

Chapter 3 The Trend of Female Labor Force Participation in OECD Countries

According to Jaumotte (2003a), female labor force participation had greatly increased in most OECD member countries from 1981 to 2001. Moreover, the prime-age female labor force participation rate in the Czech Republic, the Slovak Republic, and the Nordic countries exceeded 80 percent.

In order to understand the trend of female labor force participation in OECD countries, major historic indicators are analyzed in this chapter. These indicators include female labor force participation rate, female employment-to-population ratio, and female unemployment rate.

3.1 Female Labor Force Participation

In 1980, population of the labor force in OECD countries totaled 302,680,000. Among them, there were 183,667,000 men and 119,013,000 women. From 1980 to 2006, female labor force population increased 124,315,000 persons, and reached 243,328,000 persons in 2006. Meanwhile, population of male labor force in 2006 amounted to 318,680,000. According to the statistics, the increase in female labor force was greater than the increase in male labor force during this period. Table 3-1 lists the labor force population and the labor force participation rate in OECD member countries from 1980 to 2006. Figures 3-1 and 3-2 show the changing curve of the labor force population, and labor force participation rate respectively.

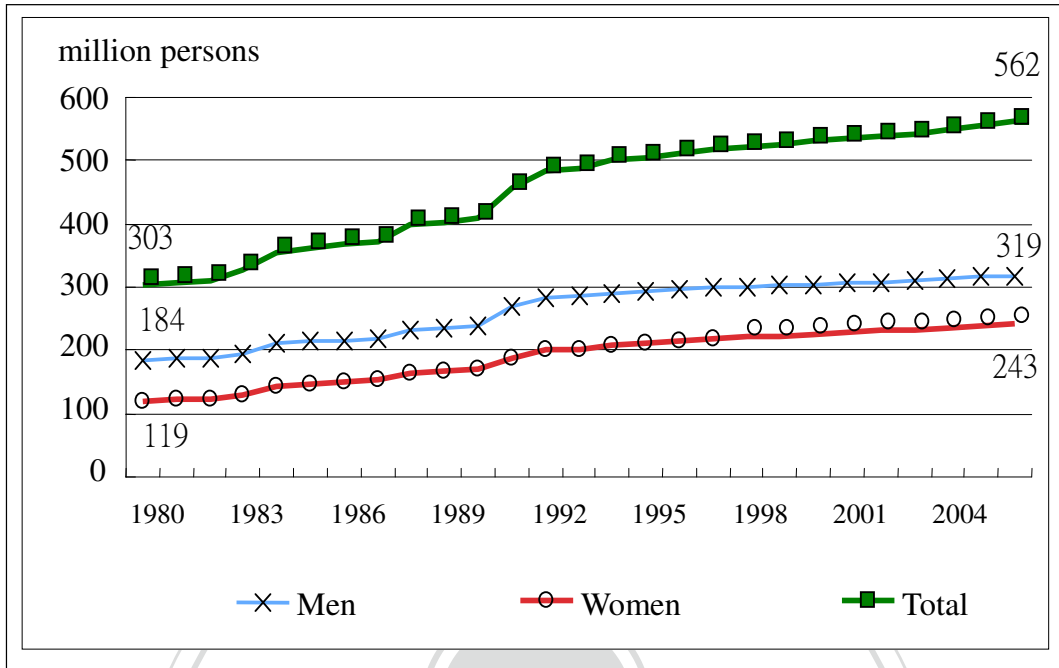
The population of female labor force was 39.32% of the total labor force population in 1980, and 40.14% in 1983. Share of females as per cent of total labor force had a rising trend in the following two decades. In 2006, 43.32% of the

Table 3-1: Labor Force Population and Labor Force Participation Rate in OECD
Countries—1980-2006

Year	Labor force population (thousand people)			Labor force participation rate (%)		
	Total	Men	Women	Total	Men	Women
1980	302,680	183,667	119,013	70.18	86.59	54.30
1981	307,920	186,085	121,836	70.22	86.20	54.72
1982	310,189	186,266	123,923	70.29	85.53	55.44
1983	325,691	194,950	130,740	70.10	85.16	55.48
1984	355,638	211,837	143,801	70.36	84.90	56.20
1985	359,893	213,176	146,717	70.63	84.71	56.90
1986	367,037	216,141	150,897	71.05	84.58	57.81
1987	372,835	218,001	154,834	71.57	84.54	58.86
1988	397,331	233,485	163,845	71.34	84.64	58.29
1989	403,620	235,855	167,765	71.74	84.56	59.14
1990	410,111	239,253	170,858	71.90	84.42	59.54
1991	456,409	268,454	187,955	71.49	84.85	58.36
1992	482,546	282,344	200,202	71.54	84.44	58.86
1993	488,488	286,058	202,430	71.29	84.15	58.63
1994	500,193	291,193	209,000	71.49	83.88	59.29
1995	504,799	293,081	211,718	71.52	83.70	59.52
1996	510,218	295,537	214,681	71.71	83.79	59.84
1997	516,808	298,578	218,230	72.03	83.91	60.34
1998	521,293	300,969	220,325	72.08	83.90	60.45
1999	525,038	301,885	223,153	72.15	83.75	60.77
2000	530,788	304,547	226,241	72.14	83.61	60.90
2001	533,807	305,635	228,172	72.03	83.31	60.96
2002	538,350	307,419	230,931	72.07	83.12	61.24
2003	542,480	309,358	233,122	71.97	82.83	61.31
2004	548,992	312,470	236,523	72.28	82.99	61.75
2005	555,297	315,489	239,808	72.55	83.20	62.10
2006	562,008	318,680	243,328	72.93	83.44	62.60

