
Services not elsewhere classified	13.3	13.5	12.7	11.0	10.8	11.4
Government	6.6	7.2	5.1	5.6	6.7	3.1
Others	2.9	2.6	3.6	2.5	2.6	2.5
Total	100.0	100.0	100.0	100.0	100.0	100.0
(N)	(6394)	(4541)	(1853)	(34324)	(23799)	(10526)

*Figures in parentheses in Employment Status Survey are in thousands of persons. The classification of job categories above corresponds to that in Employment Status Survey in 2007.

the work. Accordingly, first of all, I focused on working hour systems. In this study, I considered “the discretionary work system and de facto working hour system” and “systems without management of working hours” as especially “flexible” working hour systems among a number of working hour systems.⁷ As Figure 1 shows, the ratio of workers under “the discretionary work system and de facto working hour system” is the highest in “sales and

⁷ In the questionnaires, works performed under “the discretionary labor system and de facto working hour system” were defined as “professional jobs, marketing jobs, planning jobs that are subject to law,” and workers under “the system without management of working hours” as “workers in managerial positions and the like other than those working under the discretionary labor system and de facto working hour system.” I consider that those working under systems “without management of working hours” include those who can carry out self-certification of their working hours.

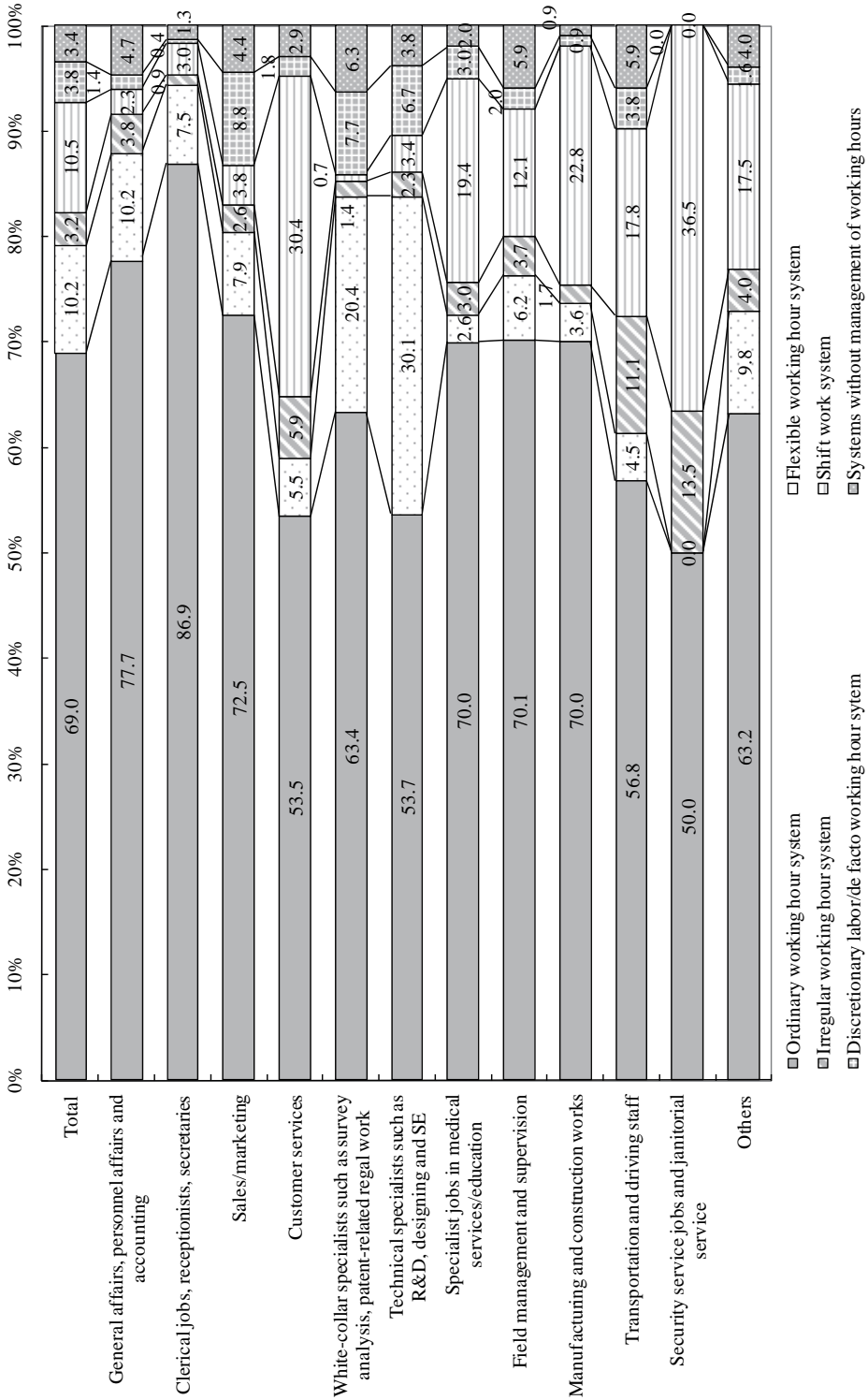


Figure 1. Working Hour System by Job Category

marketing (8.8%),” followed by “white-collar specialist jobs (7.7%)” and “technical specialist jobs (6.7%).” The ratio of workers under “systems without management of working hours” is high in several sectors, including “white-collar specialist jobs (6.3%),” “field management and supervision jobs (5.9%)” and “transportation and driving staff (5.9%).”

