Alternative Unemployment Indicator and Unemployment & Unstable Employment in Japan

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Japanese unemployment rate had been kept relatively low among international society until the bubble period of the early nineteen nineties. Due to long-term post-bubble stagnancy, the unemployment rate rapidly increased. The latescence of unemployment is progressing behind an official unemployment rate in Japan: It exits as one form of persons not in the labor force desiring job but not seeking job, the growth of discouraged workers (so-called hidden or invisible unemployment) and as a number of persons in unstable employment. I analyze the medium & long-term change of visible and invisible factors for the unemployment and unstable employment structure based on alternative unemployment indicator (U indicators) and employment and unemployment statistics in Japan.

Kewords: Latescence of unemployment, Alternative unemployment indicator, Discouraged workers, Involuntary unstable employment.

Foreword

During postwar growing period, it was advertised that the capitalism overcame a matter of unemployment. However, the problem of unemployment and its countermeasure has become a main theme for the economics and politics of every country because of increased international unemployment rate under recent low economic growth. Japanese unemployment rate had been kept relatively low among international society until the bubble period of the early nineteen nineties. Due to long-term and deepened post-bubble stagnancy, the unemployment rate rapidly increased to reach 4% level in 1998, exceeding that of U.S.A. In March 1999, Japanese unemployment rate, the youth unemployment rate and a number of unemployed person[1)] reached 4.8%, 10.9% and 3.39 millions, respectively. In April this year, the male unemployment rate reached 5% level and it is called the worst unemployment after the war.

In statistical studies of modern unemployment problems, the statistical indicator of workers in irregular and unstable employment has been deemed important in addition to a number of official unemployed person and unemployment-related indicators. Lowered labor and work conditions due to capital rationalization accelerated unstable employment: In particular, it increased a rate of female wage earners and a number of double income households with multiple jobs, bringing about a growth of nonstandard or atypical employment such as temporary workers or daily hires, part-timers and dispatched workers. The promotion of labor market flexibility, antiregulatory strategy and labor force saving as capital employment policies have generated various forms of nonstandard or unstable employment, causing an international expansion of unemployment and serious social problems[2)].

Japanese unemployment structure has been sustained by employment convention of not eliciting unemployment in the labor market and distinctiveness of labor market itself. It has been deeply connected with the following factors: duplicate economic structure and disparity in labor conditions (by sex, age, size and industry); mobility and stagnancy of surplus labor force within companies and industries (internal labor market); and seniority system with no layoff system or others and life employment system. In the background of relatively-low Japanese unemployment rate (official unemployment rate) until bubble period, there was an invisibility or latency of unemployment, that is, the existence of person not in the labor force desiring jobs (whether currently seeking job or not) and an increased number of workers in unstable employment with lower working conditions. The latescence of unemployment is progressing in two aspects: First, it exits as one form of persons not in the labor force who desire job whether seeking job or not, the growth of discouraged workers in particular, which indicates the existence of marginal labor force (marginal group between labor force and not labor force) problem, so-called hidden or invisible unemployment. Second, it appears as an increased number of persons in unstable employment who have to work under any poor conditions in order to survive. The growth of workers in unstable employment including temporary workers, daily hires and workers who wish to change jobs, especially increasing number of workers in involuntarily unstable employment is a form of latescent unemployment. The latescent unemployment is

deeply connected with female labor force in particular. Elongated "Heisei" depression has made "structural unemployment" defined by OECD more serious. However, the understanding of unemployment problem by public authorities stays only within the range of mismatch between deficient demand for labor force and its supply, where there is no approach of examining factors of structural, visible and invisible changes in unemployment and unstable employment[3].

Section 1 in this paper analyzes an international trend related with alternative unemployment indicator (an acronym of AUIs, hereinafter abbreviated to as AUIs) and various factors of change in unemployment structure based on Japanese AUIs (U indicator) in the nineteen nineties. Section 2 examines factors of medium and long-term changes in Japanese unemployment and unstable employment structure since the nineteen seventies and a change in the employment structure for each industry based on the employment and unemployment statistics of Japan: statistic indicators of Special Survey of the Labor Force Survey (hereinafter abbreviated to as SLFS) and Employment Status Survey (hereinafter abbreviated to as ESS) to review the change of visible and invisible factors for the unemployment and unstable employment structure.

1. Alternative unemployment indicator (AUIs) and unemployment & unstable employment

1.1 International trend related with AUIs

The unemployment statistics and unemployment rate in each country depend on their sources and preparation methods, therefore, they cannot be directly compared with each other. As an attempt of internationally comparing unemployment rates (adjusted unemployment rate), there is the standardized unemployment rate defined by OECD. In the nineteen nineties, the unemployment rates of OECD member states except for the U.S.A. it's high level; especially in European counties, they have exceeded as high as 10%. Although the unemployment rate in Japan indicated the relatively low level of 2~3% even during the period of low economic growth, it has rapidly increased due to post-bubble long-term depression to accelerate the elicitation of unemployment and the aggravation of unemployment indicator.

Depending on a difference in the sources of unemployment statistics and preparation methods, there are labor force statistics and registered statistics, which use different methods of calculating of elicited unemployment rates and have different meanings. Unemployment statistics also differ in meanings depending on particularities and differences in labor markets between advanced and developing countries. Attempts of internationally comparing unemployment rates have been made as calculation of standardized unemployment rate compared and adjusted by OECD, that of international comparison in unemployment rates adjusted to the American concept by the Bureau of Labor Statistics (BLS) in the U.S.A. and a comparison in adjusted unemployment rates between Japan and the U.S., etc. However, a limitation in indicating the unemployment with a single unemployment rate has been discussed as a matter of meaning and limitation of labor force approach, which is an international standard (ILO standard), to review the conceptual specification and measurement of underemployment indicator and AUIs as those supplementing and substituting for the published unemployment rate, a single indicator, on an international basis[4]. AUIs supplementing the unemployment rate (U indicator, etc.) indicate some part of a system of visible and invisible indicators for unemployment and unstable employment.

1) International discussions about reasons why the unemployment rate in Japan is low and to what extent it indicates the reality have been made since the early nineteen eighties. Because this question was proposed by American researchers, a comparison between Japan and the U.S. has been tried based on the adjusted unemployment rate prepared by adjusting the Japanese unemployment concept to the American concept. In the comparison in unemployment statistics between Japan and the U.S., (1) a problem of comparative adjustment in statistics and (2) that of particularities in Japanese and American labor markets behind those statistics were also discussed as related matters. In the comparative adjustment using statistics, the adjusted unemployment rate was calculated and, at the same time, the comparison among indicators including one supplementing and replacing the published unemployment rate, a single unemployment indicator, that is, invisible unemployment indicator (persons not in the labor force desiring jobs, etc.) was discussed and disputed while relating it such issues as unemployment structures of Japan and the U.S. and particularities in

their labor markets[5].

In the U.S.A., "poverty in abundance" problem, namely, a problem of unemployment and partial unemployment as well as poverty (races and downscale) in metropolitan areas (urban ghetto) was socialized in the prospering period of the nineteen sixties (low unemployment rate nationwide), and the concept and indicator of subemployment were examined as a measurement of relation between unemployment and economic hardship. Basic elements of subemployment consisted of unemployed person, discouraged workers, involuntary part-timers and low wage or downscale workers (poor). Subsequently, during the nineteen seventies, several comprehensive indicators were calculated to form a research of alternative indicator for unemployment rate as well as a part of measurement of underemployment indicator[6]. Initially, BLS positively participated in the establishment of subemployment indicator, however, because of difficulty in indicating the relation between unemployment and poverty and that between employment and income with a single comprehensive indicator as well as a certain political judgement, it published "seven Shiskin unemployment indicators" (U indicators) as indicators substitutable for subemployment indicator in 1976[7]. Since 1976, BLS has published the result of calculating U indicators every year. It continued the investigation study of diversified relational indicators between employment and income in the nineteen eighties. In 1989, it proposed the concept and indicator of "Working poor" covering the employment status of workers whose living standards were lower than the poverty line as a new concept and indicator of relation between employment status and low income[8]. In 1994, the following achievements were made: transition of CPS investigation to a computer-aided survey, partial revision of CPS, insertion of "availability for work" as an investigation item for establishing unemployment conditions and addition of "job search since 12 months before" and "be able to work from the previous week" conditions to the specification of discouraged workers. In addition, for AUIs (U indicators), new U indicators were determined and published in 1994[9].

The concept and indicator of underemployment, a question under discussion led by ILO exists as a basis of the calculation of international AUIs. For the framework of underemployment, a labor force survey and unemploy-

ment indicator (objective indicator of full employment) based on the model of advanced countries (modern labor market) and an underemployment indicator based on the model of developing countries (potential surplus population such as agriculture) simultaneously existed in the early stage. Along with the increase and diversification of unemployment, subemployment and unstable employment in advanced countries as well as the maturation of labor markets in developing countries, the discussion on the systematic prehension of labor force survey and underemployment was started (The thirteenth ICLS of ILO, 1982) and The sixteenth ICLS in 1998 proposed the systematic prehension of unemployment rate and underemployment indicator within the same framework as labor force survey (establishment of coherent survey items). It was a proposal of allowing the systematic prehension of unemployment, underemployment, part-time and involuntary reason, etc. by systematically placing questionnaires on "short-time employment" and "wishing to change job and have additional job", visible underemployment indicators, as investigation items in the labor force survey. Its purpose was to further develop the concept and indicator of underemployment as a basis of establishing AUIs[10].

2) The international comparison of AUIs (U indicators, U-type indicators) is calculated by BLS in the U.S.A. In particular, Sorrentino of BLS made some modification for international application to provide the calculation of international comparison of U indicators as shown in table 1. For the adjustment of international comparison, "unemployment period for more than 13 weeks" and "adult unemployment rate" (the unemployment rate of persons of 25 years or older is used due to a certain difficulty in identifying head of households) are adopted as U1 and U3, respectively. Table 1 lists disparities in U indicators among various countries as a basis of U5 (unemployment rate), highlighting a particularly large disparity of Japan. Although omitted in the table, it is distinguishable that U7 of Japanese women is especially great[11].

OECD's Bureau of Statistics has continued the investigation study of the international comparison in part-time employment and involuntary part-time employment to publish the result on the Journal "Employment Outlook". It calculated and published "U-type measure" (supplementary measure) listed in table 2 as new alternative indicators of unemployment

Table 1 International comparison of U indicators (on a basis of labor force)

(%)

Country	year	U-1	U-2	U-3	U-4	U-5	U-6	U-7
Both-sexes								
United States	1983-93	32	51	79	96	100	135	149
Canada	1983-93	47	56	87	99	100	126	133
Australia	1983-93	62	36	74	99	100	130	144
Japan	1984-93	50	25	79	79	100	138	304
Sweden	1987-93	47	61	75	108	100	186	208
European Union:								
France	1983-93	81	46	78	104	100	123	127
Germany	1985-93	81	39	98	95	100	106	(–)
West Germany	1985-91	80	32	97	93	100	105	(–)
United Germany	1992-93	79	56	100	101	100	113	(–)
Italy	1986-93	91	11	56	101	100	128	199
Netherlands	1983, 1985, 1987-91	81	10	84	84	100	124	132
United Kingdom	1983-93	76	27	83	111	100	118	124

(source) Sorrentino [29] (reference number), *Monthly Labor Review*, August 1995, Table 3 (extracts), P. 37.

based on the BLS study[12]. Its purpose was to specify and estimate (1) unemployed person, (2) discouraged workers and (3) involuntary part-timers as AUIs and define the sum of respective ratios to labor force as "supplementary measure" of unemployment. In Spain and Italy with high unemployment rates, the statistic indicators of totals in 1993 were 23.1% and 13.6%, respectively and those of females reached 30.1% and 21.9%, respectively. In both countries, there are significant differences in the ratios of discouraged workers and involuntary part-timers between males and females. Statistic indicators of Japan are not so large because of low unemployment rate, however, it is demonstrated that the ratios of female discouraged workers is remarkably high, in 1983 and 1993, being 6.2% and 4.0%, respectively.

3) The calculation and meaning of AUIs has been internationally discussed. The related indicators are U6 and U7, U indicators, and supplementary

Table 2 Supplementary measure (OECD, Seven major)

(%)

Unemployment rate (1)			Supplementary measure					
			Discouraged workers (2) (% of labor force)		Involuntary part-timer (3) (% of labor force)		BLS U7 type measure (1) + (2) + (3)	
year	1983	1993	1983	1993	1983	1993	1983	1993
France	8.0	11.4	..	0.2	..	4.8	..	14.0
Men	6.1	9.7	..	0.1	..	2.3	..	10.9
Women	10.5	13.5	..	0.3	..	7.8	..	17.7
Germany	6.9	7.7	..	..	0.9	1.5	7.4	8.5
Men	5.9	6.5	..	..	0.3	1.0	6.0	7.0
Women	8.5	9.4	..	..	1.9	2.3	9.5	10.5
Italy	8.4	10.2	1.1	2.6	2.0	2.3	10.4	13.6
Men	5.5	6.8	0.1	0.9	1.3	1.6	6.3	8.5
Women	14.0	15.8	3.0	5.4	3.3	3.3	18.2	21.9
Japan	2.7	2.6	3.2	2.2	2.1	1.9	6.8	5.7
Men	2.6	2.5	1.1	0.9	1.2	1.1	4.3	3.9
Women	2.8	2.8	6.2	4.0	3.4	3.0	10.4	8.1
Spain	20.8	22.4	0.8	0.2	2.0	1.0	22.4	23.1
Men	17.2	18.7	0.2	0.1	1.1	0.6	17.9	19.1
Women	28.3	28.8	2.0	0.4	3.7	1.8	31.5	30.0
United Kingdom	11.2	10.3	1.3	0.6	1.9	3.2	13.3	12.5
Men	12.1	12.5	1.3	0.5	1.0	2.2	13.8	14.0
Women	9.9	7.6	1.2	0.7	3.3	4.5	12.5	10.5
United States	9.8	6.9	1.5	0.9	5.7	5.0	13.9	10.2
Men	10.1	7.2	1.1	0.8	4.8	4.4	13.4	10.1
Women	9.3	6.6	2.0	1.0	6.9	5.7	14.6	10.4

(source) OECD, *Employment Outlook* [26], July 1995, Table 2.18 (extracts), P. 76-77.

measure of OECD, whose major indicators are those of involuntary part-timers and discouraged workers. Both indicators are the concepts deeply connected with female employment and unemployment. The international comparison of AUIs is to internationally compare various forms of unemployment and unstable employment and is also intended for an international comparison of female unemployment and unstable employment in

particular. AUIs of Japan is characterized by a large quantity of person not in the labor force desiring jobs (whether currently seeking employment or not) (the majority are women) and the latescence of unemployment, especially the existence of a great number of female discouraged workers.

