

**CONFERENCE OF EUROPEAN  
STATISTICIANS**

**Joint ECE/INSTRAW/UNSD Work  
Session on Gender Statistics**  
(Geneva, 20-22 April 1998)

**Working Paper No. 4**

**STATISTICS OF OCCUPATIONAL AND PAY DIFFERENCES BETWEEN MEN AND  
WOMEN IN THE NETHERLANDS**

Submitted by the Social and Cultural Planning Office<sup>1</sup>

**Introduction**

1. The aim of this paper is to show the developments in the different positions of men and women at the Dutch labour market in the last decades. The first section presents an overview of the labour participation of men and women in general. The next section focuses on sectoral differences between men and women, followed by an analysis of occupational segregation. After that the distribution of men and women over different occupational levels is looked at, followed by a brief overview of developments in self-employment. The last section of this paper focuses on pay differences.

2. The data that are used in this paper come from different sources. The oldest data presented here come from the last National Census of Population which was held in 1971. The second source of national labour force participation figures is the Labour Force Survey (Arbeidskrachtentelling) which was conducted every two years from 1973 until 1985. The most recent data are taken from the new Dutch Labour Force Survey (EBB), a continuous sample survey which is published on a yearly basis.

**Labour participation of men and women**

3. As from the turn of the century until the 1960s the gross participation rate of men and women has hardly changed (the gross participation rate refers to the labour force as % of the population aged 15-64). Never more than 30% of the women belonged to the labour force, compared to 90% of the men. This situation changed in the 1960s for both men and women.

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From 1970 to the mid-1980s men's participation rate decreased to 72%, whereas women's participation rate increased continuously. In 1996 50% of the women aged 15-64 belong to the labour force. When only the working part of the labour force is taken into account (the net labour participation rate: all persons aged 15-64 who work at least 12 hours a week) the participation rates for women and men are at present 45% and 72% respectively.

Table 1 Gross and net participation rate (as % of the population aged 15-64)

	Gross participation rate <sup>a</sup>			Net participation rate <sup>b</sup>		
	men	women	total	men	women	total
1970	86	29	57	85	29	57
1980	76	32	52	74	30	52
1990	75	44	59	71	39	55
1996	77	50	64	72	45	59

<sup>a</sup> Labour force as % of population aged 15-64

<sup>b</sup> All persons who work at least 12 hours a week

Source: CBS (EBB and distributed data) SCP treatment.

4. The growth in the labour participation of women can be attributed largely to the greater participation of married women. Between 1971 and 1996 the participation rate of this group swelled from 16% to 44%.

5. The labour participation of married women still depends on the presence of absence of young children, albeit to a lesser extent than in the past. At the beginning of the 1970s only 10% of the women with a child aged under 4 belonged to the labour force, at present more than half of these women (55%) do.

6. There are several reasons for the rise of the working women, such as increased education level and changing attitudes towards men and women. In addition, the growing labour participation of women has to some extent been aided by the shift in employment away from manufacturing and construction towards the services sector, which has traditionally employed a higher proportion of women. There is an over representation of women in particular in the retail sector, health care, education and social and socio-cultural work. In each of these sectors - with the exception of retailing - employment has grown more strongly over the last twenty years than the average for the economy as a whole. For example, the number of jobs in the health care sector and in social and socio-cultural work doubled, while the number of people employed in education increased by more than a third. Women drew great benefit from this. Employment in the retail sector increased only slightly (+7%) between 1975 and 1994, but the number of women in this sector nevertheless grew by almost a quarter. Two out of five of the extra women who have begun working since 1975 have found employment in one of the four sectors referred to (health care, social work, education and retailing). (SCP 1996)

### **Sectoral differences between men and women**

7. Table 2 shows that the share of women has increased in all sectors of the labour market. However, the distribution of women over these sectors was and still is quite different from that of men. Women are more than men concentrated in a few sectors. Half of the women work in the non-commercial service sector (especially health care and social work 28% and education 9%), almost 16% in (retail) trade and 13% in banking and insurance and business services. Men are also concentrated in some of the sectors, but their distribution is more even than that of women. The largest share of men (23%) is to be found in the non-commercial services (mostly in public

administration: 10%). 22% of the men work in the industrial sector and 15% in the (retail) trade.

Table 2 Distribution of working women and men over different sectors of the labour market and share of women within each sector, 1975-1995 (in percent)

	1	2	3	4	5	6	7	total
distribution of women over sectors								
1975	4	15	2	24	3	9	44	100
1985	3	10	1	21	3	10	51	100
1987	3	9	1	22	3	9	51	100
1994a	3	9	2	20	4	12	51	100
1994b	3	8	1	21	4	14	50	100
1995	2	9	2	19	3	13	49	100
distribution of men over sectors								
1975	7	30	13	16	8	6	19	100
1985	6	26	11	16	8	9	24	100
1987	7	30	13	16	8	6	19	100
1994a	5	23	11	18	8	11	25	100
1994b	5	22	11	17	8	13	24	100
1995	5	22	11	17	8	13	23	100
share of women within each sector								
1975	16	15	5	35	12	33	45	27
1985	20	17	6	40	16	36	52	34
1987	25	18	7	43	18	36	53	36
1994a	23	19	8	40	21	38	55	37
1994b	23	17	6	40	20	38	55	36
1995	21	19	7	40	20	38	55	37