Figure 2 shows the relationships between working hour systems and “the total hours worked.”⁸ The ratio of categories of “longer working hours” is high among workers under systems which are considered as “flexible” working hour systems. More precisely, the ratio of workers working for “241 to 280 hours” and “281 hours or longer” is high among those under “the discretionary work system and de facto working hour system,” and the ratio of those working for “281 hours or longer” is also high among those under “systems without management of working hours.” Accordingly, the ratio of workers working for shorter hours is low among those under “the discretionary work system and de facto working hour system” and “systems without management of working hours.” This indicates the possibility that “flexibility” in working hours may result in longer hours of works.

In addition, findings from analysis examining the causal relationship between the diversity of working hours and the total hours worked, on the assumption that various attributes of employers and individuals were constant, demonstrated that workers under a seeming “flexible” working hour system or those having a number of working places tend to work longer. This paper is not concerned with details of findings from the analysis.

Under present conditions, “ways of working that allow workers to work whenever they want” often contribute to long working hours. In addition, it is highly possible that ways of working where workers have more than one workplace and those that allow people to work at home also lead to longer hours of works.

The diversification of working hours essentially should serve to respond to fluctuating business needs and to better satisfy the personal needs of individual workers. However, overall, the diversification contributes to longer working hours. This is a serious problem we have to address, and I believe that reducing long hours of work is a top priority.

Flexible working hour systems should essentially allow workers to increase or reduce the number of hours worked, as the situation demands, but on the contrary the systems actually tend to increase hours worked. It is necessary that the flexibility of working hours should serve the purpose of “reducing hours worked, when the situation permits.”

(2) Diversification of Working Places

In this study, I broadly defined “the diversification of working places” as “having an opportunity to work at places other than one’s usual workplace of an organization or a business one works for.” Based on this broad definition, in the questionnaires, respondents who said that they had such opportunities were asked to answer questions about the types of

⁸ “Total hours worked” include working hours per month including unpaid overtime working hours.