First, part-time employment is also called "part-time unemployment" or "partial unemployment" and involuntary part-time employment is particularly deemed a form of invisible unemployment. For involuntary part-timers, how to prescribe part-time employment and its involuntary reasons is the matter. The prescription and scope of part-time employment are different among countries. For part-time employment, there are two basic definitions: a name of employment form within workplace like answers of subjects in EU Labor Force Survey and a certain standard of working hours like a prescription "less than 35 hours a week" in Japan and U.S. Labor Force Survey. According to OECD investigations, involuntary part-time employment is defined, based on the concept and indicator of visible underemployment adopted by ILO, to include the following three groups: (1) Workers usually work full-time but are working part-time because of economic slack, (2) workers who usually work part-time but are working fewer hours in their part-time because of economic slack and (3) those working part-time because full-time work could not be found. The majority of these groups are women[13].

Second, discouraged workers, a primary indicator of invisible unemployment, are generally persons not in the labor force desiring jobs in the labor market, who are defined as the person discouraged from seeking jobs due to some reasons for not seeking jobs. The prescription and coverage of reasons for discouraged workers not to seek jobs are different among countries, being considered as a concept containing subjective and vague judgements of respondents, making an international comparison difficult in a strict sense. The definition of discouraged workers in the international comparison by OECD's Bureau of Statistics requires the discussion on the following matters: (1) how to prescribe the range of reasons for not seeking jobs, an investigation item in the labor force survey, (2) whether or not to insert the "availability for work" condition in the prescription of discourage workers like that of U.S.A. and (3) how to include the previous job search period, etc. In the international comparison of discouraged workers, the

result is different depending on the method of dealing with its concept and prescription[14].

The term of "discouraged workers" is based on the concept and classification having been discussed on the discouragement of willingness to seek jobs. In the U.S.A., it fell under a category of unemployed person prior to 1967 and since 1967, it has been grouped into a form of "persons not in the labor force desiring jobs but not seeking jobs" as a invisible unemployment indicator. On the occasion of adopting a computer-aided survey for the labor force investigation, CPS was partially revised to improve the objectivity of labor force survey in 1994 taking the advice of Levitan Committee; an investigation item for directly confirming "availability for work" was introduced into the conditions of unemployed person in order to establish "marginally attached group" for labor market, and two conditions of "job search since 12 months before" and "be able to work from the previous week" were added to the prescription of discouraged workers. Recently, M. D. Castillo surveyed the studies of the past on this theme and examined the trend of discouraged workers based on this revision in his study of "persons outside the labor force who desire jobs"[15]. According to Castillo, one focus in the past studies on persons not in the labor force not seeking jobs was related to the concept of "hidden unemployment" and it was observed that the concept was expanded to include workers in visible underemployment (especially, involuntary part-timers) in addition to discouraged workers. Another focus was brought into the concept of "labor reserve", which was more widely related with latent supply of labor than "hidden unemployment". From both concepts, it was understood that these groups of persons not in the labor force, especially discouraged workers had stronger labor contacts with labor market than other groups, however, no strong relation was necessarily verified as shown in a Levitan Committee Report. But, Castillo pointed out the viewpoint of relation between these calculations and the then economic situation and also demonstrated that conventional calculations were made in the economic recovery cycle[16].

Generally, discouraged workers tend to decrease in good times and increase in hard times and the degree of contact with labor market depends on economic situation. According to the statistic verification of

Castillo, a number of new-discouraged workers in the U.S.A. (reasons for not seeking jobs are not changed and conditions "job search from a year before" and "availability for work" were added) have been significantly reduced (almost halved) since 1994. It is probably because of the extremely limited concept and indicator of discouraged workers and the aspect of recent U.S.A. boom. Looking at the trend of Japanese discouraged workers from the result of SLFS (see table 6 in section 2), the ratio of discouraged workers available for work in a narrow sense to the discouraged workers who had reasons for not seeking jobs in a broad sense was about a half or less in total in 1997. Thereafter, the disparity continued to enlarge and for the ratios to all labor force in 1998, the latter was 6.2%, while the former was only 1.9%. The trend of persons not in the labor force desiring jobs but currently not seeking jobs, especially the person discouraged from seeking jobs, has showed a latescent unemployment as "hidden unemployment". However, limiting it to the person available for work only seems to obscure the fact and hide these diverse movements. Also in the specification of discouraged workers by OECD, whether or not to introduce the condition of "availability for work" is under discussion.

1.2 Consideration of unemployment and unstable employment in the nineteen nineties with AUIs.

In order to check and examine the factors of structural change in the latescence of unemployment, this section discusses AUIs (calculations of U indicators) in the nineteen nineties to consider the particularity of structural change in unemployment and unstable employment in Japan.

Various features of structural change in unemployment and unstable employment of Japan in the nineteen nineties with upsurging unemployment are examined using the AUIs adjusted and calculated from the result of Special Survey of the Labor Force Survey (SLFS). Japanese U indicators (U1 was prepared for 13 unemployment weeks due to a limitation of international comparison data) in table 3(a) and 3(b) were calculated as per American U indicators. Among U indicators, only the following ones were discussed: unemployed persons-related indicators (U1~U5) as visible indicators and a not labor force indicator of discouraged workers and an employed person indicator of involuntary part-timers (including unemployed persons seeking part-time jobs) as invisible indicators. Its coverage

is limited to the some aspect of unemployment and unstable employment. Japanese U indicators were calculated by Miss. Fuchimoto*[17] from the result of SLFS. Japanese U indicators were characterized by significantly high U7 indicator of "discouraged workers" (a form of person not in the labor force desiring jobs but currently not seeking jobs). Based on the specification of discouraged workers, indicators of discouraged workers (1) (specification in a broad sense: not seeking jobs because no job seems available) and discouraged workers (2) (specification in a narrow sense: desiring jobs and available for work) were calculated[18].

Table 3(a) U indicators (on a basis of Labor force) in Japan (Fuchimoto calculation)

(%)

	Total (year)	1990	1991	1992	1993	1994	1995	1996	1997	1998
U-1	Long duration unemployment rate	1.2	1.1	1.1	1.7	1.7	1.8	2.0	2.2	2.1
U-2	Involuntary job loser rate	0.6	0.6	0.4	0.7	0.8	0.8	0.8	0.8	1.1
U-3	Unemployment rate for head of households	1.8	1.8	2.1	1.9	2.3	2.5	2.4	2.6	2.9
U-4	Unemployment rate for full-time jobseekers	1.8	1.6	1.8	1.9	2.7	2.6	2.9	2.7	2.9
U-5	Ajusted unemployment rate*	2.5	2.3	2.3	2.7	3.2	3.2	3.5	3.6	3.7
U-6	Labor underutilization rate (narrow)	3.4	3.2	3.7	3.5	4.4	4.3	4.6	4.9	5.2
U-7	Labor underutilization rate (broad) (1)	8.5	8.1	8.5	8.7	10.3	9.9	11.0	10.6	11.0
	Labor underutilization rate (broad) (2)	4.8	4.6	4.9	5.0	6.0	6.2	6.6	7.2	7.8
	Male (year)	1990	1991	1992	1993	1994	1995	1996	1997	1998
U-1	Long duration unemployment rate	1.0	1.0	1.0	1.0	1.3	1.6	1.8	1.9	1.8
U-2	Involuntary job loser rate	0.6	0.6	0.5	0.7	0.9	0.9	1.0	0.9	1.1
U-3	Unemployment rate for head of households	1.5	1.5	1.5	1.8	2.1	2.2	2.3	2.3	2.6
U-4	Unemployment rate for full-time jobseekers	1.7	1.6	1.7	1.8	2.1	2.6	2.7	2.7	3.0
U-5	Ajusted unemployment rate*	2.1	2.0	1.9	2.1	2.6	2.8	3.0	3.1	3.4
U-6	Labor underutilization rate (narrow)	2.1	2.1	2.0	2.2	2.5	2.8	3.1	3.3	3.6
U-7	Labor underutilization rate (broad) (1)	3.6	3.5	3.5	3.8	4.6	4.8	4.9	5.2	5.7
	Labor underutilization rate (broad) (2)	2.7	2.7	2.6	2.9	3.3	3.8	4.0	4.4	4.9
	Female (year)	1990	1991	1992	1993	1994	1995	1996	1997	1998
U-1	Long duration unemployment rate	1.5	1.2	1.3	1.7	2.1	2.1	2.3	2.1	1.9
U-2	Involuntary job loser rate	0.6	0.6	0.7	0.8	0.8	0.6	0.6	0.7	0.8
U-3	Unemployment rate for head of households	3.6	3.8	3.3	3.5	3.2	4.6	3.0	4.8	4.9
U-4	Unemployment rate for full-time jobseekers	1.9	1.6	2.0	1.7	2.4	2.6	3.1	2.9	2.5
U-5	Ajusted unemployment rate*	3.2	2.8	2.8	3.5	4.1	3.8	4.1	4.3	4.3
U-6	Labor underutilization rate (narrow)	5.5	5.2	5.2	5.3	6.5	6.3	7.0	7.6	7.7
U-7	Labor underutilization rate (broad) (1)	15.5	14.8	14.7	15.6	17.8	16.7	19.7	18.5	18.6
	Labor underutilization rate (broad) (2)	8.2	7.6	7.7	8.0	9.6	9.5	10.7	11.6	12.3

(note) *U-5 indicator is unemployment rate ajusted to U.S. concept of unemployment.

(source) Statistical Bureau, Management and Coordination Agence Government, *Special Survey of Labor Force Survey* (SLFS).

Table 3(b) U indicators (on a basis of adjusted unemployment rate) in Japan (Fuchimoto calculation)

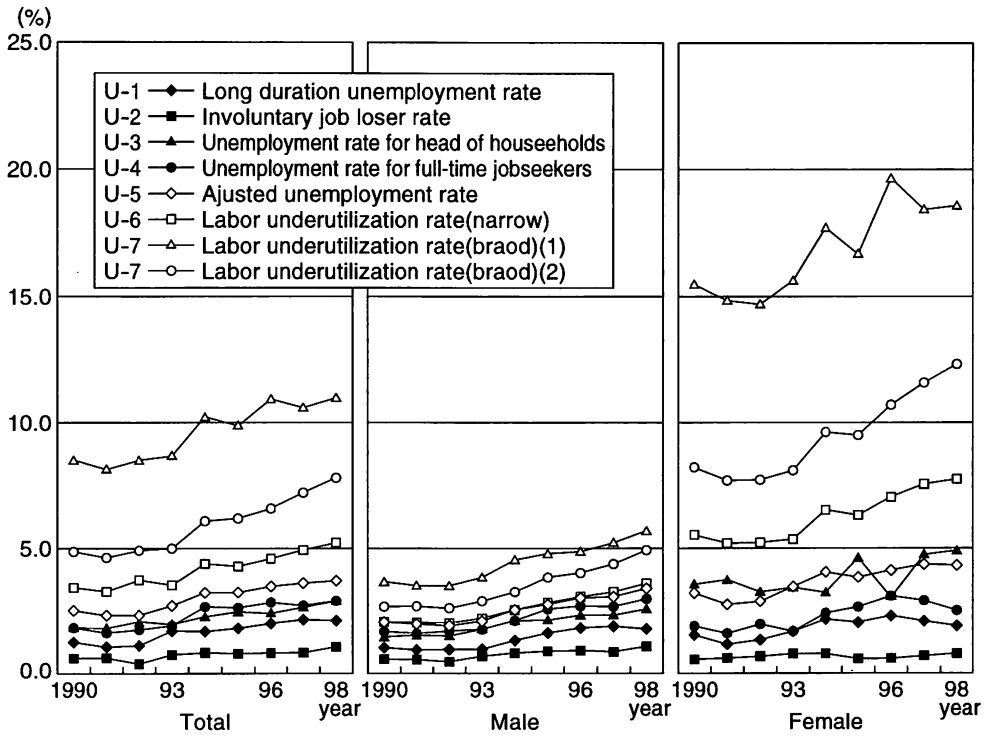
(%)

	Total (year)	1990	1991	1992	1993	1994	1995	1996	1997	1998
U-1	Long duration unemployment rate	50	47	47	63	52	56	58	60	55
U-2	Involuntary job loser rate	25	27	17	28	26	25	24	23	28
U-3	Unemployment rate for head of households	73	79	89	73	71	76	70	73	78
U-4	unemployment rate for full-time jobseekers	72	70	76	71	83	81	82	75	78
U-5	Ajusted unemployment rate	100	100	100	100	100	100	100	100	100
U-6	Labor underutilization rate (narrow)	136	142	159	131	136	132	132	136	139
U-7	Labor underutilization rate (broad) (1)	338	354	366	324	321	307	316	295	295
	Labor underutilization rate (broad) (2)	193	201	211	186	189	192	189	200	209
	Male (year)	1990	1991	1992	1993	1994	1995	1996	1997	1998
U-1	Long duration unemployment rate	50	49	52	47	51	59	61	62	53
U-2	Involuntary job loser rate	29	30	26	35	33	33	32	30	34
U-3	Unemployment rate for head of households	72	78	79	85	81	78	78	76	78
U-4	unemployment rate for full-time jobseekers	83	82	89	86	81	94	90	87	91
U-5	Ajusted unemployment rate	100	100	100	100	100	100	100	100	100
U-6	Labor underutilization rate (narrow)	100	105	107	106	97	103	102	106	106
U-7	Labor underutilization rate (broad) (1)	177	177	184	182	174	173	162	170	169
	Labor underutilization rate (broad) (2)	130	135	137	138	125	139	134	143	145
	Female (year)	1990	1991	1992	1993	1994	1995	1996	1997	1998
U-1	Long duration unemployment rate	48	43	47	48	53	53	56	48	44
U-2	Involuntary job loser rate	20	23	24	24	20	16	15	16	18
U-3	Unemployment rate for head of households	112	137	114	100	79	120	73	110	115
U-4	unemployment rate for full-time jobseekers	60	58	70	50	60	69	75	66	60
U-5	Ajusted unemployment rate	100	100	100	100	100	100	100	100	100
U-6	Labor underutilization rate (narrow)	172	188	183	154	160	164	170	174	181
U-7	Labor underutilization rate (broad) (1)	482	539	517	452	437	435	477	424	437
	Labor underutilization rate (broad) (2)	255	278	271	232	237	247	260	266	287

(source) The same as Table 4(a).