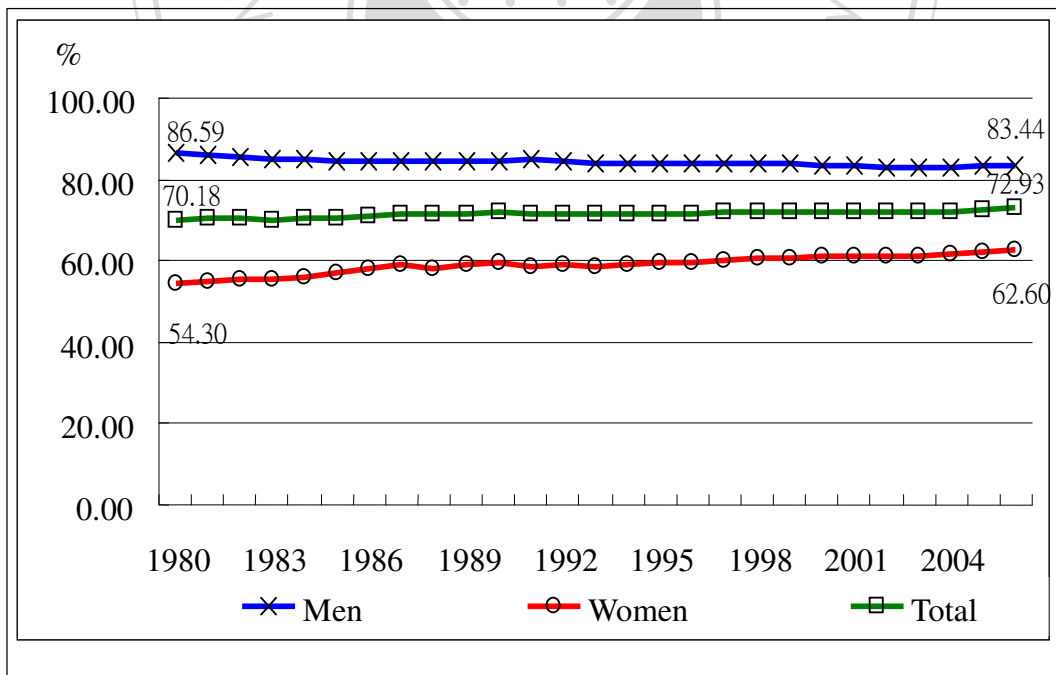
Source: Organization for Economic Cooperation and Development (OECD), *Labor Force Statistics*,

<http://www.oecd.org/els/employment/stats>.



Source: Organization for Economic Cooperation and Development (OECD), *Labor Force Statistics*, <http://www.oecd.org/els/employment/stats>.

Figure 3-1: Labor Force Population in OECD Countries—1980-2006



Source: Same as Figure 3-1

Figure 3-2: Labor Force Participation Rate in OECD Countries—1980-2006

labor force population were females, and the remaining 56.70% were males.

In 1980, participation rate of male labor force was 86.59%, while in case of females it was 54.30%. The total labor force participation rate was 70.18%. The ratio tells that there was a big gap between male and female labor force participation. In the following 26 years, female labor force participation rate has increased, narrowing the gap, though the gap never ceased to exist. In 2006, female labor force participation rate increased 8.3 percentage points to 62.60%. At the same time, the gap between males and females decreased from 32.29% to 20.84%. In 2006, Iceland had the highest rate of female labor force participation in all OECD countries, which was 86.39%. Actually, the rates of female labor force participation in most Nordic countries, such as Sweden, Norway, and Denmark have been relatively high, exceeding 75% in 2006.⁷

If we treat 1996 as a time window and compare the figures with 2006, the rate of female labor force participation in some OECD member countries decreased in 2006 (compared to 1996), though it increased in most of OECD member countries. Female labor force participation in Ireland increased the most, as the ratio increased 12.3 percentage points between 1996 and 2006. In 2006, the rate of female labor force participation in Ireland reached 62.10%. In contrast, the rate of female labor force participation in Turkey decreased the most among all OECD countries, going down from 33.29% in 1996 to 27.30% in 2006. The recession and financial crisis, incomplete education system, and more traditional gender-role attitudes were considered three reasons of causing low female labor force participation in Turkey. Table 3-2 shows female labor force participation rate in each OECD member country.

3.1.1 Female Labor Force Participation Rate by Age Group

Table 3-3 lists the rate of female labor force participation by age group, and it also

⁷ The Nordic countries are composed of Denmark, Finland, Iceland, Norway and Sweden.

Table 3-2: Female Labor Force Participation Rate in OECD Countries—1995-2006

Unit: %

Year	Australia	Austria	Belgium	Canada	Czech Republic	Denmark	Finland	France	Germany	Greece
1995	64.72	62.25	52.02	68.44	64.90	73.58	69.85	60.18	61.54	45.28
1996	64.83	61.55	52.28	68.47	64.36	74.02	70.11	60.76	61.90	46.97
1997	64.74	61.89	53.06	68.92	64.45	74.68	69.66	60.44	62.46	47.05
1998	64.98	61.92	54.02	69.75	64.66	75.55	70.02	61.10	63.04	49.44
1999	65.04	62.15	56.23	70.41	64.86	76.46	71.46	61.61	63.48	50.54
2000	66.08	62.21	56.94	71.02	64.24	76.28	72.35	61.95	63.73	50.52
2001	66.66	62.81	54.68	71.44	63.78	75.88	72.68	62.09	64.37	49.67
2002	66.96	63.96	55.64	72.88	63.37	76.56	73.08	62.40	64.80	51.63
2003	67.77	64.62	56.16	74.08	63.08	75.67	72.43	63.71	65.06	52.79
2004	67.67	64.53	57.89	74.31	62.74	76.62	72.32	64.02	66.34	54.73
2005	69.28	66.03	59.75	74.06	62.96	75.70	73.34	64.11	67.63	55.16
2006	69.94	67.62	59.26	74.53	62.93	77.49	73.86	64.17	69.31	55.60

Table 3-2: Female Labor Force Participation Rate in OECD Countries —1995-2006

(Cont. 1)

Unit: %

Year	Hungary	Iceland	Ireland	Italy	Japan	Korea	Luxembourg	Mexico	Netherlands	New Zealand	Norway
1995	50.73	84.42	47.89	42.83	62.30	53.53	44.42	40.71	59.32	66.43	73.46
1996	50.27	83.33	49.80	43.54	62.84	54.25	45.93	40.73	60.38	68.13	75.09
1997	49.54	82.43	50.48	44.08	63.76	55.40	47.30	43.00	62.18	67.89	76.42
1998	51.07	84.02	52.67	45.11	63.95	52.58	47.74	42.66	63.09	67.74	77.18
1999	52.54	85.22	54.85	45.99	63.72	53.41	50.34	41.94	64.74	68.17	77.34
2000	52.91	85.73	56.22	46.78	63.82	54.93	51.98	42.21	65.56	68.27	77.52
2001	52.58	85.69	56.51	47.77	64.27	55.82	52.08	41.55	66.22	69.34	77.55
2002	52.93	84.94	57.87	48.41	63.96	56.67	53.59	42.34	66.78	70.06	78.00
2003	54.23	86.70	58.23	48.83	64.17	56.03	53.67	41.93	67.74	70.33	77.16
2004	54.31	84.27	58.53	51.02	64.55	57.40	55.93	44.33	68.27	70.94	77.03
2005	55.37	85.73	60.90	50.73	65.22	58.06	57.11	44.69	69.08	72.29	76.71
2006	55.77	86.39	62.10	51.22	65.98	58.51	..	45.99	69.84	73.01	76.03

Table 3-2: Female Labor Force Participation Rate in OECD Countries —1995-2006
(Cont. 2)

