Nonstandard Work in Japan and Korea-the Origin of Wage Differentials[1]

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I. Introduction

The ongoing discussion on the size, the current status and definitions of nonstandard work started around 1999, when nonstandard workers, which were represented by 'temporary employees' and 'daily workers', began to take up more than half of the paid workers[2], largely due to the lingering impact of the 1997 Economic Crisis.

However, there was no consensus on the definition of nonstandard work and no representative data giving a general picture of the actual size and status of nonstandard workers in the whole economy. Therefore, most arguments related with nonstandard work were simply based on inappropriate surveys and the definition and the size of nonstandard workforce varied depending upon the orientation of those who made such arguments. For instance, some argued that 'the growth of nonstandard work was a natural result of the increased flexibility of the labor market and diverse employment arrangements,' stressing only the bright side of nonstandard work, such as the possibility of keeping the optimal number of people employed facing fluctuation of the labor demand and the possibility of bypassing temporal or spatial limits of the labor supply. By contrast, others insisted that 'nonstandard workers should be protected from discrimination', by drawing attention to poor conditions of nonstandard workers, such as low wages, limited fringe benefits including social insurance, and deficient job security.

At that time, only two nationally representative data sets, the Economically Active Population Survey (EAPS) conducted by the Korean National Statistics Office (NSO) and the Korea Labor and Income Panel Survey (KLIPS) conducted by the Korea Labor Institute, were available for scientific analysis of nonstandard work. The EAPS provided the size of nonstandard work based on the 'statistical' definition, i.e., 'temporary employees' and 'daily workers,' but it failed to define nonstandard work in an internationally comparable way, to describe its general picture, and to offer appropriate information for an in-depth analysis of

[1] I apologize that I did not make a full comparison of nonstandard work in Japan and Korea. First, I want to give some shed of light about nonstandard work in Korea by giving much information about it and then I try to do my best to find similarities and differences in both country experiences as far as I can.

[2] Hereafter, worker means paid worker or wage and salary worker without making any confusion.

working conditions. The KLIPS provided information on a 'self-declared definition' of nonstandard work, which was crucial to identifying the actual size of nonstandard work, as well as information on the status of workers. Although it also offered considerable information essential for empirical analyses, the KLIPS, due to the lack of information for identifying diverse employment arrangements, was not sufficient to become a qualified source for making the definition of nonstandard work.

The discussions on nonstandard work gained a great momentum in 2000 when relevant basic data was brought into being. The Ministry of Labor, in an effort to put in order the diverse 'arguments', called expert meetings to work out the definition of nonstandard work. The NSO set in action expert meetings with a view of developing questionnaires that would be used to map out the definition of nonstandard work. These efforts led to the 1st SEAPS in August 2000. Using the same data, however, researchers applied different definitions of nonstandard work, which produced differences in its sizes ranging from 26 percent to 58 percent. As a result, the debate on 'definitions of nonstandard workforce' was repeated. The only breakthrough was that researchers came to share the same view on negative aspects of nonstandard work that had been confirmed by empirical analyses.

Nonstandard work has been at the center of public debates since 2001. The national centers of trade unions - Korean Confederation of Trade Unions and Federation of Korean Trade Unions - have demanded 'a ban on discrimination against nonstandard workers,' positioning the subject as a core issue of collective bargaining. The Korean Tripartite Commission formed the 'Special Committee on Nonstandard Work' in July 2001 in order to put forth efforts to derive a consensus on the definition of nonstandard work and its size until May 2003, but it failed to make any progress. The Noh Government started in February 2003, at the outset, declared protection of nonstandard workers from overuse and discriminatory treatment as the basic principles of labor market policy. The Ministry of Labor has put its efforts into preparing some laws to realize the principles.[3] In 2004, the national centers of trade unions picked up nonstandard work as a leading issue in collective bargaining.

There arise so many questions related with nonstandard work: how many workers are nonstandard workers in an economy? What extent of differences in working conditions between standard work and nonstandard work is due to discriminatory treatment? Why have firms tried to utilize nonstandard work?

The main purposes of this paper tackling these questions are: (1) to identify various types of employment and to define nonstandard work; (2) to examine differences in working conditions between standard and nonstandard work; (3) to decompose the wage differentials into the price effect and the productivity effect after estimating wage equations; and (4) to

[3] A new law to protect part-time and/or contingent workers and the revision of the Law on Dispatched Work were passed over the Labor and Environment Committee in the National Assembly on February 27, 2006 and the General Meeting in National Assembly to legislate the laws is planned on March 2, 2006.

present, from the theoretical and practical views, reasons why firms utilize nonstandard workers.

The remainder of this paper is organized as follows. The next chapter first introduces the data used in this study and then looks at various types of employment briefly using the data from the 2005 SEAPS. And then it moves to 'the' definition of nonstandard work and presents its recent trend according to three categories of workers, i.e., standard workers, nonstandard workers, and 'seemingly-discriminated workers'. In chapter III, some stylized facts on nonstandard work are presented such as working conditions, coverage of social insurance and entitlement of fringe benefits, the reason why they choose nonstandard work, and the probability of jumping into standard work in the next year. Chapter IV first explains how to decompose wage differentials and it presents estimates of the wage equations by types of employment and finally it identify what proportion of wage differentials comes from discriminatory treatment. The final chapter raises open discussions on why nonstandard work recently became prevalent in Korea. The reasons that Korean firms demand more nonstandard workers are briefly stated from the theoretical, legal, and practical views.

II. Who are nonstandard workers and where are they?

1. Data

A. The Economically Active Population Survey

The National Statistics Office (NSO) has conducted the Economically Active Population Survey (EAPS) since 1963 in order to provide information on the labor force characteristics of the Korean population that make it possible for labor economists, government policymakers and legislators to understand labor market situations and to plan and evaluate many government programs.

About 70,000 household members in 33,000 sample households[4], who are at least 15 years old, excluding foreigners or persons in the armed forces, prison, or institutions, are interviewed every month.[5, 6] Questionnaires in the EAPS include: (1) employment status record (major activities during last week, whether worked for pay or profit, temporary absence from work and its reason, looking for work); (2) hours worked, usual working hours, occupation, industry, the status of workers, establishment size, looking for additional work; (3) methods of looking for work its and duration; (4) and demographic characteristics, sex, age, education, marital status, relationship to the household head, etc.[7] The EAPS classifies workers into six groups according to 'the status of workers': the first three are 'unpaid workers,' i.e., 'employers,' 'own-account workers' (these two are referred to as 'self-employed'), 'unpaid family workers'; and the other three are 'wage and salary workers', i.e., 'regular employees', 'temporary employees', and 'daily workers'. According to the Guideline of the EAPS, 'regular employees' are defined as 'workers with employment contracts for 1 year or longer' and/or 'workers who have worked for one year or longer and are entitled to fringe benefits such as legal retirement allowances and bonuses'[8]. 'Temporary employees' are defined as 'out of those who are not regular employees, workers with employment contracts for longer than one month but shorter than one year.' 'Daily workers' are defined as, 'out of those who are not regular or temporary employees, workers with employment contracts for less than one month'.

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[4] The EAPS is a panel data set in the sense that the sample households are kept in the sample over the five-year period. As a matter of fact, some sample households disappear mainly due to moving-away. Then, households moving in the same residence become new sample households for the rest of the five-year period.

[5] The survey has been conducted quarterly prior to July 1982.

[6] The reference period for the survey is the week containing the 15th day of each month and interview is performed over the week after the reference period.

[7] See Appendix for the questionnaire.

[8] Only about 18 percent of 'wage and salary workers' have explicit or implicit contracts. It implies that it is difficult to classify workers only with a specified period on the contract. Therefore, tenure at the current job and entitlement of fringe benefits were considered to classify workers into the status of workers.

Table 1. Labor force status

(Units: 1,000 persons, %)

	EAP	Employed				Self-employed				U	NILF	
		Total	Reg.	Temp.	Daily	Total	Emp'r	OAW	Family		Edu.	Etc.
All	38,428	39.0	20.6	12.7	5.6	20.5	4.4	12.0	4.1	2.2	25.6	12.7
Gender												
Male	18,684	46.5	29.3	11.1	6.1	24.9	7.3	16.6	1.0	2.9	13.8	11.9
Never married	5,716	41.6	20.9	14.1	6.7	6.7	1.3	3.7	1.8	4.9	38.1	8.6
Married w/ Spouse	12,084	49.3	34.3	9.7	5.3	33.8	10.3	22.9	0.6	1.9	2.6	12.4
Married w/o Spouse	884	39.7	15.7	11.1	12.9	20.0	3.9	14.9	1.1	4.5	10.5	25.4
Female	19,744	31.8	12.4	14.2	5.2	16.4	1.7	7.6	7.0	1.5	36.8	13.5
Never married	4,755	45.2	23.5	17.1	4.6	4.6	0.6	3.2	0.8	3.2	41.7	5.3
Married w/ Spouse	11,697	29.2	10.3	13.9	4.9	21.1	2.2	7.7	11.2	0.9	34.8	14.0
Married w/o Spouse	3,292	22.1	3.8	11.1	7.1	16.6	1.9	13.6	1.1	1.1	36.7	23.6
Age Groups												
15~24	6,078	27.7	10.4	11.2	6.2	2.4	0.1	1.4	1.0	2.8	58.9	8.1
25~34	8,033	57.5	36.6	17.3	3.5	10.7	2.5	5.8	2.4	3.7	12.0	16.2
35~44	8,412	50.6	28.5	15.7	6.3	25.7	8.1	12.9	4.7	2.1	15.4	6.2
45~54	7,019	40.9	21.0	12.4	7.5	33.2	8.5	18.6	6.2	1.7	20.1	4.0
55~64	4,280	27.4	10.0	10.5	6.9	31.7	4.1	21.0	6.5	1.6	26.4	12.9
65 and more	4,606	8.0	1.2	3.6	3.2	22.2	0.9	16.6	4.7	0.2	31.8	37.8
Education Levels												
Elementary	6,987	18.3	3.8	7.2	7.3	25.9	1.1	17.2	7.6	0.9	34.0	20.9
Middle school	5,906	23.6	6.5	10.2	6.9	20.5	2.6	13.2	4.7	1.4	46.6	7.9
High School	15,621	41.8	18.5	16.2	7.1	20.7	4.9	12.0	3.9	2.9	22.5	12.0
Two-year College	3,077	60.6	41.0	17.2	2.4	12.9	4.3	6.4	2.3	3.8	10.3	12.3
College	6,070	55.0	43.3	10.7	1.0	18.3	8.4	8.4	1.6	2.0	14.0	10.7
Graduate School	767	72.7	63.9	8.5	0.4	14.4	8.9	5.2	0.3	1.4	4.3	7.2

Note: EAP stands for the economically active population who are aged 15 and more1.
U stands for who are unemployed and NILF for not-in-the-labor force.
Reg., Temp., and Daily stand for regular employees, temporary employees, and daily workers according to their status of workers, respectively.
Emp'r, OAW, Family stand for employers, own account workers, and unpaid family workers.
The NILF edu stands for those who are in the NILF due to education/training while the NILF etc for those who are in the NILF without education/training.

Source: National Statistic Office, *the Supplement Survey of the Monthly Economically Active Population Survey*, August 2005, Raw data.

It is noteworthy that 'temporary employees' and 'daily workers' were known as nonstandard workers, while 'regular employees' were known as standard workers until the Supplement survey for diverse employment was started in August 2000. Discussions about nonstandard workers, however, reveal that 'the status of workers' is not appropriate for classifying workers into standard or nonstandard workers because it is likely to narrowly define standard workers by including entitlement to fringe benefits as a critical criterion, which only represents how workers are treated with.[9] It requires the SEAPS that makes it possible to analyze nonstandard workers by accurately defining them, estimating their size, and examining what happens to them.

[9] 'The status of workers' brings about endless dispute on the size of nonstandard workers in Korea. As stated already, there are two groups differently saying the ratio of nonstandard workers: one says that it is about 27 percent while another 56 percent (as of August 2002).

B. The Supplement of the Economically Active Population Survey

The NSO and the Ministry of Labor had to overcome the weakness of defining nonstandard workers using 'the status of workers' and they found that, in discussion of nonstandard workers, more than just its definition and size was necessary. After several meetings of experts in labor economics, those who are related with the national centers of trade unions, and the representatives for employers, the NSO implemented the SEAPS in August 2000.[10] Its main goal is to examine diverse types of employment such as dispatched work, work arranged by a temporary help agency, individual contract work, and home-based work, as well as to scrutinize 'temporary employees' and 'daily workers' whose shares have been on the increasing trend since the recent Economic Crisis.

To accomplish its goal, the SEAPS made extra questions for the employed ('wage and salary workers') in addition to the questions in the EAPS.[11] They are: the starting date, existence of an employment contract specifying the period and its duration, renewal or repetition of employment contract, short-term work without any employment contract specifying the period, possibility of continuing employment without worker's faults and its reasons, the expected duration of the current employment, full-time or part-time work and its reason, payers of wages or salaries, independent contract work, usual workplaces, the coverage of social insurance systems such as the National Pension or equivalent, the Health Insurance, and the Employment Insurance, entitlement of fringe benefits such as legal retirement allowances, bonuses, and overtime wages, union membership status, and labor income.[12, 13]

[10] The SEAPS has been carried out on every August, i.e., 2000, 2001, 2002, 2003, and March 2002.
[11] See Appendix for detail.
[12] The questions of the starting date of current employment and existence of employment contract specifying the period and its duration is in the main survey since January 2003.
[13] The question of the union membership status is added in the 2003 SEAPS.

2. The first look-at various types of employment

A. Part-time work

Part-time work is not so prevalent in Korea while it is so in many OECD member countries such as Japan and plays important roles for the young, married women, and the older. Only 7.0 percent (about 1,044 thousand workers) out of the total employees (14,968 thousand workers) are part-time workers. A quarter of part-time workers works less than 18 hour per week (short-time) and the remainder works 18 or more hours but less than 36 hours per week.

Table 2. Part-time workers

(Units: 1,000 workers, %)

	All Workers[1]	Part-time workers			Percentage[2]			Its Distribution[3]		
		Total	Short[4]	Part[5]	Total	Short[4]	Part[5]	Total	Short[4]	Part[5]
All	14,968	1,044	276	769	7.0	1.8	5.1	100.0	100.0	100.0
Gender										
Male	8,682	309	69	239	3.6	0.8	2.8	29.6	25.1	31.1
Never married	2,380	159	37	121	6.7	1.6	5.1	15.2	13.6	15.8
Married w/ Spouse	5,951	128	30	97	2.1	0.5	1.6	12.2	11.0	12.7
Married w/o Spouse	351	22	1	21	6.3	0.4	5.9	2.1	0.5	2.7
Female	6,286	736	206	529	11.7	3.3	8.4	70.4	74.9	68.9
Never married	2,148	197	60	137	9.2	2.8	6.4	18.9	21.8	17.9
Married w/ Spouse	3,411	432	118	314	12.7	3.5	9.2	41.4	42.8	40.8
Married w/o Spouse	727	106	28	78	14.6	3.9	10.7	10.2	10.3	10.1
Age Groups										
15~24	1,686	237	66	171	14.0	3.9	10.1	22.6	23.8	22.2
25~34	4,616	184	43	141	4.0	0.9	3.0	17.6	15.7	18.3
35~44	4,256	257	72	186	6.0	1.7	4.4	24.7	25.9	24.2
45~54	2,870	175	34	141	6.1	1.2	4.9	16.8	12.3	18.4
55~64	1,172	111	28	83	9.5	2.3	7.1	10.6	10.0	10.9
65 and more	369	80	34	46	21.8	9.2	12.6	7.7	12.4	6.0
Education Levels										
Elementary	1,280	189	46	143	14.8	3.6	11.2	18.1	16.7	18.6
Middle school	1,396	136	30	107	9.7	2.1	7.6	13.0	10.7	13.9
High School	6,534	504	126	378	7.7	1.9	5.8	48.3	45.8	49.2
Two-year College	1,864	59	14	45	3.1	0.7	2.4	5.6	5.0	5.8
College	3,336	130	45	85	3.9	1.3	2.5	12.4	16.3	11.1
Graduate School	558	27	15	11	4.8	2.8	2.0	2.6	5.6	1.5

Note 1. All wage and salaried worker.
2. Percentage of part-time workers out of all workers who belong to each demographic group.
3. Percentage of part-time workers belonging to each demographic group out of all part-time workers.
4. Those who work less than 18 hours per week.
5. Those who work 18 or more hours per week but less than 35 hours

Source: National Statistic Office, *the Supplement Survey of the Monthly Economically Active Population Survey*, August 2005, Raw data.

The ratio of part-time work by demographic groups shows that, as seen in the Table 2, female, especially married female without spouse, the young, and the older is more likely to work as part-time workers. The ratio of part-time work is 11.7 percent for female (14.6 percent for married female without spouse while 9.2 percent for unmarried female) while it

is less than 4 percent for male (only 2.1 percent for married male with spouse). About 21.8 percent out of the aged 65 and more work as a part-timer while it is also relatively high for the young aged 15~24(14.0 percent). The ratio of part-time work is negatively related with the education level. Out of college graduate, only 3.9 percent works as a part-timer while its ratio is about 15 percent for the least educated. It is negatively related with the firm size.