As shown in the profile of fig. 1 (total, male and female), Japanese U indicators are characterized by the fact that ranges (widths) of U1~U7 for women are wider than those for men; especially for U7 indicator related with discouraged workers (both in a broad sense and a narrow sense), female rate is significantly high. It is found that the latescence of unemployment has been accelerated in regard of discouraged female workers. In total, during the bubble period of 1990~1992, a decrease or reduced range of unemployment rate (adjusted unemployment rate) of U5 and other U indicators was observed, however, values of U indicators have raised along with deepened post-bubble depression. One U7 indicator (discouraged workers (1)) on the persons discouraged from working or seeking jobs, a

Fig. 1 Chart of U indicators (on a basis of labor force) in Japan



(source) The same as Table 4(a).

labor underutilization rate in a broad sense, is large both in its level and increase rate: It has raised to 10% level in total. Especially, its female indicator has increased to 15% or near 20%. Another U7 indicator (discouraged workers (2)) has also increased in spite of low level. U6, a factor of a labor underutilization rate in a narrow sense (indicator of involuntary part-timers), has also continued to increase and its female indicator has far exceeded 10%. U1~U5 are alternative indicators on unemployed person. U5, an adjusted unemployment rate (unemployment rate adjusted to the American concept), has raised to 4% level (the value of females is greater than that of males). U4, an unemployment rate for full-time jobseeker, has increased to 2% level (the value of females is greater than that of males) and U3, an unemployment rate for head of households, has raised to 2% level (especially, the value of males already reached 2% level in 1994). U1

of long-duration unemployment rate, an indicator of unemployment seriousness, has increased since 1993 to reach 2% level. U2, an involuntary job loser rate, has raised since 1994 and its male rate reached 1.1% in 1998. Table 3(b) shows U indicators assuming the adjusted unemployment rate = 100 (on a basis of adjusted unemployment rate), indicating the transition of disparity between unemployment rate and each indicator to characterize the structural change of unemployment. Discouraged workers tend to relatively decrease in good times and increase in hard times. In good times (bubble period), the disparity of U7 indicator of discouraged workers relatively increased with a decrease of unemployment rate and it significantly reduced during post-bubble period of 1992~1993. Due to deepened depression, an increase of unemployment rate U5 and far more increase of discouraged workers (females in particular) caused the disparity of U7 to incline toward expansion since 1994. Associated with deepened depression and serious unemployment situation (increase of unemployment rate since 1993), an increase of persons not in the labor force desiring jobs but currently not seeking jobs (discouraged workers), especially male workers desiring jobs and available for work has been observed.

Looking at various factors of change in the unemployment structure with U indicator-related indicators (table 4), a majority of indicators have been worsened since 1993~1994. For visible unemployment indicators (unemployed person-related indicators), the indicator of long-duration unemployed person increased from 1.1% during bubble period to 1.7% in 1993 and to 2.1% in 1998. The indicator of involuntarily job loser increased from 0.6% to 1.1%. For unemployed person for head of households, the indicator of males is greater than that of females, having increased from 1.1% to 1.5%. The indicator of unemployed person for full-time jobseekers became 1.7% in 1994, then 1.9% in 1998. For unemployed person for part-time jobseekers, the increase rate of females is greater than that of males. For invisible unemployment indicators, an increase of involuntary part-timers, especially that of females is remarkable. For discouraged workers, the weight of females is overwhelmingly high. Although the composition ratio decreased during bubble period, it increased during depression period. The indicator of discouraged workers (1) was low during bubble period; however, it increased to 6.2% in total and 12.0% for females in 1998. Associated with elicited unemployment (unemployed person and involuntarily job

Table 4 U indicator-related indicators in Japan (Fuchimoto calculation)

(%)

Total (year)	1990	1991	1992	1993	1994	1995	1996	1997	1998
① Persons unemployed 13 weeks or over	1.2	1.1	1.1	1.7	1.7	1.8	2.0	2.2	2.1
② Labor force	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
③ Involuntary job losers	0.6	0.6	0.4	0.7	0.8	0.8	1.7	1.7	1.1
④ Unemployed persons for head of households	1.0	1.0	1.1	1.0	1.2	1.3	1.3	1.4	1.5
⑤ Labor force for head of households	52.9	52.8	53.3	53.5	53.3	52.6	52.6	53.1	52.4
⑥ Unemployed persons for full-time jobseekers	1.1	1.0	1.1	1.2	1.7	1.7	1.8	1.7	1.9
⑦ Labor force for full-time employment	57.3	58.6	58.4	59.4	60.2	59.5	59.9	59.0	58.8
⑧ Adjusted unemployed persons	2.5	2.3	2.3	2.7	3.2	3.2	3.5	3.6	3.7
⑨ Unemployed persons for part-time jobseekers	0.5	0.6	0.2	0.6	0.8	0.7	0.8	0.9	0.9
⑩ Involuntary part-timers	3.8	3.7	4.4	3.7	4.1	4.1	4.2	4.9	5.2
⑪ Voluntary part-timers	7.7	8.0	8.5	8.8	8.3	8.6	9.1	9.3	9.7
⑫ Discouraged workers (1)	5.3	5.1	5.0	5.4	6.3	5.9	6.8	6.1	6.2
Discouraged workers (2)	1.4	1.4	1.2	1.5	1.7	1.9	2.0	2.4	2.7
Male (year)	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**
① Persons unemployed 13 weeks or over	1.0	1.0	1.0	1.0	1.3	1.6	1.8	1.9	1.8
② Labor force	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
③ Involuntary job losers	0.6	0.6	0.5	0.7	0.9	0.9	1.0	0.9	1.1
④ Unemployed persons for head of households	1.2	1.2	1.2	1.4	1.7	1.7	1.8	1.8	2.0
⑤ Labor force for head of households	78.1	78.0	78.0	76.7	78.0	78.0	76.8	77.2	75.9
⑥ Unemployed persons for full-time jobseekers	1.2	1.1	1.2	1.3	1.5	1.8	1.9	1.9	2.2
⑦ Labor force for full-time employment	67.0	68.0	67.9	68.7	69.3	69.2	69.2	68.5	68.9
⑧ Adjusted unemployed persons	2.1	2.0	1.9	2.1	2.6	2.8	3.0	3.1	3.4
⑨ Unemployed persons for part-time jobseekers	0.4	0.4	0.3	0.4	0.5	0.4	0.5	0.6	0.6
⑩ Involuntary part-timers	1.4	1.5	1.4	1.5	1.5	1.5	1.6	2.1	2.1
⑪ Voluntary part-timers	2.0	2.0	2.2	2.5	2.2	2.3	2.7	2.7	2.8
⑫ Discouraged workers (1)	1.6	1.5	1.5	1.6	2.1	2.0	1.9	2.0	2.2
Discouraged workers (2)	0.6	0.6	0.6	0.7	0.7	1.0	1.0	1.2	1.3
Female (year)	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**
① Persons unemployed 13 weeks or over	1.5	1.2	1.3	1.7	2.1	2.1	2.3	2.1	1.9
② Labor force	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
③ Involuntary job losers	0.6	0.6	0.7	0.8	0.8	0.6	0.6	0.7	0.8
④ Unemployed persons for head of households	0.6	0.6	0.5	0.6	0.5	0.8	0.5	0.9	0.9
⑤ Labor force for head of households	15.7	15.7	16.5	16.9	16.7	16.5	16.6	17.9	18.2
⑥ Unemployed persons for full-time jobseekers	1.0	0.8	1.0	0.9	1.3	1.4	1.7	1.6	1.4
⑦ Labor force for full-time employment	42.9	44.8	43.6	45.3	45.9	45.2	46.1	45.0	44.2
⑧ Adjusted unemployed persons	3.2	2.8	2.8	3.5	4.1	3.8	4.1	4.3	4.3
⑨ Unemployed persons for part-time jobseekers	0.8	0.9	0.7	1.0	1.3	1.1	1.2	1.4	1.4
⑩ Involuntary part-timers	7.4	6.9	6.8	6.9	7.9	7.9	8.1	9.0	9.6
⑪ Voluntary part-timers	16.1	16.8	17.7	18.3	17.3	11.7	18.7	19.0	19.7
⑫ Discouraged workers (1)	10.8	10.3	10.1	11.0	12.4	11.7	14.2	12.0	12.0
Discouraged workers (2)	2.6	2.4	2.5	2.6	3.1	3.3	3.7	4.1	4.6

(source) The same as Table 4(a).

loser, etc.) due to "Heisei" depression, a rapid increase of unstable employment, especially involuntary female part-timers and discouraged workers is observed. Along with the elicitation of unemployment, the latescence of unemployment is deepened.

2. Employment & unemployment statistics and unemployment & unstable employment indicators

AUIs (Japanese U indicators) can only indicate a limited aspect of structural change in unemployment. The analysis of various factors of structural change in unemployment and unstable employment and systematic factors of visible and invisible unemployment structures can be examined from the results of two investigation methods: the Special Survey of the Labor Force Survey (SLFS) and Employment Status Survey (ESS). SLFS is a method of labor force approach for current employment status during one week of the survey, while ESS is a gainful worker's approach for usual employment status. These two methods are different in the basic concept and specification of employment status. SLFS (performed every February until 1982, in June in 1983 and every March after 1984) is a special survey supplementing the indicators of unemployed person, unemployment rate and unemployment-related indicators published by Labor Force Survey (every month) for the purpose of investigating the "status of national unemployment and unstable employment". It can indicate diversified unemployment and unstable employment indicators of current status. On the other hand, ESS is a structural survey performed once every few years on usual employment and unstable employment status with a large number of investigation samples, indicating more structurally diversified aspects and indicators than SLFS. As proposed by the thirteenth ICLS of ILO, the establishment of statistics with two survey methods (labor force approach and gainful worker's approach) on the employment status has been internationally recommended. In Japan, the employment and unemployment statistics in both methods have been prepared since early postwar period, providing two statistical systems, which are internationally noticeable and well established.

This section examines the diversification of Japanese employment forms (structural change of employed persons by two sectors and by industries) first and then the change of visible and invisible factors for Japanese

unemployment and unstable employment structure from various results of SLFS and ESS, statistics of two survey approaches.

2.1 Diversification of employment forms — change of employed persons by two sectors and by employment forms

The latescence of unemployment and diversified forms of unstable employment are manifested through computerization, information, and growth of economic services, intensified division of labor, labor force regimentation and change of employment structure. Table 5(a)(b) re-classifies the working persons (employed persons) by industry into two sectors (goods sector and service sector) based on ESS[19]. It provides (1) sector by industries and by status in employment and (2) sector by industries and by employment forms (summary tables of 1968, 1982 & 1999 and their distribution ratio are only listed due to limited paper size). One cause of unemployment latescence as well as unemployment and unstable employment in Japan was the existence of small-size self-employed persons and family workers. The increase of employment and unstable employment and diversified employment are accelerated through fluctuation in the regimentation of working person by two sectors and by industries. Between the goods production (industrial production)-intensive rapid growth period of 1968~1974 and the subsequent low growth period, there was a great change in the structure of working person. Especially, after 1987 when the service sector exceeded a majority of employed person, the weight of service sector such as wholesale and retail trade service industry (personal & business services and educational & medical services, etc.) and financial and insurance services has been increased. Workers in non standard and unstable employment including temporary and daily-hired workers, part-timers, "Shokutaku" (workers with side jobs) and dispatched workers have been rapidly increased in various industries of service sector, with a notable fact that almost of them are women. The latescence of unemployment and diversified unstable employment are accelerated through intensified division of labor and changing process of employment structure regimentation by industries, accumulating the imbalance between the restructurization of female division of labor and the allocation of work.

1) By status in employment, working person and employees show a similar trend. The distribution ratio of working person started to decrease in goods sector although it increased during growth period: It reduced from 63.5% in

1968 to 49.7%, being less than half, in 1987, then fell to 45.2% in 1997. The decrease of working person in agriculture and fishery, especially in agriculture is remarkable: It reduced from 20.5% in 1968 to 9.8%, below 10%, in 1979 and lowered to 4.9% in 1997. In the industrial sector, which is a core of goods production sector, the ratio exceeds 30%, but has decreased its weight. To the contrary, in the service sector, it has been increasing since the beginning of low economic growth period: Although it was only 36.5% (female rate: 16.3%) in 1968, it raised to 50.3% (female rate: 24.1%) in 1987, more than a majority of working person, then it reached 54.8% (female rate: 27.6%) in 1997 and the female rate exceeded the majority. Among wholesalers and retailers in particular, it has been significantly increased since 1982 22.3% (female rate: 10.4%) to get 22.3% (female rate: 11.4%) in 1997 and the ratio of female workers has raised to exceed the majority. In the service industry, an increase of female workers is remarkable with a great increase in personal & business services, educational and medical services. For the composition and distribution ratios of self-employed person (a majority of self-employed person have no employee), the composition ratio of industrial total changed from 20.4% in 1968 through 18.5% in 1982 to 11.8% in 1997 being almost halved, however, it still exceeds 10%. For self-employed person in the goods sector, the composition ratio decreased from 20.9% in 1968 to 13% in 1997, which was mainly caused by a hemorrhage of self-employed person in agriculture and forestry, especially in agriculture: The distribution rate of agriculture significantly reduced from 43.2% in 1968 to 19.9% in 1997. The weight of self-employed person in Japanese agriculture prosecuted in the small size and self-employed form has not so changed, being about 45%. Self-employed person in industrial production (like small-size factories) has shown a trend of abatement with a peak of 12.4% in 1982; however, the composition and distribution ratios of 1997 were 9.2% and 25.5%, respectively. For self-employed person in the service sector (those of downtown-type such as restaurants and shops), the composition ratio has indicated a trend of slight abatement, however, the distribution ratio increased from 34.9% in 1968 to 50.4% in 1997, exceeding a half to attain the majority. In particular, the growth of self-employed person in wholesalers and retailers and service industry is remarkable.