Unit: %

Year	Poland	Portugal	Slovak Republic	Spain	Sweden	Switzerland	Turkey	United Kingdom	West Germany	United States
1995	62.90	62.74	61.63	47.51	78.11	69.92	33.67	67.94	59.31	71.62
1996	62.38	63.95	62.67	48.44	77.95	71.77	33.29	68.39	59.47	71.96
1997	61.62	65.57	62.16	49.49	76.77	72.10	31.42	68.89	60.09	72.54
1998	61.37	65.76	61.85	50.13	75.82	73.61	31.92	68.79	60.96	72.54
1999	61.20	66.34	62.48	51.20	76.37	73.90	32.77	69.41	..	72.61
2000	61.13	67.50	63.30	53.16	77.29	73.34	29.02	69.80	..	72.71
2001	61.05	68.27	63.79	51.90	77.95	74.87	29.67	69.73	..	72.43
2002	60.03	68.91	63.27	53.98	77.88	75.56	30.54	70.31	..	72.12
2003	59.46	69.41	63.64	56.00	77.69	75.71	29.13	70.23	..	71.88
2004	59.25	70.58	63.08	57.95	77.44	75.25	27.89	70.63	..	71.48
2005	59.27	71.72	61.63	59.46	78.51	75.60	27.24	70.82	..	71.57
2006	57.57	72.34	61.02	61.37	78.66	76.21	27.30	71.52	..	71.74

Source: Same as Table 3-1.

reveals the ups and downs of each age group. In 1980, females between 20 to 24 years of age saw a high participation rate in the labor market. Meanwhile, the highest rate of female labor force participation was in the age group of 20-24, which reached 65.67%. However, the fact that females obtain easier access to tertiary education contributed to a falling tendency in female labor force participation in this age group since 1990.

On the contrary, it was age group of 40-44 that was having the highest female labor force participation rate since 1990. Moreover, the ratio has kept growing. In 2006, the rate of female labor force participation in the age group of 40- 44 reached 72.67%, 13.04 percentage points higher than in 1980. The statistics show that in OECD countries

Table 3-3: Female Labor Force Participation Rate by Age in OECD
Countries —1980-2006

Unit: %

Year	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+
1980	38.25	65.67	58.21	55.72	58.45	59.63	57.19	53.41	44.94	27.73	7.22
1981	36.94	65.93	59.04	56.84	59.40	60.65	58.24	53.63	45.00	27.25	7.17
1982	35.79	66.11	60.25	57.94	60.57	62.04	59.59	53.93	45.34	27.53	7.20
1983	34.86	66.23	61.32	59.06	60.14	61.20	57.77	51.74	42.18	26.45	7.03
1984	36.55	66.63	61.97	59.89	61.73	62.73	59.20	53.06	42.62	25.11	6.48
1985	36.00	67.16	62.99	61.03	62.99	63.94	60.27	53.57	42.86	24.74	6.32
1986	36.08	68.18	64.08	61.96	64.18	65.01	61.30	54.40	42.95	24.62	6.38
1987	37.07	70.27	66.49	63.99	66.42	67.46	63.45	55.53	43.79	24.77	6.59
1988	36.94	68.07	65.44	63.27	65.83	66.74	63.59	55.40	43.73	24.88	6.81
1989	36.49	68.45	66.45	64.44	67.01	68.21	65.16	56.71	44.52	26.26	6.77
1990	35.19	67.81	66.82	64.84	67.49	69.06	66.09	57.51	45.16	26.45	6.87
1991	33.82	64.40	64.90	63.62	66.46	68.33	65.50	58.05	45.03	25.60	6.95
1992	31.81	63.91	67.76	66.20	69.71	71.64	68.81	60.91	44.61	25.78	7.22
1993	31.05	62.24	64.83	64.06	67.43	69.97	67.77	59.45	44.56	25.49	6.94
1994	31.33	62.13	67.66	66.56	69.93	72.25	70.08	62.13	45.26	25.42	7.10
1995	31.11	61.45	66.04	65.28	68.05	70.52	68.67	60.94	46.08	25.65	6.90
1996	30.64	61.07	66.40	65.51	68.32	71.02	69.28	61.54	47.21	25.92	6.84
1997	30.84	60.87	67.18	65.91	68.71	71.33	69.74	62.59	48.04	26.76	6.91
1998	31.28	60.98	67.33	65.79	68.38	71.37	70.07	62.93	48.46	26.41	6.91
1999	31.27	61.21	67.11	66.21	68.66	71.31	70.47	63.75	49.25	26.60	7.02
2000	31.37	60.67	67.54	66.29	68.59	71.36	70.65	64.14	49.64	26.71	7.03
2001	30.39	60.48	67.00	66.37	68.86	71.44	70.69	64.66	49.94	27.66	7.01
2002	29.53	60.25	67.68	66.61	68.88	71.43	71.09	65.04	51.31	28.77	7.11
2003	28.53	59.43	67.70	66.10	68.78	71.76	71.41	65.70	52.80	29.32	7.21
2004	28.35	59.80	67.87	67.02	69.24	72.01	71.74	66.30	53.28	30.52	7.24
2005	28.35	59.91	68.48	66.73	69.12	72.20	72.16	66.78	54.13	31.34	7.44
2006	28.42	59.88	69.37	67.19	69.48	72.67	72.20	67.59	54.97	32.45	7.58

Source: Same as Table 3-1.

females in early twenties participated more enthusiastically in the labor market in 1980, while females in forties formed the age group with the maximum proportion of labor force participation in 2006. Clearly, compared with to 1980, middle-aged females were released from household work and are less occupied by their involvement in family.

The age group of 45-49 ranked second in 2006, in terms of rate of female labor force participation. The rate of participation of this age group reached 72.20% in 2006, which was 15.01 percentage points higher than in 1980. Also, the increase in rate of female labor force participation of this age group increased more than all other age groups. As different from the situation in 1980, female labor force participation rates in age groups of 40-44 and 45-49 in 2006 were significantly higher than other age groups. It means that in OECD countries, there are more and more middle-aged females participating in the labor market in recent years.

Growth of female labor force participation in each age group can be found in Table 3-3. Generally speaking, except the age group of 15 to 19 and 20 to 24, the rate of female labor force participation in other age groups in OECD countries shows an increasing trend from 1980 to 2006.