1 = agriculture + fishing

2 = industry + mining

3 = construction + public industry

4 = trade, hotel- and catering industry, repair companies

5 = transport, haulage and communications

6 = banking and insurance and business services

7 = non-commercial services

total = including those of whom the sector of employment is not known

Source: Hooghiemstra en Niphuis-Nell (1993); CBS (AKT'75 en '85; EBB'87, '94 en 95) SCP treatment

Explanation: 1994a: the division is based on the classification of sectors developed by Statistics Netherlands in 1974; 1994b: this division is based on the classification of sectors developed and used by Statistics Netherlands since 1993. This implies that from 1994 on some branches of industry are classified differently. Shifts in the share of men and women within a sector can therefore be partly explained by this different way of classifying. The most important shift is that a lot of people working in the non-commercial service sector according to the classification of 1974 are working in the banking and insurance and business services when the classification from 1993 is applied (5.4% of the men in non-commercial services 1974 and 3.5% of the women).

## Occupational segregation

8. Apart from the distribution of the sexes over different sectors of the labour market it is of interest to look at the distribution of the sexes over different occupations. These two levels of classification intermingle. Secretaries for example, are classified as belonging to the 'administrative occupations' whereas they can be working in different sectors: a secretary from a metallurgical concern works in the industrial sector and a secretary from a department store works in the trade sector.

9. Before elaborating on the distribution of the sexes over occupations it is important to point at the shift in the occupational structure in general, which is even larger than the shift in the sectoral structure of employment as described before. Again, women have drawn great benefit from this shift. The share of occupations in the traditional crafts, industrial and transport sectors

in employment shrank from 43% in 1960 to 23% in 1994, whereas the share of occupations in the services sectors (administrative, commercial and service-providing occupations) grew from 30% to 38%. The growth in scientific and other specialist occupations was even stronger, as was the rise in the share of middle and senior management positions: their joint share increased from 12 to 25%. This indicates that there was not only a shift taking place in the employment structure between sectors, but also within sectors; even within the industrial sector, an ever-increasing share of the workforce has a non-industrial occupation (35.5% in 1987, 46.5% in 1993). If this trend continues in the future, there is likely to be a steadily declining demand for people with technical training and a constantly rising call for people with an administrative, commercial or service-oriented training. (SCP 1996)

Table 3 Distribution of women and men over different occupations (according to the Standard Classification of Occupations 1984, CBS), 1975 - 1995 (in %)

	1	2	3	4	5	6	7	total
women								
1975	20	0	29	15	23	4	8	100
1985	25	0	29	12	24	3	6	100
1991	27	2	27	12	23	3	6	100
1995	30	2	27	11	17	2	5	100
men								
1975	15	5	14	9	5	8	43	100
1985	20	5	14	10	6	7	37	100
1991	22	7	12	10	6	6	35	100
1995	23	6	12	9	6	5	34	100
share of women within occupations								
1975	33	5	43	38	63	14	6	27
1985	39	7	52	39	67	19	8	34
1991	44	16	58	43	71	24	9	39
1995	43	18	57	41	65	19	8	37

1 = scientific and other specialist occupations

2 = middle and senior management

3 = administrative occupations

4 = commercial occupations

5 = service-providing occupations

6 = agricultural occupations and fishermen

7 = traditional crafts, industrial and transport occupations

total = including those of whom the occupations is not known

Source: Hooghiemstra en Niphuis-Nell (1993); CBS (AKT'75 en '85; EBB'91 and '95) SCP treatment

10. Although these tables present some insight in the change in the differential distribution of men and women in the employment structure, the classification in terms of sector and occupational groups is rather crude. During the last decade, several Dutch researches have analysed the trends in occupational gender segregation more thorough (Van Mourik en Siegers 1988, Tijdens 1989, Groot 1990, Faber et al. 1995, Plantenga et al. 1997). The conclusions of their work however diverge. According to Van Mourik and Siegers as well as according to Tijdens, occupational gender segregation increased. Groot finds no changes of significance, but only a short period is looked upon (1981-1985). Plantinga et al. however come to the same conclusion looking at the period 1987-1991. Faber et al. finally conclude that the occupational gender segregation has decreased in the period 1971-1989. It is, however, difficult to compare the findings of these researchers for they measured segregation differently.

11. The problem in establishing shifts in segregation is how to identify the substantive change under investigation as distinct from other changes that occur simultaneously, such as the increase of working women, changes in the sectoral structure of employment, and the shift in the occupational structure in general. According to Blackburn et al. (1995) two criteria are essential for a satisfactory measure of segregation: sex composition invariance and gendered occupations invariance. *Sex composition invariance* requires that the measurement of segregation should not be affected statistically by the sex composition of the labour force, i.e. by the relative proportions of women and men. It must be avoided that variation in the sex composition of the labour force causes changes in the observed values of a measure which are unrelated to changes in actual segregation. *Gendered occupation invariance* requires that variation in the relative size of gendered occupational categories should not affect the measurement of segregation. When for instance employment in female occupations rises more strongly than employment in male occupations, this development in itself should not affect the outcome of the segregation measure. Unfortunately, so far no Dutch research on occupational gender segregation is done that meets these two criteria. Since the approach taken by Faber et al. comes closest, some of their findings will be presented.