2) Looking at the variation by employment form in unstable employment, temporary employees have significantly increased in the entire industry,

Table 5(a) Employed person by employment form and by industries (by two sectors)

		All industry			I Goods sector						
								Agriculture*1			industry*2
		Total	male	female	Total	male	female	Total	male	female	Total
1968	Working person	100.0	62.6	38.4	63.5	42.4	22.0	21.0	9.9	11.1	34.5
	Self-employed person	100.0	74.1	26.9	65.1	52.5	13.5	43.2	34.1	9.1	19.3
	····· with employees	100.0	84.7	17.2	46.2	46.0	2.2	6.5	5.6	1.0	36.6
	····· without employees	100.0	78.0	22.8	70.1	58.4	12.5	55.2	43.6	11.7	12.1
	Pieceworkers at home	100.0	4.6	95.7	56.5	3.9	52.9	0.0	0.0	0.0	56.5
	Family workers	100.0	24.3	76.1	78.1	19.2	59.3	66.3	14.3	52.0	9.7
	Employees	100.0	69.5	31.7	58.9	45.6	14.5	1.1	0.8	0.3	46.3
	····· Ordinary employees	100.0	70.1	31.0	58.1	45.7	13.5	0.7	0.5	0.1	45.3
	····· Temporary employees	100.0	47.1	53.5	69.3	38.5	31.4	4.6	3.0	1.6	55.2
	····· Daily employees	100.0	57.2	42.9	84.7	51.7	32.9	10.3	4.2	5.9	70.1
1982	Working person	100.0	61.4	39.6	51.9	35.9	17.0	9.1	4.5	4.6	35.3
	Self-employed person	100.0	69.8	31.5	56.1	43.1	14.2	25.4	20.6	4.8	27.3
	····· with employees	100.0	86.2	15.9	42.3	43.4	1.0	3.3	2.9	0.3	36.4
	····· without employees	100.0	75.6	25.5	56.9	50.0	8.0	37.1	30.0	7.1	15.7
	Pieceworkers at home	100.0	2.5	97.6	78.6	2.2	76.5	0.0	0.0	0.0	78.6
	Family workers	100.0	18.4	82.6	62.7	12.5	51.3	43.1	7.3	35.8	17.0
	Employees	100.0	65.5	35.5	49.5	37.6	12.9	0.7	0.5	0.2	39.6
	····· Ordinary employees	100.0	68.3	32.6	49.6	39.1	11.5	0.5	0.4	0.1	38.8
	····· Temporary employees	100.0	27.4	73.2	41.7	14.9	27.3	1.3	0.4	0.8	36.2
	····· Daily employees	100.0	50.6	49.7	66.6	43.2	23.6	4.6	2.6	1.9	59.0
	Regular staff	100.0	70.9	30.1	50.6	40.9	10.7	0.5	0.4	0.1	39.4
	Part-timers	100.0	16.7	83.7	39.1	7.6	31.9	1.1	0.3	0.8	35.1
	"Shokutaku"	100.0	66.7	34.0	40.8	31.6	9.8	0.7	0.6	0.1	30.1
	Other	100.0	65.1	35.9	65.7	52.2	14.2	4.8	3.2	1.6	56.2

		Wholesale and retail trade			Finance and insurance			Service			
											Personal
		Total	male	female	Total	male	female	Total	male	female	Total
1968	Working person	18.2	10.1	8.1	2.8	1.6	1.2	12.5	6.0	6.5	3.7
	Self-employed person	21.6	15.2	6.5	1.2	0.8	0.4	12.0	5.5	6.4	7.5
	····· with employees	33.5	25.1	8.4	0.9	0.8	0.1	19.3	12.8	6.5	10.8
	····· without employees	20.9	14.3	6.6	1.4	0.9	0.5	7.6	4.4	3.2	3.8
	Pieceworkers at home	0.0	0.0	0.0	0.0	0.0	0.0	43.3	0.7	42.6	40.3
	Family workers	17.6	4.2	13.3	0.2	0.0	0.2	4.1	0.9	3.3	3.2
	Employees	17.3	10.0	7.2	4.0	2.2	1.7	15.0	7.6	7.4	2.5
	····· Ordinary employees	16.9	9.6	7.3	4.2	2.3	1.9	15.5	7.9	7.5	2.5
	····· Temporary employees	13.2	4.0	9.2	1.5	0.3	1.2	12.7	3.2	9.5	3.2
	····· Daily employees	6.1	2.4	3.6	0.3	0.2	0.2	7.0	2.0	5.2	1.8
1982	Working person	22.3	11.9	10.4	3.8	2.1	1.8	18.4	8.6	9.7	3.4
	Self-employed person	25.2	17.3	7.8	1.9	1.3	0.6	16.9	8.0	8.9	7.5
	····· with employees	37.8	28.1	9.8	1.5	1.2	0.3	18.4	13.6	4.9	6.5
	····· without employees	25.2	16.7	8.5	2.3	1.5	0.8	15.6	7.5	8.2	6.4
	Pieceworkers at home	0.0	0.0	0.0	0.0	0.0	0.0	21.3	0.3	21.0	15.7
	Family workers	28.4	4.7	23.7	0.8	0.1	0.7	8.1	1.1	7.0	4.7
	Employees	20.8	11.6	9.1	4.7	2.5	2.2	20.1	9.8	10.3	2.4
	····· Ordinary employees	19.3	11.5	7.8	5.1	2.7	2.4	20.5	10.3	10.2	2.2
	····· Temporary employees	29.4	5.9	23.6	1.9	0.4	1.5	23.8	5.6	18.2	4.3
	····· Daily employees	15.9	2.8	13.1	0.5	0.1	0.5	14.0	3.4	10.7	3.0
	Regular staff	18.2	11.8	6.4	5.2	2.8	2.4	20.3	10.5	9.8	2.0
	Part-timers	36.6	5.3	31.4	1.6	0.1	1.5	20.8	3.4	17.4	5.1
	"Shokutaku"	12.5	8.1	4.5	7.3	4.8	2.6	32.3	18.3	14.0	3.5
	Other	8.9	3.4	5.4	1.6	0.6	1.0	18.9	6.4	12.6	2.4

(note 1) For the classification of Industry by two sectors, see note 19).

(note 2) *1 In agriculture, Forestry and Fishers are contained.

*2 Industry is consisted of Mining, Constraction and Manufacturing.

(source) Statistical Bureau, *Employment Status Survey* (ESS).

(%)

		Manufacturing (extract)			Electricity, gas, and water			Transport and communication			II Service sector		
male	female	Total	male	female	Total	male	female	Total	male	female	Total	male	female
24.7	9.8	26.7	17.8	8.8	0.7	0.6	0.1	6.2	5.4	0.8	36.5	20.2	16.3
15.0	4.3	13.0	8.7	4.3	0.0	0.0	0.0	0.8	0.8	0.0	34.9	21.5	13.3
35.6	1.0	22.5	21.5	0.9	0.0	0.0	0.0	1.5	1.5	0.1	53.8	38.7	15.0
11.4	0.7	7.0	6.3	0.7	0.0	0.0	0.0	0.7	0.7	0.0	29.9	19.6	10.3
3.8	52.8	56.5	3.8	52.8	0.0	0.0	0.0	0.0	0.0	0.0	43.5	0.7	42.8
3.8	5.9	8.1	2.6	5.5	0.0	0.0	0.0	0.3	0.1	0.1	21.9	5.1	16.8
33.7	12.6	36.3	25.0	11.3	1.1	1.0	0.1	9.7	8.4	1.2	41.1	23.9	17.2
33.5	11.8	36.9	25.9	11.0	1.2	1.1	0.1	10.3	9.0	1.3	41.9	24.3	17.5
28.4	26.9	34.7	12.1	22.6	0.6	0.3	0.3	5.9	4.0	1.9	30.7	8.6	22.1
44.0	25.8	16.7	6.4	10.2	0.2	0.2	0.2	3.2	2.7	0.6	15.3	5.5	10.0
24.1	11.2	25.6	15.8	9.8	0.6	0.5	0.1	6.2	5.4	0.7	48.1	25.5	22.6
18.1	9.3	18.1	8.9	9.2	0.0	0.0	0.0	1.6	1.6	0.0	43.9	26.7	17.3
35.8	0.6	17.1	16.5	0.5	0.0	0.0	0.0	1.4	1.4	0.0	57.7	42.9	14.9
14.9	0.8	8.3	7.5	0.8	0.0	0.0	0.0	1.9	1.9	0.0	43.1	25.7	17.5
2.1	76.4	78.6	2.1	76.4	0.0	0.0	0.0	0.0	0.0	0.0	21.4	0.3	21.1
4.2	12.8	11.9	2.3	9.6	0.0	0.0	0.0	0.6	0.1	0.5	37.3	5.9	31.4
28.2	11.4	29.2	19.3	9.9	0.8	0.7	0.1	8.0	7.0	0.9	50.5	27.9	22.6
28.6	10.1	29.9	20.9	9.0	0.9	0.8	0.1	9.0	8.0	0.9	50.4	29.2	21.2
12.1	24.2	27.5	5.6	21.9	0.4	0.1	0.2	3.3	1.6	1.6	58.3	12.6	45.8
38.2	20.7	19.1	4.7	14.4	0.1	0.1	0.1	2.3	1.8	0.5	33.4	7.4	26.2
30.0	9.4	30.0	21.7	8.3	0.9	0.9	0.1	9.3	8.4	0.9	49.4	29.9	19.5
6.1	28.9	29.7	3.0	26.7	0.2	0.0	0.1	2.5	1.0	1.5	60.9	9.1	51.9
23.2	6.8	22.2	16.0	6.2	2.6	1.3	1.3	7.3	5.9	1.6	59.2	35.2	24.2
44.9	11.6	13.0	7.5	5.6	0.5	0.2	0.2	3.0	2.4	0.5	34.3	12.9	21.6

service		Business service			Medical service			Education service			Govemment		
male	female	Total	male	female	Total	male	female	Total	male	female	Total	male	female
1.2	2.5	1.4	0.9	0.5	0.6	1.1	2.8	1.6	1.1	1.9	2.5	0.5	0.0
2.6	4.9	0.6	0.3	0.3	1.1	0.3	0.1	0.0	0.0	1.9	0.0	0.0	0.0
5.5	5.3	0.7	0.6	0.1	3.5	0.4	0.3	0.1	0.1	2.5	0.0	0.0	0.1
2.2	1.6	0.3	0.3	0.1	0.7	0.3	0.0	0.0	0.0	2.0	0.0	0.0	0.0
0.4	39.9	2.9	0.1	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
0.7	2.5	0.1	0.0	0.1	0.1	0.3	0.0	0.0	0.0	0.3	0.0	0.0	0.0
0.9	1.7	2.0	1.3	0.7	0.5	1.6	4.4	2.6	1.8	2.4	4.0	0.9	0.0
0.9	1.7	2.1	1.4	0.7	0.6	1.7	4.8	2.9	1.9	2.4	4.4	0.8	0.0
0.5	2.8	1.5	0.6	0.9	0.3	1.1	2.6	0.8	1.8	1.7	1.0	2.2	0.1
0.3	1.5	1.2	0.6	0.8	0.2	0.2	0.3	0.2	0.3	0.5	0.8	1.1	0.2
1.2	2.3	2.9	1.8	1.1	2.9	0.8	2.1	3.3	1.8	1.5	3.4	2.8	0.7
2.7	4.8	1.6	0.6	1.0	1.7	1.5	0.2	0.1	0.0	0.1	0.0	0.0	0.0
3.3	3.3	0.9	0.8	0.0	4.9	4.6	0.3	0.3	0.1	0.1	0.0	0.0	0.0
2.9	3.5	1.2	0.6	0.6	1.0	0.7	0.2	0.0	0.0	0.0	0.0	0.0	0.0
0.2	15.5	5.7	0.2	5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.7	3.9	0.4	0.1	0.3	1.3	0.1	1.2	0.1	0.0	0.1	0.0	0.0	0.0
0.9	1.5	3.6	2.3	1.2	3.4	0.8	2.6	4.5	2.5	2.0	4.7	3.8	0.9
0.9	1.2	3.6	2.4	1.2	3.7	0.9	2.9	5.0	2.9	2.2	5.3	4.6	0.8
0.4	3.9	4.0	1.4	2.5	3.3	0.4	2.9	4.0	1.3	2.6	2.9	0.6	2.2
0.3	2.7	3.1	1.3	1.8	1.4	0.3	1.1	0.5	0.1	0.4	2.4	0.7	1.7
0.9	1.1	3.5	2.4	1.1	3.7	0.9	2.8	5.2	2.9	2.2	5.5	4.7	0.8
0.4	4.7	3.7	0.9	2.8	3.5	0.2	3.3	1.7	0.4	1.3	1.5	0.1	1.3
1.9	1.6	6.8	4.9	1.9	2.3	0.9	1.4	7.9	4.5	3.5	6.9	3.9	3.2
0.5	2.0	3.3	1.9	1.4	1.8	0.5	1.3	3.9	1.2	2.6	4.4	2.0	2.5