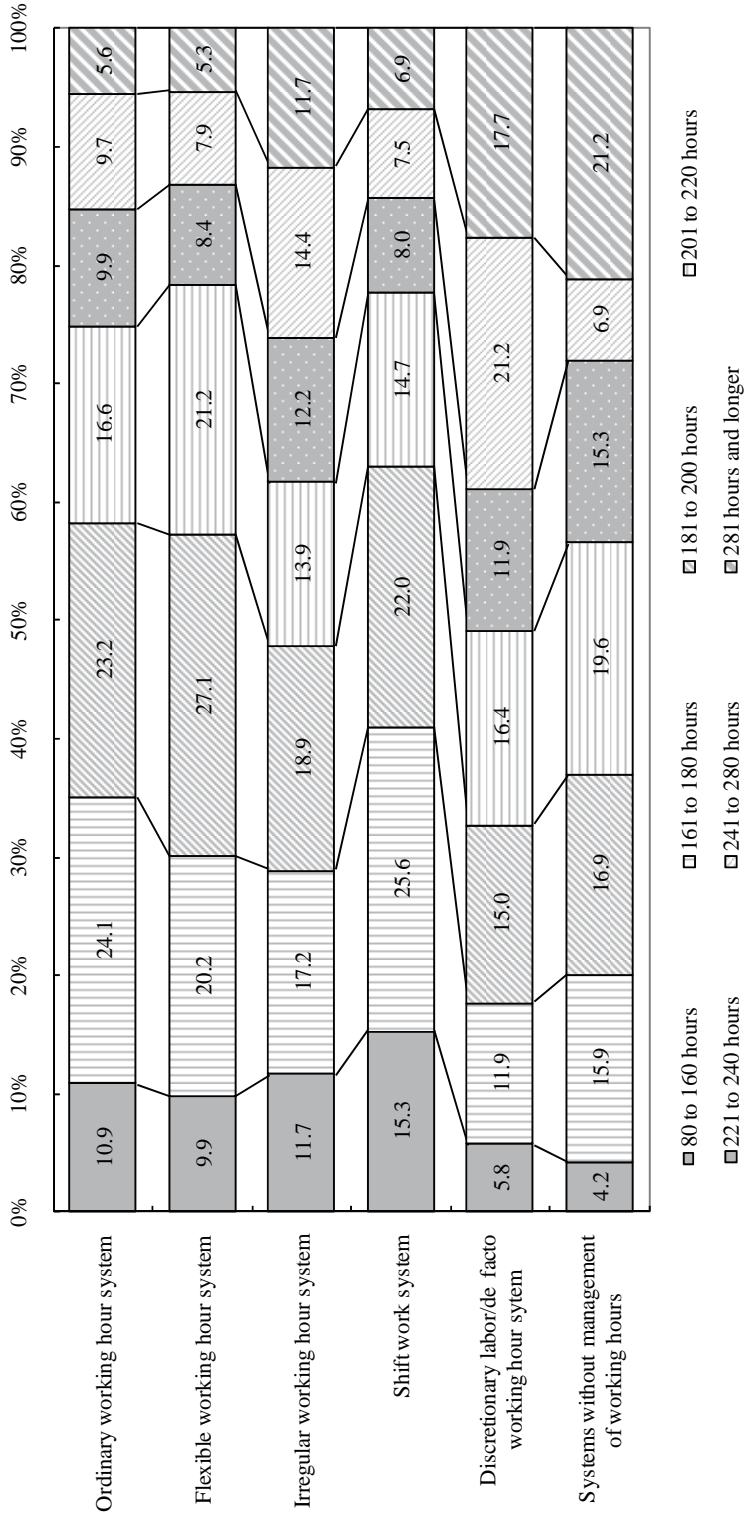


Figure 2. Total Working Hours by Working Hour System

their working places and how often they had such opportunities.⁹

Previous research studies concerning working places focused mainly on telework, and the primary concern of many of them is home-based work (telecommuting). Telework works can be grouped into several types according to the place of work (working at a worker's own home, by facility utilization, or in a mobile environment) and according to how often one carries out "teleworking" (Ogura and Fujimoto 2008, 6). Many studies have lumped together all the cases as "teleworking." A study concerning employers conducted by JILPT in 2008 asked questions about details of teleworking, by grouping places of work into four: "completely home-based work," "partly home-based work," "mobile work" and "working at one's second office."¹⁰ Findings from the study showed that less than 10% of the companies surveyed already institutionalized teleworking systems or effectively allowed their employees to carry out "teleworking," for each place of work.¹¹ In addition, other studies concerning individual workers demonstrated that the number of people making use of home-based work systems was still small (Sato 2008).

As above mentioned, however, many workers, including on-the-road salespersons, managerial employees and specialist employees, are more likely to work outside of their usual workplaces of organizations or businesses they work for, regardless of whether home-based work systems are available or not. In the light of the above, in this study, I do not use the term "telework" to examine the reality of workers having opportunities to work at places "other than" their usual workplaces. I assume seven different working places other than workers' usual workplaces, including "home," "other offices of the employer," "offices or plants of customers," "when travelling by transportation or at accommodation facilities" and "others" after having referred to classifications found in other studies on enterprises and corporate case examples.

Figure 3 shows "whether workers have opportunities to work at places other than usual workplaces"¹² by job category. The ratio of workers having opportunities to work at places other than their usual workplaces is high among "sales and marketing (61.7%)," followed by "white-collar specialist jobs such as survey analysis and patent-related legal work (57.3%)," "technical specialist jobs such as research and development, designing and system

⁹ It is theoretically possible that one never shows up at the office, if his/her "usual working place of an organization or a business he/she works for" is solely "his/her own home." In other words, precise information about such employees (For example, precise information about "works performed at home" of employees in a completely "work-at-home" position who always work at their own home) is not available. As previous studies demonstrated, however, I can hardly find such regular employed workers. In the first place, nearly all of workers in a completely work-at-home position are independent contractors or self-employed persons who perform "work at home." In this study, respondents who said that they had "no opportunity to work at a place other than their regular workplaces" were asked to give their reasons, and none of them cited "completely home-based work" as their reasons.

¹⁰ For the definition of each working place, see JILPT (2008).

¹¹ For the detailed findings, see JILPT (2008).

¹² More precisely, it means "places other than their usual workplaces of organizations or companies they work for," and hereinafter referred to as "places other than usual workplaces."