Table 3. Part-time workers by industries, occupations and the firm sizes

(Units: 1,000 workers, %)

	All Workers[1]	Part-time workers			Percentage[2]			Its Distribution[3]		
		Total	Short[4]	Part[5]	Total	Short[4]	Part[5]	Total	Short[4]	Part[5]
All	14,968	1,044	276	769	7.0	1.8	5.1	100.0	100.0	100.0
Industry										
Agriculture, fishing, & forestry	148	32	7	25	21.6	4.9	16.8	3.1	2.6	3.2
Mining and Manufacturing	3,533	96	24	73	2.7	0.7	2.1	9.2	8.6	9.5
Utilities	68	1	0	1	1.5	0.3	1.2	0.1	0.1	0.1
Construction	1,328	80	13	67	6.0	0.9	5.1	7.6	4.6	8.7
Wholesale and retail trade	1,851	162	39	124	8.8	2.1	6.7	15.5	14.0	16.1
Accommodation & food srvc.	1,116	195	32	162	17.4	2.9	14.5	18.6	11.7	21.1
Transportation & warehousing	647	17	5	13	2.7	0.7	2.0	1.6	1.6	1.7
Post and telecommunication	242	5	0	5	2.2	0.1	2.0	0.5	0.1	0.6
Finance and insurance	691	14	3	11	2.0	0.5	1.6	1.4	1.2	1.4
Real estates, rental, & leasing	315	20	10	10	6.3	3.0	3.2	1.9	3.5	1.3
Prof'al, scientific, & tech. srvc.	1,380	51	12	39	3.7	0.9	2.8	4.9	4.3	5.1
Public admin. & defense	780	56	20	36	7.2	2.5	4.7	5.4	7.1	4.7
Educational services	1,239	165	59	106	13.3	4.8	8.5	15.8	21.5	13.8
Health care&social assistance	586	22	7	15	3.8	1.2	2.6	2.1	2.6	2.0
Entertain't, culture, & recreat'n	305	44	16	28	14.5	5.2	9.3	4.2	5.8	3.7
Waste mgt.&remediation srvc	591	37	16	22	6.3	2.7	3.6	3.6	5.7	2.8
Priv. household service	122	46	14	32	37.9	11.4	26.6	4.4	5.0	4.2
Foreign org. & bodies	26	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0
Occupation										
Management	261	1	0	1	0.3	0.1	0.2	0.1	0.1	0.1
Professionals	1,562	74	32	43	4.8	2.0	2.7	7.1	11.4	5.6
Tech. & associate prof.	1,683	110	42	68	6.5	2.5	4.0	10.5	15.2	8.8
Clerks	3,039	97	31	66	3.2	1.0	2.2	9.3	11.1	8.6
Service workers	1,621	219	34	186	13.5	2.1	11.5	21.0	12.2	24.2
Sales workers	1,050	91	17	74	8.7	1.6	7.0	8.7	6.2	9.6
Farming, fishing, forestry skill	60	11	1	10	19.1	2.2	16.9	1.1	0.5	1.3
Craft & related trade workers	1,711	61	9	52	3.6	0.5	3.0	5.9	3.4	6.8
Machine operator &assmblers	1,753	29	7	22	1.6	0.4	1.2	2.7	2.4	2.8
Simple laborer	2,230	351	104	248	15.8	4.7	11.1	33.6	37.6	32.2
Firm Size										
1~4 employees	2,974	496	134	362	16.7	4.5	12.2	47.5	48.5	47.1
5~9	2,484	210	53	156	8.4	2.1	6.3	20.1	19.3	20.3
10~29	3,186	183	51	132	5.7	1.6	4.1	17.5	18.4	17.2
30~99	2,941	95	21	74	3.2	0.7	2.5	9.1	7.6	9.6
100~299	1,484	28	7	20	1.9	0.5	1.4	2.7	2.7	2.7
300 and more	1,899	34	9	24	1.8	0.5	1.3	3.2	3.4	3.2

Note: See the notes at the Table 2.
Source: National Statistic Office, *the Supplement Survey of the Monthly Economically Active Population Survey*, August 2005, Raw data.

B. Agency work

There are two types of agency work, which is a kind of indirect employment, in Korea. One is so-called dispatched work, which is protected by the Law on Dispatched Workers, and another is temporary help agency work, which is not subject to any law yet. Indirect employment means that user of labor service differs from employer, which in general is prohibited in Korea by the Law on Job Security.

As seen in the table, there are only 548 thousands agency workers, which is less than 4 percent out of the whole workers. The ratio of agency work is slightly higher for females and the married but without spouse and much higher for the older and the less educated.

Table 4. Agency Workers

(Units: 1,000 workers, %)

	All Workers[1]	Agency Workers			Percentage[2]			Its Distribution[3]		
		Total	Type1[4]	Type2[5]	Total	Type1[4]	Type2[5]	Total	Type1[4]	Type2[5]
All	14,968	548	431	118	3.7	2.9	0.8	100.0	100.0	100.0
Gender										
Male	8,682	290	247	43	3.3	2.8	0.5	52.9	57.4	36.4
Never married	2,380	74	58	16	3.1	2.4	0.7	13.5	13.5	13.6
Married w/ Spouse	5,951	195	170	25	3.3	2.9	0.4	35.5	39.4	21.2
Married w/o Spouse	351	21	19	2	6.1	5.5	0.6	3.9	4.5	1.7
Female	6,286	258	183	75	4.1	2.9	1.2	47.1	42.6	63.6
Never married	2,148	42	15	27	2.0	0.7	1.3	7.7	3.5	23.1
Married w/ Spouse	3,411	159	122	37	4.7	3.6	1.1	29.0	28.4	31.2
Married w/o Spouse	727	57	46	11	7.8	6.3	1.5	10.4	10.7	9.3
Age Groups										
15~24	1,686	56	39	17	3.3	2.3	1.0	10.3	9.1	14.8
25~34	4,616	81	39	42	1.7	0.8	0.9	14.7	9.0	35.5
35~44	4,256	95	65	31	2.2	1.5	0.7	17.4	15.0	26.1
45~54	2,870	114	97	17	4.0	3.4	0.6	20.7	22.4	14.4
55~64	1,172	150	142	8	12.8	12.1	0.6	27.3	33.0	6.5
65 and more	369	53	50	3	14.3	13.4	0.9	9.6	11.5	2.8
Education Levels										
Elementary	1,280	127	119	9	10.0	9.3	0.7	23.2	27.6	7.4
Middle school	1,396	113	103	11	8.1	7.3	0.8	20.6	23.8	8.9
High School	6,534	226	168	59	3.5	2.6	0.9	41.3	39.0	49.7
Two-year College	1,864	41	23	18	2.2	1.2	1.0	7.5	5.4	15.2
College	3,336	39	17	22	1.2	0.5	0.7	7.1	4.0	18.4
Graduate School	558	2	1	1	0.3	0.2	0.1	0.3	0.2	0.4

Note 1. All wage and salaried worker.
2. Percentage out of all workers who belong to each demographic group.
3. Percentage of agency workers belonging to each demographic group out of all agency workers.
4. Agency workers who are subject to the Law.
5. Agency workers who are not subject to the Law.

Source: National Statistic Office, *the Supplement Survey of the Monthly Economically Active Population Survey*, August 2005, Raw data.

Basically, agency work is for professional, scientific, and technical service industry and a little bit for wholesale and retail trade industry. By occupations, it is most prevalent for simple laborer and some of them have jobs for service, sales, crafts, and machine operation. Agency work is relatively usual in the medium-sized establishment rather than in the large-sized one.

Table 5. Agency workers by industries, occupations and the firm sizes

(Units: 1,000 workers, %)

	All Workers[1]	Agency workers			Percentage[2]			Its Distribution[3]		
		Total	Type1[4]	Type2[5]	Total	Type1[4]	Type2[5]	Total	Type1[4]	Type2[5]
All	14,968	548	431	118	3.7	2.9	0.8	100.0	100.0	100.0
Industry										
Agriculture, fishing, & forestry	148	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0
Mining and Manufacturing	3,533	16	3	13	0.5	0.1	0.4	2.9	0.7	11.0
Utilities	68	1	0	1	0.7	0.0	0.7	0.1	0.0	0.4
Construction	1,328	12	8	4	0.9	0.6	0.3	2.2	2.0	3.2
Wholesale and retail trade	1,851	31	1	30	1.7	0.1	1.6	5.6	0.3	25.1
Accommodation & food srvc.	1,116	9	2	7	0.8	0.2	0.6	1.7	0.5	6.0
Transportation & warehousing	647	1	0	1	0.1	0.0	0.1	0.1	0.0	0.7
Post and telecommunication	242	2	0	2	0.7	0.0	0.7	0.3	0.0	1.4
Finance and insurance	691	2	0	2	0.2	0.0	0.2	0.3	0.0	1.3
Real estates, rental, & leasing	315	10	7	3	3.1	2.1	1.0	1.8	1.6	2.7
Prof'al, scientific, & tech. srvc.	1,380	451	405	46	32.6	29.3	3.3	82.1	93.9	39.1
Public admin. & defense	780	2	0	2	0.3	0.0	0.3	0.4	0.0	1.8
Educational services	1,239	2	0	2	0.2	0.0	0.2	0.4	0.0	1.8
Health care&social assistance	586	2	0	2	0.3	0.0	0.3	0.3	0.0	1.4
Entertain't, culture, & recreat'n	305	1	0	1	0.3	0.0	0.3	0.1	0.0	0.7
Waste mgt.&remediation srvc	591	6	3	3	1.1	0.5	0.6	1.2	0.7	2.8
Priv. household service	122	2	2	1	1.7	1.3	0.4	0.4	0.4	0.4
Foreign org. & bodies	26	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0
Occupation										
Management	261	2	1	1	0.8	0.3	0.5	0.4	0.2	1.0
Professionals	1,562	15	1	14	1.0	0.1	0.9	2.8	0.3	11.7
Tech. & associate prof.	1,683	8	2	6	0.5	0.1	0.3	1.5	0.5	4.9
Clerks	3,039	31	16	14	1.0	0.5	0.5	5.6	3.8	12.1
Service workers	1,621	48	35	13	2.9	2.2	0.8	8.7	8.1	10.7
Sales workers	1,050	46	11	35	4.3	1.0	3.3	8.3	2.4	29.7
Farming, fishing, forestry skill	60	2	2	0	4.0	3.4	0.7	0.4	0.5	0.3
Craft & related trade workers	1,711	44	34	10	2.6	2.0	0.6	8.0	8.0	8.2
Machine operator &assmblers	1,753	48	41	7	2.7	2.3	0.4	8.8	9.4	6.3
Simple laborer	2,230	305	288	18	13.7	12.9	0.8	55.6	66.8	15.0
Firm Size										
1~4 employees	2,974	91	60	31	3.1	2.0	1.1	16.6	13.8	26.6
5~9	2,484	104	85	20	4.2	3.4	0.8	19.0	19.6	16.8
10~29	3,186	153	129	24	4.8	4.0	0.8	27.9	29.9	20.5
30~99	2,941	124	103	22	4.2	3.5	0.7	22.6	23.8	18.4
100~299	1,484	50	40	10	3.3	2.7	0.6	9.1	9.3	8.1
300 and more	1,899	27	15	12	1.4	0.8	0.6	4.9	3.5	9.8

Note: See the Note at the Table 4.
Source: National Statistic Office, *the Supplement Survey of the Monthly Economically Active Population Survey*, August 2005, Raw data.

C. Some special types of employment

The Table 6 and 7 shows the number of and the share of workers with alternative employment arrangements. Type 1 is independent contractors like free-lancers or seemingly-self-employed (sometimes it is called as 'special employment workers'), Type 2 is on-call work, and Type 3 is home-based work (tele-work).

As seen in the tables, about 4.2 percent(about 633 thousand workers) out of the total workers are independent contractors and 4.8 percent (about 718 thousand workers) are on-call workers while only 0.9 percent are home-based workers. They are more prevalent for high school graduates or the less educated, those who are aged 25~54, married female with spouse.

Table 6. Some Special Types of Employment

(Units: 1,000 workers, %)

	All Workers[1]	Special Types[2]			Percentage[3]			Its Distribution[4]		
		Type1	Type2	Type3	Type1	Type2	Type3	Type1	Type2	Type3
All	14,968	633	718	141	4.2	4.8	0.9	100.0	100.0	100.0
Gender										
Male	8,682	240	466	14	2.8	5.4	0.2	37.8	64.9	9.9
Never married	2,380	69	121	7	2.9	5.1	0.3	10.9	16.9	4.6
Married w/ Spouse	5,951	156	290	7	2.6	4.9	0.1	24.7	40.4	4.6
Married w/o Spouse	351	14	55	1	4.0	15.6	0.3	2.2	7.6	0.6
Female	6,286	394	252	127	6.3	4.0	2.0	62.2	35.1	90.1
Never married	2,148	64	25	4	3.0	1.1	0.2	10.1	3.4	3.1
Married w/ Spouse	3,411	288	161	99	8.4	4.7	2.9	45.5	22.4	70.1
Married w/o Spouse	727	42	67	24	5.7	9.2	3.3	6.6	9.3	16.8
Age Groups										
15~24	1,686	32	64	2	1.9	3.8	0.1	5.1	8.8	1.3
25~34	4,616	172	92	30	3.7	2.0	0.6	27.2	12.8	21.1
35~44	4,256	241	191	43	5.7	4.5	1.0	38.0	26.6	30.8
45~54	2,870	127	210	29	4.4	7.3	1.0	20.0	29.2	20.8
55~64	1,172	48	114	22	4.1	9.8	1.9	7.5	15.9	15.8
65 and more	369	14	48	14	3.8	12.9	3.9	2.2	6.6	10.2
Education Levels										
Elementary	1,280	31	202	31	2.4	15.8	2.4	4.8	28.2	21.8
Middle school	1,396	64	150	23	4.6	10.7	1.7	10.2	20.9	16.4
High School	6,534	319	327	69	4.9	5.0	1.1	50.4	45.6	49.3
Two-year College	1,864	65	23	5	3.5	1.2	0.3	10.3	3.2	3.8
College	3,336	147	16	12	4.4	0.5	0.3	23.2	2.2	8.2
Graduate School	558	7	0	1	1.3	0.0	0.1	1.1	0.0	0.5

Note 1. All wage and salaried worker.
2. The special types are independent contractors(Type 1), on-call workers(Type 2), and home-based workers(Type 3)
3. Percentage of corresponding workers out of all workers who belong to each demographic group.
4. Percentage of corresponding workers belonging to each demographic group out of all workers in that type.
Source: National Statistic Office, *the Supplement Survey of the Monthly Economically Active Population Survey*, August 2005, Raw data.

Independent contractors are mainly in wholesale and retail trade industry, finance and insurance industry (who sell financial commodities), and educational service industry (who teach elementary school students by visiting their home). Their occupations are sales workers or technician and associated professional. They work usually in the medium-sized establishment but almost not in the large-sized establishment.

Table 7. Some special types of employment by industries, occupations and the firm sizes

(Units: 1,000 workers, %)

	All Workers[1]	Special Types[2]			Percentage[3]			Its Distribution[4]		
		Type1	Type2	Type3	Type1	Type2	Type3	Type1	Type2	Type3
All	14,968	633	718	141	4.2	4.8	0.9	100.0	100.0	100.0
Industry										
Agriculture, fishing, & forestry	148	3	47	1	1.8	31.4	0.4	0.4	6.5	0.4
Mining and Manufacturing	3,533	36	59	67	1.0	1.7	1.9	5.7	8.2	47.4
Utilities	68	1	0	0	1.0	0.3	0.0	0.1	0.0	0.0
Construction	1,328	14	367	2	1.1	27.7	0.2	2.2	51.2	1.5
Wholesale and retail trade	1,851	152	44	16	8.2	2.4	0.8	24.0	6.1	11.2
Accommodation & food srvc.	1,116	20	71	1	1.7	6.3	0.1	3.1	9.9	1.0
Transportation & warehousing	647	35	10	1	5.4	1.5	0.2	5.5	1.4	0.9
Post and telecommunication	242	16	1	0	6.5	0.6	0.1	2.5	0.2	0.2
Finance and insurance	691	197	1	3	28.4	0.1	0.4	31.1	0.1	2.0
Real estates, rental, & leasing	315	17	1	1	5.5	0.3	0.2	2.7	0.1	0.4
Prof'al, scientific, & tech. srvc.	1,380	27	49	3	2.0	3.6	0.2	4.3	6.8	1.8
Public admin. & defense	780	5	5	1	0.6	0.7	0.2	0.7	0.7	0.9
Educational services	1,239	69	2	8	5.6	0.1	0.6	11.0	0.2	5.5
Health care&social assistance	586	1	5	1	0.2	0.9	0.2	0.2	0.7	0.7
Entertain't, culture, & recreat'n	305	11	13	1	3.6	4.1	0.3	1.7	1.7	0.6
Waste mgt.&remediation srvc	591	25	19	3	4.2	3.2	0.6	3.9	2.6	2.3
Priv. household service	122	4	25	33	3.5	20.2	27.0	0.7	3.4	23.3
Foreign org. & bodies	26	1	0	0	4.6	0.0	0.0	0.2	0.0	0.0
Occupation										
Management	261	2	0	0	0.8	0.0	0.2	0.3	0.0	0.3
Professionals	1,562	12	1	2	0.8	0.0	0.1	1.9	0.1	1.3
Tech. & associate prof.	1,683	129	2	9	7.7	0.1	0.5	20.4	0.3	6.5
Clerks	3,039	37	8	5	1.2	0.3	0.2	5.8	1.1	3.4
Service workers	1,621	38	83	18	2.3	5.1	1.1	6.0	11.5	12.6
Sales workers	1,050	257	23	6	24.4	2.2	0.6	40.5	3.2	4.3
Farming, fishing, forestry skill	60	2	12	0	3.0	19.9	0.0	0.3	1.7	0.0
Craft & related trade workers	1,711	22	238	10	1.3	13.9	0.6	3.5	33.2	6.7
Machine operator &assmblers	1,753	48	19	3	2.7	1.1	0.2	7.6	2.6	2.4
Simple laborer	2,230	87	333	88	3.9	14.9	3.9	13.7	46.4	62.4
Firm Size										
1~4 employees	2,974	104	318	104	3.5	10.7	3.5	16.4	44.3	73.7
5~9	2,484	83	214	9	3.3	8.6	0.4	13.1	29.8	6.3
10~29	3,186	175	134	15	5.5	4.2	0.5	27.6	18.7	10.5
30~99	2,941	200	39	11	6.8	1.3	0.4	31.6	5.4	7.7
100~299	1,484	47	10	2	3.2	0.7	0.1	7.4	1.4	1.1
300 and more	1,899	24	3	1	1.3	0.2	0.0	3.8	0.5	0.6

Note: See the Note at the Table 6.
Source: National Statistic Office, *the Supplement Survey of the Monthly Economically Active Population Survey*, August 2005, Raw data.

D. Fixed-term employment

Fixed-term employment is relatively prevalent in the sense that its ratio out of workers is more than 18 percents (about 2,728 thousand workers) and that the ratio is very similar over all demographic groups. The fixed-term employment can be classified into two types according to expectation of job continuity without own faults.