Table 5(b) Employed person by employment form and by industries (by two sectors)*3

(%)

1997		All industry			I Goods sector														
								Agriculture*1			industry*2			Manufacturing (extract)			Electricity, gas, and water		
		Total	male	female	Total	male	female	Total	male	female	Total	male	female	Total	male	female	Total	male	female
	Working person	100.0	59.0	41.0	45.2	31.7	13.4	5.0	2.7	2.3	32.9	23.2	9.8	22.6	14.5	8.0	0.6	0.5	0.1
	Self-employed person	100.0	70.9	29.1	49.6	40.6	9.0	19.9	17.1	2.8	25.5	19.5	6.0	13.9	7.9	6.0	0.0	0.0	0.0
	Pieceworkers at home	100.0	4.7	95.1	77.4	3.8	73.6	0.0	0.0	0.0	77.4	3.8	73.6	77.4	3.8	73.6	0.0	0.0	0.0
	Family workers	100.0	18.3	81.6	58.0	11.9	46.0	35.2	5.7	29.5	19.6	5.3	14.3	10.9	2.1	8.8	0.0	0.0	0.0
	Employees	100.0	59.0	41.0	43.4	31.5	11.9	0.6	0.3	0.3	34.5	24.4	10.1	24.9	16.3	8.6	0.8	0.7	0.1
	Ordinary employees	100.0	62.6	37.4	44.9	33.7	11.2	0.5	0.3	0.2	35.7	26.0	9.7	26.2	18.0	8.2	0.8	0.7	0.1
	····· Temporary employees	100.0	30.1	69.9	28.3	11.8	16.4	1.4	0.4	1.0	21.4	8.9	12.5	15.9	4.8	11.1	0.3	0.1	0.2
	····· Daily employees	100.0	47.7	52.3	50.7	33.9	16.7	3.4	1.4	2.0	42.8	29.8	13.1	15.2	4.6	10.6	0.1	0.1	0.0
	Regular staff	100.0	69.5	30.5	47.6	38.2	9.4	0.4	0.3	0.1	37.7	29.5	8.1	27.0	20.4	6.6	0.9	0.8	0.1
	Part-timers	100.0	6.3	93.7	32.2	3.0	29.2	1.2	0.1	1.0	27.3	2.4	24.9	24.7	1.7	23.0	0.1	0.0	0.1
	"Arubaito"	100.0	49.4	50.5	24.0	16.4	7.6	1.0	0.4	0.6	17.2	12.1	5.1	9.7	5.5	4.2	0.1	0.0	0.1
	····· Student	100.0	55.6	44.4	7.0	5.1	1.8	0.0	0.0	0.0	4.7	3.2	1.4	3.8	2.4	1.4	0.0	0.0	0.0
	"Shokutaku"	100.0	62.5	37.5	30.3	23.3	6.8	0.7	0.4	0.2	20.9	16.4	4.5	15.0	11.2	3.8	1.4	0.8	0.6
	Dispatched workers	100.0	20.6	79.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Other	100.0	59.7	40.2	49.3	39.9	9.2	3.2	2.0	1.2	0.0	0.0	0.0	11.7	7.6	4.1	0.4	0.2	0.2
1997					II Service sector														
		Transport and communication						Wholesale and retail trade			Finance and insurance			Servic			Government		
		Total	male	female	Total	male	female	Total	male	female	Total	male	female	Total	male	female	Total	male	female
	Working person	6.2	5.1	1.1	54.8	27.2	27.6	22.3	10.9	11.4	4.2	2.2	2.0	24.4	11.2	13.2	3.1	2.4	0.7
	Self-employed person	2.5	2.5	0.1	50.4	30.3	20.1	23.3	15.4	7.9	3.0	2.0	1.0	24.0	12.8	11.2	0.0	0.0	0.0
	Pieceworkers at home	0.0	0.0	0.0	22.4	0.9	21.6	0.0	0.0	0.0	0.0	0.0	0.0	22.4	0.9	21.6	0.0	0.0	0.0
	Family workers	0.9	0.2	0.7	42.0	6.4	35.6	28.0	4.6	23.4	1.4	0.2	1.2	12.6	1.6	11.0	0.0	0.0	0.0
	Employees	7.4	6.0	1.4	56.6	27.4	29.2	21.3	10.0	11.3	4.4	2.2	2.2	25.8	11.5	14.4	4.1	3.2	0.9
	Ordinary employees	7.8	6.6	1.2	55.1	28.9	26.2	20.1	10.4	9.7	4.8	2.5	2.3	25.2	11.9	13.2	4.3	3.6	0.7
	····· Temporary employees	4.9	2.2	2.7	71.8	18.3	53.5	31.5	7.9	23.6	2.2	0.3	1.9	33.3	8.8	24.5	3.1	0.6	2.4
	····· Daily employees	4.0	2.5	1.4	49.3	13.8	35.5	23.1	5.2	17.9	0.9	0.2	0.7	21.5	6.1	15.4	0.6	0.1	0.4
	Regular staff	8.4	7.4	1.0	52.4	31.3	21.1	17.0	11.1	5.9	5.1	2.8	2.3	24.8	12.8	12.0	4.8	4.0	0.8
	Part-timers	3.5	0.4	3.1	67.8	3.3	64.5	37.5	1.2	36.3	2.6	0.1	2.4	25.9	1.8	24.1	0.7	0.1	0.6
	"Arubaito"	5.5	3.8	1.7	75.9	33.0	42.9	45.3	19.3	26.1	1.0	0.3	0.7	25.4	11.8	13.6	1.6	0.2	1.4
	····· Student	2.3	2.0	0.4	93.0	50.4	42.6	66.9	35.0	31.9	0.4	0.1	0.3	23.7	14.3	9.4	0.1	0.0	0.1
	"Shokutaku"	7.1	5.6	1.6	69.9	39.2	30.6	11.7	6.9	4.8	7.8	4.6	3.2	41.6	23.2	18.4	8.1	4.0	4.0
	Dispatched workers	0.0	0.0	0.0	100.0	20.6	79.4	0.0	0.0	0.0	0.0	0.0	0.0	100.0	20.6	79.4	0.0	0.0	0.0
	Other	3.9	2.7	1.2	50.8	19.8	31.0	8.9	3.1	5.8	1.8	0.5	1.3	33.0	12.1	20.9	4.6	2.2	2.3

(note 1), (note 2) A ditto. (note 3) Table of 1997 is summarized due to the revision of industrial classification.
(source) A ditto.

however, the distribution ratio of female temporary employees changed from 53.5% in 1968, through 72.0% in 1987, to 69.9% in 1997, and the majority of such workers were women. The temporary employees in the goods sector have showed a trend of abatement, however, the composition ratio of temporary employees in the service sector has been consistently increased to become 9.8% (female ratio: 14.6%) in 1997 and the distribution ratio was 58.3% (female ratio: 45.8%) exceeding the majority in 1982 to reach 71.8% (female ratio: 53.5%) in 1997, and most of them were women. For wholesale and retail trades, the composition ratio increased from 2.2% (female ratio: 3.4%) in 1968 to 10.6% (female ratio: 15.6%) in 1997 and the distribution ratio also raised from 13.2% (female ratio: 9.2%) in 1968 to 31.5% (female ratio: 23%) in 1997: It occupies more than 30% of temporary employees in total and 23% of female temporary employees are wholesalers or retailers. For service industry, the composition ratio rapidly increased from 3.1% (female ratio: 4.6%) in 1968 to 10.2% (female ratio: 13.9%) in 1997 and the distribution ratio raised from 12.7% (female ratio: 9.5%) in 1968 to 32.3% (female ratio: 24.5%) in 1997: It occupies more than 30% of total temporary employees and less than 25% of female temporary employees are from the service industry. The increase of temporary employees is remarkable in office service industry as well as proprietary one.

3) Looking at indicators by employment forms (since 1982), for the indicator of part-timers (as an appellation in the workplace) in the entire industry, the composition ratio increased from 8.1% (female ratio: 17.1%) in 1982 to 10.4% (female ratio: 23.9%) in 1997; the distribution ratio for women changed from 83.7% in 1982 to 93.7% in 1997 and the supermajority of part-timers are women. For part-timers in the goods sector, the composition ratio has increased a little, however, the distribution ratio has decreased its weight. For part-timers in the service sector, the composition ratio raised from 10.2% (female ratio: 18.5%) in 1982 to 12.9% (female ratio: 24.2%) in 1997 and the distribution ratio also increased from 60.9% (female ratio: 51.9%) in 1982 to 67.8% (64.5%) in 1997: Many of female part-timers are workers in the service sector. The composition and distribution ratios for wholesale and retail trades have greatly increased and the weight of part-timers exceeds 36% and most of them are women. Similarly, part-timers in the service sector have remarkably increased in number: Their ratio is about 26% of the entire industry and most of them are women.

"Arubaito" (workers with side jobs) have also increased with the composition ratio of industrial total being 5.0% (female ratio: 6.1%) in 1997 and the ratio of "Arubaito" (workers with side jobs) in the service sector being 6.9% (female ratio: 7.8%). Industries with high side-job composition ratios include restaurants with the ratio of 20.7% (female ratio: 19.9%) and foods retailers, etc. The increase of "shokutaku" (full-time but treated as subemployed workers) and dispatched workers since 1982 has been great, however, the ratio of dispatched workers in 1997 was 0.4% in industrial total: The male percentage was 20.6% and the female one was 79.4%. Most of dispatched workers are employed in the service industry, especially in office services and the majority are women.

2.2 Labor Force Survey (Special Survey) and unemployment & unstable employment indicators

From the results of Special Survey of the Labor Force Survey (SLFS), as shown in table 6(a)(b), (1) visible unemployment (unemployed person) indicator, (2) invisible unemployment indicator (not labor force desiring jobs whether currently seeking jobs or not) and (3) unstable employment (short-time worker) indicator and unstable employees (by employment forms) indicator during the period of 1977~1998 were calculated. And various factors of time series and structural change in unemployment and unstable employment are analyzed.

For the indicators of person in visible unemployment (unemployed person), reasons for leaving job are particularly identified as involuntary indicators: unemployed person seeking main jobs and unemployed person with involuntary reasons (personnel reduction, dissolution of company and business slack, etc.) (involuntary unemployed person losing job), which are regarded as indicators for the seriousness of unemployment. For person not in the labor force desiring jobs, those desiring jobs and available for work are separated as invisible unemployment indicator, which is deemed an indicator with high invisible unemployment rate due to strong desire for jobs. Discouraged workers and those available for work as an additional prescription are identified. The prescription of discouraged workers in a broad sense (due to a reason that no job seems available) is a typical indicator of invisible unemployment. Discouraged workers available for work (conceptually, similar to a new prescription of BLS) is an indicator of dis-

Table 6(a) Unemployment and unstable employment-related indicators (Total, SLFS)

(%)

Total Number (year)	1977	1978	1979	1980	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Visible unemployment indicator (unemployed person)	2.3	2.6	2.5	2.2	2.6	2.6	3.0	2.8	2.8	3.2	2.9	2.5	2.3	2.2	2.1	2.4	3.0	3.1	3.4	3.5	3.7
Unemployed person seeking work within a month	1.5	1.4	1.4	1.2	1.6	–	2.2	2.1	2.1	2.2	2.0	1.7	1.6	1.5	1.5	1.8	2.3	2.4	2.7	2.7	2.9
Long term unemployed person	1.1	1.3	1.4	1.2	1.3	1.4	1.6	1.4	1.5	1.8	1.6	1.3	1.2	1.1	1.0	1.2	1.7	1.6	2.0	2.0	2.1
Unemployed person seeking main jobs	2.0	2.2	2.1	1.8	2.0	1.8	2.4	2.3	2.3	2.6	2.3	1.9	1.7	1.6	1.6	1.9	2.3	2.4	–	–	–
Involuntary unemployed person losing job	0.7	0.9	0.7	0.6	0.7	–	1.0	0.9	0.9	0.9	0.8	0.6	0.4	0.5	0.5	0.7	0.9	0.9	0.9	0.9	1.1
Unemployed person for the head of households	0.9	0.7	0.8	0.8	1.1	0.9	1.2	1.1	1.1	1.2	1.0	0.8	0.7	0.7	0.6	0.7	0.8	0.9	1.0	0.9	1.1
Unemployed person for household members	0.8	1.4	1.0	1.2	0.9	1.4	1.4	1.4	1.3	1.5	1.4	1.3	1.2	1.2	1.2	1.3	1.7	1.7	2.0	2.0	2.1
Invisible unemployment indicator (not labor force)																					
Person waiting to report to a new job within a month	1.3	1.6	1.6	1.3	1.5	–	2.3	1.9	2.2	2.3	2.3	2.4	2.4	2.3	2.3	2.2	2.0	1.8	1.7	1.7	1.6
..... After graduation	–	1.0	1.0	1.0	–	–	2.0	1.7	1.9	2.0	1.9	2.1	2.0	2.0	2.1	1.9	1.7	1.4	1.3	1.3	1.2
Persons who desire job	13.8	16.6	17.1	16.8	14.8	12.1	17.7	16.3	16.9	18.1	17.4	16.9	16.4	15.5	15.1	15.5	15.1	14.0	14.5	14.6	14.8
..... Available for work	2.9	3.2	3.0	2.9	2.9	3.8	1.9	1.9	2.0	2.1	1.8	1.7	1.4	1.4	1.4	1.5	1.7	1.9	2.1	2.4	2.7
Discouraged workers	4.4	5.3	5.2	4.2	2.2	–	4.5	6.4	6.7	6.8	6.2	5.8	5.3	5.1	5.0	5.4	6.3	5.9	6.1	6.1	6.2
..... Available for work	2.0	1.8	1.8	1.5	1.0	–	1.0	1.4	1.4	1.5	1.3	1.1	1.0	0.9	0.9	1.0	1.3	1.4	1.5	1.7	1.9
Employed persons, not work temporarily	0.2	0.3	0.3	–	–	1.7	–	–	–	–	–	2.3	2.4	2.6	2.5	2.6	2.7	1.9	1.9	1.8	2.0
Unstable employed person (short time worker) indicator																					
Part-time worker (less than 35 hour for a week)	15.0	15.2	15.3	17.0	16.1	13.7	17.7	18.0	17.6	17.7	18.0	24.8	18.8	19.5	20.2	20.7	20.2	21.5	21.2	21.7	23.1
..... Part-time worker engaged mainly in work	6.1	6.0	6.1	7.6	6.7	4.8	6.1	6.1	5.8	6.1	6.4	12.4	6.7	6.8	7.1	8.0	8.3	8.7	8.6	9.2	10.0
..... Part-time worker wishing to change job	1.2	1.3	1.8	2.1	2.4	–	2.1	–	2.1	2.1	2.2	3.2	2.1	2.1	2.1	2.2	2.3	2.4	2.4	2.5	2.7
Unstable employees Total	9.4	10.1	11.2	10.8	9.2	10.9	9.6	9.6	9.3	9.3	9.7	9.9	10.0	9.4	9.4	9.6	9.6	9.5	9.1	9.7	10.1
Temporary employees	4.4	4.9	5.8	5.4	4.6	6.5	5.2	5.3	5.4	5.4	5.8	5.9	6.2	5.8	5.7	6.1	6.1	5.8	5.7	6.2	6.5
..... Temporary employees engaged mainly in work	2.5	2.5	3.2	2.9	2.2	3.1	2.8	2.6	2.4	2.6	2.8	2.8	2.7	2.3	2.4	2.7	2.7	2.6	2.6	3.0	2.9
Daily employees	3.1	3.5	3.4	3.3	2.6	2.3	2.6	2.5	2.3	2.3	2.4	2.5	2.4	2.3	2.5	2.5	2.4	2.6	2.6	2.7	2.8
..... Daily employees engaged mainly in work	2.5	2.7	2.6	2.4	1.9	1.6	1.8	1.7	1.6	1.5	1.5	1.5	1.4	1.4	1.4	1.4	1.4	1.4	1.5	1.6	1.6
Pieceworkers	1.8	1.7	2.0	2.1	2.0	2.0	1.8	1.8	1.7	1.5	1.5	1.5	1.4	1.3	1.3	1.0	1.0	1.1	0.8	0.8	0.8
..... Pieceworkers engaged mainly in work	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Employees of small size company (less than 30 employees)	22.0	–	–	24.6	23.6	–	25.4	25.0	25.3	25.4	25.7	25.4	25.4	26.0	26.1	25.6	25.9	26.3	26.9	26.7	26.5
..... Employees, mainly in work	19.4	–	–	20.9	20.0	–	21.3	20.6	20.9	20.8	21.0	20.7	20.3	20.8	20.5	20.4	20.8	21.2	21.6	21.5	21.4
Labor force Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(source) Statistical Bureau, *Special Survey of Labor Force Survey* (SLFS)