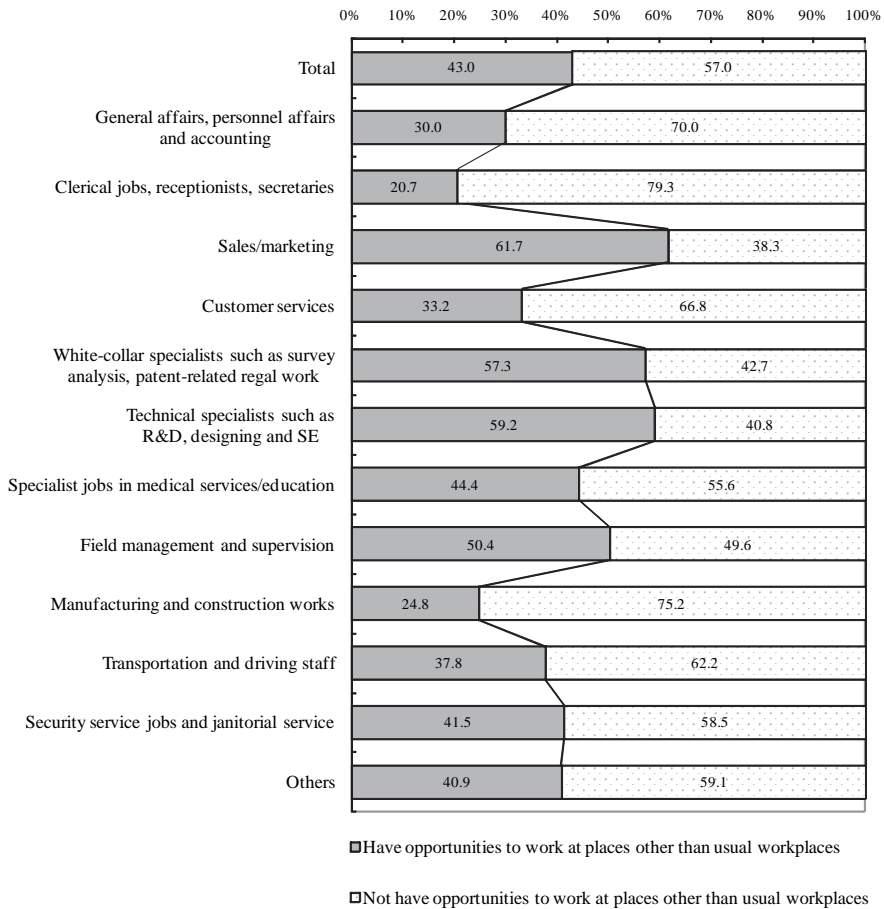


Figure 3. Ratio of Workers Working at Places Other Than Usual Workplaces, by Job Category

engineering (59.2%)” and “field management and supervision jobs (50.0%).”

Table 3 shows whether workers work at places other than usual workplaces, for each working hour system. The ratio of respondents who answered that “they have workplaces other than usual workplaces” is high among those working under the “discretionary labor system and de factor working hour system (73.7%)” and those working under “systems without management of working hours (67.7%),” and low among those working under the “shift work system (23.8%).” This indicates a correlation between the “flexibility” of the working hour system and working places.

Figure 4 shows the ratio of workers working at places other than usual workplaces, by total hours worked. It indicates that the longer the total hours worked, the higher the respondents who answered that they had workplaces other than usual ones. This indicates the

Table 3. Ratio of Workers Working at Places Other Than Usual Workplaces, by Working Hour System

	Have opportunities to work at places other than usual workplaces	Not have opportunities to work at places other than usual workplaces	Total	(N)
Ordinary working hour system	41.1	58.9	100.0	(4406)
Flexible working hour system	54.2	45.8	100.0	(650)
Irregular working hour system	50.5	49.5	100.0	(202)
Shift work system	23.8	76.2	100.0	(669)
Discretionary labor/de facto working hour system	73.7	26.3	100.0	(243)
Systems without management of working hours	67.7	32.3	100.0	(220)

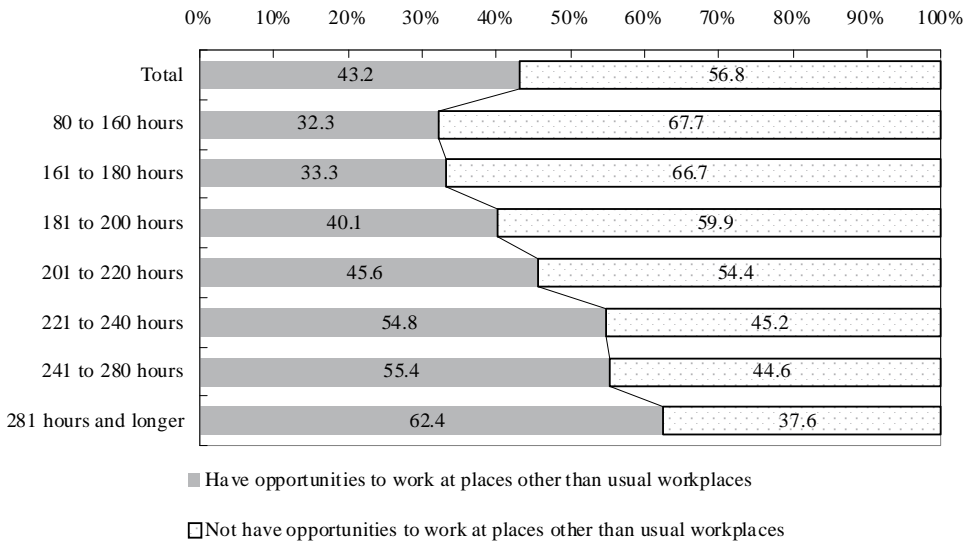


Figure 4. Whether Workers Work at Places Other Than Usual Workplaces, by the Total Hours Worked

possibility that the “diversification” of workplaces will lead to longer hours of works. While this study is not concerned here with details of findings from the survey, the survey results showed that the more working places other than usual workplaces workers had, the longer the total hours worked would be.