Workers falling into the first type (11.0 percent) are more, as seen in the table, than those who belong to the Type 2 (7.2 percent). The ratio of workers in the Type 1 is higher for female than for male, for the never married than the married, for the young or the older, and the most educated. The ratio of workers in the Type 2 is higher for female than for male, for the married but without spouse, for the young and the older, and the least educated. The ratio of the Type 1 is not closely related with the education level while it has a negative relation with the education level.

Table 8. Fixed-term contract workers

(Units: 1,000 workers, %)

	All Workers[1]	Fixed-term workers[2]			Percentage[3]			Its Distribution[4]		
		Total	Type1	Type2	Total	Type1	Type2	Total	Type1	Type2
All	14,968	2,728	1,644	1,083	18.2	11.0	7.2	100.0	100.0	100.0
Gender										
Male	8,682	1,484	889	595	17.1	10.2	6.8	54.4	54.1	54.9
Never married	2,380	512	293	219	21.5	12.3	9.2	18.8	17.8	20.2
Married w/ Spouse	5,951	902	570	332	15.2	9.6	5.6	33.1	34.7	30.7
Married w/o Spouse	351	70	26	44	19.8	7.4	12.4	2.6	1.6	4.0
Female	6,286	1,244	756	489	19.8	12.0	7.8	45.6	45.9	45.1
Never married	2,148	454	305	149	21.1	14.2	6.9	16.7	18.6	13.7
Married w/ Spouse	3,411	626	386	240	18.3	11.3	7.0	22.9	23.5	22.1
Married w/o Spouse	727	164	64	100	22.6	8.8	13.7	6.0	3.9	9.2
Age Groups										
15~24	1,686	446	225	221	26.4	13.3	13.1	16.3	13.7	20.4
25~34	4,616	792	602	190	17.2	13.0	4.1	29.0	36.6	17.5
35~44	4,256	600	377	223	14.1	8.9	5.2	22.0	22.9	20.6
45~54	2,870	477	260	217	16.6	9.1	7.6	17.5	15.8	20.0
55~64	1,172	305	144	161	26.0	12.3	13.8	11.2	8.7	14.9
65 and more	369	108	37	71	29.3	10.1	19.2	4.0	2.3	6.5
Education Levels										
Elementary	1,280	325	134	192	25.4	10.4	15.0	11.9	8.1	17.7
Middle school	1,396	286	125	161	20.5	8.9	11.5	10.5	7.6	14.9
High School	6,534	1,197	651	546	18.3	10.0	8.4	43.9	39.6	50.4
Two-year College	1,864	308	254	54	16.5	13.6	2.9	11.3	15.4	5.0
College	3,336	504	400	104	15.1	12.0	3.1	18.5	24.3	9.6
Graduate School	558	108	82	26	19.3	14.6	4.6	3.9	5.0	2.4

Note 1. All wage and salaried worker.
2. Fixed-term contract workers are classified into those who expect to work continuously without their own faults(Type 1) and who do not(Type 2).
3. Percentage of fixed-term workers out of all workers who belong to each demographic group.
4. Percentage of fixed-term workers belonging to each demographic group out of all fixed-term workers.

Source: National Statistic Office, *the Supplement Survey of the Monthly Economically Active Population Survey*, August 2005, Raw data.

Table 9. Fixed-term contract workers by industries, occupations and the firm sizes

(Units: 1,000 workers, %)

	All Workers[1]	Fixed-term workers[2]			Percentage[3]			Its Distribution[4]		
		Total	Type1	Type2	Total	Type1	Type2	Total	Type1	Type2
All	14,968	2,728	1,644	1,083	18.2	11.0	7.2	100.0	100.0	100.0
Industry										
Agriculture, fishing, & forestry	148	54	8	46	36.5	5.3	31.3	2.0	0.5	4.3
Mining and Manufacturing	3,533	412	316	96	11.7	8.9	2.7	15.1	19.2	8.9
Utilities	68	10	5	5	15.1	7.9	7.2	0.4	0.3	0.5
Construction	1,328	394	118	276	29.7	8.9	20.8	14.4	7.2	25.5
Wholesale and retail trade	1,851	244	136	108	13.2	7.3	5.8	8.9	8.3	10.0
Accommodation & food srvc.	1,116	214	83	131	19.1	7.4	11.7	7.8	5.1	12.0
Transportation & warehousing	647	88	73	15	13.5	11.3	2.3	3.2	4.4	1.4
Post and telecommunication	242	40	33	7	16.7	13.8	2.9	1.5	2.0	0.7
Finance and insurance	691	116	86	30	16.8	12.5	4.3	4.3	5.3	2.8
Real estates, rental, & leasing	315	69	52	17	21.9	16.6	5.3	2.5	3.2	1.6
Prof'al, scientific, & tech. srvc.	1,380	400	305	96	29.0	22.1	6.9	14.7	18.5	8.8
Public admin. & defense	780	122	41	82	15.7	5.2	10.5	4.5	2.5	7.6
Educational services	1,239	281	205	76	22.7	16.5	6.2	10.3	12.4	7.0
Health care&social assistance	586	113	91	22	19.4	15.6	3.8	4.2	5.6	2.0
Entertain't, culture, & recreat'n	305	70	39	31	23.1	12.8	10.2	2.6	2.4	2.9
Waste mgt.&remediation srvc	591	73	44	29	12.4	7.5	4.9	2.7	2.7	2.7
Priv. household service	122	24	7	17	19.9	5.6	14.3	0.9	0.4	1.6
Foreign org. & bodies	26	1	1	0	4.6	4.6	0.0	0.0	0.1	0.0
Occupation										
Management	261	30	20	10	11.3	7.5	3.9	1.1	1.2	0.9
Professionals	1,562	286	227	59	18.3	14.5	3.8	10.5	13.8	5.4
Tech. & associate prof.	1,683	260	204	56	15.5	12.1	3.3	9.5	12.4	5.2
Clerks	3,039	493	377	116	16.2	12.4	3.8	18.1	22.9	10.7
Service workers	1,621	297	160	137	18.3	9.9	8.4	10.9	9.7	12.6
Sales workers	1,050	128	65	63	12.2	6.2	6.0	4.7	3.9	5.8
Farming, fishing, forestry skill	60	23	6	17	38.4	10.1	28.3	0.8	0.4	1.6
Craft & related trade workers	1,711	365	143	222	21.3	8.4	13.0	13.4	8.7	20.5
Machine operator &assmblers	1,753	192	138	54	10.9	7.9	3.1	7.0	8.4	4.9
Simple laborer	2,230	656	305	350	29.4	13.7	15.7	24.0	18.6	32.3
Firm Size										
1~4 employees	2,974	551	194	357	18.5	6.5	12.0	20.2	11.8	33.0
5~9	2,484	427	190	237	17.2	7.7	9.5	15.6	11.6	21.8
10~29	3,186	618	378	239	19.4	11.9	7.5	22.6	23.0	22.1
30~99	2,941	568	440	128	19.3	15.0	4.3	20.8	26.8	11.8
100~299	1,484	297	229	67	20.0	15.4	4.5	10.9	13.9	6.2
300 and more	1,899	268	213	55	14.1	11.2	2.9	9.8	13.0	5.1

Note: See the Note at the Table 9.
Source: National Statistic Office, *the Supplement Survey of the Monthly Economically Active Population Survey*, August 2005, Raw data.

There are many worker with fixed-term contracts in construction industry, professional, scientific, technical service industry, and educational service industry. The Type 1 is more crowded in manufacturing industry, professional, scientific, technical service industry, and educational service industry while the Type 2 is more on construction industry, accommodation and food service industry, and wholesale and retail trade industry. It is more prevalent in simple laborer and clerks while the Type 2 is so in crafts and related trade.

3. The definition of nonstandard work

To identify nonstandard work, it is better to classify workers into mutually exclusive and exhaustive 18 groups according to types of employment and then to check which types of employment belong to nonstandard work. To do so, four steps are applied to.[14, 15]

A. Procedure to classify workers

The first step identifies alternative employment arrangements, consisting of part-time work, indirect employment (dispatched work and temporary help agency work), independent contract work, on-call work, and tele-work/home-based work.[16] Second, workers with the traditional employment arrangements are classified into workers with or without fixed-term contract. Third, workers with fixed-term contract are classified into 8 groups according to the possibility of continuing employment without own faults and the duration of fixed-term contract(shorter than 1 year, 1 year, longer than 1 year but not longer than 3 years, and longer than 3 years).[17] Finally, workers without fixed term contract are classified into 4 categories according to the possibility of continuing employment without own faults and, if impossible, the expected duration of the current employment(1 year or shorter, longer than 1 year but not longer than 3 years, and longer than 3 years). The number of workers in the 18 groups and their shares are presented in the Table A-1.

B. How to define nonstandard work?

(a) Three tradition of classification

A wide range of terms has been used to describe the relatively new employment arrangements: nonstandard, nontraditional, alternative, atypical, contingent, flexible, market-mediated, just-in-time, marginal, precarious, disposable, secondary employment arrangement. There have emerged three major rules in classifying workers into two groups: the BLS tradition, which is adopted by the Bureau of Labor Statistics of the US Department of Labor since 1996; the nonstandard work tradition, which is adopted by Carre et. al.(2000) analyzing data from the February 1995 and February 1997 Contingent and Alternative Work Arrangements Supplements to the Current Population Survey; and the OECD tradition, which is adopted by the OECD Employment Outlook(2002) to define temporary

[14] The sequence identifying types of employment is important in the sense that a different sequence can bring about a slight difference in their sizes. The sequence in this study is

[15] In this study, workers mean the employed without any confusion.

[16] It is a little bit different from the BLS definition of the alternative employment arrangement. It is also called as atypical work.

[17] It is slightly different from the BLS definition of contingent workers using 1-year requirement.

employment best suited to approximate an internationally consistent definition.[18]

The BLS tradition, classifies workers contingent/noncontingent workers and workers with alternative/nonalternative or traditional employment arrangements.[19] In this tradition, contingent work is defined as any job in which individual does not have an explicit or implicit contract for long-term employment, following Freeman(1985)'s argument, i.e., "conditional and transitory employment arrangements as initiated by a need for labor – usually because a company has an increased demand for particular service or a product or technology, at a particular place, at a specific time."[20] Contingent workers are individuals who hold jobs that are temporary or not expected to continue, in which 'temporary work' means working only until the completion of a specific project, temporarily replacing another worker, being hired for a fixed period of time, filling another worker, or if business conditions dictated that the job was temporary.[21] In this tradition, workers with alternative employment arrangements consist of independent contractors, on-call workers, temporary help agency workers, and workers provided by contract firms.

The second tradition, the nonstandard work tradition, examines workers in eight mutually exclusive groups to define nonstandard work arrangements different from regular full-time workers. Eight groups are (1) agency temporaries, (2) on-call workers, (3) contract company workers, (4) direct-hire temporary workers, (5) independent contractors, (6) regular self-employed, (7) regular part-time workers, and (8) regular full-time workers. The first seven groups, i.e., those who are not regular full-time workers, are defined as workers with nonstandard work arrangements. This tradition prefers the term nonstandard in order to

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[18] Chapter 3 Taking the measure of temporary employment.

[19] Nitta(1999) tries to figure out atypical and typical employment in Japan, classifying workers into (1) typical atypical employment(traditional non-regular employees such as seasonal workers or day laborers, part-timer(typical), arubaito(typical), agency work(registration-based or continuous employment-based) etc., (2) non-typical atypical employment such as part-time/arubaito (long working hours and non-fixed term), (3) less typical typical employment such as regular workers such as in small firms, female, flexibilized, semi-independent employees, quasi-agency workers, and workers with flexible workplace, (4) typical typical employment, (5) Quasi-employed self-employed, and (6) typical self-employed. Ogura(2005) summarizes concepts of atypical employment and discusses similarities and differences the concepts in Japan, the United States and Europe.

[20] This definition became more popular to describe 'a wide variety of employment arrangements including part-time work, self-employment, temporary help agency employment, contracting out, employee leasing, and employment in the business services industry. … Combining these very diverse arrangements into a single category and labeling them contingent may cause workers to be classified incorrectly and may cause confusion' (Hipple, 2001). The definition is similar to nonstandard employment arrangements in the next tradition.

[21] The BLS(1996) provides three estimates for contingent work. The narrow definition, estimate 1, defines contingent workers as wage and salary workers who expect to work in their current job for 1 year or less and who had worked for their current employer for 1 year or less(they are called as 1-year requirement). Estimate 2 expands the narrow definition by including self-employed, independent contractors with the 1-year requirement, temporary help and contract company workers with the 1-year requirement but excluding a "temp" who is assigned to a single client for more than 1 year. Estimate 3 expands the concept by removing the 1-year requirement, which includes all the wage and salary workers who do not expect their employment to last due to non-personal reasons.

avoid value-laden connotations and it merely defines nonstandard as 'employment relationships that do not fit the concept of what, at least for some decades after World War II, were considered standard'(Carre, 2000, p. 3). [22]

The third tradition, the OECD tradition, defines temporary employment as 'dependent employment of limited duration' with intention of differentiating between jobs that offer workers the prospect of a long-lasting employment relationship (referred to as "permanent" jobs) and jobs that do not. The temporary and permanent quality of a job is, in this tradition, understood as being a characteristic of the explicit or implicit employment contract, rather than being defined in terms of the actual duration of the job. Although the conceptual criterion for temporary employment depends on the national statistics offices, it typically includes the following: fixed-term contracts, temporary agency workers, contract for a specific task, replacement contracts, seasonal work, on-call workers, daily workers, trainees, and persons in job creation schemes.

(b) Three employment arrangements

In this study considering two extreme arguments about the size of nonstandard work[23], I classify workers into three categories: workers with standard employment arrangements, workers with nonstandard arrangements, and 'seemingly-discriminated workers', as seen in the framework below.

Standard workers hold jobs that are permanent and expected to continue so that both of the two arguments consider them as standard jobs, i.e., those who work as standard workers and they are treated as standard workers. They are workers without fixed-term contract and with possibility of continuing employment without their faults and their 'work status' in the EAPS is 'regular employees'.

'Seemingly-discriminated workers' are those who work as standard workers (as the official argument classifies) but are treated as nonstandard workers (as the radical argument classifies) and, therefore, there is a huge difference between what they are and what they are treated with. They are workers without fixed-term contract and with possibility of continuing employment without their faults but their 'work status' in the EAPS is 'temporary employees' or 'daily workers'.

Nonstandard workers are contingent workers or workers with alternative employment arrangements and both of the two arguments agree with it, i.e., those who work as nonstandard workers and are treated as nonstandard workers. Contingent workers consist of

[22] In this tradition, the terms flexible staffing arrangement, nonstandard work, and contingent work are the same, meaning any position other than regular full-time work.

[23] The labor economists, the Government, and the employer representatives support 27 percent (hereafter, official argument) while the labor representatives insist 56 percent(hereafter, radical argument) as of August 2002.

those with fixed-term contract whether it is possible to continue employment relationship without their faults and those without fixed-term contract but without possibility of continuing employment without their faults.

Treated as Employment type	Standard workers (Regular employees)	Nonstandard workers (Non-regular employees)	
Standard work	Standard workers (6,564 thousands, 43.9%)	Seemingly-discriminated workers (2,867 thousands, 19.1%)	9,432 thousands 63.0%
Nonstandard work		Nonstandard workers (5,537 thousands, 37.0%)	
		8,404 thousands, 56.1%	

Table 10 shows that, among workers with no fixed-term contract and expecting job continuity, only 43.9 percent are 'regular employees' while 17.8 percent are 'temporary employees'. Those who have no fixed-term contact but do not expect job continuity are mostly 'temporary employees'. Those who have fixed-term contracts are 'regular employees' if their employment periods are one year or longer while those are 'temporary employees' or 'daily workers' if their employment periods are shorter than one year.

<Table 10> Types of employment and the status of workers(2005)

(units: 1,000 workers, %)

Type of employment / The status of workers	All	The Number of Workers			The Share of Workers		
		Regular	Temp.	Daily	Regular	Temp.	Daily
Employed workers	14,968	7,926	4,879	2,164	53.0	32.6	14.4
A. Workers without fixed term contract							
(1) Continuing employment, possible	9,432	6,564	2,664	203	43.9	17.8	1.4
Continuing employment, impossible							
(2) The expected duration longer than three years	139	5	115	18	0.0	0.8	0.1
(3) Longer than 1 but not longer than 3 years	407	4	321	83	0.0	2.1	0.6
(4) Not longer than 1 year	256	2	162	93	0.0	1.1	0.6
B. Workers with fixed term contract, Continuing employment, possible							
(5) The duration of contract: longer than 3 years	108	108	0	0	0.7	0.0	0.0
(6) Longer than 1 but not longer than 3 years	220	219	1	0	1.5	0.0	0.0
(7) 1 year	665	665	0	0	4.4	0.0	0.0
(8) Shorter than 1 year	354	0	229	125	0.0	1.5	0.8
C. Workers with fixed term contract, Continuing employment, impossible							
(9) The duration of contract: Longer than 3 years	13	13	0	0	0.1	0.0	0.0
(10) Longer than 1 but not longer than 3 years	19	19	0	0	0.1	0.0	0.0
(11) 1 year	26	26	0	0	0.2	0.0	0.0
(12) Shorter than 1 year	692	0	265	427	0.0	1.8	2.9
(13) Part-time workers	732	13	375	343	0.1	2.5	2.3
(14) Dispatched workers	113	55	48	10	0.4	0.3	0.1
(15) Temporary agency workers	394	159	199	35	1.1	1.3	0.2
(16) Independent contractors	596	73	461	62	0.5	3.1	0.4
(17) On-call/daily workers	718	0	4	713	0.0	0.0	4.8
(18) Tele-workers/Home-based workers	86	1	34	51	0.0	0.2	0.3

Note: Regular, Temp., and daily stands for whose status of work is classified as regular employee, temporary employees, and daily workers, respectively.

Source: National Statistic Office, *the Supplement Survey of the Monthly Economically Active Population Survey*, August 2005, Raw data.

Part-time workers and independent contractors are usually 'temporary employees' while some are 'daily workers'. Dispatched workers and temporary help agency workers are either 'regular worker' or 'temporary employees' while on-call workers are mainly 'daily workers'.

4. The size of nonstandard work[24]

A. The trend of nonstandard work

Table 11 present the most recent trend of nonstandard work. As seen in the table, there was no significant change over the last five years except that there is: (a) a drop in the share of seemingly-discriminated workers in 2003 and a decreasing trend since then; (b) a jump in the share of nonstandard work in 2003 and an increasing trend since then; and (c) a slightly increasing trend in the ratio of contingent work.