Table 6(b) Unemployment and unstalle employment-related indicator (Female, SLFS)

(%)

Female (year)	1977	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Visible unemployment indicator (unemployed person)	2.2	2.6	2.9	3.0	2.8	2.8	3.3	2.8	2.7	2.4	2.1	2.2	2.7	3.2	3.1	3.5	4.3	3.5
Unemployed person seeking work within a month	1.4	1.6	–	2.3	2.1	2.1	2.5	2.1	2.0	1.8	1.6	1.7	2.0	2.6	2.2	1.7	3.6	2.9
Long term unemployed person	0.9	1.3	1.4	1.4	1.2	1.4	1.7	1.4	1.2	1.0	0.9	1.0	1.2	1.7	1.3	2.9	2.1	1.7
Unemployed person seeking main jobs	1.5	1.5	1.4	1.9	1.8	1.7	2.1	1.7	1.5	1.4	1.1	1.3	1.6	1.8	1.9	–	–	–
Involuntary unemployed person losing job	0.4	0.4	–	0.5	0.6	0.5	0.7	0.5	0.3	0.2	0.3	0.3	0.5	0.7	0.6	0.7	0.9	0.7
Unemployed person for the head of household	0.2	0.4	0.2	0.3	0.2	0.3	0.3	0.3	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3
Unemployed person for household members	1.0	1.2	2.3	2.4	2.2	2.1	2.4	2.1	2.1	1.9	1.6	1.7	2.1	2.7	2.4	2.8	3.4	2.8
Invisible unemployment indicator (not labor force)																		
Person waiting to report to a new job within a month	2.3	2.5	–	3.3	2.4	2.8	3.0	3.1	3.1	3.0	2.8	3.0	2.8	1.4	2.2	2.2	2.6	1.9
..... After graduation	–	–	–	2.8	1.9	2.2	2.4	2.5	2.5	2.5	2.3	2.5	2.4	0.9	1.6	1.6	1.8	1.4
Persons who desire job	30.3	31.0	22.9	37.2	33.3	34.0	36.5	34.6	32.7	31.6	30.0	29.4	30.4	29.5	26.7	28.0	33.7	27.7
..... Available for work	5.9	5.7	6.0	3.9	3.7	3.9	3.9	3.4	3.0	2.7	2.4	2.5	2.7	3.2	3.3	3.8	5.0	4.7
Discouraged workers	9.7	4.7	–	9.8	13.8	14.2	14.4	13.0	11.8	10.8	10.4	10.1	11.1	12.5	11.8	12.6	14.7	12.1
..... Available for work	4.2	2.1	–	2.1	2.8	2.9	2.9	2.3	2.1	1.8	1.6	1.7	1.9	2.4	2.5	2.8	–	–
Employed persons, not work temporarily	0.2	–	1.5	–	–	–	–	–	2.0	2.3	2.2	2.5	2.6	2.6	1.8	1.9	2.2	2.1
Unstable employed person (short time worker) indicator																		
Part-time worker (less than 35 hour for a week)	27.5	29.1	25.6	28.8	29.7	29.3	29.6	30.3	14.2	31.5	32.4	33.8	34.8	35.5	36.8	35.7	44.6	38.4
..... Part-time worker engaged mainly in work	6.5	7.3	12.0	6.3	6.4	6.1	6.4	6.9	12.9	7.3	7.7	8.1	9.6	10.0	10.9	10.4	14.6	12.4
..... Part-time worker wishing to change job	2.2	4.3	–	3.4	–	3.6	3.8	3.8	5.4	3.8	3.7	3.6	3.9	4.0	4.3	4.2	5.5	4.7
Unstable employees Total	15.9	16.9	19.9	17.0	17.6	17.0	17.0	17.3	17.6	17.6	16.6	16.5	16.7	16.9	17.0	15.6	19.9	17.3
Temporary employees	8.0	8.4	12.3	9.4	9.8	9.9	10.1	10.5	10.7	11.1	10.4	10.1	10.9	11.0	10.4	10.0	12.9	11.5
..... Temporary employees engaged mainly in work	3.9	3.5	5.1	4.1	3.9	3.7	3.9	4.2	4.2	3.9	3.3	3.6	3.9	4.2	4.0	3.7	5.2	4.4
Daily employees	3.3	3.5	2.6	3.1	3.3	2.9	3.2	3.3	3.4	3.2	3.0	3.4	3.4	3.4	3.9	3.8	4.8	3.9
..... Daily employees engaged mainly in work	1.9	1.7	1.2	1.5	1.5	1.3	1.3	1.4	1.4	1.1	1.0	1.1	1.3	1.3	1.5	1.3	1.8	1.5
Pieceworkers	4.6	5.0	5.0	4.5	4.4	4.2	3.7	3.6	3.6	3.3	3.2	3.0	2.5	2.5	2.7	1.8	2.2	1.9
..... Pieceworkers engaged mainly in work	0.3	0.5	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1
Employees of small size company (less than 30 employees)	20.0	23.4	–	26.5	26.2	26.7	26.6	27.4	26.8	27.4	28.2	28.4	28.2	28.3	28.6	29.1	35.5	28.7
..... Employees, mainly in work	14.2	16.0	–	18.0	16.9	17.3	16.6	17.5	16.8	16.8	17.4	16.8	17.5	17.6	18.4	18.4	22.7	18.2
Labor force Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(source) A ditto.

couraged workers in a narrow sense because of those limited to those available for work.
Unstable employment indicators consist of a short-time worker indicator and an indicator of unstable employment by employment forms (employees). Unstable employment is related with employees employed by capitals (including executives of company) and it is necessary to consider those including self-employed person. It is because small-size self-employers, a majority of self-employed person, are under as unstable working conditions as laborers through repeated bankruptcies, business terminations and operations. As indicators of short-time workers, those working less than 35 hours a week [as main jobs or not] is identified first, and their classification as main job is deemed one form of involuntary part-time. Second, those employees working less than 35 hours a week [wishing to change jobs or not] are identified and part-time employment of those wishing to change jobs are deemed another form of involuntary part-time employment. However, the part-time employment of short-time workers represents only a part of part-time employment because of an increasing number of part-timers working for as long time as full-time workers even though they are treated as part-timers. As unstable employment indicators, temporary employees, daily employees and pieceworker [wishing to change jobs or not] indicators are identified by employment forms. Because recently increasing regular part-timers and dispatched workers, etc., tend to be classified as regular employees in spite of their temporary employment property, the temporary employment is most likely to be extenuated. The form of unstable employment as main jobs indicates the category of involuntarily unstable employment.

The general feature of variation in unemployment or unstable employment since 1977 with SLFS indicators is, as shown in fig. 2, a great change observed in unemployment structure among pre-bubble, bubble and post-bubble periods. During pre-bubble period, the following features are indicated: relatively low level of unemployment rate as visible unemployment indicator, invisible unemployment indicator substituting for or supplementing it, increase of unstable employment indicators and a large disparity between males and females. Many of persons not in the labor force desiring jobs and discouraged workers as well as a majority of workers in unstable employment are women, highlighting a disparity between men and

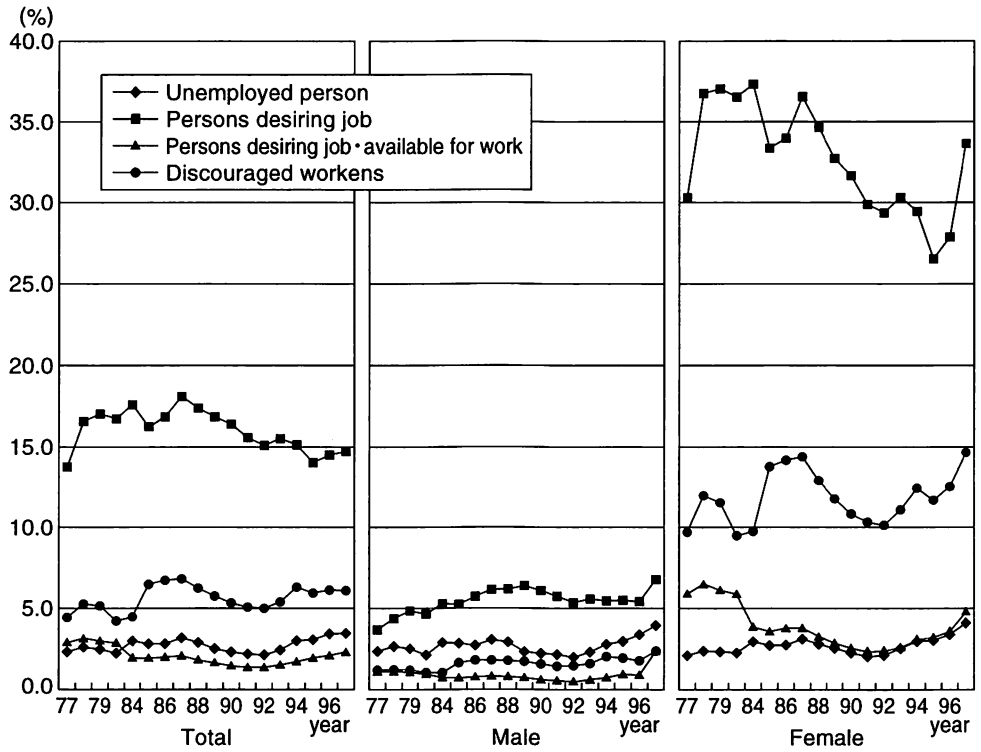
women in unemployment and unstable employment. Business fluctuation during this period consists of the following stages: the second oil shock in 1982, depression due to strong yen from 1985 to 1986, bubble boom with a shortage of labor force from 1988 to 1991 and "Heisei" depression of 1992 or later.

Unemployment rate, a visible unemployment indicator, stayed at 2%~3% level from the end of the nineteen seventies to the nineteen eighties and decreased to 2.1% in 1992 during flush times of bubble (a shortage of labor force). However, it has rapidly increased since 1994, post-bubble period, and male unemployment rate reached 5% level in April 1999. The ratio of unemployed person seeking jobs within a month was 2% level in the nineteen eighties and 1% level in the bubble period, however, it increased again along with deepened "Heisei" depression: Especially, the ratio of unemployed men seeking jobs within a month has shown a tread of surpassing that of women in these post-bubble times. The indicator of long-term unemployed person was 1.5% or more and less than 2% in the nineteen eighties during pre-bubble period, and 1% or more and less than 1.5% during bubble period. However, it started to increase in these post-bubble times (after 1994) to reach 2.1% in total in 1998. The indicator of involuntary unemployed person losing job due to business slack or layoff was around 1% prior to bubble period and reduced to about 0.5% during bubble period. However, it began to increase in post-bubble times and the male increase ratio is higher. Unemployed person seeking main jobs (one form of involuntary job loser) also decreased during bubble period, but has increased again since 1993. The ratios of unemployed persons for head of households and those for households members (particularly, women) are both increasing in these post-bubble times. The indicator of the unemployed person for household members changed from around 1.5% during pre-bubble period to about 1.2% during bubble period and raised to 2% level after 1996, indicating an increase of unemployment among family members.