3.1.2 Female Labor Force Participation Rate by Level of Educational Attainment

Table 3-4 lists the rate of female labor force participation by level of educational attainment in OECD countries from 1991 to 2005. In 1991, labor force participation rate of females with less than upper secondary education was 56.1 %, while upper secondary educated females had a rate of 60.9%. In the same year, female labor force participation rate of tertiary educated was 73.3%. In the following 14 years, female labor force participation rate of upper secondary educated and tertiary educated had an increasing trend. However, compared with 1991, the rate of labor force participation of females with less than upper secondary education has decreased. In 2005, rates of female labor

Table 3-4: Female Labor Force Participation Rate by Level of Educational Attainment in OECD Countries—1991-2005

Unit: %

Year	Less than upper secondary education	Upper secondary education	Tertiary education
1991	56.1	60.9	73.3
1992	56.7	61.0	72.3
1993	57.1	61.3	72.8
1994	57.6	67.6	78.5
1995	47.2	67.0	76.9
1996	47.3	67.5	77.3
1997	45.6	69.0	78.8
1998	44.6	68.8	78.5
1999	44.8	68.8	78.4
2000	44.3	69.2	78.4
2001	44.3	69.4	78.4
2002	44.6	69.2	78.4
2003	45.5	69.2	78.1
2004	50.7	70.1	82.0
2005	51.0	70.4	82.3

Note: 1. Based on persons aged 25-64.

2. Less than upper secondary education includes illiterate, self-educated, primary school and junior high school education.

3. Upper secondary education includes senior high school and vocational school education.

4. Tertiary education includes college, university, and graduate school education.

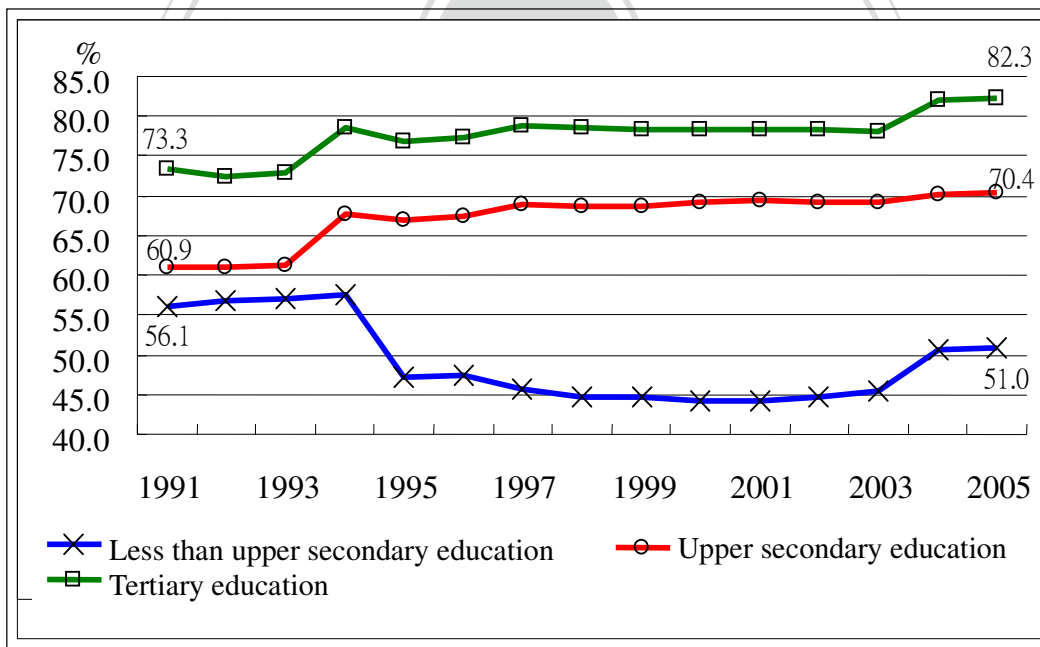
Source: OECD, *Education at a Glance — OECD Indicators*, <http://www.oecd.org>.

force participation of these three groups, less than upper secondary educated, upper secondary educated, and tertiary educated, were 51%, 70.4%, and 82.3% respectively.

According to the data in Figure 3-3 and in Table 3-4, in each year from 1991 to 2005, the rate of female labor force participation of tertiary educated was the highest among the three educational attainment groups. Besides, the rate of labor force

participation of upper secondary educated females was greater than of females with less than upper secondary education. It proves that females who have more human capital and opportunity cost will participate more actively in the labor market. It also indicates that better educational attainment is helpful to increase female labor force participation.

Indeed, in each OECD member country, the rate of labor force participation of females with tertiary education was higher than other two educational attainment groups. Moreover, the gap between tertiary educated and less than upper secondary educated females' labor force participation rate was very large in several countries. For example, in 2005, the gap reached 47 percentage points in Turkey, 46.8 percentage points in



Note: 1. Based on persons aged 25-64.

2. Less than upper secondary education includes illiterate, self-educated, primary school and junior high school education.

3. Upper secondary education includes senior high school and vocational school education.

4. Tertiary education includes college, university, and graduate school education.

Source: Same as Table 3-4.

Figure 3-3: Female Labor Force Participation Rate by Level of Educational Attainment in OECD Countries—1991-2005

Slovak Republic, and 44.5 percentage points in Italy. The gap presents the huge influence of educational attainment, which is regarded as one indicator of human capital, on female labor force participation.

According to the data of 2005, the highest rate of female labor force participation in the group with less than upper secondary education, 78.5%, was in Iceland. While the lowest, 23.2%, was in Turkey. Moreover, in the upper secondary educated group, the highest rate was 82.5% in Sweden, and the lowest was 32.8% in Turkey. Furthermore, in the tertiary education group, the largest rate was in Portugal, which reached 91.3%, and the lowest was in Korea, which was 60.2% only. These figures indicate that although higher educational attainment is helpful to enhance female labor force participation, the latter may be influenced by other factors also, that may vary in each country and with level of economic development.

3.2 Female Employment

The ratio of female employment-to-population in OECD member countries was 50.73% in 1980. During the following two decades, it increased 7.85 percentage points and reached 58.58% in 2006.

Table 3-5 divides these member countries into areas and shows the ratio of female employment-to-population of OECD member countries in Europe, North America, and the Oceania area.⁸ It is obvious that the ratio of female employment-to-population has increased from 1980 to 2006 in all the three areas. Besides, female employment-to-population ratio in the Oceania area has increased the most, by 10.25 percentage points over the past 26 years. In 2006, the ratio of female employment-to-population was 53.87% in Europe, 62.71% in North America, and

⁸ The boundaries of Oceania make up parts of Australasia such as Australia, New Zealand and New Guinea, and all or part of the Malay Archipelago.