<Table 11> The trend of nonstandard work

(Units: 1,000 workers, %)

	2001	2002	2003	2004	2005
The number of workers					
Employed	13,540	14,029	14,149	14,584	14,968
Standard work	6,028	6,117	6,307	6,428	6,564
Seemingly discriminated	3,632	4,120	3,195	2,967	2,867
Nonstandard work	3,878	3,793	4,646	5,190	5,537
Contingent work	1,590	1,487	2,322	2,517	2,898
Part-time work	587	564	647	725	732
Alternative employment	1,701	1,742	1,677	1,948	1,907
The share of workers					
Standard work	44.5	43.6	44.6	44.1	43.9
Seemingly discriminated	26.8	29.4	22.6	20.3	19.2
Nonstandard work	28.6	27.0	32.8	35.6	37.0
Contingent work	11.7	10.6	16.4	17.3	19.4
Part-time work	4.3	4.0	4.6	5.0	4.9
Alternative employment	12.6	12.4	11.9	13.4	12.7

Source: National Statistic Office, *the Supplement Survey of the Monthly Economically Active Population Survey*, August each year, Raw data.

B. Nonstandard work by demographic groups

Table 12 shows the number of workers and the ratio of workers for types of employment by demographic groups. The ratios of seemingly-discriminated work and of nonstandard work are higher for females (about 25 percent and 45 percent, respectively) than males (slightly over 15 percent and 31 percent, respectively) and they are higher for the married but

[24] Out of workforces in Japan, according to Ministry of Health, Labour and Welfare(2005), about 34.6% are nonstandard workers, which consists of Arubaito (23.0%), contract workers (2.3%), dispatched workers (2.0%), 出向社員 (1.5%), 嘱託社員 (1.4%),temporary employees (0.8%), other types (3.4%). It is very different from Korean case in the sense that the main type of nonstandard work is part-time work (two-thirds) in Japan while contingent and seemingly-discriminated work in Korea.

without spouse than the unmarried or the married with spouse. They are higher for the young and the older and the ratio of nonstandard work is much higher for the aged 55~64 (55.4 percent) or 65 and more (72.5 percent). The ratios of seemingly-discriminated workers and of nonstandard work have negative relationships with the education level.

<Table 12> Nonstandard work by demographic groups

(Units: 1,000 workers, %)

	Employed	Standard Work	Seemingly Discriminated			Nonstandard Work			
			Subtotal	Temp.	Daily	Subtotal	Contin.	Part-time	Alter.
All	14,968	43.9	19.2	17.8	1.4	37.0	19.4	4.9	12.7
Gender									
Male	8,682	53.5	15.1	14.2	0.9	31.3	17.8	2.4	11.1
Never married	2,380	39.8	21.5	20.1	1.5	38.7	23.1	4.8	10.7
Married w/ Spouse	5,951	60.2	12.3	11.6	0.7	27.5	15.5	1.4	10.5
Married w/o Spouse	351	33.4	19.4	17.7	1.7	47.3	20.1	3.1	24.1
Female	6,286	30.5	24.7	22.8	2.0	44.8	21.5	8.3	15.0
Never married	2,148	40.6	23.4	22.0	1.4	36.0	22.0	8.0	6.0
Married w/ Spouse	3,411	27.7	24.9	22.7	2.1	47.5	20.5	8.2	18.7
Married w/o Spouse	727	13.6	28.0	25.1	2.8	58.4	25.0	9.5	23.9
Age Groups									
15~24	1,686	28.2	24.0	21.6	2.4	47.8	27.7	11.5	8.7
25~34	4,616	52.0	19.1	18.4	0.7	28.9	18.5	2.9	7.4
35~44	4,256	48.8	18.1	16.7	1.4	33.1	16.6	4.1	12.4
45~54	2,870	44.2	18.4	17.0	1.4	37.4	17.9	3.8	15.7
55~64	1,172	26.7	17.8	16.0	1.8	55.4	22.7	5.8	27.0
65 and more	369	7.9	19.7	16.9	2.8	72.5	24.4	14.8	33.3
Education Levels									
Elementary	1,280	14.8	21.9	19.4	2.5	63.3	25.7	9.0	28.5
Middle school	1,396	21.2	26.5	23.8	2.7	52.3	22.9	6.0	23.4
High School	6,534	36.9	23.8	22.0	1.8	39.3	20.6	5.3	13.4
Two-year College	1,864	55.3	17.7	17.2	0.5	26.9	17.4	2.7	6.8
College	3,336	66.8	9.4	9.1	0.2	23.8	14.6	3.2	6.1
Graduate School	558	72.8	4.0	4.0	0.0	23.3	16.8	4.8	1.7

Source: National Statistic Office, *the Supplement Survey of the Monthly Economically Active Population Survey*, August 2005, Raw data.

C. Nonstandard work by industries[25]

Seemingly-discriminated work is more prevalent in accommodation and food service industry, wholesale and retail trade industry, waste management and remediation service industry, and real estate, rental, and leasing industry while nonstandard work is much more prevalent in private household service industry, agriculture, forestry, and fishing industry, and construction industry and it is more prevalent in professional, scientific, and technical service industry, and accommodation and food service industry. It is remark able that there

[25] According to Ministry of Health, Labour and Welfare(2005), the share of nonstandard work in Japan is highest in accommodation and food service industry (70.9%) and slightly higher in wholesale and retail trade industry (45.3%) and service industry (41.3%). Its share is negatively related with the firm size from 19.0% to 37.9 %. It is 20% for male workers while 55.6% for female workers.

are less than 10 percent of standard workers in agriculture, fishing, and forestry industry, accommodation and food service industry, and private household service industry while more than 70 percent in utilities industry, public administration and defense industry, and foreign organization and bodies.

<Table 13> Nonstandard work by Industries

(Units: 1,000 workers, %)

			Seemingly discriminate			Nonstandard work			
	Employed	Standard work	Subtotal	Temp.	Daily	Subtotal	Contin.	Part-time	Alternative
All	14,968	6,564	2,867	2,664	203	5,537	2,898	732	1,907
		43.9	19.2	17.8	1.4	37.0	19.4	4.9	12.7
Industry									
Agriculture, fishing, & forestry	148	8.8	12.1	7.6	4.5	79.1	33.7	12.5	32.9
Mining and Manufacturing	3,533	61.7	18.3	17.1	1.1	20.1	14.8	1.3	4.0
Utilities	68	81.2	2.9	2.9	0.0	16.0	13.4	0.6	2.1
Construction	1,328	24.3	12.3	10.9	1.4	63.4	31.7	2.4	29.3
Wholesale and retail trade	1,851	28.5	34.1	32.4	1.8	37.4	18.8	6.1	12.5
Accommodation & food srvc.	1,116	5.7	42.5	37.2	5.3	51.8	29.3	13.7	8.8
Transportation & warehousing	647	59.2	15.9	14.9	1.0	24.9	16.2	1.7	6.9
Post and telecommunication	242	62.7	12.0	11.0	1.0	25.2	16.2	1.1	7.9
Finance and insurance	691	50.3	4.1	3.9	0.2	45.5	15.6	1.1	28.8
Real estates, rental, & leasing	315	29.7	28.7	28.5	0.2	41.6	26.9	5.6	9.1
Prof'al, scientific, & tech. srvc.	1,380	38.2	9.2	8.6	0.6	52.6	16.1	1.4	35.2
Public admin. & defense	780	76.8	1.5	1.3	0.3	21.7	13.3	6.7	1.7
Educational services	1,239	51.0	12.3	12.1	0.3	36.7	18.6	12.3	5.8
Health care&social assistance	586	58.7	14.8	14.5	0.3	26.5	21.3	3.6	1.5
Entertain't, culture, & recreat'n	305	27.1	27.0	22.8	4.2	45.9	26.3	12.2	7.3
Waste mgt.&remediation srvc	591	37.5	33.5	32.2	1.2	29.1	16.8	4.5	7.8
Priv. household service	122	0.2	17.1	16.5	0.7	82.8	18.0	19.3	45.4
Foreign org. & bodies	26	76.3	14.1	14.1	0.0	9.2	4.6	0.0	4.6

Source: National Statistic Office, *the Supplement Survey of the Monthly Economically Active Population Survey*, August 2005, Raw data.

<Table 14> Nonstandard work by Industries, Occupations, and the firm sizes

(Units: 1,000 workers, %)

			Seemingly discriminate			Nonstandard work			
	Employed	Standard work	Subtotal	Temp.	Daily	Subtotal	Contin.	Part-time	Alternative
All	14,968	6,564	2,867	2,664	203	5,537	2,898	732	1,907
		43.9	19.2	17.8	1.4	37.0	19.4	4.9	12.7
Occupation									
Management	261	84.5	1.8	1.8	0.0	13.8	11.8	0.3	1.8
Professionals	1,562	68.7	7.5	7.5	0.0	23.8	17.4	4.6	1.8
Tech. & associate prof.	1,683	58.6	13.1	13.1	0.0	28.3	14.4	5.6	8.3
Clerks	3,039	65.2	12.3	11.9	0.4	22.5	17.1	2.8	2.6
Service workers	1,621	16.3	36.5	32.8	3.7	47.3	26.1	10.6	10.5
Sales workers	1,050	10.7	35.5	33.5	2.1	53.7	17.1	5.9	30.8
Farming, fishing, forestry skill	60	17.8	11.4	10.6	0.8	70.9	31.7	12.9	26.3
Craft & related trade workers	1,711	31.3	25.2	23.3	1.8	43.5	24.0	1.9	17.6
Machine operator &assmblers	1,753	61.3	18.4	17.7	0.7	20.2	12.6	1.3	6.3
Simple laborer	2,230	13.7	19.1	16.2	2.9	67.2	26.0	8.2	33.0

Source: National Statistic Office, *the Supplement Survey of the Monthly Economically Active Population Survey*, August 2005, Raw data.

D. Nonstandard work by occupations

As seen in the Table 14, seemingly-discriminated work is more prevalent in occupations like service work and sales work as well as craft and related trade work while it is not so prevalent in occupations like management or professionals. Nonstandard work is more prevalent in the sense that its ratio is much higher than that of seemingly-discriminated worker and for it is higher for many occupations.

E. Nonstandard work by the firm sizes

As seen in the Table 15, all types of nonstandard work or seemingly-discriminated work is closely related with the firm size. It is remarkable that there are only 9.2 percent of workers who work as standard workers in the establishments with 1~4 workers while about 80 percent in the large-sized establishments.

<Table 15> Nonstandard work by Industries, Occupations, and the firm sizes

(Units: 1,000 workers, %)

		Standard	Seemingly discriminate			Nonstandard work			
	Employed	work	Subtotal	Temp.	Daily	Subtotal	Contin.	Part-time	Alternative
All	14,968	6,564	2,867	2,664	203	5,537	2,898	732	1,907
		43.9	19.2	17.8	1.4	37.0	19.4	4.9	12.7
Firm Size									
1~4 employees	2,974	9.2	37.2	34.3	2.9	53.6	23.9	11.1	18.6
5~9	2,484	28.2	30.0	28.1	1.9	41.7	20.2	6.0	15.5
10~29	3,186	43.7	18.6	17.3	1.3	37.8	19.5	4.1	14.2
30~99	2,941	58.2	9.2	8.6	0.6	32.6	18.2	2.3	12.1
100~299	1,484	65.5	7.3	6.7	0.5	27.2	18.6	1.7	7.0
300 and more	1,899	79.8	2.4	2.2	0.2	17.9	13.4	1.5	2.9

Source: National Statistic Office, *the Supplement Survey of the Monthly Economically Active Population Survey*, August 2005, Raw data.

III. What is going on to nonstandard workers?

I examined about what is the definition of nonstandard work and its size. Now, I am going to move to the working conditions of nonstandard work compared with standard work and some more on it. They include monthly and hourly wages, coverage of social insurance and entitlement of fringe benefits, the reason why they choose or had to choose such 'bad' jobs and work as nonstandard workers, and finally the probability of jumping into standard work, i.e., of exodus from the so-called 'nonstandard work trap'.

1. Working conditions: monthly and hourly wages

Table 16 presents monthly wages for each type of employment in selected years in order to shed lights on the relative wage and annual wage growth. As seen in the table, nonstandard work and seemingly-discriminated work are paid by about slightly higher than a half compared with standard work.

Of types of employment in nonstandard work, the least relative wage is paid to home-base work (25.7 percent) and on-call work (39.1 percent) as well as part-time work (24.4 percent) while it is relatively high for independent contractor (66.4 percent) , dispatched work (about 60 percent) and contingent work (slightly lower than 60 percent).

<Table 16> Monthly wages by the employment types

(Units: 1,000 KRW/month, %)

	Monthly wages(Relative wage level)						Wage growth rate		
	2001		2003		2005		2001~ 2003	2003~ 2005	2001~ 2005
Employed	1,242	(74.3)	1,467	(72.8)	1,593	(72.4)	8.7	4.2	6.4
Standard work	1,672	(100.0)	2,014	(100.0)	2,199	(100.0)	9.8	4.5	7.1
Seemingly discriminated	919	(55.0)	1,064	(52.8)	1,126	(51.2)	7.6	2.9	5.2
Nonstandard work	877	(52.5)	1,001	(49.7)	1,117	(50.8)	6.8	5.6	6.2
Contingent work	1,007	(60.2)	1,154	(57.3)	1,287	(58.5)	7.1	5.6	6.3
Pat-time work	482	(28.8)	510	(25.3)	536	(24.4)	2.9	2.5	2.7
Alternative employment	892	(53.3)	967	(48.0)	1,081	(49.2)	4.1	5.7	4.9
Dispatched work	1,040	(62.2)	1,115	(55.4)	1,317	(59.9)	3.5	8.7	6.1
Temporary agency work	795	(47.5)	878	(43.6)	952	(43.3)	5.1	4.1	4.6
Independent contractor	1,096	(65.6)	1,308	(64.9)	1,461	(66.4)	9.2	5.7	7.5
On-call work	665	(39.8)	806	(40.0)	860	(39.1)	10.1	3.3	6.6
Home-based work	528	(31.6)	456	(22.6)	566	(25.7)	-7.1	11.4	1.8

Note: The numbers in the parentheses are the relative wage levels compared with that of standard work.
Source: National Statistic Office, *the Supplement Survey of the Monthly Economically Active Population Survey*, August each year, Raw data.

It is important to examine wage growth rates by types of employment to have an idea of expansion of wage gap between standard and nonstandard work. Over the 2001~2005, the annual wage growth rate is higher for standard work (7.1 percent) while it is 6.2 percent for nonstandard work and 5.2 percent for seemingly-discriminated workers, which implies that

the wage gaps have widened from 52.5 percent to 50.8 percent for nonstandard work and from 55.0 percent to 51.2 percent for seemingly-discriminated work. The annual wage growth rate is so low for part-time work (only 2.7 percent) and home-based work (less than 2 percent) while it is higher for independent contractors.

The same pattern can be found in the hourly wage rates. The relative wage rate for nonstandard work is 53.3 and it is much lower than a half (only 44.6) for seemingly-discriminated work. The annual growth rate of wage rate is much higher for standard work (8.3 percent) compared with nonstandard work (5.4 percent) and seemingly-discriminated work (5.1 percent), which implies again widening of the wage gap between standard work and nonstandard work or seemingly-discriminated work. The relative wage rate is relatively higher for independent contractor (68.3) and dispatched work (58.9) while lower for home-based work (31.8) and temporary help agency work (39.1). Slowest wage growth is for part-time work (1.5 percent) and the next is for home-based work (2.9 percent) while it is relatively high for independent contractors (7.5 percent), contingent work (6.9 percent), and dispatched work (6.8 percent).

<Table 17> The wage rate by the employment types

(Units: KRW/hour, %)

	Hourly wages(Relative hourly wage level)						Wage growth rate		
	2001		2003		2005		2001~ 2003	2003~ 2005	2001~ 2005
Employed	6,100	(75.0)	7,299	(72.9)	8,054	(72.1)	9.4	5.0	7.2
Standard work	8,130	(100.0)	10,010	(100.0)	11,167	(100.0)	11.0	5.6	8.3
Seemingly discriminated	4,083	(50.2)	4,789	(47.8)	4,981	(44.6)	8.3	2.0	5.1
Nonstandard work	4,833	(59.4)	5,346	(53.4)	5,954	(53.3)	5.2	5.5	5.4
Contingent work	4,756	(58.5)	5,519	(55.1)	6,222	(55.7)	7.7	6.2	6.9
Pat-time work	5,534	(68.1)	5,449	(54.4)	5,872	(52.6)	-0.8	3.8	1.5
Alternative employment	4,418	(54.3)	5,323	(53.2)	5,578	(50.0)	9.8	2.4	6.0
Dispatched work	5,048	(62.1)	5,556	(55.5)	6,572	(58.9)	4.9	8.8	6.8
Temporary agency work	3,864	(47.5)	4,000	(40.0)	4,370	(39.1)	1.7	4.5	3.1
Independent contractor	5,710	(70.2)	6,887	(68.8)	7,632	(68.3)	9.8	5.3	7.5
On-call work	3,670	(45.1)	4,342	(43.4)	4,623	(41.4)	8.8	3.2	5.9
Home-based work	3,165	(38.9)	2,767	(27.6)	3,549	(31.8)	-6.5	13.3	2.9

Note and Source: see those in the previous table.

Table 18 and 19 present the wage gap in the monthly wage and hourly wage rate by the firm sizes. As seen in the tables, it can be found that:

(a) there is a huge gap in the wage rates, i.e., the average (hourly) wage in the very small-sized establishment is only for 965 thousand KRW (4,765 KRW), which amounts only 39.1 (36.3) percent of that in the very large-sized one (2,469 thousand KRW per month and 13,140 KRW per hour).

(b) the relative wage of nonstandard work has a positive relationship with the firm size, i.e., from 49.5 to 67.0;

(c) the relative wage for seemingly-discriminate work is negatively related with the firm

size, i.e., from 66.6 to 39.8;

(d) part-time work and other employment types in alternative employment show no significant relationship between the relative wage and the firm size; and

(e) the relative wage of contingent work is positively related with the firm size just same as nonstandard work while its components show different pattern, i.e., work with fixed-term contract and expecting job continuity has a positive relationship with the firm size while work without expecting job continuity with or without fixed-term contract shows a negative relationship with it.