For invisible unemployment indicators, as shown in fig. 2, person not in the labor force desiring jobs have a trend of relatively decreasing in good times and increasing in bad times. However, there is a significant difference in the change of indicators between men and women. Unemployed person

desiring jobs who are available for work especially increased after bubble period, reflecting a hardness of depression. Discouraged workers (in a broad sense) show a trend of decreasing in good times and increasing in bad times. Their ratio increased after bubble period to reach 6.2% in total (12.1% for females) in 1998. A number of discouraged workers available for work (in a narrow sense) are less than about a half number of discouraged workers in a broad sense and the disparity are increasing: Male discouraged workers available for work has increased with deepened "Heisei" depression. Persons waiting a new job within a month (person determined to be employed prior to the formal employment procedure) increase in flush times (about 2.4% during bubble period) and decrease in depression times.

Fig. 2 Person not in the labor force desiring job-related indicator



(note) Data of 82 year, 83 year (change of survey month) and abnormal data of 89 year are not showed.
(source) Table 6 (a) (b).

For unstable employment indicators, the indicator of short-time worker working less than 35 hours a week (part-timers) doubled from 10% level in the nineteen eighties to 20% level after 1992 to reach 23.1% in total in 1998: 12.7% for men and 38.4% for women (approx. three times as large as men in real number). The weight of short-time worker in main jobs (indicator of involuntary part-timers) has raised to reach 10% in total in 1998: 8.5% for men and 12.4% for women. Involuntary part-timers wishing to change jobs has increased since bubble period, especially since 1994: In 1998, the female rate reached 4.7%, showing an increase of female weight. For indicators of unstable employment forms, the ratio of temporary employees (total) raised from 4% level in the nineteen seventies through 5.5% or more and less than 6% in the nineteen eighties to 6% level in 1993 during post-bubble period. In 1998, it reached 6.5% in total: 3.1% for men and 11.5% for women (approx. three times as large as men in real number), highlighting the increase of female temporary employees in their main jobs. The indicator of daily employees shows a slight increase, however, the growth of female composition ratio is large. Pieceworkers have a trend of decreasing in general. Employees of small-size companies with 30 or less workers show 25% level in their ratio.

2.3 Employment Status Survey and unemployment & unstable employment indicators

Various factors of changes in visible and invisible unemployment structures in usual status are analyzed based on ESS. Table 7 provides an overall list of unemployment and unstable employment (related indicators). It calculates statistic indicators of unemployment and unstable employment on employees in non-agricultural industry because the unemployment status is mainly related with employees (including executives and managers).

Based on the usual employment status of employees (in non-agricultural industry), as shown in the left line of Table 7, indicators of 1 total number of unemployed person (not working person desiring jobs) and 1-(1) visible unemployed person (not working person desiring and seeking jobs) (there is no non-agricultural category for not working person desiring jobs) were calculated as indicators of unemployed person and those of 2 unstable employment forms ((1) temporary employees, (2) daily employees and (3) pieceworkers), 3 short-time worker ((1) 200 days or more a year and less

than 35 hours an usual week and (2) less than 200 days a year), 4 persons with consciousness of desiring jobs ((1) person desiring additional jobs and (2) person wishing to change jobs) were calculated as unstable employment indicators. In order to exclude overlaps, the sum of indicators of unemployed person (1 total of unemployed person and 1-(1) visible unemployed person), 2-(3) pieceworker indicator and 3 short-time worker was added to the grand total of unstable employees. For overall indicators of working and non-working states, the rate of unstable employment & unemployment (1) (total of unemployed person) and the rate of unstable employment & unemployment (2) (visible unemployed person) were estimated as ratios of total unemployed person and unstable employees to labor force population (labor force survey). The overall list is a time series table from 1968 to 1997, whose general features are as shown in fig. 3. The time series consist of the following stages: early bubble stage and depression stage from 1982 to 1987 (the second oil shock in 1982; depression due to strong yen from 1985 to 1986); bubble period from 1987 to 1992 (flush times and a shortage of labor force); and bubble collapse and Heisei depression from 1992 to 1997.

Total number of unemployed person (not working person desiring jobs) reduced its weight with a peak of 19.4% in 1977 to decrease to 14.5% in 1992 during bubble period, however, it raised again to 16.9% in 1997 with 11.333 million people in real number. Especially, the weight of total unemployed women is high: 8.5% (3.351 million) for men and 29% (7.982 million) for women in 1997. Invisible unemployed person of not working person desiring but not seeking jobs showed a similar trend to total unemployed person: 9.0% in total, 3.5% for men and 17.0% for women in 1997, indicating a large number of invisible unemployed women. Visible unemployed person of not working person desiring and seeking jobs temporarily decreased during bubble period, however, the composition ratio of women is about three times as large as that of men: Real numbers for men and women in 1997 were 1.977 million and 3.294 million, respectively. The increase of visible unemployed person desiring jobs, especially the rapidly increasing unemployment rate of men indicates the seriousness of "Heisei" depression.

Total number of unstable employment forms (non-agricultural industry,

Table 7 Unemployment and unstable employment-related indicators (summary table)

(1000 person, %)

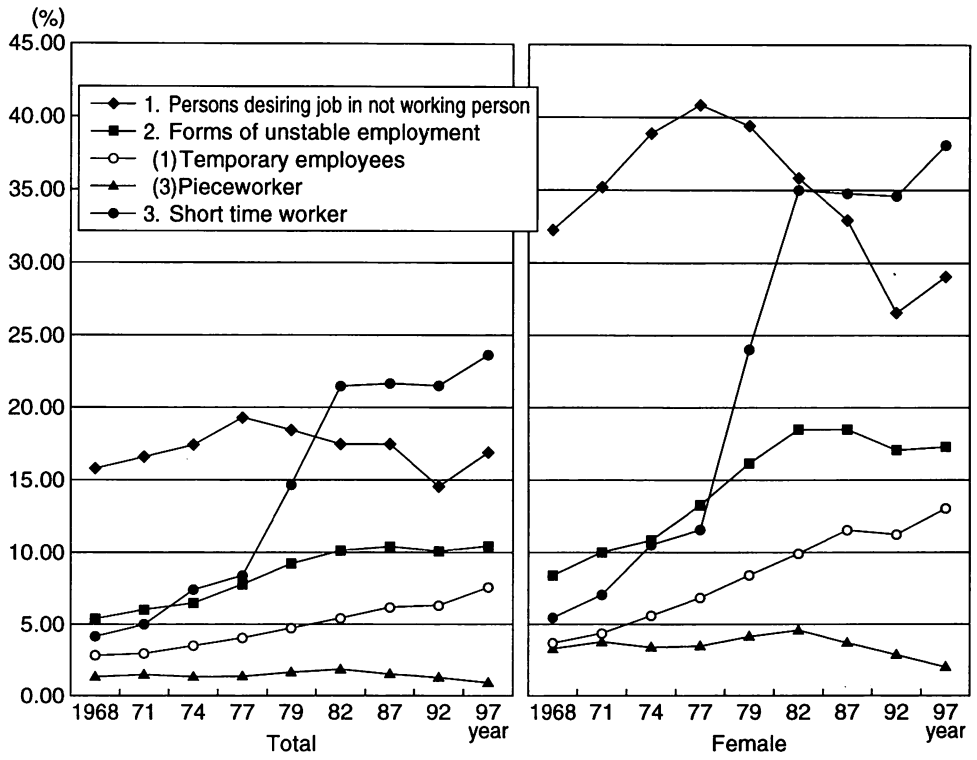
		(year)	1968			1971			
			Total	male	female	Total	male	female	Total
Total Unemployed person (visible unemployment) (invisible unemployment)		Employees (non-agriculture)	30200	20670	9530	33360	22840	10520	35620
		1. **Persons desirering job in not working person**	8020	1560	6460	8640	1580	7060	9220
		(1) **Person seeking job**	3260	800	2460	3260	800	2460	3510
		(2) Person not seeking job	4760	760	4000	5380	780	4600	5710
Indicators of unstable employment	Half unemployment	2. Forms of unstable employment	2700	1030	1670	3140	1140	2000	3410
		(1) Temporary employees	1420	650	770	1520	610	910	1860
		(2) Daily employees	590	350	240	830	500	330	840
		(3) **Pieceworker**	670	30	660	790	30	760	710
	Partial unemployment	3. **Short time worker**	2100	1010	1090	2610	1200	1410	3910
		(1) Working 200 days and over & under 35 hours	680	320	360	810	360	450	1220
		(2) Working under 200 days	1420	690	730	1800	840	960	2690
	Consciousness of employment	4. Consciousness of desire for work	2570	1770	800	2950	2090	860	3610
		(1) Person wishing to have additional jobs	870	690	180	1100	900	200	1490
		(2) Person wishing to change the job	1700	1080	620	1850	1190	660	2120
(A1) Unemployment & unstable employment, Total			10810	2600	8210	12040	2810	9230	13840
(A2) Unemployment & unstable employment, Total			6030	1840	4210	6660	2030	4630	8130
(B) Labor force			50610	30580	20030	51790	31750	20040	52740
Unstable employment & unemployment rate (1) (A1/B)			21.36	8.50	40.99	23.25	8.85	46.06	26.24
Unstable employment & unemployment rate (2) (A2/B)			11.91	6.02	21.02	12.86	6.39	23.10	15.42
		(year)	1968			1971			
			Total	male	female	Total	male	female	Total
Total Unemployed person (visible unemployment) (invisible unemployment)		Employees (non-agriculture)	59.7	67.6	47.6	64.4	71.9	52.5	67.5
		1. **Persons desirering job in not working person**	15.8	5.1	32.3	16.7	5.0	35.2	17.5
		(1) **Person seeking job**	6.4	2.6	12.3	6.3	2.5	12.3	6.7
		(2) Person not seeking job	9.4	2.5	20.0	10.4	2.5	23.0	10.8
Indicators of unstable employment	Half unemployment	2. Forms of unstable employment	5.3	3.4	8.3	6.1	3.6	10.0	6.5
		(1) Temporary employees	2.8	2.1	3.8	2.9	1.9	4.5	3.5
		(2) Daily employees	1.2	1.1	1.2	1.6	1.6	1.6	1.6
		(3) **Pieceworker**	1.3	0.1	3.3	1.5	0.1	3.8	1.3
	Partial unemployment	3. **Short time worker**	4.1	3.3	5.4	5.0	3.8	7.0	7.4
		(1) Working 200 days and over & under 35 hours	1.3	1.0	1.8	1.6	1.1	2.2	2.3
		(2) Working under 200 days	2.8	2.3	3.6	3.5	2.6	4.8	5.1
	Consciousness of employment	4. Consciousness of desire for work	5.1	5.8	4.0	5.7	6.6	4.3	6.8
		(1) Person who wish to have additional jobs	1.7	2.3	0.9	2.1	2.8	1.0	2.8
		(2) Person who wish to change the job	3.4	3.5	3.1	3.6	3.7	3.3	4.0
(A1) Unemployment & unstable employment, Total			21.4	8.5	41.0	23.2	8.9	46.1	26.2
(A2) Unemployment & unstable employment, Total			11.9	6.0	21.0	12.9	6.4	23.1	15.4
(B) Labor force			100.0	100.0	100.0	100.0	100.0	100.0	100.0

(note) (A1) The total of unemployment & unstable employment consists of the sum <boldface, [1] + [2–(3)] + [3]>. (A2) consists of the sum <boldface, [1–(1)] + [2–(3)] + [3]>

(source) Statistical Bureau, *Employment Status Survey* (ESS)