Table 4 illustrates the types of workplaces other than usual ones and the frequency of working at such workplaces. First, I would like to focus attention to the percentage of those who answered “Never work there.” The ratio is the lowest for “other offices of the employer” at 35.6%, followed by “offices or plants of customers” at 49.5% and “home” at 63.2%. The

Table 4. Workplaces Other Than Usual Workplaces and How Often They Work There (%)

	Almost every-day	Three to four days a week	One to two days a week	One to three days a month	Less than one day a month	Never work there	Total	(N)
Other offices of the employer	4.7	3.6	9.6	19.9	26.5	35.6	100.0	(2449)
At home	4.7	3.4	8.0	12.3	8.3	63.2	100.0	(2324)
Offices or factoris of customers	12.0	6.5	8.3	11.8	12.0	49.5	100.0	(2368)
When traveling by transportation	3.3	1.8	3.0	5.0	4.7	82.3	100.0	(2267)
At accommodation facilities	0.4	0.2	1.3	5.2	8.1	84.7	100.0	(2259)
At coffee shops	0.2	0.4	1.6	2.8	3.5	91.5	100.0	(2247)
Others	4.9	1.7	1.4	3.9	5.4	82.6	100.0	(1981)

ratio for “all other places” exceeds 80%. In other words, the respondents frequently worked at the three types of working places above mentioned. The ratio of those working “almost everyday” at “offices or plants of customers” is relatively high at 12.0%. This probably reflects how sales representatives and others visit their customers.

Although figures and tables are not shown in this paper, when asked about the advantages of working at places other than usual workplaces, the largest number of respondents (46.0%) answered “productivity and efficiency increase” for working at “other offices of the employer,” and the largest number (48.1%) also answered “productivity and efficiency increase” for working “at home.” Asked about working “at offices or factories of customers,” the largest number (39.6%) cited “customer service improves” as the most important advantage. At the same time, 34.8%, 27.0% and 30.1% of the respondents found no advantage in working at “other offices of the employer,” “at home” and “at offices or factories of customers,” respectively.

Asked about the disadvantages of working at places other than usual workplaces, as the most important disadvantage, the largest number (43.2%) of workers working “at other offices of the employer” cited “working hours tend to be longer;” 59.1% and 55.9% of those working at “home” cited “it is difficult to separate work from private time” and “working hours tend to be longer,” respectively; and 32.6% of those working at “offices or factories of customers” cited “working hours tend to be longer.”

There are still needs for home-based works. 24.2% of the respondents who were working neither at usual workplaces of the employer nor at home said that they hoped to work “at home.” As for other places, only few people, or less than 10% of the respondents, expressed such hope. This indicates that those who are not allowed to work “at home” wish,

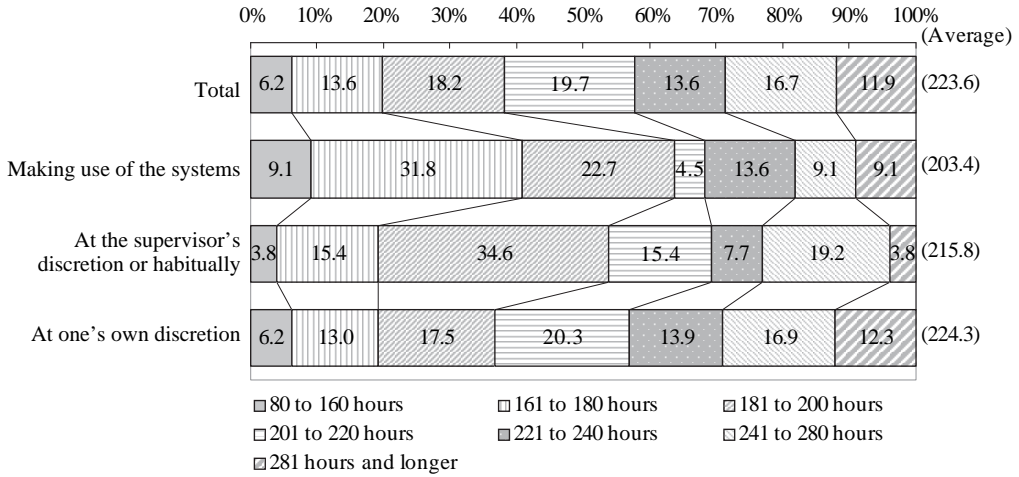


Figure 5. Total Hours Worked by System Concerning Work-at-Home

more or less, to work at “home.” The same tendency was observed among those who were working at places other than usual workplaces. 36.0% of the all respondents wished to work “at home.”