<Table 18> Monthly wages by the employment types and the firm sizes(2005)

(Units: 1,000 KRW/month, %)

	All Sizes	Firm Sizes					
		1~4	5~9	10~29	30~99	100~299	300 & more
Monthly wage levels							
Employed	1,593	965	1,267	1,545	1,818	1,934	2,469
Standard work	2,199	1,595	1,751	2,046	2,194	2,196	2,665
Seemingly discriminated	1,126	1,063	1,169	1,165	1,130	1,283	1,061
Temporary employee	1,147	1,087	1,186	1,178	1,160	1,311	1,085
Daily workers	848	777	914	979	682	930	781
Nonstandard work	1,117	789	1,011	1,153	1,343	1,478	1,785
Contingent work	1,287	957	1,111	1,271	1,416	1,608	1,975
No fixed-term contract	992	922	1,043	1,025	1,048	1,083	1,152
Fixed-term, guaranteed	1,624	1,096	1,347	1,531	1,568	1,804	2,221
Fixed-term, not guaranteed	998	933	988	1,023	1,108	1,058	1,022
Pat-time work	536	463	551	575	651	748	664
Alternative employment	1,081	767	1,058	1,156	1,366	1,307	1,496
Dispatched work	1,317	1,044	1,254	1,267	1,461	1,161	2,107
Temporary agency work	952	778	988	966	937	1,010	1,167
Independent contractor	1,461	987	1,308	1,499	1,646	1,672	1,536
On-call work	860	736	979	901	1,046	1,017	657
Home-based work	566	497	1,061	733	728	1,242	900
The relative wage levels							
Seemingly discriminated	51.2	66.6	66.8	56.9	51.5	58.4	39.8
Temporary employee	52.2	68.2	67.7	57.6	52.9	59.7	40.7
Daily workers	38.6	48.7	52.2	47.8	31.1	42.3	29.3
Nonstandard work	50.8	49.5	57.7	56.4	61.2	67.3	67.0
Contingent work	58.5	60.0	63.4	62.1	64.5	73.2	74.1
No fixed-term contract	45.1	57.8	59.6	50.1	47.8	49.3	43.2
Fixed-term, guaranteed	73.9	68.7	76.9	74.8	71.5	82.1	83.3
Fixed-term, not guaranteed	45.4	58.5	56.4	50.0	50.5	48.2	38.3
Pat-time work	24.4	29.0	31.5	28.1	29.7	34.1	24.9
Alternative employment	49.2	48.1	60.4	56.5	62.3	59.5	56.1
Dispatched work	59.9	65.5	71.6	61.9	66.6	52.9	79.1
Temporary agency work	43.3	48.8	56.4	47.2	42.7	46.0	43.8
Independent contractor	66.4	61.9	74.7	73.3	75.0	76.1	57.6
On-call work	39.1	46.1	55.9	44.0	47.7	46.3	24.7
Home-based work	25.7	31.2	60.6	35.8	33.2	56.6	33.8

Note and Source: see those in the previous table.

<Table 19> Hourly wages by the employment types and the firm sizes

(Units: KRW/hour, %)

	All Sizes	Firm Sizes					
		1~4	5~9	10~29	30~99	100~299	300 & more
Hourly wage levels							
Employed	8,054	4,765	6,131	7,692	9,234	9,790	13,140
Standard work	11,167	7,477	8,511	10,113	11,094	11,135	14,138
Seemingly discriminated	4,981	4,584	5,059	5,383	5,210	5,598	5,272
Temporary employee	5,067	4,672	5,134	5,450	5,333	5,704	5,400
Daily workers	3,847	3,532	3,959	4,498	3,363	4,270	3,780
Nonstandard work	5,954	4,424	5,291	6,029	7,057	7,675	9,735
Contingent work	6,222	4,309	5,087	6,105	7,062	8,099	10,274
No fixed-term contract	4,438	4,049	4,582	4,727	4,887	4,723	5,643
Fixed-term, guaranteed	8,104	5,100	6,408	7,418	7,876	9,184	11,604
Fixed-term, not guaranteed	4,750	4,259	4,532	4,967	5,598	5,326	5,226
Pat-time work	5,872	5,020	5,915	6,238	7,364	8,244	8,142
Alternative employment	5,578	4,215	5,314	5,867	6,990	6,406	8,068
Dispatched work	6,572	4,788	6,820	5,947	7,372	5,628	11,547
Temporary agency work	4,370	3,718	4,546	4,453	4,293	4,468	5,164
Independent contractor	7,632	5,201	6,400	7,798	8,691	8,638	8,781
On-call work	4,623	4,189	5,061	4,799	5,234	4,408	4,253
Home-based work	3,549	3,151	5,911	4,125	4,583	13,694	6,885
The relative hourly wage levels							
Seemingly discriminated	44.6	61.3	59.4	53.2	47.0	50.3	37.3
Temporary employee	45.4	62.5	60.3	53.9	48.1	51.2	38.2
Daily workers	34.4	47.2	46.5	44.5	30.3	38.3	26.7
Nonstandard work	53.3	59.2	62.2	59.6	63.6	68.9	68.9
Contingent work	55.7	57.6	59.8	60.4	63.7	72.7	72.7
No fixed-term contract	39.7	54.2	53.8	46.7	44.1	42.4	39.9
Fixed-term, guaranteed	72.6	68.2	75.3	73.4	71.0	82.5	82.1
Fixed-term, not guaranteed	42.5	57.0	53.2	49.1	50.5	47.8	37.0
Pat-time work	52.6	67.1	69.5	61.7	66.4	74.0	57.6
Alternative employment	50.0	56.4	62.4	58.0	63.0	57.5	57.1
Dispatched work	58.9	64.0	80.1	58.8	66.5	50.5	81.7
Temporary agency work	39.1	49.7	53.4	44.0	38.7	40.1	36.5
Independent contractor	68.3	69.6	75.2	77.1	78.3	77.6	62.1
On-call work	41.4	56.0	59.5	47.5	47.2	39.6	30.1
Home-based work	31.8	42.1	69.5	40.8	41.3	123.0	48.7

Note and Source: see those in the previous table.

2. Coverage of social insurances and entitlement of fringe benefits

Table 20 presents coverage of social insurances and entitlement of fringe benefits by types of employment. Social insurance includes national pension plan, health insurance, and employment insurance. Fringe benefits include legal retirement allowance, over-time payments, regular bonuses, and paid-holiday leave.

Of standard workers, more than 80 percent are covered by all of social insurance considered here while it is slightly over 30 percent for nonstandard workers and 26.6 percent for seemingly-discriminated workers. Of types of employment, the share of workers with

full social insurance benefits is relatively higher for workers with fixed-term contracts and expecting job continuity (77.9 percent), dispatched work (59.3 percent), and temporary help agency workers (54.8 percent). It is remarkable that only 0.7 percent of on-call workers, 1.2 percent of home-base workers, 2.2 percent of pat-time workers, and 8.4 percent of 'daily workers' are covered by all of social insurance.

The same pattern can be found for entitlement of fringe benefits.

<Table 20> The coverage of social insurance and fringe benefits by types of employment

(Units: 1,000 workers, %)

	The number of workers	Social insurance			Fringe benefits		
		All	Some	Nothing	All	Some	Nothing
Employed	14,968	52.1	10.6	37.3	37.3	20.5	42.1
Standard work	6,564	81.2	17.4	1.4	73.0	25.9	1.1
Seemingly discriminated	2,867	26.6	5.0	68.3	1.1	16.8	82.1
Temporary employee	2,664	28.0	5.1	66.9	1.2	17.7	81.1
Daily workers	203	8.4	4.4	87.2	0.5	4.9	94.6
Nonstandard work	5,537	30.8	5.4	63.8	13.8	16.1	70.1
Contingent work	2,898	45.0	5.6	49.4	21.6	20.7	57.7
No fixed-term contract	802	15.7	4.7	79.6	0.7	9.2	90.0
Fixed-term, guaranteed	1,346	77.9	6.5	15.7	44.5	33.7	21.8
Fixed-term, not guaranteed	750	17.5	4.9	77.6	2.7	9.6	87.7
Pat-time work	732	2.2	1.5	96.3	0.4	5.2	94.4
Alternative employment	1,907	20.2	6.6	73.3	7.2	13.1	79.7
Dispatched work	113	59.3	4.4	36.3	30.1	28.3	41.6
Temporary agency work	394	54.8	17.8	27.4	17.0	38.6	44.4
Independent contractor	596	16.3	7.4	76.3	5.9	8.4	85.7
On-call work	718	0.7	0.6	98.7	0.0	1.9	98.1
Home-based work	86	1.2	0.0	98.8	1.2	1.2	97.7

Note and Source: see those in the previous table. Social insurance includes national pension plan, health insurance, and employment insurance. Fringe benefits include legal retirement allowance, over-time payments, regular bonuses, and paid-holiday leave.

3. Why do they choose nonstandard work?

Table 21 presents the reason why they choose own types of employment. The Questionnaire for this is read as follows: "What is the reason why you choose to work with such an explicit or implicit contract as in your job?" Interviewee can choose one main reason from followings: "because I (1) am satisfied with job contents and its working conditions; (2) can't find any other satisfactory jobs other than this; (3) have a plan to move to another job sooner or later with having experience in this job; (4) have to also take care of children and/or home production; (5) have to participate in vocational training or other further education; (6) have freedom for me to control working hours flexibly at this job; (7) can get money just as much as I do in this job; (8) do not want to be tight at work-life and am not responsible for this job too much; and (9) have any other reasons;

The reason 2 implies that someone chooses nonstandard work involuntarily while the

reasons 1, 6, 7, and 8 are for voluntary choice and the reasons 4 and 5 are reflecting a kind of the time restriction.

Table 21. The reasons why chooses this type of employment?[1]

(Units: 1,000 workers, %)

	All Workers	Reasons[2]								
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Employed	14,968	50.5	28.1	7.3	2.5	2.1	1.6	5.6	1.8	0.6
Standard work	6,564	77.8	12.1	5.8	0.0	0.0	0.6	2.8	0.5	0.4
Seemingly discriminated	2,867	33.6	41.6	11.3	2.9	1.4	1.7	4.6	2.3	0.5
Temporary employee	2,664	36.0	39.5	11.7	2.9	1.2	1.7	4.4	2.2	0.5
Daily workers	203	1.5	69.5	5.4	3.9	4.4	2.5	8.4	3.9	0.5
Nonstandard work	5,537	26.8	40.0	6.9	5.2	5.0	2.9	9.3	3.1	0.8
Contingent work	2,898	35.6	38.9	9.3	2.0	3.2	1.5	6.6	2.0	0.9
No fixed-term contract	802	19.1	54.5	9.1	3.5	3.9	2.4	4.1	2.7	0.6
Fixed-term, guaranteed	1,346	57.3	22.7	9.9	1.2	1.0	1.1	4.8	1.1	1.0
Fixed-term, not guaranteed	750	14.4	51.5	8.4	1.7	6.5	1.3	12.4	2.7	0.9
Pat-time work	732	11.7	29.8	5.3	14.8	19.7	6.1	4.4	6.8	1.2
Alternative employment	1,907	19.2	45.6	4.0	6.4	2.0	3.7	15.3	3.4	0.4
Dispatched work	113	46.0	30.1	9.7	1.8	1.8	4.4	3.5	2.7	0.0
Temporary agency work	394	39.6	47.2	4.8	1.3	1.0	1.5	2.5	2.0	0.0
Independent contractor	596	20.5	26.5	4.5	6.2	0.8	6.4	32.6	2.3	0.2
On-call work	718	3.3	65.6	2.5	6.1	3.8	2.5	10.6	4.9	0.8
Home-based work	86	15.1	25.6	1.2	38.4	0.0	3.5	10.5	4.7	1.2

Note 1. The Questionnaire is as such: "What is the reason why you choose to work with such an explicit or implicit contract as in your job?"

2. The reasons for interviewee to choose are one of as follows: because I
   (1) am satisfied with job contents and its working conditions;
   (2) can't find any other satisfactory jobs other than this;
   (3) have a plan to move to another job sooner or later with having experience in this job;
   (4) have to also take care of children and/or home production;
   (5) have to participate in vocational training or other further education;
   (6) have freedom for me to control working hours flexibly at this job;
   (7) can get money just as much as I do in this job;
   (8) do not want to be tight at work-life and am not responsible for this job too much;
   (9) have any other reasons;

Source: National Statistic Office, *the Supplement Survey of the Monthly Economically Active Population Survey*, August 2005, Raw data.

As seen in the table, the share of choosing the reason 2(choosing nonstandard work involuntarily) is 40.0 percent for nonstandard work and 41.6 percent for seemingly-discriminated work while it is only 12 percent for standard work. The share is relatively higher for daily workers (about 70 percent) and on-call work (about two-thirds). The share of choosing time restrictions as the main reason of nonstandard work is higher for part-time work (34.5 percent) and home-based work (38.4 percent). It is better to know that some of dispatched workers (46 percent) and temporary help agency workers (about 40 percent) are satisfied with job contents and its working conditions. About one-third of independent contractors think that they can earn fair money as much as they do. About 12 percent of 'temporary employees' have plans to move to another job with experience in the current jobs.

4. Is there any chance for them to jump to standard work?[26]

There have been many discussions about the role of nonstandard work: stepping-stone for standard work, an alternative for standard work or no work, and a trap in the sense that those who trap in it cannot jump out from it.

The year-to-year transition matrix as seen in Table 22 shed lights on the role of nonstandard work. First of all, it can be found that the state stability, which means that those who were in a state are in the same state, is strong for not-in-the-labor force (83.6 percent), self-employment (85.9 percent), and standard work (84.0 percent) while it is so weak for unemployment (14.3 percent). It is 58.6 percent for nonstandard work, 52.6 percent for seemingly-discriminate work, 51.3 percent for contingent work, 31.7 percent for part-time work, and 43.1 percent for alternative employment.

The probability of jumping into standard work in the next year is 6.2 percent for nonstandard work and 10.2 percent for seemingly-discriminated work. It is higher for dispatched work (17.6 percent), 'temporary employee' (10.7 percent), and independent contractor (9.2 percent) while it is lower for 'daily workers' (3.8 percent), part-time work (2.9 percent), on-call work (2,1 percent), and home-based work (3.8 percent).

Table 22. One year transition of work force status and employment types

(Units: 1,000 persons, %)

2003 \ 2004	EAP	Standard	Temp.	Daily	Nonstandard	Contingent	Part-time	Alternative	Self-emp'ed	U	NILF	Attrition
EAP	37,390	4,607	1,900	142	3,669	1,751	526	1,392	6,362	510	10,281	9,921
		16.8	6.9	0.5	13.4	6.4	1.9	5.1	23.2	1.9	37.4	26.5
Work force status and employment types												
Employed	14,149	42.2	14.5	1.0	25.9	13.0	3.0	9.9	4.1	2.4	9.9	38.4
Standard work	6,307	84.0	2.4	0.2	6.4	3.5	0.2	2.6	2.0	1.4	3.7	26.9
Seemingly-discriminate	3,196	10.2	50.0	2.6	16.6	7.0	2.3	7.2	5.6	3.2	11.7	30.3
Temporary employee	2,978	10.7	52.2	1.0	15.7	6.8	2.1	6.8	5.6	3.2	11.5	30.5
Daily workers	218	3.8	20.3	23.4	27.8	10.1	5.1	12.7	6.3	3.2	14.6	27.5
Nonstandard work	4,646	6.2	7.8	1.1	58.6	29.9	7.3	21.4	5.8	3.4	17.0	27.3
Contingent work	2,322	7.0	7.7	0.7	63.2	51.3	3.6	8.3	4.6	3.2	13.3	28.8
Part-time work	647	2.9	10.0	0.6	51.7	9.8	31.7	10.2	5.4	3.1	26.3	25.8
Alternative employment	1,677	6.4	6.9	1.8	55.2	9.4	2.7	43.1	7.6	3.7	18.4	25.7
Dispatched work	94	17.6	8.8	1.5	54.4	10.3	0.0	44.1	4.4	4.4	10.3	27.7
Temporary help agency	322	7.4	6.6	0.4	67.8	7.4	1.2	59.3	1.6	3.1	13.6	19.9
Independent contractor	551	9.2	10.8	0.8	58.2	7.7	3.6	46.9	7.4	2.6	11.0	29.2
On-call work	589	2.1	3.8	4.0	50.5	13.1	3.1	34.3	8.9	5.6	24.9	27.7
Tele-work/home-based	121	3.8	4.8	1.0	32.7	4.8	3.8	24.0	20.2	1.0	36.5	14.0
Self-employed	7,977	1.2	1.6	0.1	3.3	1.3	0.6	1.5	85.9	0.7	7.2	20.1
Unemployed	810	10.1	13.3	1.2	24.8	13.7	3.0	8.1	8.7	14.3	27.2	38.8
NILF	14,454	1.6	2.4	0.3	6.5	2.5	1.6	2.3	4.2	1.4	83.6	28.2

Note: see note in the Table 1. Attrition means that the sample in 2003 moved out and they could not be interviewed in 2004. The transition probability is calculated out of those who are remained in the 2004 survey.
Source: National Statistic Office, *the Supplement Survey of the Monthly Economically Active Population Survey*, August 2003 and 2004, Raw data.

[26] Takeishi(2003) discusses the same topic.

IV. What is the origin of the wage differentials? - Discrimination matters.

1. Methodology

Until now, focus is given to the size (or the share of) nonstandard work and its working conditions such as wages, the coverage of social insurance and entitlement of fringe benefits. In this chapter, focus is given to what contributes to the wage differentials among types of employment to answer the question: how much of the wage differentials is attributed to discriminative treatment in the labor market?

In order to identify the proportion of the wage differentials due to discriminatory treatment, I estimate wage equations by the types of employment and then compare the wage equation for comparison groups (nonstandard workers, 'seemingly-discriminated workers', contingent workers, alternative workers, and workers with other types of nonstandard employment) with the wage equation for the reference group (standard workers).

The wage equation for all workers is set up as

(Eq. 1) $y = X\beta + Z\gamma + \varepsilon$

where y = log of the hourly wage, X = a set of explanatory variables considered as determining the wage rates, β = parameters to be estimated, Z = a set of dummy variables representing types of employment, γ = parameters to be estimated, and ε = the disturbance term.