Table 3-5: Female Employment -to-Population Ratio in OECD
Countries —1980-2006

Unit: %

Year	Total	OECD countries in Europe	OECD countries in North America	OECD countries in Oceania
1980	50.73	44.00	56.56	51.96
1981	50.83	43.67	57.13	52.10
1982	50.93	43.67	56.76	52.82
1983	50.64	42.90	57.31	53.34
1984	51.36	44.66	59.09	52.89
1985	52.06	45.05	60.34	53.32
1986	53.00	45.79	61.58	54.06
1987	54.08	46.65	63.06	54.85
1988	53.78	45.75	64.34	55.41
1989	54.84	46.86	65.52	56.16
1990	55.36	47.45	65.56	57.15
1991	54.13	49.00	58.39	57.59
1992	54.13	49.22	58.62	57.84
1993	53.78	48.26	59.11	57.57
1994	54.38	48.77	60.09	58.02
1995	54.67	49.06	60.26	58.42
1996	55.08	49.46	60.62	58.89
1997	55.65	49.50	61.75	59.64
1998	55.91	50.26	62.05	58.45
1999	56.41	51.10	62.33	58.42
2000	56.78	51.31	62.61	59.14
2001	56.90	51.85	61.99	59.60
2002	56.89	52.17	61.51	59.63
2003	56.88	52.25	61.33	59.70
2004	57.31	52.64	61.61	60.47
2005	57.78	53.03	62.00	61.34
2006	58.58	53.87	62.71	62.21

Note: Because the statistics of female employment -to-labor force ratio is not available, here, we used

“female employment -to- population ratio” to understand female employment in OECD countries.

Source: Same as Table 3-1.

62.21% in the Oceania.

In order to understand the composition of female labor force participation, the sector and the occupations of female employment are presented in the following sub-sections. These sections present the distribution of female employment. We can decide from statistics provided here whether or not there is a gender-dominated situation in the labor market.

3.2.1 Female Employment by Sector

The proportion of female employment in the service sector (Appendix 1) indicates an increasing trend in OECD countries. On the other hand, proportion of females employed in agriculture and industry sectors shows a declining tendency.

In fact, except Turkey, the service sector was the most popular one for women in all OECD member countries. In 2006, 90.54% females in Norway were employed in the service sector. Moreover, more than 80% female employees in the following 13 advanced countries joined the service sector in 2006: Austria, Belgium, Canada, Denmark, Finland, Germany, Iceland, Ireland, New Zealand, Spain, Sweden, Switzerland, and United Kingdom. Furthermore, 60% to 79% of females in nine member countries were employed in the service sector, including the Czech Republic, Greece, Hungary, Italy, Japan, Korea, Mexico, Poland, Portugal, and the Slovak Republic.

In 2006, except Greece and Turkey, the proportion of females employed in the industry sector was greater than the agriculture sector in 24 countries. In the same year, the share of females employed in the industry sector among OECD member countries ranged from 7.93% to 27.02%. Besides, the lowest ratio was seen in Norway, and the highest ratio was found in the Czech Republic.

In addition, in most of OECD member countries, the proportion of females

employed in the agriculture sector in 2006 ranged between 0.9% to 9%. In four member countries, the proportion of females employed in the agriculture sector was more than 10%; these countries were Greece, Poland, Portugal, and Turkey. Especially in Turkey, it was in agriculture sector that females were employed the most, and the share was 48.46% in 2006.

Compared with females, the statistics of male employment by sector also showed a similar trend. That is, except the Slovak Republic and the Czech Republic, most males of the remaining 24 OECD member countries in 2006 were also employed in the service sector. In the Slovak Republic and the Czech Republic, the majority of male employment was found in the industry sector.

To sum up, employment of males as well as females in service sector is increasing in OECD member countries. However, female employment is also influenced by the composition of an economy. If an economy is substantially focused on the agriculture sector, then the proportion of females who participate in the agriculture sector will be undoubtedly higher, as shown in the statistics for Turkey.

3.2.2 Female Employment by Occupation

According to International Standard Classification of Occupations, ISCO-88, occupations are categorized into ten major groups. Appendix 2 shows the sub-major occupations under each major group. Because of missing data, the development of female employment by occupation is discussed only for 25 OECD member countries. The development of female employment by occupation in France, Japan, Korea, Luxemburg, and United States is not discussed here.

Growth of female employment by occupation among the 25 OECD member countries was quite different. In 1997, most females in Belgium were employed as professionals, and the ratio was 25.11%. In Hungary, 18.67% female workers were plant

and machine operators and assemblers. In Poland and Greece, 19% to 23% female workers were skilled agricultural and fishery workers. In the Czech Republic, Germany, Slovakia, and Switzerland, most employed females were technicians and associate professionals. Moreover, in six OECD member countries (Australia, Austria, Canada, Ireland, Italy, and New Zealand), most females worked as clerks. Furthermore, most females in nine member countries (Denmark, Iceland, Mexico, Netherlands, Norway, Portugal, Spain, Sweden, and United Kingdom) have been employed in the service industry as shop and market salespersons.⁹

In 2006, more females were employed as technicians and associate professionals. Besides the four countries mentioned in the last paragraph, relatively more females in Austria, Italy, and Denmark also worked as technicians and associate professionals. Likewise, the number of countries where most females were employed as professionals had increased over the past decade. In 2006, 22% to 26% of female workers in Belgium, Australia, and Poland worked as professionals.

In 2006, most females in nine OECD member countries were still employed in the service industry as shop and market salespersons. Nevertheless, these nine countries were changed to Finland, Ireland, Iceland, Mexico, Norway, Portugal, Spain, Sweden, and Greece. In Norway, more than one-third (36.18%) of female workers were employed in the service sector. As different from 1997, most female workers of only two member countries (Canada and New Zealand) were employed as clerks in 2006. In Turkey, there were 38.86% female workers employed as skilled agricultural and fishery workers in 2006. However, the percentage of female employment in these sectors decreased 22.47 percentage points from 61.33% in 2001. While the proportion of skilled agricultural and fishery workers decreased dramatically, the proportion of female

⁹ The data are from International Labour Organization, Labour Statistics Database, <http://www.ilo.org/>.

employment in elementary occupations increased relatively fast in Turkey.

Armed forces and other occupations excluded, in eleven OECD member countries the fewest number of females were employed as skilled agricultural and fishery workers in 1997. In 2006, the fewest number of females employed in these occupations in thirteen countries. The eleven countries in 1997 were Netherlands, Belgium, Australia, the Czech Republic, Germany, Slovakia, Denmark, Canada, Ireland, Sweden, and Hungary. Only the Netherlands was not among the thirteen countries in 2006, while Italy, Norway and Spain were the new additions; status of all others remained unchanged.

Both in 1997 and 2006, fewer female workers worked as plant operators and machine assemblers in Poland, Switzerland, Austria, Iceland, Portugal, and Greece. Other than that, much fewer, around 1.3%, females worked as legislators, senior officials and managers in Italy and Mexico in 1997. In 2006, the fewest females were employed as legislators, senior officials and managers in Turkey and Mexico.