The total hours worked among those who “make use of the work-at-home system” tended to be shorter than the total hours among those who “work at home at the supervisor’s discretion or work at home habitually” or among those who “work at home at own discretion” (See Figure 5).

As discussed above, a worker who has a variety of workplaces works in flexible ways of working to some extent. However, among those who were working at home, many “took their works home” at their own discretion, and this practice tended to contribute to longer working hours. To reduce longer working hours spent for work taken home by workers’ discretion, it is considered essential to institutionalize “work taken home and performed at home” as a system concerning working hours. This is probably because such a system would allow workers to more easily distinguish various ways of working in many ways. According to the findings from this survey, however, only a limited number of respondents actually made use of the work-at-home system. Accordingly, I cannot draw any decisive conclusion, but I can suggest that we have to discuss the ways of working at home, for the purpose of preventing long working hours which result from the practice of “taking work home,” because many of the respondents who were not working at any place other than their usual workplaces cited “home” as the place where they wished to work if possible and there are seemingly needs for home-based work.

3. Findings from the Interviews with Companies

I carried out a survey on teleworking works performed mainly at home by interviewing 10 private-sector enterprises (in the manufacturing, information communications and service

sectors) in 2007 and 2008. These 10 enterprises were all considered as forward-looking case examples in preceding studies and researches.

All of the 10 enterprises interviewed in this study were considered to relatively smoothly implement the system of teleworking or the system of home-based work. In discussion on the system of home-based work, we have to pay special attention to the fact that every company surveyed allowed institutionally their employees to partially work at home once or twice a week, for example, by making use of existing internal rules. It is also noteworthy the system of partial work-at-home was adopted and being implemented as a system which addressed different values of each company, including changes in working styles, diversified ways of working, and employees' needs, and as a system, in particular, which served to allow employees responsible for child rearing or elderly care to fulfil such responsibilities while performing their work duties at the same time. In other words, as far as I have learned from case examples of the interview data, the practice of partial home-based working is a working pattern designed and established as a system aimed at contributing to the work-life-balance¹³ (hereinafter referred to as "WLB") of employees, and also as a form of working at home included in the category of "teleworking" which utilizes information communication devices.

Based on the above discussion, I conclude findings from the interviews and surveys, concerning the effects of working at home, supportive facts, efforts to address problems and challenges for the future home-based work, as follows.

(1) Effects of Home-Based Work Arrangements

The introduction of home-based work arrangements enables employers to better meet employees' needs in terms of WLB, and allows employees to spend more time in child rearing or elderly care and with family as they can save time by not having to go to work everyday. It was also observed that home-based work arrangements allowed employers to better prevent employees, in particular, female employees, from quitting their jobs for reasons of child rearing or elderly care, and benefited employees because they did not have to quit their jobs thanks to home-based work arrangements. In addition, home-based work arrangements enabled employees doing home-based work to perform their individual-based jobs in a better-planned and efficient manner and to better concentrate (and enhance productivity) when working at home.

A number of prior studies and researches¹⁴ already pointed out the above mentioned

¹³ There is no official and clear definition of "work-life-balance." It has been interpreted in broad sense as "to cope with both work and family life" and is often used as a term which refers to the conditions which allow people to cope with the both and a system or measure to support people who have to cope with the both. In this section, in particular, it is used as a term referring to the conditions which enable workers to fulfil their responsibilities for child rearing and elderly nursing care while performing their work duties at the same time.

¹⁴ The most recent studies in this regard include Ogura and Fujimoto (2008) and The Japan Institute for Labour Policy and Training (2008).

effects, and this interview survey again confirmed them. Then what kind of factual factors support the above mentioned positive effects of home-based work?

(2) Facts and Factors That Support the Implementation of Home-Based Work Arrangements

Findings from the interviews with the companies show that the employers interviewed in this study which seemingly introduced and operated work-at-home arrangements in a relatively favorable manner have the following characteristics:

- (i) Giving the highest priority to employees' job satisfaction (in order to allow them to continue to work for the employer, to prevent them from quitting their jobs, and to promote their willingness to work);
- (ii) Considering the introduction of or actually having introduced home-based work arrangements in response to strong needs of employees, and implementing such arrangements and policies underlying them in a top-down manner (regardless of whether the top-down manner directly led to the introduction of work-at-home arrangements);
- (iii) Making work-at-home systems as user-friendly as possible, by easing requirements and procedures for eligible applicants; and
- (iv) Leaving the actual operation of the arrangements to each department (supervisor) to which a person making use of work-at-home arrangements belongs.¹⁵

In some cases, work-at-home arrangements are implemented in a favorable manner even when not all of the above factors are put in place. Accordingly, these factors are believed to be mutually complementary.