Explanatory variables consist of tenure at the current job (year) and its square, interaction term of gender and marital status (married male with spouse(the reference group), never married male, married male without spouse, never married female, married female with spouse, and married female without spouse), age (10 years) and its square, the education levels (elementary school graduate(grade 6), middle school graduate(grade 9), high school graduate(grade 12, the reference group), 2-year college graduate, college graduates, graduate school graduate(M.A. degree or more educated), the establishment sizes (large-sized establishments with 300 workers and more (the reference group), very-small-sized establishments with 1~ 4 workers, small-sized workers with 5~ 9 workers, small-sized workers with 10~29 workers, medium-sized establishment with 30~99, and large-sized establishment with 100~299 workers), dummy variables for occupations and industries at the two-digit level.

For decomposition of the wage differentials, the wage equation

(Eq. 2) $y^j = X^j\beta^j + \varepsilon^j$, j = each group representing relevant type of employment

is estimated for workers in each group and then the wage differential compared with

standard workers can be expressed as

$$\text{(Eq. 3)}\ y^r - y^c = X^r\beta^r - X^c\beta^c ,$$

where $y^r = X^r\beta^r + \varepsilon^r$ for the reference group (standard workers)

$y^c = X^c\beta^c + \varepsilon^c$ for the comparison group.

Then, it becomes

$$y^r - y^c = (X^r - X^c)\beta^r - X^c(\beta^r - \beta^c) .$$

The first term of the RHS is the productivity effect, which represents the wage differentials due to differences in the productivity factors, and the second term is the price effect, which stands for the wage differentials due to different pricing for the same productivity factor, i.e., due to discriminatory treatment (discrimination).

2. Estimates of the wage equations by employment types

Table 23~26 present estimates of the wage equations by the types of employment. The first estimates in the Table 23 are for all workers. First of all, as seen at the table, about 67 percent of wage variation is explained by the fitted wage equation. Briefly looking at the estimates for explanatory variables, it can be found that

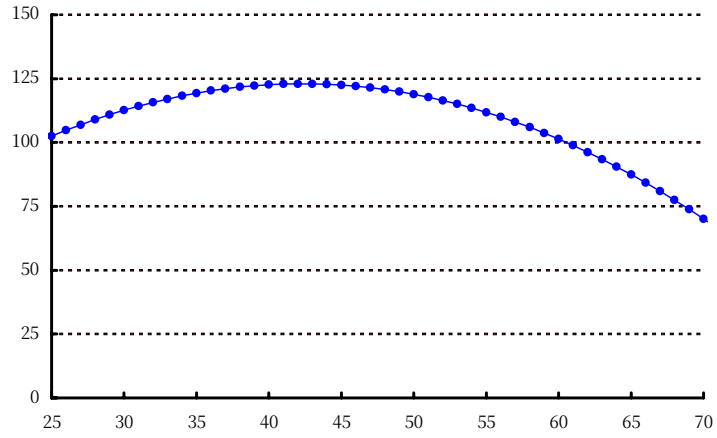
(a) by working one more year, workers are paid by 3.1 percent higher wage rate;

(b) women have about 25 percent lower wage than married men with spouse, while unmarried men and married men without spouse get 10 percent and 7.6 percent lower ;

(c) as workers become older, their wages increases by 5.1 percent per year but at decreasing growth rate, as seen in Figure 1;

Figure 1. Wage levels as workers become older

(Unit: wage at age 24=100)



(d) the rate of return to college education is 4.47 percent per year and a little bit lower for M.A. degree or higher education while it is only 2.38 percent per year for 2-year college education;

(e) the effects of the firm size are 13 to 29 percent.[27]

The estimates of γ present the magnitude of the wage gap among types of employment, after controlling differences in productivity. The magnitude ranges from 6.85 percent (for independent contractors) to about 50 percent (for tele-workers/home-based workers). It is lower for part-time workers, dispatched workers, and contingent workers with fixed-term employment and expectation of job continuity while higher for on-call workers, contingent workers without expectation of job continuity. For seemingly-discriminated workers, it rages from 18 percent to 28 percent, which cannot be considered as low one.

Table 23. Estimates of the wage equation: three main types of employment

Variables	All employed	Standard workers	Seemingly-discriminated	Nonstandard workers
Temporary employee	-0.1776 (0.0087) ***			
Daily worker	-0.2818 (0.0225) ***			
Contingent 1	-0.2164 (0.0123) ***			
Contingent 2	-0.0906 (0.0095) ***			
Contingent 3	-0.3094 (0.0131) ***			
Part-time work	-0.0701 (0.0133) ***			
Dispatched work	-0.0706 (0.0300) **			
Temporary help agency	-0.2182 (0.0225) ***			
Independent contractor	-0.0685 (0.0152) ***			
On-call work	-0.2444 (0.0144) ***			
Tele-work/home-based	-0.4987 (0.0328) ***			
Intercept	8.1081 (0.0388) ***	8.1451 (0.0722) ***	7.8529 (0.0867) ***	7.8727 (0.0671) ***
Tenure	0.0310 (0.0012) ***	0.0261 (0.0014) ***	0.0323 (0.0036) ***	0.0520 (0.0032) ***
Tenure square	-0.0003 (0.0000) ***	-0.0002 (0.0000) ***	-0.0007 (0.0002) ***	-0.0012 (0.0002) ***
Unmarried men	-0.1007 (0.0094) ***	-0.0967 (0.0120) ***	-0.1072 (0.0194) ***	-0.1001 (0.0191) ***
Married man w/o spouse	-0.0766 (0.0163) ***	-0.0406 (0.0240) *	-0.0720 (0.0339) **	-0.1061 (0.0283) ***
Unmarried woman	-0.2411 (0.0110) ***	-0.2536 (0.0145) ***	-0.2510 (0.0226) ***	-0.2053 (0.0225) ***
Married woman	-0.2734 (0.0078) ***	-0.2589 (0.0107) ***	-0.3286 (0.0160) ***	-0.2234 (0.0153) ***
Married woman w/o spouse	-0.2227 (0.0127) ***	-0.2783 (0.0267) ***	-0.3078 (0.0232) ***	-0.1428 (0.0209) ***
Age/10	0.5157 (0.0158) ***	0.4953 (0.0306) ***	0.4643 (0.0325) ***	0.4853 (0.0260) ***
Square of (age/10)	-0.0610 (0.0018) ***	-0.0562 (0.0037) ***	-0.0562 (0.0037) ***	-0.0583 (0.0028) ***
Elementary school	-0.1163 (0.0108) ***	-0.1780 (0.0207) ***	-0.0869 (0.0199) ***	-0.1022 (0.0173) ***
Middle school	-0.0847 (0.0091) ***	-0.1524 (0.0160) ***	-0.0654 (0.0164) ***	-0.0562 (0.0152) ***
2-year college	0.0476 (0.0085) ***	0.0316 (0.0106) ***	0.0192 (0.0175)	0.0933 (0.0182) ***
College	0.1788 (0.0081) ***	0.1571 (0.0096) ***	0.1348 (0.0194) ***	0.2163 (0.0178) ***
Graduate school	0.2738 (0.0163) ***	0.2424 (0.0172) ***	0.0580 (0.0672)	0.3341 (0.0402) ***
Firm size 1~4	-0.2943 (0.0112) ***	-0.3464 (0.0190) ***	-0.1030 (0.0413) **	-0.2768 (0.0243) ***
Firm size 5~9	-0.2270 (0.0109) ***	-0.2677 (0.0135) ***	-0.0571 (0.0416)	-0.1950 (0.0248) ***
Firm size 10~29	-0.1877 (0.0099) ***	-0.2140 (0.0110) ***	-0.0177 (0.0416)	-0.1502 (0.0237) ***
Firm size 30~99	-0.1603 (0.0095) ***	-0.1836 (0.0101) ***	-0.0291 (0.0429)	-0.1048 (0.0238) ***
Firm size 100~299	-0.1310 (0.0106) ***	-0.1539 (0.0110) ***	-0.0039 (0.0477)	-0.0707 (0.0269) ***

Note: The numbers in parentheses are the standard errors. ***, **, and * stand for the estimates are statistically significant at the size of 0.01, 0.05, and 0.10, respectively. Estimate for dummy variables for industries (at the two-digit levels) and occupations (at the two-digit levels) are not shown for convenience.

Source: National Statistic Office, *the Supplement Survey of the Monthly Economically Active Population Survey*, August 2005, Raw data.

[27] The effects of the firm sizes are 10~22 percent in 2003, 12~26 percent in 2001. It implies that wage differential by the firm size decreased over 2001~2003 but it increased in 2005.

However, the first estimate assumes that workers of various types of employment have the same estimate for each productive factor, i.e. all the workers are paid for their productive factors as the same, which is not a reasonable assumption.

The last three estimates in the Table 23 present estimates of the wage equations for three types of employment according to the main classification of workers. First of all, it is valuable to examine estimate for the constant: it is 8.15 for standard workers while it is 7.85 for seemingly-discriminated workers and 7.87 for nonstandard workers, which implies the differences in the basic wages by the types of employment, which again large fraction of the wage differentials is remained unexplained with these *ad hoc* wage equations.

Second, it is remarkable that most estimates are statistically significant for standard workers and nonstandard workers, though the sizes of estimates are different from each other, which means that the productivity factors are paid for them, while some are not statistically significant for seemingly-discriminated workers.

For the disaggregated types of employment, I do not explain estimates of the wage equations since it is so easy to find some basic facts by just looking at the tables.

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Table 24. Estimates of the wage equation: contingent workers

Variables	Contingent workers	No Fixed-term, Not guaranteed continuity	Fixed-term guaranteed continuity	Fixed-term, not guaranteed continuity
Intercept	7.9201 (0.0816) ***	7.6781 (0.1495) ***	8.0759 (0.1283) ***	7.6754 (0.1883) ***
Tenure	0.0480 (0.0036) ***	0.0398 (0.0074) ***	0.0376 (0.0044) ***	0.0498 (0.0223) **
Tenure square	-0.0011 (0.0002) ***	-0.0014 (0.0004) ***	-0.0007 (0.0002) ***	-0.0040 (0.0021) *
Unmarried men	-0.1292 (0.0221) ***	-0.1516 (0.0397) ***	-0.1430 (0.0295) ***	-0.0171 (0.0536)
Married man w/o spouse	-0.1746 (0.0364) ***	-0.1353 (0.0669) **	-0.1512 (0.0635) **	-0.1613 (0.0622) ***
Unmarried woman	-0.2831 (0.0256) ***	-0.2139 (0.0455) ***	-0.3157 (0.0331) ***	-0.2922 (0.0679) ***
Married woman	-0.3271 (0.0191) ***	-0.3365 (0.0327) ***	-0.3451 (0.0265) ***	-0.2558 (0.0477) ***
Married woman w/o spouse	-0.2887 (0.0268) ***	-0.2921 (0.0410) ***	-0.2972 (0.0463) ***	-0.2319 (0.0586) ***
Age/10	0.5074 (0.0342) ***	0.4731 (0.0527) ***	0.5141 (0.0587) ***	0.4677 (0.0730) ***
Square of (age/10)	-0.0605 (0.0038) ***	-0.0596 (0.0058) ***	-0.0629 (0.0068) ***	-0.0497 (0.0078) ***
Elementary school	-0.0536 (0.0225) **	-0.0687 (0.0344) **	-0.0450 (0.0376)	-0.0234 (0.0460)
Middle school	-0.0331 (0.0195) *	-0.0309 (0.0292)	-0.0551 (0.0335) *	-0.0172 (0.0396)
2-year college	0.1042 (0.0205) ***	0.0023 (0.0372)	0.0712 (0.0254) ***	0.1950 (0.0616) ***
College	0.2505 (0.0205) ***	0.1332 (0.0433) ***	0.2360 (0.0250) ***	0.2566 (0.0584) ***
Graduate school	0.3914 (0.0421) ***	0.0947 (0.1224)	0.4118 (0.0473) ***	0.2912 (0.1357) **
Firm size 1~4	-0.2895 (0.0268) ***	-0.1223 (0.0750)	-0.3060 (0.0382) ***	-0.1975 (0.0687) ***
Firm size 5~9	-0.2378 (0.0269) ***	-0.0789 (0.0755)	-0.2307 (0.0351) ***	-0.1759 (0.0691) **
Firm size 10~29	-0.1791 (0.0253) ***	-0.0753 (0.0760)	-0.1941 (0.0294) ***	-0.0556 (0.0666)
Firm size 30~99	-0.1239 (0.0250) ***	-0.0403 (0.0779)	-0.1626 (0.0278) ***	-0.0188 (0.0709)
Firm size 100~299	-0.0699 (0.0275) **	-0.0112 (0.0878)	-0.1092 (0.0300) ***	-0.0176 (0.0781)

Note and Source: see those in the previous table.

Table 25. Estimates of the wage equation: some types of employment

Variables	Temporary employee	Daily workers	Part-time workers	Alternative employment
Intercept	7.9172 (0.0892) ***	7.8491 (0.4433) ***	7.1595 (0.2043) ***	8.0741 (0.1480) ***
Tenure	0.0304 (0.0036) ***	0.0219 (0.0285)	0.0783 (0.0166) ***	0.0518 (0.0059) ***
Tenure square	-0.0006 (0.0002) ***	-0.0001 (0.0018)	-0.0036 (0.0012) ***	-0.0013 (0.0003) ***
Unmarried men	-0.0991 (0.0195) ***	-0.2764 (0.1121) **	-0.0602 (0.0821)	-0.0891 (0.0346) **
Married man w/o spouse	-0.0688 (0.0345) **	-0.0890 (0.1666)	0.1112 (0.1410)	-0.0806 (0.0435) *
Unmarried woman	-0.2435 (0.0227) ***	-0.3857 (0.1394) ***	-0.1156 (0.0812)	-0.1067 (0.0480) **
Married woman	-0.3290 (0.0163) ***	-0.2487 (0.0890) ***	-0.1938 (0.0586) ***	-0.1055 (0.0267) ***
Married woman w/o spouse	-0.3074 (0.0238) ***	-0.2878 (0.1120) **	0.0291 (0.0715)	-0.0590 (0.0354) *
Age/10	0.4417 (0.0340) ***	0.3365 (0.1372) **	0.6393 (0.0712) ***	0.3378 (0.0487) ***
Square of (age/10)	-0.0534 (0.0039) ***	-0.0463 (0.0142) ***	-0.0719 (0.0073) ***	-0.0430 (0.0050) ***
Elementary school	-0.0961 (0.0205) ***	0.0420 (0.0873)	-0.3060 (0.0585) ***	-0.0997 (0.0281) ***
Middle school	-0.0720 (0.0168) ***	0.0400 (0.0724)	-0.0829 (0.0505)	-0.0672 (0.0252) ***
2-year college	-0.0011 (0.0175)	0.3108 (0.1262) **	0.0907 (0.0648)	0.0616 (0.0366) *
College	0.1275 (0.0193) ***	0.1816 (0.1387)	0.2652 (0.0596) ***	0.0773 (0.0352) **
Graduate school	0.0483 (0.0660)	0.0000 .	0.2345 (0.1082) **	0.1646 (0.1658)
Firm size 1~4	-0.1199 (0.0421) ***	-0.0489 (0.2257)	-0.1387 (0.0861)	-0.2105 (0.0597) ***
Firm size 5~9	-0.0787 (0.0424) *	0.0523 (0.2254)	-0.0636 (0.0887)	-0.1199 (0.0601) **
Firm size 10~29	-0.0367 (0.0424)	0.0472 (0.2279)	-0.0108 (0.0887)	-0.0856 (0.0584)
Firm size 30~99	-0.0435 (0.0438)	-0.0080 (0.2387)	0.0852 (0.0932)	-0.0619 (0.0585)
Firm size 100~299	-0.0258 (0.0487)	0.1020 (0.2561)	-0.0140 (0.1153)	-0.0596 (0.0663)

Note and Source: see those in the previous table.

Table 26. Estimates of the wage equation: some types of employment

Variables	Dispatched workers	Temporary help agency workers	Independent contractors	On-call workers
Intercept	7.9191 (0.5089) ***	8.2095 (0.2929) ***	7.2249 (0.3508) ***	7.4860 (0.3532) ***
Tenure	0.0710 (0.0227) ***	0.0346 (0.0087) ***	0.0578 (0.0092) ***	0.0727 (0.0306) **
Tenure square	-0.0028 (0.0016) *	-0.0010 (0.0005) *	-0.0013 (0.0005) ***	-0.0042 (0.0020) **
Unmarried men	-0.0346 (0.1455)	0.0671 (0.0668)	-0.0802 (0.0751)	-0.1112 (0.0510) **
Married man w/o spouse	0.5174 (0.3809)	-0.0587 (0.0673)	-0.3307 (0.1318) **	-0.0176 (0.0535)
Unmarried woman	-0.0943 (0.1372)	-0.1027 (0.1002)	-0.1081 (0.0796)	-0.1193 (0.1053)
Married woman	-0.2936 (0.1252) **	-0.0370 (0.0364)	-0.1328 (0.0528) **	-0.2126 (0.0490) ***
Married woman w/o spouse	-0.0446 (0.1562)	0.0884 (0.0486) *	-0.1539 (0.0815) *	-0.2117 (0.0594) ***
Age/10	0.4714 (0.2404) *	0.3275 (0.0870) ***	0.7079 (0.1265) ***	0.3321 (0.0730) ***
Square of (age/10)	-0.0638 (0.0291) **	-0.0419 (0.0087) ***	-0.0920 (0.0140) ***	-0.0346 (0.0072) ***
Elementary school	-0.4231 (0.1736) **	0.0096 (0.0394)	-0.2028 (0.0977) **	-0.1408 (0.0395) ***
Middle school	-0.0643 (0.1131)	-0.0520 (0.0366)	-0.0969 (0.0586) *	-0.0799 (0.0373) **
2-year college	0.1161 (0.1005)	-0.0148 (0.0723)	0.0669 (0.0583)	0.0137 (0.0785)
College	0.0744 (0.1365)	0.0451 (0.0745)	0.0757 (0.0495)	-0.1170 (0.0974)
Graduate school	0.6436 (0.4290)	-0.2877 (0.3265)	0.2716 (0.2134)	0.0000 .
Firm size 1~4	-0.0895 (0.1499)	-0.2307 (0.0772) ***	-0.1493 (0.1103)	-0.2445 (0.1955)
Firm size 5~9	-0.1927 (0.1604)	-0.0856 (0.0748)	-0.1044 (0.1096)	-0.1716 (0.1961)
Firm size 10~29	-0.1307 (0.1482)	-0.0719 (0.0720)	-0.0962 (0.1003)	-0.1470 (0.1956)
Firm size 30~99	-0.1647 (0.1386)	-0.1096 (0.0719)	-0.0133 (0.0988)	-0.1636 (0.2019)
Firm size 100~299	-0.1987 (0.1774)	-0.0864 (0.0785)	-0.1068 (0.1158)	-0.1707 (0.2271)

Note and Source: see those in the previous table.