To sum up, the number of females that served as skilled agricultural and fishery workers declined from 1997 to 2006. Although most females in nine out of 25 OECD member countries were employed as service workers, more females in other OECD member countries were employed in occupations which were dominated by males before. The fact that a higher proportion of females participating in occupational categories that were previously male-dominated reflects the reduction of gender segregation in the labor market. It also reveals the influence of modern gender-role attitudes, which in turn, makes a positive impact on participation of female labors.

3.3 Female Unemployment

In 1980, the rate of female unemployment in OECD member countries was 6.58%. A cyclical pattern appears almost every ten years. The rate of female

unemployment reached the highest point and then went down during the periods of 1981-1990, 1991-2000, and 2001-2006. In 2006, the rate of female unemployment in OECD countries slightly went down to 6.42%. Although in 1980, the rate in OECD countries decreased 0.16 percentage points only, the rate of female unemployment in 2006 was the lowest in the past 26 years.

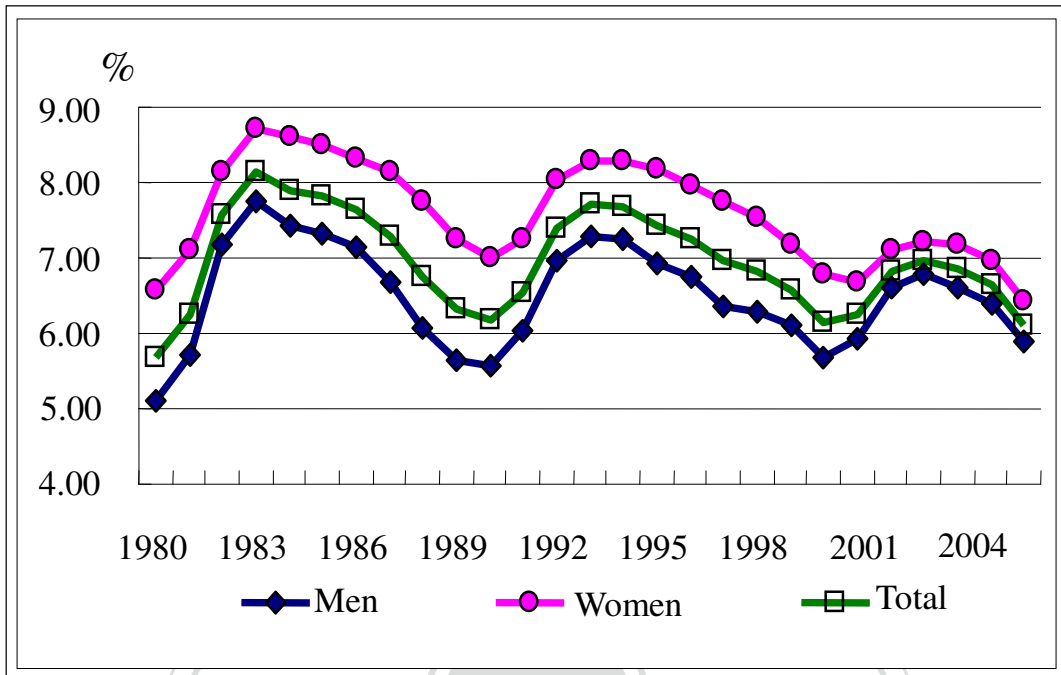
Considering female unemployment rate by area, it is found that unemployment rate in OECD countries in Europe was always higher than the average. Comparing the average female unemployment rate of member countries in Europe and all OECD member countries, the gap is around 3 to 4%. From 1980 to 1983, unemployment rate of women in North America was greater than the average. However, since 1984, female unemployment rate in the member countries in North America has been lower than the average. The rate of female unemployment in Oceania was lower than average throughout from 1980 to 2006. The trend of female unemployment rate in Oceania area was different from other areas; the rate increased from 2.78% in 1980 to 3.75% in 2006.

Compared with male unemployment rate in OECD member countries, female unemployment rate was usually higher in the period from 1980 to 2006. However, male unemployment rate too had the same cyclical fluctuation every ten years. In 1980, the average rate of male unemployment in OECD member countries was 5.09%, and the rate has increased to 5.88% in 2006.

Figure 3-4 shows the trend of male and female unemployment rate in OECD member countries, and Table 3-6 lists the statistics of male and female unemployment rates divided by area. Moreover, to understand the context of female unemployment, please refer to the analysis in sub-sections by age and level of educational attainment.

3.3.1 Female Unemployment Rate by Age Group

Looking at female unemployment rate by age group in OECD countries, it is easy



Source: Same as Figure 3-1.

Figure 3-4: Male and Female Unemployment Rate in OECD Countries—1980-2006

to find that the rates of female unemployment of age groups 15-19, 20-24, and 25-29 are higher than the average rate from 1980 to 2006. Female unemployment rates of age groups 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, and 65 and above have remained consistently lower than the average over all the 27 years. Only the unemployment rate of 30 to 34-years-old females has been higher than the average from 1980 to 1987, but this too has remained lower than the average from 1988 to 2006.

From 1980 to 2006, it was always the age group of 15-19 that features the highest female unemployment rate. The figure was 18.13% in 1980, 22.80% in 1983, 13.67% in 2000, and 15% in 2006. Although female unemployment rate fluctuated in the past 26 years, it decreased 3.13 percentage points from 1980 to 2006.

Checking the ebb and flow of each age group from 1980 to 2006, we know that female unemployment rate only decreased in two age groups. These two groups were 15-19 and 65 and above. These two groups were the groups which featured the highest