All of the above mentioned are factors involving how employers (including general affairs or personnel affairs departments or other sections responsible for work-at-home systems) consider the introduction of home-based arrangements, and how they introduce and actually operate them. Then what is important for employees making use of home-based-work arrangements and for their supervisors who are actually responsible for implementing the arrangements? Though I did not interview such employees or their supervisors concerning the arrangements (while in some cases, persons who answered my questionnaires happened to be employees using such arrangements and their supervisors), as findings from the interviews and the requirements for the use of home-based work systems show, it is important that

¹⁵ On the contrary, though it is only a speculation, we can consider that, in cases where the employer sets up a short-term and concrete financial profit or business models (commercialization of work-at-home arrangements as ways of working), where the employer has not introduced work-at-home arrangements in a top-down manner, where such arrangements are difficult to make use of (because of being designed in too much detail in order to avoid having troubles), or where the actual operation of such arrangements is not left to a section to which an employee who makes use of such arrangements belongs to, such systems/arrangements are not being operated in a favorable manner in relative terms. This is also an important consideration when introducing a work-at-home system designed to better contribute to WLB.

- (v) an applicant for or a user of such home-based work arrangements daily maintains good communication in the workplace;
- (vi) an applicant for or a user of such home-based work arrangements is considered by his/her supervisors and colleagues to be a person who works hard even when no one sees him/her;
- (vii) an applicant for or a user of such home-based work arrangements is a person trusted by his/her supervisors and colleagues and has trust and good relationships with them.¹⁶

As one's supervisor is a person responsible for receiving applications for or approving the use of the work-at-home system, one has to obtain the trust of one's supervisor. In addition, building up trust and good relationships with one's colleagues will be of high importance, as uncomfortable feeling of a user of the home-based work arrangements about making use of work-at-home systems is believed to serve as an obstacle to the use of such system.

(3) Challenges for the Future of the Companies Interviewed

Though each employer surveyed is currently operating home-based work arrangements in a favorable manner, I believe that the companies surveyed still have issues to address. While the above mentioned positive effects of the arrangements are considered as "bright sides," there still remain negative effects of such arrangements, as listed below.

Management working hours, issues of overwork and of mental health, work-related accidents, personnel evaluation systems, establishment and reform of good work climates, ensuring of security, ensuring of a feeling of fairness among employees, understanding of the parent company, explanation to employees working under different forms of employment, elimination of prevailing concern that work-at-home arrangements may negatively affect the efficiency of a company as a whole, possible expansion of eligible job categories and possible application of such arrangements to all employees, enhanced publicity to encourage the use of such arrangements, promotion of the use of communication tools, measurement of the effects by conduction questionnaire surveys, and discussion on job types eligible for home-based-work arrangements and on the number of employees eligible for such arrangements at certain sections.

As above listed, there still remain a number of issues, and one can say this means that such arrangements are still under development even in companies that implement such arrangements relatively smoothly. Accordingly, continued researches and studies as well as active collection and provision of relevant information, including forward-looking case examples, will play important roles in the wider use and promotion of home-based-work systems.

¹⁶ These observations have affinities with the suggestions presented in surveys on individual businesses conducted in Yanagihara (2007).

III. Conclusion of Policy Challenges

Under present conditions, “the diversification of working places and working hours” results in long working hours for many people, as typically observed in “work taken home and performed at home.” They often work at home and elsewhere at night or on holidays, while working during ordinary working hours as well, in spite of the diversification of working hours.

The diversification of working hours essentially should serve to respond to fluctuating business needs and to better satisfy the personal needs of individual workers, by allowing them to decide “when to work” to a certain degree. In other words, it should essentially allow workers “to increase or reduce the number of hours worked, as the situation demands.” However, for most of workers, the diversification does not provide the option to “reduce working hours.” Likewise, the diversification of workplaces is likely to lead to longer hours of works if it simply increases “work taken home and performed at home.”

As the surveys in this study showed, however, the implementation of home-based work arrangements which allow workers to perform their works at home one or two days a week have positive effects to some extents. One can say that such arrangements will avoid lack of communication and other issues which are possible negative effects in “completely home-based work” where employees have not to go to work at all, and at the same time, such arrangements will serve to enhance efficiency, prevent employees from quitting their jobs, partially solve issues concerning commuting, and alleviate the burden concerning family affairs and child care. This benefits both the employer and the employee.

In conclusion, I should not that, the political implication of this study is that one is required to adopt and implement flexible working structures, including partial home-based work arrangements, while paying careful attention so that the diversification of working places and of working hours will not result in longer hours of works. It is important that the administration should provide information on specific matters, including “what kind of home-based-work arrangements is desirable,” “how such arrangements should be introduced” and “what are important considerations in the introduction.”