3. The origin of wage differentials[28]

Table 27~30 present decomposition of wage differentials according to the methodology outlined before and Table 31 summarizes the results. Each table for decomposition shows hourly wage and its relative level and wage differential compared with that for the reference group, difference in log of hourly wages, and the origin of wage differentials as a percentage of the log difference and as a monetary unit.

As seen in the Table 27, the proportion of the wage differential due to discriminatory treatment against nonstandard workers is 22.9 percent (which amounts to about 1,193KRW per hour) and, at the disaggregated level, it is higher for contingent workers (27.8 percent, 1,376KRW) while it is lower for part-time workers (only 7.7 percent, 409KRW)

<Table 27> Decomposition of wage differentials: nonstandard workers by types

(units: KRW/hour, %)

		Nonstandard workers	Contingent workers	Part-time workers	Alternative employment
Hourly wage (log wage) of the reference group		11,167 (9.1772)			
Hourly wage		5,954	6,222	5,872	5,578
Relative hourly wage level		53.31	55.71	52.58	49.95
Wage differentials (KRW)		5,214	4,946	5,295	5,589
The rate of wage difference		46.69	44.29	47.42	50.05
Log of hourly wage		8.4961	8.5489	8.4381	8.4382
Difference of log wage rate		0.6811	0.6283	0.7391	0.7390
The origin of differences in the wage rate (%)					
Discriminatory behavior		22.88	27.81	7.73	21.82
Productivity factors	Tenure	19.62	20.53	20.55	18.23
	Gender/Marital status	8.67	8.01	14.67	7.26
	Age	4.99	5.40	10.69	2.29
	Education level	11.06	9.54	9.68	13.64
	Firm size	11.64	10.48	14.84	11.97
	Occupation	3.72	3.94	2.03	4.13
	Industry	17.42	14.29	19.81	20.67
The origin of differences in the wage rate (KRW)					
Discriminatory behavior		1,193	1,376	409	1,220
Productivity factors	Tenure	1,023	1,015	1,088	1,019
	Gender/Marital status	452	396	777	406
	Age	260	267	566	128
	Education level	577	472	513	762
	Firm size	607	518	786	669
	Occupation	194	195	107	231
	Industry	908	707	1,049	1,155

Note: The reference group is standard workers without any fixed-term contract and expecting to work continuously without their own faults and whose 'states of work' are not 'temporary employees' nor 'daily workers'.

[28] Nagase(永瀬伸子, 2003) examined the wage differentials between male and female using the same method. She applied decomposition of gender wage gap in general and by the types of employment using the wage equation including education, tenure, age, the firm size, occupation, some family variables, and employment types. Employment types include regular employee, contract worker, temporary employee, short-time part-timer, other part-timer, 出向社員, dispatched worker, and other nonstandard worker. She decomposed gender wage gap into the productivity effect (45.7% or 40.0 %) and the price effect (54.3% or 60.0%).

Source: National Statistic Office, *the Supplement Survey of the Monthly Economically Active Population Survey*, August 2005, Raw data.

Table 28 presents decomposition for seemingly-discriminated workers, showing that seemingly-discriminated workers also suffer from discriminatory treatment as much as nonstandard workers. Its proportion is 21.5 percent (1,328KRW) and it is much higher for daily workers (27.2 percent, 1,990KRW) while it is a little bit lower for temporary employees (20.9 percent, 1,275 KRW)

<Table 28> Decomposition of wage differentials: seemingly-discriminated workers by types

(units: KRW/hour, %)

		Seemingly-discriminated workers	Temporary Employee	Daily Workers
Hourly wage (log wage) of the reference group		11,167	(9.1772)	
Hourly wage		4,981	5,067	3,847
Relative hourly wage level		44.60	45.37	34.45
Wage differentials (KRW)		6,187	6,100	7,320
The rate of wage difference		55.40	54.63	65.55
Log of hourly wage		8.4206	8.4410	8.1528
Difference of log wage rate		0.7566	0.7362	1.0243
The origin of differences in the wage rate (%)				
Discriminatory behavior		21.47	20.89	27.19
Productivity factors	Tenure	17.24	17.47	14.98
	Gender/Marital status	9.03	9.10	8.38
	Age	3.19	3.14	3.64
	Education level	9.89	9.80	10.69
	Firm size	14.55	14.89	11.20
	Occupation	7.35	7.60	5.02
	Industry	17.28	17.10	18.90
The origin of differences in the wage rate (KRW)				
Discriminatory behavior		1,328	1,275	1,990
Productivity factors	Tenure	1,066	1,066	1,097
	Gender/Marital status	559	555	613
	Age	197	192	267
	Education level	612	598	782
	Firm size	900	908	820
	Occupation	455	463	367
	Industry	1,069	1,043	1,383

Note and Source: See those in the previous table.

Contingent workers are suffering from discriminatory treatment more than workers with alternative employment arrangements or seemingly-discriminated workers. As seen in the Table 29, there is a huge difference in the proportion of the price effect according to the existence of fixed-term employment contract and the possibility of job continuity without own faults. Out of three types of contingent workers, the proportion of discriminatory treatment is lowest for workers without any fixed-term employment contract but who are not expecting job continuity (22.3 percent, 1,503KRW) while it is highest for workers with a fixed-term employment contract and not expecting job continuity (about 35 percent, 2,233KRW). It is slightly over 25 percent (781KRW) for workers with a fixed-term employment contract but expecting job continuity.

<Table 29> Decomposition of wage differentials: contingent workers by types

(units: KRW/hour, %)

		Contingent workers 1	Contingent workers 2	Contingent workers 3
Hourly wage (log wage) of the reference group		11,167	(9.1772)	
Hourly wage		4,438	8,104	4,750
Relative hourly wage level		39.74	72.57	42.54
Wage differentials (KRW)		6,729	3,063	6,417
The rate of wage difference		60.26	27.43	57.46
Log of hourly wage		8.3004	8.8265	8.3163
Difference of log wage rate		0.8768	0.3507	0.8609
The origin of differences in the wage rate (%)				
Discriminatory behavior		22.34	25.49	34.79
Productivity factors	Tenure	16.94	28.10	19.09
	Gender/Marital status	9.06	11.69	4.26
	Age	3.92	7.84	5.26
	Education level	10.79	6.17	10.73
	Firm size	13.00	6.81	10.52
	Occupation	6.40	1.79	2.88
	Industry	17.54	12.12	12.47
The origin of differences in the wage rate (KRW)				
Discriminatory behavior		1,503	781	2,233
Productivity factors	Tenure	1,140	861	1,225
	Gender/Marital status	610	358	274
	Age	264	240	337
	Education level	726	189	689
	Firm size	875	209	675
	Occupation	431	55	185
	Industry	1,180	371	800

Note and Source: See those in the previous table.

Workers with alternative employment arrangement suffer from discriminatory treatment as much as seemingly-discriminated workers, as already stated. Table 30 shows decomposition for its types of employment. As seen in the table, home-based workers (not shown), on-call workers, and temporary help agency workers are highly suffering from discriminatory treatment while it is not so severe for dispatched workers (only 4.8 percent, 220KRW) or independent contractors (9.6 percent, 340KRW).

<Table 30> Decomposition of wage differentials: workers with alternative employment arrangements

(units: KRW/hour, %)

		Dispatched workers	Temporary help agency workers	Independent contractors	On-call workers
Hourly wage (log wage) of the reference group		11,167 (9.1772)			
Hourly wage		6,572	4,370	7,632	4,623
Relative hourly wage level		58.85	39.13	68.34	41.40
Wage differentials (KRW)		4,596	6,797	3,536	6,544
The rate of wage difference		41.15	60.87	31.66	58.60
Log of hourly wage		8.6171	8.2934	8.7536	8.2931
Difference of log wage rate		0.5601	0.8838	0.4235	0.8840
The origin of differences in the wage rate (%)					
Discriminatory behavior		4.78	21.28	9.61	25.96
Productivity factors	Tenure	21.66	13.72	23.73	19.61
	Gender/Marital status	16.78	4.19	19.79	2.47
	Age	5.58	5.67	-2.35	1.89
	Education level	9.56	15.39	9.34	15.60
	Firm size	12.16	6.56	14.05	14.18
	Occupation	7.60	8.01	-4.70	5.31
	Industry	21.88	25.17	30.54	14.98
The origin of differences in the wage rate (KRW)					
Discriminatory behavior		220	1,447	340	1,699
Productivity factors	Tenure	995	933	839	1,283
	Gender/Marital status	771	285	700	162
	Age	256	386	-83	124
	Education level	439	1,046	330	1,021
	Firm size	559	446	497	928
	Occupation	349	544	-166	348
	Industry	1,005	1,711	1,080	980

Note and Source: See those in the previous table.

<Table 31> Summary of decomposition of wage differentials by types of employment

(units: KRW/hour, %)

	Wage differential (log hourly wage)	Discriminatory treatment	Tenure	Firm size
Nonstandard workers	0.6811	22.88	19.62	11.64
Contingent workers	0.6283	27.81	20.53	10.48
Contingent workers 1	0.8768	22.34	16.94	13.00
Contingent workers 2	0.3507	25.49	28.10	6.81
Contingent workers 3	0.8609	34.79	19.09	10.52
Part-time workers	0.7391	7.73	20.55	14.84
Alternative employment	0.7390	21.82	18.23	11.97
Dispatched workers	0.5601	4.78	21.66	12.16
Temporary help agency workers	0.8838	21.28	13.72	6.56
Independent contractors	0.4235	9.61	23.73	14.05
On-call workers	0.8840	25.96	19.61	14.18
Home-based workers/tele-workers	1.2847	33.83	11.32	12.27
Seemingly-discriminated workers	0.7566	21.47	17.24	14.55
Temporary employee	0.7362	20.89	17.47	14.89
Daily workers	1.0242	27.19	14.98	11.20

Note and Source: see those in the previous table.

V. Some Open Questions on Nonstandard Work: Do Employers Prefer Nonstandard Work?

1. What do employers say?

Nonstandard work is characterized with low wages, limited fringe benefits including social insurance, and deficient job security. These negative characteristics can be interpreted as lower labor costs and higher flexibility of employment from the employer's viewpoint.

The Workplace Panel Survey (WPS), conducted by the Korea Labor Institute in 2002, 2003, and 2004 provides information on utilization of nonstandard workers. The WPS interviewed managers in charge of human resource management, industrial relations and the employee representative of the trade union or work council for 2000 workplaces sampled from the Employment Insurance Database. The questionnaire for human resource management consists of 12 basic sections and 4 supplementary sections.[29] The supplementary section for nonstandard work is the first integrated survey on it. Some supplementary questions are as follows: the number of nonstandard workers by type of nonstandard employment, the recent trend of its share, plans utilizing it in the near future, reasons for using it, satisfaction with using it, problems arising from using it, its relative productivity and wage level/unit labor cost compared with standard workers, etc.

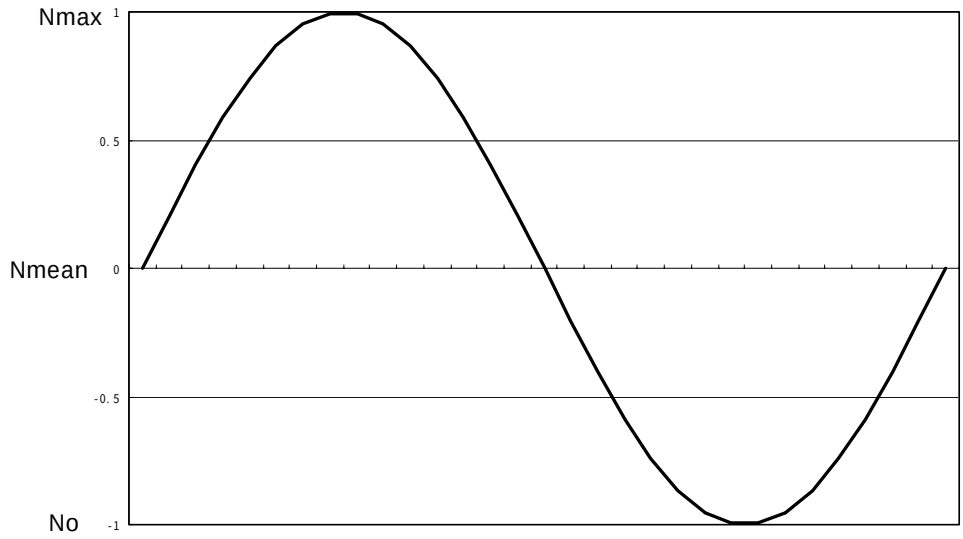
In order to shed light on what employers say about nonstandard work, it is better to briefly summarize the main findings from the 1st wave of the Nonstandard Work Supplement Survey of the WPS, in which 1,433 workplaces provide appropriate information. First, about 65 percent (832 workplaces) have utilized nonstandard work and its share in 732 workplaces employing nonstandard workers at the time of interview was 17.6 percent. Second, the main reasons why they utilize nonstandard work are more flexibility of employment (30.3 percent) and reduction of labor costs (32.1). Third, the relative wage level of nonstandard workers to standard workers is 79.9 percent on average, while the relative productivity is 77.6 percent, which implies no extra profit from employing nonstandard workers. Then, why do employers utilize nonstandard workers? The relative unit labor cost is 70.4 percent, which means extra profits of 7.2 percent point from employing nonstandard workers.

[29] The basic sections are the basic information on the workplace, managerial environments, the overall human resource management, the current structure of employment, the recruiting and selection process, the employee training system, the evaluation system, the promotion system, the compensation system, the workplace structure and employee participation, the working hour system, and the compulsory retirement system. The four supplementary sections are the recent experience of restructuring employment, nonstandard work, the certificate of qualification system, and adoption of information technology.

2. How do firms meet the derived demand? – Flexibility matters.

Figure 1 shows fluctuation in the demand for goods or services produced by workers in a workplace. To meet the derived demand in the short run, the firm should adjust employment, or more exactly, the effective labor (=the number of workers times working hours). It is possible only when the firm can choose any number of workers (free to layoff or recruit) and any number of working hours (the fully flexible working hour schedule). In this case, the firm will employ Nmean workers and change employment considering minimization of the adjustment costs.

Figure 1. When the demand fluctuates



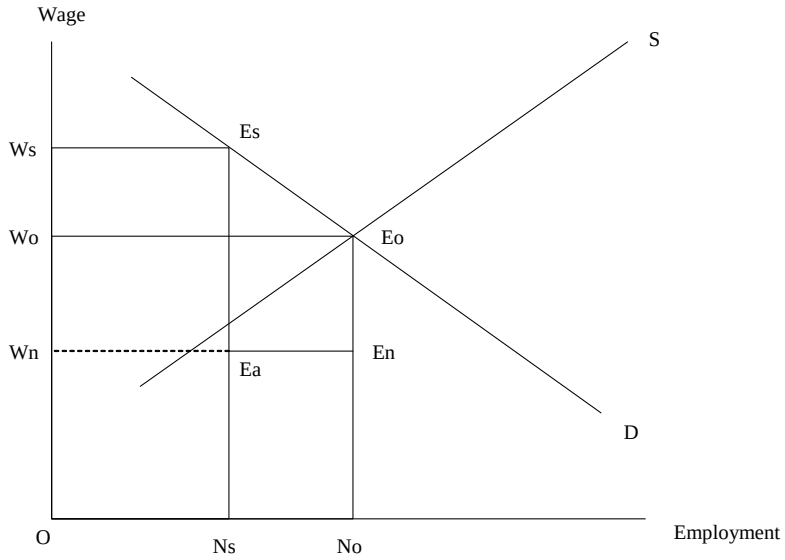
What happens if they are not free to choose the optimum level of employment due to regulations in the labor market such as employment protection legislation or the legal maximum of working hours, or a limit in the flexible working hour schedule? The Labor Standards Act of Korea is known as one of the most strict employment protection legislations mainly due to the Article specifying prohibition of layoffs without 'just causes', even though mass layoffs due to managerial reasons have been permitted recently. Further, the legal maximum of working hours is 40 hours per week and overtime is limited to 16 hours. The flexible working hour schedule is possible only within three months.

What is the best strategy when a firm cannot lay off standard workers? The firm is likely to be very careful to employ more standard workers even in its upturn because layoff costs are so high. In other words, the firm is more likely to maintain the minimum number of standard workers, No. The firm meets the derived demand by employing nonstandard workers who can be laid off whenever it decides. It can be concluded that, by providing full flexibility, nonstandard work plays a crucial role of guaranteeing the optimal number of employment, which leads to the firm's profit maximization.

3. How to explain the wage gap between standard workers and nonstandard workers?

Figure 2 shows labor market equilibrium, Eo, where demand for labor meets supply of labor. At the equilibrium, firms employ No workers paying wage, Wo, which is the same as the value of marginal product. The total labor cost is □ONoEoWo.

Figure 2. When trade unions demand a higher wage



Suppose that there is a trade union demanding a higher wage, say Ws, and that Ns workers are union members and N-Ns workers are not. In this context, the trade union as a monopoly union is assumed to select Ws because it considers the value of marginal product without non-member workers. Suppose that the firm gives up to the 'powerful' trade union and it accepts the higher wage demanded. Then, to keep the zero normal profit, the firm has to pay a lower wage level to non-member workers such as Wn such that □ONsEsWs + □NsNoEnEa = □ONoEoWo. A wage gap, Ws – Wn, takes place in this workplace due to trade union demanding the wage level for union members (standard workers) higher than equilibrium at the cost of non-union workers (nonstandard workers).