1974			1977			1979			1982			1987			1992			1997	
male	female	Total	male	female	Total	male	female	Total	male	female	Total	male	female	Total	male	female	Total	male	female
24250	11370	37250	25180	12340	39197	25959	13238	52506	32401	20105	55787	33959	21828	52242	31854	20388	54651	32938	21712
1460	7760	10700	2010	8690	10353	1829	8524	10103	2037	8066	10661	2655	8006	9540	2392	7148	11333	3351	7982
770	2740	4090	1100	2790	4127	1032	3095	4196	1210	2986	4531	1562	2969	3832	1252	2580	5271	1977	3294
690	5020	6610	910	5700	6226	797	5429	5905	826	5079	6127	1092	5035	5701	1138	4564	6044	1364	4679
1250	2160	4330	1490	2840	5180	1678	3502	5825	1647	4178	6317	1819	4498	6585	1973	4613	6942	2192	4749
710	1150	2170	690	1480	2688	799	1889	3281	885	2396	4051	1132	2918	4341	1281	3060	4965	1493	3472
510	330	1390	780	610	1557	853	704	1472	735	737	1341	660	682	1427	657	771	1403	672	730
30	680	770	20	750	935	26	909	1072	26	1046	925	27	898	817	35	782	574	27	547
1810	2100	4640	2150	2470	8232	3007	5225	12421	4524	7888	13162	4727	8435	14129	4794	9335	15886	5403	10512
520	700	1050	450	600	2053	558	1495	2797	728	2069	3202	714	2488	4037	904	3133	4577	1002	3604
1290	1400	3590	1720	1870	6179	2449	3730	9615	3796	5819	9960	4013	5947	10092	3890	6202	11309	4401	6908
2490	1120	5670	3880	1790	6021	3929	2092	6693	4142	2551	7119	4353	2766	8920	4986	3934	10218	5745	4473
1180	310	2270	1740	530	2077	1530	547	2714	1823	891	2341	1577	764	2794	1708	1086	3163	1877	1286
1380	810	3400	2140	1260	3944	2399	1545	3979	2319	1660	4778	2776	2002	6126	3278	2848	7055	3868	3187
3300	10540	16110	4180	11930	19520	4862	14658	23587	6587	17000	24748	7405	17343	24486	7221	17265	27793	8781	19041
2610	5520	9500	3270	6010	13294	4065	9229	17689	5760	11920	18618	6316	12302	18778	6081	12697	21731	7407	14353
32780	19960	55200	33960	21240	55960	34320	21640	57740	35220	22520	60840	36550	24290	65756	38776	26980	67003	39508	27495
10.07	52.81	29.18	12.3	56.2	34.9	14.2	67.7	40.9	18.7	75.5	40.7	20.3	71.4	37.2	18.6	64.0	41.5	22.2	69.3
7.96	27.66	17.21	9.6	28.3	23.8	11.8	42.6	30.6	16.4	52.9	30.6	17.3	50.6	28.6	15.7	47.1	32.4	18.7	52.2
1974			1977			1979			1982			1987			1992			1997	
male	female	Total	male	female	Total	male	female	Total	male	female	Total	male	female	Total	male	female	Total	male	female
74.0	57.0	67.5	74.1	58.1	70.0	75.6	61.2	90.9	92.0	89.3	91.7	92.9	89.9	79.4	82.1	75.6	81.6	83.4	79.0
4.5	38.9	19.4	5.9	40.9	18.5	5.3	39.4	17.5	5.8	35.8	17.5	7.3	33.0	14.5	6.2	26.5	16.9	8.5	29.0
2.3	13.7	7.4	3.2	13.1	7.4	3.0	14.3	7.3	3.4	13.3	7.4	4.3	12.2	5.8	3.2	9.6	7.9	5.0	12.0
2.1	25.2	12.0	2.7	26.8	11.1	2.3	25.1	10.2	2.3	22.6	10.1	3.0	20.7	8.7	2.9	16.9	9.0	3.5	17.0
3.8	10.8	7.8	4.4	13.4	9.3	4.9	16.2	10.1	4.7	18.6	10.4	5.0	18.5	10.0	5.1	17.1	10.4	5.5	17.3
2.2	5.8	3.9	2.0	7.0	4.8	2.3	8.7	5.7	2.5	10.6	6.7	3.1	12.0	6.6	3.3	11.3	7.4	3.8	12.6
1.6	1.7	2.5	2.3	2.9	2.8	2.5	3.3	2.5	2.1	3.3	2.2	1.8	2.8	2.2	1.7	2.9	2.1	1.7	2.7
0.1	3.4	1.4	0.1	3.5	1.7	0.1	4.2	1.9	0.1	4.6	1.5	0.1	3.7	1.2	0.1	2.9	0.9	0.1	2.0
5.5	10.5	8.4	6.3	11.6	14.7	8.8	24.1	21.5	12.8	35.0	21.6	12.9	34.7	21.5	12.4	34.6	23.7	13.7	38.2
1.6	3.5	1.9	1.3	2.8	3.7	1.6	6.9	4.8	2.1	9.2	5.3	2.0	10.2	6.1	2.3	11.6	6.8	2.5	13.1
3.9	7.0	6.5	5.1	8.8	11.0	7.1	17.2	16.7	10.8	25.8	16.4	11.0	24.5	15.3	10.0	23.0	16.9	11.1	25.1
7.6	5.6	10.3	11.4	8.4	10.8	11.4	9.7	11.6	11.8	11.3	11.7	11.9	11.4	13.6	12.9	14.6	15.3	14.5	16.3
3.6	1.6	4.1	5.1	2.5	3.7	4.5	2.5	4.7	5.2	4.0	3.8	4.3	3.1	4.2	4.4	4.0	4.7	4.8	4.7
4.2	4.1	6.2	6.3	5.9	7.0	7.0	7.1	6.9	6.6	7.4	7.9	7.6	8.2	9.3	8.5	10.6	10.5	9.8	11.6
10.1	52.8	29.2	12.3	56.2	34.9	14.2	67.7	40.9	18.7	75.5	40.7	20.3	71.4	37.2	18.6	64.0	41.5	22.2	69.3
8.0	27.7	17.2	9.6	28.3	23.8	11.8	42.6	30.6	16.4	52.9	30.6	17.3	50.6	28.6	15.7	47.1	32.4	18.7	52.2
100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Fig. 3 Forms of unstable employment



(source) Table 7.

employees) continued to increase and the total indicator and female ratio reached 10.4% and 17.3%, respectively, in 1997. Especially, the indicator of temporary employees continuously raised from 2.8% in 1968 and the weight of female temporary employees was more than twice as much as that of male temporary employees: In 1997, the total indicator, male and female ratios reached 7.4%, 3.8% and 12.6%, respectively. Short-time employees (part-timers) in usual state consistently and largely increased (although it decreased in 1992) and the composition ratio to the total greatly increased from 8.4% in 1977 to 23.7% in 1997. In particular, the real number and composition ratio of female short-time employees remarkably increased: 11.6% in 1977, 34.7% in 1987 and 38.2% in 1997. The indicator of a total number of person wishing to change jobs or have additional jobs, which indicates a trend of involuntarily unstable employment (male ratio is

larger and person wishing to change jobs are the majority), had been 10% level since 1977. It started to further increase during post-bubble period and the composition ratio reached 15.3% in 1997. Especially, the indicator of person wishing to change jobs consistently and largely increased to become 10% level in 1997 with larger weight of females. The unstable employment & unemployment rate (1) and (2) are characterized by the fact that the former is higher than the latter and that the male rate moderately increases, while the female indicator provides a great amplitude between upswing and downswing (bubble period). The unstable employment & unemployment rate (1) lowered with a peak of 40.95% in 1982 to decrease to 37.2% in 1992 during bubble period, however, in 1997, it raised to the highest level of 41.5% on the record. The decrease of unstable employment & unemployment rate (1) and (2) during bubble period is caused by a factor that against the increase of short-time workers, the total number of unemployed person (not working person desiring jobs), and the female composition ratio in particular, had continued to decrease since 1979 to show remarkably low values in 1992 during bubble period. In any way, total numbers in 1997 are as follows: 2.3 millions of completely unemployed persons; 3.5% of unemployment rate (by SLFS in February, 1997); 27.793 millions of persons in unemployment and unstable employment (A1), 41.48% of the unstable employment & unemployment rate (1) (19.041 millions; 69.3% for females); and 21.731 millions of persons in unemployment and unstable employment (A2), 32.4% of the unstable employment & unemployment rate (14.353 millions; 52.2% for females). This implies the latescence of a huge number of unemployed person and workers in unstable employment, especially females in such conditions, behind the elicitation of unemployed person.

Conclusion

AUIs (U indicator, etc.), which supplement the unemployment rate indicate a limited aspect of structural change in unemployment and unstable employment. Indicators of involuntary part-timers and discouraged workers, main indicators of AUIs, are those supplementing visible unemployment (published unemployment rate) to elicit invisible unemployment, particularly related with female employment. International comparisons of AUIs are intended to a certain extent for those of unemployment and

unstable employment, especially those of women. In order to more systematically analyze the structural change of unemployment and unstable employment, it is necessary to establish and review its structural and systematic indicators based on employment and unemployment statistics.

Changes of visible and invisible factors of unemployment and unstable employment were examined by analyzing various factors of changes in the unemployment structure in the nineteen nineties with Japanese, AUIs (calculated U indicators), as well as medium and long-term changes in the unemployment and unstable employment structure since the nineteen seventies with SLFS and ESS (two survey approaches of employment status) indicators. Until bubble times in the early nineteen nineties, Japanese unemployment structure was based on such a framework as relatively low level of unemployment rate (visible unemployment rate) and latescence of unemployment (persons in the labor force desiring jobs by whether currently seeking job and workers in unstable employment). It has been sustained by the following factors: seniority and life employment systems; duplicate economic structure and disparity in labor conditions; mobility and stagnancy of surplus labor force within companies and industries; and such employment convention as not eliciting unemployment in the labor market and particularity of labor market itself.

Extended and deepened "Heisei" depression as well as bubble collapse have elicited unemployment, causing a rapid increase of visible unemployment like unemployed person in complete unemployment, in involuntary disemployment, in unemployment seeking job within a month and in long-term unemployment. In particular, it made the youth unemployment rate twice as large as general unemployment rate along with increased unemployment rates of males and people of middle and great ages, providing a similar aspect to "European and American-type unemployment structure". Latescence indicators of unemployment, underlying AUIs, were temporarily elicited during bubble-period to reduce its weight, however, due to the depths of unheard-of depression, it is again further accelerating its latescence. Discouraged workers, whose majority are women, reduced their weight from the late nineteen eighties to the bubble boom to be temporarily elicited, however, they increased again along with bubble collapse and deepened "Heisei" depression, making not only female but also male dis-

couraged workers available for work latescent. Workers, mainly women, in unstable employment such as part-timers and temporary workers have much increased in number and the increase of involuntarily unstable employees is particularly remarkable. In the process of bubble collapse and deepened "Heisei" depression, the elicitation and latescence of unemployment are being accelerated in a tangly manner. In order to solve a policy issue "what direction the unemployment structure will move in", we should base ourselves on the analysis of visible and invisible factors of structural changes in the unemployment and unstable employment. Future trend will basically depend on the variation of systematic framework having sustained Japanese unemployment structure.

Notes

1) When the labor force survey method was introduced during postwar period, an enormous number of people were in complete or partial invisible unemployment due to postwar depression in Japan. When the labor force survey was first adopted during this postwar period, the unemployed person measured by the labor force survey were called "fully or completely unemployed person" (hereinafter referred to as "unemployed person") in that only a limited number of people in unemployment status were investigated.
2) For literature of Japanese unstable employment, see Kato [21], Gaga [9] [10].
3) For analyses of unemployment problems due to "Heisei" depression on the governmental side, refer to [21] [22]. For a comment on the understanding of the Ministry of Labor on unemployment, refer to Nomura [24], pp. 24-25, According to a report on a newspaper (Mainichi Evening Paper, January 30, Saturday in 1999), because of "difficulty in understanding the entire unemployment status with a single value" of complete unemployment rate, the Economic Planning Agency started a discussion in the direction of developing "indicators of seriousness" such as long-term unemployment rate or employment loss ratio (a ratio of unemployed person to labor force) by "focusing on the creation of employment" based on alternative unemployment indicators like U indicators (although U indicators are not clearly specified).
4) Iwai, H. [13] [14].
5) For adjusted unemployment rate between Japan and the U.S., refer to Iwai, a Ditto.
6) For the concept and indicator of sub employment, refer to Iwai [15].
7) Shiskin, J. [27]. For the unemployment indicator of Shiskin, refer to Iwai [13], p. 49.
8) For the working poor, refer to Klein, B. W. and Rones, P. L. [20] and BLS. [1]. The following survey reports are on the employment and income of BLS: Ryscavage, P. M. [2], [3] [4]. For the establishment of employment and income statistics in the thirteenth ICLS of ILO (1982), refer to Iwai, [13] pp. 279-280.
9) For the revision of CPS and new U indicators, refer to the following reference: Bregger.

J. E. and Hauggen S. E. S. [5]. Cohany. S. R., Polivka and Rotgeb, J. M. [7].

10) For the report and resolution on underemployment in the sixteenth ICLS, refer to the owing references: ILO [16] [17] [18] [19].
11) Sorrentino. C. [28] [29]
12) For the estimation of involuntary part-timers and alternative indicators of unemployment of OECD, refer to OECD [25] [26].
13) OECD [26] p. 45.
14) OECD [26] p. 65.
15) Castillo, M. D. [6].
16) Castillo, M. D. [6] pp. 34-36.
17) Alternative unemployment indicators (AUIs, U indicators) in Japan were calculated by Miss. Chisa Fuchimoto who is a student of Economics Course, Postgraduate school of Kansai University. Japanese U indicators were calculated according to SLFS (1990~1998) consulting international U indicator calculations. For the prescription of discouraged workers (2) in a narrow sense, it is questionable to regard it as an indicator of discouraged workers because there is no questionnaire on the reason for discouragement.

    Procedure for calculation of U indicator based SLFS in Japan is as follows: (1) Persons unemployed 13 weeks or over of U1 are calculated as reduction of persons unemployed less than 3 months from all adjusted employed persons. (2) Labor force of U1 is the sum of adjusted employed persons and adjusted unemployed person. (3) Involuntary Job losers are the sum of those adjusted unemployed person and those adjusted employed person for the reason of job lose of involuntary person (retirement or old ages are omitted). (4) Unemployed persons for head of households of U3 are adjusted unemployed person for head of ordinary households (contained single household). (5) Labor force for head of households is the sum of unemployed person, adjusted employed person for head of ordinary households and single household. (6) Unemployed persons for full-time jobseekers of U4 are adjusted unemployed person with forms for seeking job (ordinary employees). (7) Labor force for full-time employment of U4 is labor force of ordinary employees. (8) Unemployed persons of U5 are the unemployed person ajusted to U.S. concept of unemployment. (9) Unemployed persons for part-time jobseekers of U6 (narrow definition) are adjusted unemployed person with "forms for seeking job (part-timer, "arubaito" (a job on the side), etc.)." (10) Involuntary part-timers of U6 are adjusted unemployed persons with" forms of employment (part-timer, "arubaito", person wishing to change job and to have a additional job)." (11) Voluntary part-timers of U6 are adjusted unemployed person with "forms of employment (part-timer, "arubaito", etc. not wishing to change job)." (12) Discouraged workers (1) of U7 are persons not in the labor force desiring a job, but not seek a job. (12) Discouraged workers (2) of U7 are persons not in the labor force desiring a job but not seeking a job and can take up job. (Refer to Table 4)
18) Reasons for not seeking jobs (no prospect of finding appropriate jobs) among discouraged workers (1) in SLFS include 1) no job nearby, 2) for one's own knowledge or skill, 3) with working hours, etc., 4) with wages or salaries, 5) under current economic situa-

tion or seasonal reason and 6) others. For discouraged workers (2), conditions of persons available for work are added like new discouraged workers in the United States (although the scope of not seeking jobs and the condition of job search since 12 months before are different).

19) The working persons (employed person) by industry are re-classified into two sector (goods sector and service sector) based on ESS. The goods sectors are consisted of Agriculture, Industry (Manufacture-extracts), Electricity-gas-water and Transport & communication (In manufacture, repair service is contained because it's service is regarded as a part of goods production). Service sectors are consisted of Wholesale & retail trade, Finance & insurance, service and Government (Repair service is omitted from service sector). For the detail industrial classification by tow sectors, refer to following literature: Iwai, H. and Fujoka, M. [11] [12].

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