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JILPT Research Activities

Research Reports

The findings of research activities undertaken by JILPT are compiled into Research Reports (in Japanese). Below is a list of the reports published from June to August 2009. The complete text in Japanese of these reports can be accessed from the JILPT website (<http://www.jil.go.jp/english/index.html>). We are currently working on uploading abstracts of reports in English onto the JILPT website as well.

Discussion Papers

- DPS-10-01 Future of Individual Contractors: Focusing on Japanese and American Married Women with Children (January 2010). Yanfei Zhou
- DPS-09-06 Dealing with Labor Complaints Utilizing an Internal Reporting System: From Perspective of Labor Dispute Prevention (December 2009). Shino Naito

Research Material Series

- No.63 Minimum Wage System in Western Countries II: Trend of Germany, Belgium and the United States (January 2010).

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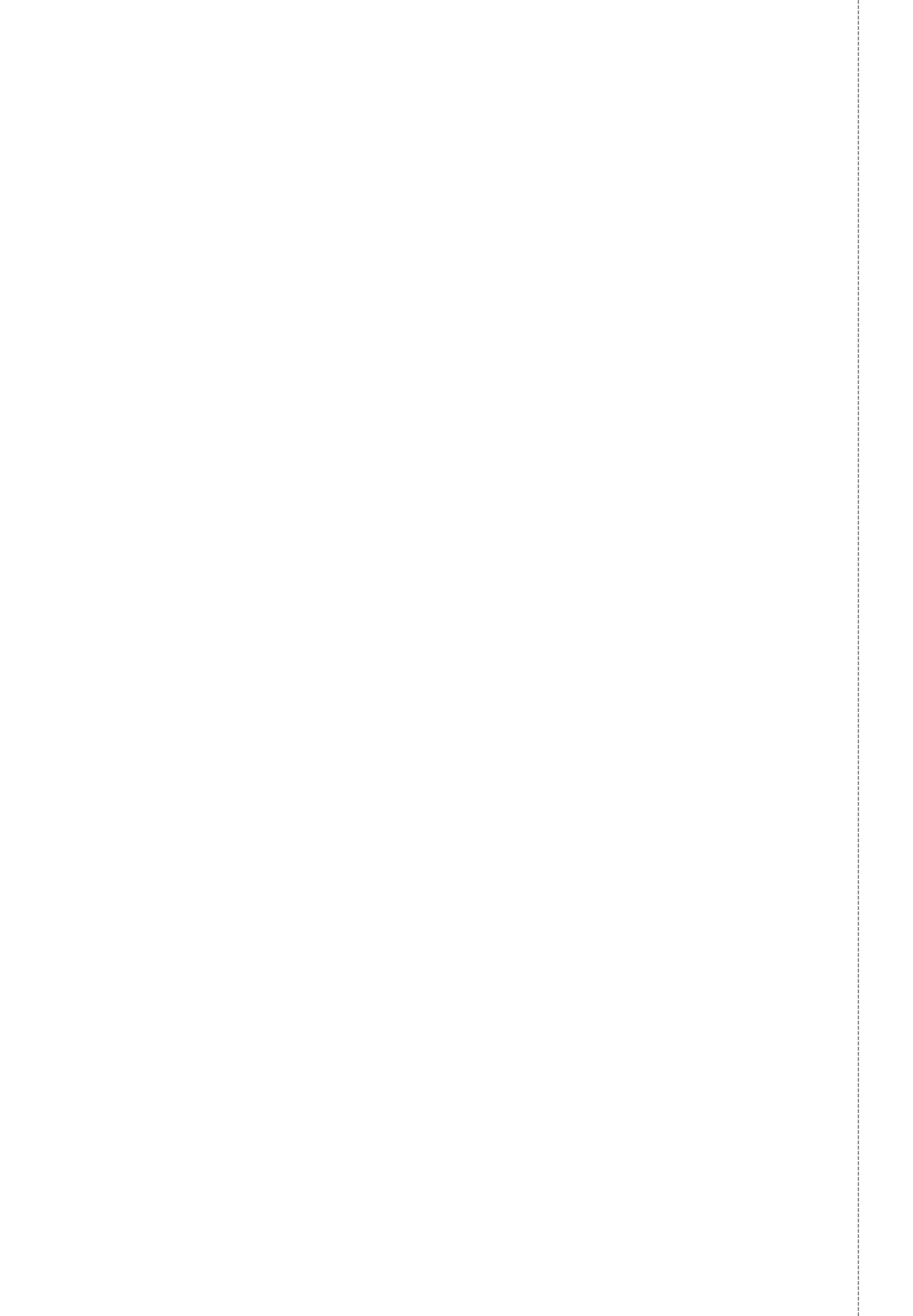
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