4. What is the optimal mix of standard workers and nonstandard workers?

Suppose a firm's short-run production schedule

Q = F(L; K), L = labor and K = capital,

and a labor-combining schedule is

L = G(Ls, Ln), Ls = standard workers and Ln = Nonstandard workers,

as in Figure 3. Then, Q = F(G(Ls, Ln); K).

Suppose that the wage rates for standard workers and nonstandard workers are Ws and Wn. Then, the factor price ratio, which represents the relative price of nonstandard workers

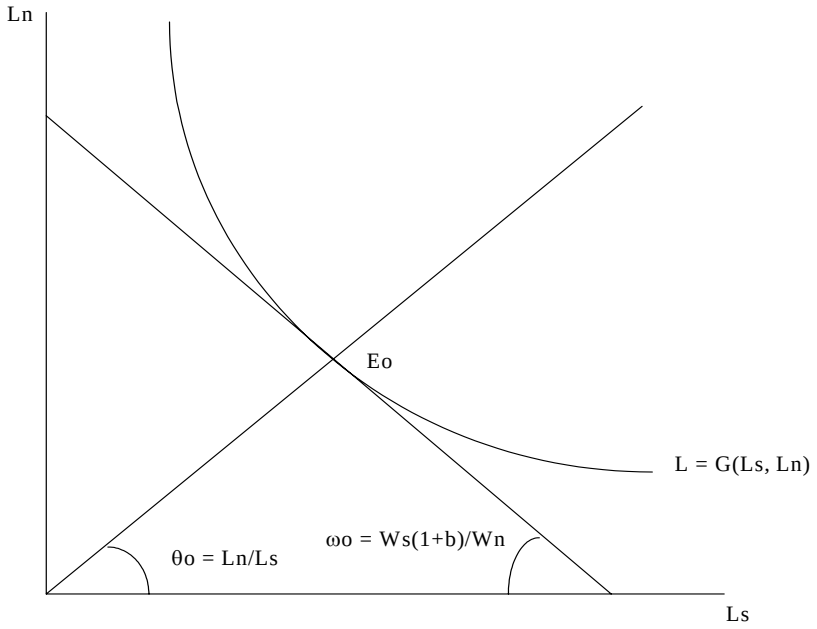
to standard workers, is Ws/Wn. Let's define the ratio of the unit labor cost as

$\omega = Ws(1+b)/Wn$, b = costs of fringe benefits for standard workers.

If there is no fringe benefits at all and there is no wage gap, then $\omega = 1$.

The firm chooses Eo where the marginal rate of substitution equals the ratio of the unit labor cost and the nonstandard-worker intensity is θ_o. With a higher relative wage of standard workers or more fringe benefits, the ratio of the unit labor cost goes up and the nonstandard-worker intensity goes up, implying a higher ratio of nonstandard workers.

Figure 3. The optimal combination of types of workers



5. Why do firms give in to trade unions demanding a higher wage and what happens?

Suppose a market structure as follows: (1) a firm C has monopoly power in the goods market; (2) in the firm C, there is a trade union whose members are standard workers; (3) there are many and relatively small subcontracting firms and their workers cannot organize a trade union; and (4) the firm C has power to the subcontracting firms as a monopsonist.

Suppose that the trade union demands a wage higher than equilibrium at the collective bargaining. The firm has to accept the demand or the trade union goes on strike. The firm and trade union calculate losses due to strike. If that trade union is powerful and firm C expects a huge loss due to the strike, it accepts the demand.

Now the firm has two options to maximize its profits: to raise the price of its product or to cut down the subcontracting price. Suppose that the firm chooses the second, which is usual practice in Korea. Then subcontracting firms face less money for their workers, which implies lower wages for nonstandard workers in small-sized firms. As the trade union demands higher wages, the wage gap between standard and nonstandard workers and that between workers in large-sized and small-sized establishments are widened.

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Appendix 1: The Supplement Survey of the Monthly Economically Active Population Survey

0. Cover sheets (mostly not for public release)

Ed number
Segment and living quarter's number
Household number
Interview Date and Time
Interview Method: 1) Face to face 2) Telephone 3) Self-fill out
Status of household members: Total, Male, Female
Household size
Excluded from the survey: age less than 15
Excluded from the survey: age 15 or older (if 15 and younger and 15 and older are excluded, that leaves nobody for the survey)
Included in the survey
Employed persons
Unemployed persons
Not-in-the labor force
Household head excluded 1. Yes 2. No
Type of household: 1) Farm 2) Non-farm

I. Individual Characteristics

1. Household member number	**2. Relationship to household head**	**3. Sex**	**4. Date of Birth**
on household list __ __	1. Head 2. Spouse 3. Son/Daughter Not Married 4. Son/Daughter Married 5. Grandson/daughter 6. Parent (in law) 7. Grandparent (in law) 8. Brother/sister not married 9. other relatives	1. Male 2. Female	Year __ __ __ __ Month __ __ Day __ __

5. Educational Attainment			**6. Marital Status**
School	**Major**	**Attainment**	
0.None 1.Primary school 2.Middle school 3.High school 4.College 5.University 6.Graduate	*For high schools* 1. Cultural 2. Artistic/physical 3. Educational 4. Commercial, agricultural, technical, fishery *For college and higher education* 1. Cultural/Social Science 4. Natural Science 2. Artistic/Physical 5. Engineering 3. Educational 6. Medicine/Pharmacy	1. Graduated Year: __ __ 2. Attending 3. Dropped out 4.Temporary rested	1. Not married 2. Married 3. Widowed/Divorced

II. Confirmation Items for Labor Force Status

7. What were you doing most of last week?	**9. Although you did not work last week, did you have a job or business?**
1. Working *(skip to the questionnaire 12)* 2. With a job but not work 3. Looking for work 4. Caring for child(ren) 5. Keeping house 6. Attending school 7. Attending institution for entrance examination 8. Attending vocational Institution 9. Preparing for employment 10. Preparing for entrance to school of higher grade 11. Too able to work (Doesn't make sense) 12. Unable to work (handicapped) 13. Waiting for enlistment 14. Preparing for wedding 15. Rested 16.Other (Specify:)	1. Yes **Why were you absent from work last week?** 11. Temporary illness or injury 12. On vacation or training 13. Other family/personal obligation 14. Labor dispute 15. Shutdown of operation *(skip to questionnaire 14, for 11~15)* 16. Other (specify:) *(skip to questionnaire 10)* 2. No. *(skip to questionnaire 10)*

8. Did you do any work for pay or without pay in the family business last week? 1. Yes *(skip to questionnaire 12)* 2. Unpaid family work *(skip to questionnaire 12)* 3. No.	**10. Were you looking for a job or work during the last week?** 1. Yes *(skip to questionnaire 18)* 2. No **11. Were you looking for a job or work during the last 4 weeks?** 1. Yes *(skip to questionnaire 18)* 2. No *(skip to questionnaire 25)*

III. For the Employed

12. Did you have more than 1 job or business last week? 1. Yes 2. No	**15. Did you want an increase in work hours last week? Otherwise, did you want an additional job or to change a job with longer work hours last week?** 1. Want to increase work time in the current job 2. Want to have another job in addition to the current job 3. Want to change a job with longer work hours worked than the current job *(skip to questionnaire 16 for 1~3)* 4. Do not want to change *(skip to questionnaire 31)*
13. How many hours did you work last week? 1. Main job: __ __ __hours 2. Supplementary job: __ __ __ hours 3. Total: __ __ __ hours 1. less than 18 hours (unpaid family work) *(skip to questionnaire 10)* 2. 1~35 hours 3. 36 hours or more *(skip to questionnaire 31)*	
14. Do you usually work less than 36 hours a week? **Yes: what is the main reason you usually work less** **than 36 hours a week?** 11. Normal work time is less than 36 hours 12. Own illness 13. caring for child(ren) 14. Keeping house 15. Attending school 16. Personal preference 17. Out of work 18. Other (specify:) **No: Then, what is the main reason you worked less than 36 hours last week?** 21. Temporary illness or injury 22. Bad weather 23. Vacation/professional training 24. Caring for child 25. Other family/personal obligations 26. Labor dispute 27. Business depression/shutdown of operation 28. Other (specify:)	**16. Could you increase work hours or change a job last week?** Yes: **When?** *(skip to questionnaire 17)* 1. Within 1 week 2. After 1 week up to 1 month 3. After 1 month(including not exact) 9. No *(skip to questionnaire 31)* **10. Were you looking for another job or work last week?** 1. Yes 2. No *(skip to questionnaire 31)*

IV. For the Unemployed

18. Could you have taken a job last week if one had been offered? 1. Yes 2. No *(skip to questionnaire 25)*	**21. What kind of worker status do you want?** 1. Paid worker 2. Unpaid worker
19. How were you looking for work mainly? 1. Registered at public employment agency 2. Registered at private employment agency 3. Sent out resumes/Filled out applications 4. Placed or answered ads. 5. School/university employment center 6. Checked at work sites 7. Contacted friends or relatives 8. Arranged to establish own business 9. Other (specify:)	**22. What kind of work do you desire?** 1. Full-time 2. Part-time **23. Did you receive any job offers last week?** 1. Yes *(skip to questionnaire 24)* 2. No *(skip to questionnaire 29)*
20. How many months have you been looking for work? __ __ months	**24. What was the main reason you could not work at the offered job last week?** 1. Lack of knowledge, experience, skills, or aptitude 2. Unsatisfactory work conditions such as pay, welfare, working hours, etc. 3. Have no prospect of work or company 4. Geographical disadvantage 5. Lack of information on work or job 6. Waiting for notice of results after test or job interview 7. Other (specify:) *(skip to questionnaire 29)*

V. For Those Not-in-the-Labor Force

25. Did you want a job last week?
1. Yes
2. No *(skip to questionnaire 29)*

26. Could you have started a job if one had been offered last week?
1. Yes
2. No
** skip to questionnaire 29, if responded 1. yes for questionnaire 10*

27. What was the main reason you were not looking for work last week?
1. No prospect of finding a job suitable own knowledge and experience
2. No prospect of finding a job suitable with acceptable wage and salary working experience
3. No prospect of finding a job suitable nearby
4. Lack of necessary schooling, training, skills or experiences
5. Employers might think too young or too old
6. Couldn't find any job or work in the past
7. Caring for child, keeping house
8. In school or other training
9. Other (specify:)

28. Have you ever looked for work at any time during the last 1 year? If yes, when did you last look for work?
1. Yes Year __ __ __ __ Month __ __
2. No

(skip to questionnaire 29)

VI. Other

29. Have you ever worked for pay or profit? If yes, how many months have passed since leaving the last job?
1. Less than 12 months
When: Year __ __ __ __ Month __ __
2. 12 months and over (♣ Question End)
3. Never (♣ Question End)

30. What was the main reason you left the job?
1. Other family/personal obligations
2. Caring for child, keeping house
3. Retirement or old age
4. Unsatisfactory work conditions (hours, pay, etc.)
5. Dissolution or closure of the company
6. Dismissed or voluntarily retired
7. Temporary or seasonal job completed
8. Out of work/business conditions worsened
9. Other (specify:)

31. What kind of business or industry were you engaged in?

Name of establishment:

_____

Main activity of establishment (industry)

_____ (__ __ __)

32. What kind of work were you doing?
Kind of duty _____
Position(occupation) _____ (__ __)

How many persons were engaged in the establishment?
1. 1~4 workers 2. 5~9 3. 10~29
4. 30~99 5. 100~299 6. 300~499
7. 500 or more

33. What was the status of workers?
Wage and salary worker
1. Regular employee
2. Temporary employee
3. Daily worker
Self-employed (♣ Question End)
4. Employer
5. Own-account worker
6. Unpaid family worker

34. When did you start the job of last week?
Year __ __ __ __ Month __ __

35. Did you have a fixed term contract when employed?
1. Yes
What was the duration of the contract?
1. 1 month or less
2. More than 1 month but less than 1year
3. 1 year
4. More than 1 year up to 3 years
5. More than 3 years
2. No
Without any specific faults made by yourself, do you expect to keep working as long as you want?
1. Yes 2. No

(For the special month for the supplement survey, skip to questionnaire 41.
If not, ♣ Question End)

♣ This supplement survey is for the employed, but not for the self-employed.

Here, 'your job' means for the job you have during the reference period, i.e., the last week.

41. (If there is a fixed employment period on the contract) is the current contract (period) recurring or updated?
1. Yes
2. No. (It is the first contract period)
((Go to Questionnaire 43)

42. (If there is no fixed employment period on the contract) Is your job for days or weeks only when it is available? (e.g. daily workers in construction industry, personal home-keeping service, personal care for patient)
1. Yes ***(Go to Questionnaire 46)***
2. No

43. Provided the economy does not change (run into closing business or mass layoff for restructuring) and your job performance is adequate, can you continue to work for your current employer as long as you wish?
1. Yes
43-1. Why did you say YES?
1. My job with a contract without specifying any employment period.
2. My job is continued by recurring contract
3. My job under implicit employment practice, meaning continuing work without contract specified
(Go to Questionnaire 46)
2. No

44. How much longer do you expect to work with your current job?
1. No more than 1 year (months)
2. More than 1 year but no more than 3 years
3. More than 3 years

45. What is the main reason of your expectation as such?
Because
1. the employment contract with a specified period is going to be terminated
2. the contract will come to an end implicitly or in general practice
3. I was recruited under the condition that I will quit whenever the employer says to.
4. the current project/duty will be terminated.
5. the previous worker (whom I worked for as a substitute) will be back.
6. my job is only available during certain times of the year, for seasonal work.
7. I am going to search for a new job with better working conditions or a better match to my aptitude or abilities
8. I am going to be of retirement age according to rules or practices.
9. of an education, caring family, or health problem
10. of a managerial problem in the workplace
11. of other reasons (specify:)

46. What are the working hours in the current job?
1. full-time work: usually___ hours per week
(Go to Questionnaire 47)
2. part-time work: usually___ hours per week

46-1. What is the main reason for part-time work?
1. I couldn't find a full-time job.
2. I wanted part-time work.
(46-1 is deleted since 2004 survey)

47. Who pays for your wages and salaries? Is it a temporary work agency?
1. employer the same as workplace
(Go to Questionnaire 49)
2. the dispatched worker company(a TWA)
3. a temporary help agency

48. What is the name of your workplace?
Name: _____
The main activity (industry) __ __

49. Is the current job paid by achievements that you accomplish or by receiving clients to provide goods and services?
1. Yes 2. No.

50. Where do you usually work?
1. At home
2. Either in workplace/my office or in other place but specified

51. What is the reason why you choose to work with such an explicit or implicit contract as in your job?"
Because I
1. am satisfied with job contents and its working conditions
2. can't find any other satisfactory jobs other than this
3. have a plan to move to another job sooner or later with having experience in this job
4. have to also take care of children and/or home production
5. have to participate in vocational training or other further education
6. have freedom for me to control working hours flexibly at this job
7. can get money just as much as I do in this job
8. do not want to be tight at work-life and am not responsible for this job too much
9. have any other reasons
(Q. 51 has been added since the 2004 survey)

52. Are you covered, through the current job, by the social insurance systems as follows?
National Pension or equivalents 11. Yes 12. No
Health Insurance 21. Yes 22. No
Employment Insurance 31. Yes 32. No

53. Are you eligible for the following fringe benefits?
Retirement Allowance 11. Yes 12. No
Bonus 21. Yes 22. No
Overtime Wages 31. Yes 32. No
Paid vacation 41. Yes 42. No

54. Did you and your employer make a written employment contract when you started work?
1. Yes 2. No

55. Are you a member of a trade union in your workplaces?
1. There is NO trade union.
2. I am NOT eligible for trade union.
3. I do not want be a member.
4. I am a member of a trade union.

56. How is your wage or salary determined?
1. Hourly 2. Daily 3. Weekly 4. Monthly
5. Annually 6. Performance payment 7. others
(This questionnaire is added since 2004 survey)

57. How much were you paid per month during the last three months?
__ __ __ __ ten thousand won

Appendix 2: Some more tables

<Table A-1> Diverse types of employment: the share and the number of workers

(units: %, thousand persons)

	2001	2002	2003	2005	2001	2002	2003	2005
	The share of workers				The number of workers			
Employed workers	100.0	100.0	100.0	100.0	13,540	14,029	14,149	14,968
A. Workers without fixed term contract								
(1) Continuing employment, possible	71.3	73	67.2	63.0	9,660	10,237	9,502	9,432
Regular employee	44.5	43.6	44.6	43.9	6,028	6,117	6,307	6,564
Non-regular employee	26.8	29.4	22.6	19.2	3,631	4,121	3,196	2,867
Continuing employment, impossible The expected duration								
(2) Longer than three years	0.5	0.2	0.6	0.9	74	34	89	139
(3) Longer than 1 year but not Longer than 3 years	1.7	1.1	1.8	2.7	234	149	252	407
(4) Not longer than 1 year	1.7	1.3	1.3	1.7	228	181	189	256
B. Workers with fixed term contract Continuing employment, possible The duration of contract								
(5) Longer than 3 years	0.4	0.5	0.6	0.7	56	68	90	108
(6) Longer than 1 year but not longer than 3 years	0.4	0.5	1	1.5	56	69	145	220
(7) 1 year	1.1	1.5	2.6	4.4	151	209	372	665
(8) Shorter than 1 year	1.7	1.6	2.6	2.4	233	226	367	354
C. Workers with fixed term contract Continuing employment, impossible The duration of contract								
(9) Longer than 3 years	0	0	0.1	0.1	4	6	10	13
(10) Longer than 1 year but not longer than 3 years	0.1	0.1	0.2	0.1	9	8	26	19
(11) 1 year	0.1	0.1	0.2	0.2	14	14	22	26
(12) Shorter than 1 year	3.9	3.7	5.4	4.6	531	523	760	692
(13) Part-time workers	4.3	4	4.6	4.9	587	564	647	732
(14) Dispatched workers	0.9	0.7	0.7	0.8	127	92	94	113
(15) Temporary agency workers	2.1	2.3	2.3	2.6	288	316	322	394
(16) Independent contractors	5.7	5.3	3.9	4	769	743	551	596
(17) On-call/daily workers	2.2	2.9	4.2	4.8	298	412	589	718
(18) Tele-workers/Home-based workers	1.6	1.3	0.9	0.6	219	179	121	86

Source: National Statistic Office, *the Supplement Survey of the Monthly Economically Active Population Survey*, August 2001, 2002, 2003, and 2005, Raw data.