Table 3-6: Male and Female Unemployment Rate in OECD Countries—1980-2006

Unit: %

Year	Total		OECD countries in Europe		OECD countries in North America		OECD countries in Oceania	
	Male	Female	Male	Female	Male	Female	Male	Female
1980	5.09	6.58	4.63	8.29	6.95	7.50	3.08	2.78
1981	5.70	7.11	5.81	9.35	7.36	7.95	3.19	2.70
1982	7.17	8.14	7.00	10.42	10.03	9.54	3.32	2.76
1983	7.77	8.72	8.11	11.76	10.18	9.42	3.79	3.19
1984	7.44	8.61	9.24	12.19	7.84	7.99	3.55	3.27
1985	7.33	8.50	9.36	12.26	7.39	7.75	3.55	3.14
1986	7.16	8.31	9.13	12.20	7.20	7.34	3.60	3.23
1987	6.68	8.13	8.66	12.59	6.44	6.49	3.55	3.19
1988	6.07	7.74	7.88	11.97	5.67	5.82	3.02	3.00
1989	5.63	7.26	7.23	11.19	5.43	5.60	2.77	2.74
1990	5.56	7.01	6.76	10.47	5.92	5.78	2.73	2.68
1991	6.02	7.24	7.15	10.15	6.46	6.44	2.95	2.96
1992	6.95	8.03	8.52	11.21	7.09	6.92	3.20	3.07
1993	7.30	8.28	9.52	11.89	6.60	6.60	3.54	3.40
1994	7.26	8.28	9.80	12.13	6.05	6.18	3.56	3.45
1995	6.92	8.16	9.14	11.75	6.01	6.34	3.48	3.45
1996	6.75	7.95	9.08	11.56	5.52	5.96	3.67	3.55
1997	6.36	7.76	8.76	11.53	4.79	5.51	3.78	3.67
1998	6.28	7.52	8.22	10.97	4.38	4.95	5.35	4.73
1999	6.11	7.17	8.13	10.51	3.90	4.47	5.58	4.87
2000	5.70	6.77	7.54	10.05	3.75	4.19	5.11	4.50
2001	5.92	6.67	7.48	9.36	4.41	4.63	5.22	4.64
2002	6.59	7.10	8.25	9.63	5.32	5.42	5.23	4.68
2003	6.79	7.21	8.56	9.83	5.56	5.48	5.11	4.66
2004	6.61	7.19	8.62	9.99	5.19	5.41	4.67	4.31
2005	6.39	6.95	8.51	9.89	4.85	4.97	4.44	4.12
2006	5.88	6.42	7.83	9.19	4.39	4.56	4.23	3.75

Source: Same as Table 3-1.

and the lowest female unemployment rate. Compared with 1980, unemployment rate in the age group of 40-44 increased the most, rising 1.95 percentage points until 2006. In addition to the age group of 40-44, the increase of female unemployment rate among other age groups like those of 30-39, 40-44, 45-49, 50-54, and 55-59 were 1 percentage point excessive.

In 2006, female unemployment rates in age groups of 25-29, 30-34, 35-39, 40-44, 45-49, 50-54 were higher than those of males. In other words, unemployment rate of prime-age females is higher than that of males. Although female unemployment rate was higher than males, female unemployment rate in age groups 15-19, 20-24, 55-59, 60-64, and 65 and above were lower than the same age groups of males. Table 3-7 lists female unemployment rate in each age group in OECD countries, while Table 3-8 shows the data of males.

3.3.2 Female Unemployment Rate by Level of Educational Attainment

Review of female unemployment rate by level of educational attainment in OECD member countries (Table 3-9) reveals that unemployment rate of tertiary educated females remained lower than the other two groups from 1991 to 2005. From 1991 to 2005, female unemployment rate of tertiary educated reached the highest in 1993, 5.47%, and the lowest in 2001, 3.36%. Compared with other two educational attainment groups, female unemployment rate of tertiary educated was rather stable, fluctuating from 3.36% to 5.47%.

In contrast, unemployment rate of females with less than upper secondary education was the highest among all. Also, the rate in this group fluctuated more than other two groups of different educational attainments. Unemployment rate of females with less than upper secondary education went down to its lowest, 6.75%, in 1996, and climbed to its highest, 11.10%, in 2005. Compared with 1980, unemployment rate of

Table 3-7: Female Unemployment Rate by Age in OECD Countries—1980-2006

Unit: %

Year	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+
1980	18.13	10.69	7.37	5.28	4.22	3.47	3.37	3.33	3.37	2.83	2.04
1981	19.66	11.57	8.18	5.80	4.60	3.88	3.53	3.35	3.77	3.25	2.94
1982	21.80	13.40	9.50	6.84	5.51	4.74	4.15	4.17	4.49	4.12	2.53
1983	22.80	14.38	10.25	7.49	6.16	5.02	4.62	4.67	4.83	4.03	2.38
1984	21.86	14.49	10.06	7.46	6.19	5.12	4.69	4.51	4.66	3.57	2.08
1985	21.13	14.32	10.30	7.85	6.11	5.00	4.55	4.31	4.63	3.48	1.74
1986	20.20	14.01	10.33	7.94	5.86	4.89	4.55	4.42	4.36	3.61	1.65
1987	19.13	13.73	10.03	7.79	6.14	5.11	4.60	4.38	4.38	3.25	1.52
1988	17.20	13.23	9.87	7.59	5.99	4.82	4.21	4.05	4.26	2.76	1.59
1989	15.72	12.18	9.58	7.49	5.64	4.63	4.00	3.93	4.03	2.69	1.45
1990	15.80	11.69	9.09	7.18	5.66	4.58	3.96	3.85	3.79	2.50	1.41
1991	14.84	11.57	9.39	7.51	6.04	4.87	4.61	4.41	4.23	2.73	1.53
1992	16.36	12.70	10.36	8.88	7.25	5.85	5.18	5.26	4.65	3.12	2.22
1993	17.00	13.23	10.43	8.78	7.42	5.91	5.39	5.33	5.14	3.46	1.90
1994	16.48	13.30	10.84	9.06	7.70	6.33	5.56	5.43	5.27	3.25	2.09
1995	17.37	13.80	10.24	8.51	7.19	6.10	5.18	4.99	5.36	3.12	1.94
1996	16.58	13.43	10.05	8.42	7.15	5.89	4.96	4.96	5.71	3.17	1.86
1997	16.49	13.00	9.80	8.03	7.08	5.87	5.01	4.92	5.76	2.97	1.77
1998	14.84	12.58	9.47	8.02	6.96	5.79	5.10	4.69	5.53	3.07	1.80
1999	14.28	12.21	9.01	7.59	6.52	5.66	4.90	4.54	5.27	3.09	1.54
2000	13.67	11.39	8.36	7.10	6.10	5.50	4.78	4.50	4.92	3.43	1.59
2001	13.97	11.37	8.32	7.07	6.07	5.34	4.84	4.41	4.52	3.23	1.46
2002	14.50	12.18	9.05	7.41	6.54	5.67	5.17	5.02	4.56	3.65	1.84
2003	15.34	12.53	9.00	7.58	6.83	5.93	5.27	4.91	4.60	3.54	1.90
2004	15.69	12.59	8.95	7.23	6.71	5.95	5.38	5.08	4.80	3.72	1.83
2005	15.24	11.89	8.95	7.20	6.44	5.70	5.27	4.98	4.52	3.47	1.79
2006	15.00	11.17	7.97	6.55	5.84	5.42	4.74	4.63	4.39	3.42	1.48

Source: Same as Table 3-1.

Table 3-8: Male Unemployment Rate by Age in OECD Countries—1980-2006

Unit: %

Year	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+
1980	16.14	10.39	5.95	3.84	3.19	2.70	2.95	2.79	3.54	4.04	2.19
1981	17.98	11.36	6.51	4.32	3.59	3.32	3.29	3.27	4.14	4.48	2.51
1982	21.26	13.83	8.66	5.83	5.00	4.27	4.03	4.31	5.32	5.20	2.63
1983	21.50	14.67	9.17	6.13	5.16	4.37	4.36	4.62	5.68	6.24	2.75
1984	21.00	13.90	8.28	5.94	4.81	4.31	4.32	4.47	5.65	6.23	2.27
1985	20.38	13.90	8.26	5.94	4.68	4.29	4.40	4.67	5.55	5.78	2.40
1986	19.21	13.52	8.22	5.94	4.83	4.33	4.19	4.66	5.80	5.49	2.30
1987	18.15	12.40	7.73	5.64	4.48	4.16	4.11	4.52	5.50	5.54	2.02
1988	16.36	11.81	6.95	4.87	3.97	3.55	3.62	4.01	5.11	5.24	1.92
1989	15.25	10.79	6.60	4.56	3.80	3.45	3.34	3.54	4.89	4.65	2.13
1990	15.28	10.75	6.64	4.78	3.79	3.31	3.28	3.43	4.46	4.42	1.94
1991	14.63	11.64	7.17	5.24	4.39	3.83	3.60	3.93	4.55	4.40	1.86
1992	15.85	12.96	8.82	6.57	5.73	4.78	4.55	4.78	5.39	5.22	2.05
1993	16.00	13.65	8.79	6.54	5.83	5.03	4.71	4.89	5.85	5.78	2.08
1994	16.24	13.43	9.10	6.83	5.87	5.24	4.87	5.16	5.96	5.73	2.33
1995	16.49	12.78	8.28	6.03	5.31	5.03	4.60	4.75	5.85	5.44	2.41
1996	15.69	12.68	8.08	5.92	5.19	4.84	4.53	4.75	5.95	5.49	2.16
1997	14.84	11.94	7.64	5.62	4.88	4.51	4.34	4.53	5.80	5.16	2.06
1998	14.41	11.66	7.56	5.45	4.69	4.62	4.34	4.55	5.80	5.61	2.31
1999	13.61	11.60	7.35	5.34	4.54	4.48	4.29	4.46	5.73	5.71	2.19
2000	13.09	11.09	6.70	4.78	4.28	4.08	4.05	4.22	5.09	5.60	2.37
2001	13.70	11.77	7.01	5.08	4.64	4.29	4.35	4.26	4.91	5.60	2.30
2002	15.06	12.91	8.19	5.85	5.19	4.90	4.85	4.92	5.25	5.58	2.24
2003	15.84	13.34	8.61	6.08	5.30	5.10	5.08	5.07	5.28	5.31	2.45
2004	15.50	13.00	8.55	5.80	5.25	4.86	4.86	5.01	5.22	5.13	2.24
2005	15.87	12.79	8.10	5.69	4.99	4.70	4.70	4.85	5.07	4.72	2.24
2006	15.16	11.48	7.56	5.34	4.54	4.31	4.30	4.41	4.74	4.24	2.09

Source: Same as Table 3-1.

Table 3-9: Female Unemployment Rate by Level of Educational Attainment in OECD

Countries—1991-2005

Unit: %

Year	Less than upper secondary education	Upper secondary education	Tertiary education
1991	7.18	6.79	4.22
1992	8.00	7.57	4.54
1993	8.11	7.99	5.47
1994	8.99	7.88	4.42
1995	6.98	7.10	4.54
1996	6.75	6.97	4.40
1997	9.58	6.45	3.85
1998	9.44	6.54	3.94
1999	9.27	6.25	3.92
2000	8.90	6.12	3.42
2001	8.10	6.01	3.36
2002	8.45	6.76	3.88
2003	8.37	7.00	4.07
2004	10.59	7.27	4.26
2005	11.10	6.95	4.20

Note: Same as Table 3-4.

Source: Same as Table 3-4.

females with less than upper secondary education increased 3.92 percentage points in 2006.

Similar to the group of tertiary education, the highest unemployment rate of females with upper secondary education was observed in 1993, and the lowest in 2001. Unemployment rate of females with upper secondary education was 7.99% in 1993, and 6.01% in 2001. From 1994 to 2001, female unemployment rate of this educational attainment group had a downward trend. In 2005, the rate was 6.95%, which somewhat

higher, 0.16 percentage points, compared with 1980. Unemployment rate of females with upper secondary education was higher than of those with tertiary education by 2.33 to 3.46 percentage points from 1991 to 2005.

According to the statistics of all OECD member countries in 2005, unemployment rate of females with less than upper secondary education was the lowest, 1.9%, in Korea, and the highest, 44.9%, in the Slovak Republic. Moreover, the rate of upper secondary education group was the lowest, 1.5%, in Iceland, and the highest, 19.2%, in Poland. Furthermore, unemployment rate of females with tertiary education was the lowest in Iceland and United Kingdom, and the highest in Greece, which was 1.7% and 10.0% respectively.¹⁰

3.4 Summary

According to the statistics of OECD member countries from 1980 to 2006, not only female labor force population increased to 243,328,000 in 2006, but also female labor force participation rate increased 8.3 percentage points to 62.60% in 2006.

The female labor force participation by age group obviously reveals the fact that the highest rate of female labor force participation was in age group of 40 to 44 in 2006. The second highest rate was in the age group of 45-49. Moreover, the rate of female labor force participation of the 45 to 49 group increased the most among all age groups. This reflects that more and more middle-age females in OECD member countries are participating in the labor market now.

It is obvious that the rate of female labor force participation of tertiary educated was always the highest in all years in all countries. In Turkey, the gap between tertiary education and less than upper secondary education in 2005 was as high as 47 percentage

¹⁰ The data are from the Organization for Economic Cooperation and Development (OECD), *Education at a Glance—OECD Indicators*, <http://dx.doi.org/10.1787/024877570562>.

points. This indicates that more human capital and opportunity cost will encourage more women to participate in the labor market.

The proportion of female employment by sector reveals that female employment in the service sector has an increasing trend. In contrast, the proportion of female employment in both agriculture and industry sectors showed the reverse tendency. Except Turkey, the service sector was the most popular one for women in remaining OECD member countries in 2006.

Composition of female employment by occupation in OECD member countries varies significantly. In 2006, the ratio of service workers and shop and market salespersons was high in nine countries. Meanwhile, the number of countries where more females were employed as technicians and associate professionals reached seven. This increasing trend indicates that in recent years more females in OECD member countries have been employed in male-dominated occupations.

Unemployment rate of tertiary educated females was more stable and lower than the other two educational attainment groups through out, from 1991 to 2005. Nevertheless, unemployment rate of females with less than upper secondary education was the highest. Generally speaking, a higher level of educational attainment is helpful not only to reduce female unemployment rate, but also to enhance female labor force participation in OECD member countries.