12. Faber et al. make a distinction between three occupational categories: female occupations, male occupations and equal occupations. In 1971 occupations in which more than 41% of the workers is female are labeled as female occupation, occupations with less than 21% women are labeled as male occupation and occupations in which 21 through 41% of the workers are women are labeled as equal occupation. Because the share of women in the labour force has increased since 1971 to 37% in 1989, the intervals on the basis of which occupations are labeled change. If in 1989 more than 50% of the employees within an occupational category is female, this profession is labeled as female. Male occupations are those professional categories in which less than 30% of the workers is female. In equal occupations finally 30 through 50% of the employees is female. At first, Faber et al. analysed how occupational gender segregation developed within 188 occupational categories. They establish that within 43% of the occupations segregation has been decreasing, in 40% segregation remained the same and in 32 occupations (17%) segregation increased. Moreover, of 27 occupations the gender label changed. 12 male occupations changed into equal occupations (e.g. employee in the printing industry and manager in the hotel and catering industry). 4 of the equal occupations (20 in 1971) became male occupation (e.g. bookbinder and shoemaker) and 7 of them became female occupation (e.g. sociologist/psychologist and librarian/archivist). And of the 32 female occupations 2 changed in equal ones (e.g. executive of domestic staff) and 2 changed in male occupations. Secondly, Faber et al. analysed the shifts in segregation at a macrolevel. Taking changes in the size of the occupations into account, the researchers establish that occupational gender segregation decreased between 1971 and 1989. Proportionally more women got to work in male and equal occupations than in female occupations and men got proportionally more often engaged in female and equal occupations than in male occupations. Faber et al. ascribe the decrease of the occupational segregation to the decline in the overrepresentation of men in male occupations and, to a lesser extent, to the decline of the overrepresentation of women in female occupations.

13. Although the analysis of Faber et al. is of interest, new research is necessary. Not only because new data are available but especially because of improvements in the methodology of measuring occupational gender segregation as suggested by Blackburn et al. It will however, become more and more complicated to establish trends in the future because of the changes in the

classification systems that are applied by Statistics Netherlands.

### Distribution of men and women over positions

14. Another aspect of gender segregation at the labour market is the distribution of men and women over higher and lower positions. Table 4 shows the proportion of women on several managerial positions within different occupations. It is clear that the number of women on higher positions has increased considerably, although the proportion of women in the occupational category as a whole still exceeds the proportion of women on higher positions. In 1995 57% of all employees in administrative occupations was female (compared to 43% in 1977) whereas for instance only 36% of the managerial administrative personnel was female. The same trend occurs among commercial occupations. In 1995 41% of all commercial jobs was held by women (37% in 1977), while only 34% of the managers in retail is female (13% in 1977). Compared with other occupational categories, the proportion of female managers in service-providing occupations is high, even though also in this category this proportion is lower than the proportion of women in service providing occupations as a whole. For the rest the rise in female managers in agriculture and horticulture is noteworthy.

15. Table 4 only focuses on women on higher positions. To get a more comprehensive picture table 5 presents the distribution of men and women over all levels of occupation. This table goes only back to 1990 since this method of classification has only recently been used by Statistics Netherlands. It is clear from this table that the level of occupation of men is higher on average than that of women. Women are considerably more often employed in elemental occupations (13% compared to 9% of the men), whereas a larger share of men are engaged in a higher or scientific profession (17.1 and 7.5% respectively, compared to 15.5 and 6.0% of the women).

Table 4 Proportion of women in occupational categories as a whole and in managerial occupations within these categories (as a percentage of the number of workers in the category), 1977-1991

	1977	1985	1987	1995
Administrative occupations	43	52	55	57
- supervising and managerial administrative personnel	5	17	27	36
- executive officials	5	3	.	15
- supervising and managerial transport- en communications personnel	3	4	.	9
Commercial occupations	37	39	41	41
- managers of whole-sale trade	5	.	.	14
- retail managers	13	12	.	34
- supervising and managerial commercial personnel, purchasers	12	16	23	26
Service-providing occupations	65	67	71	65
- managers of hotels and catering industries	40	35	40	42
- supervising and managerial domestic personnel	64	.	64	53
Agricultural occupations, fishermen	15	19	21	19
- managers of agriculture, horticulture etc.	4	2	.	9
Traditional crafts, industrial-, and transport occupations	6	8	8	8
- production managers	2	4	5	7

. = data not available

Source: Hooghiemstra en Niphuis-Nell (1993); CBS (AKT'77, '85; EBB'87, '95) SCP treatment

Table 5 Occupational position of workers, 1990-1996, in percent

	men		women		total	
	1990	1996	1990	1996	1990	1996
elemental occupations	8,9	9,3	12,9	13,1	10,4	10,9
lower occupations	27,4	26,8	28,6	27,4	27,9	27,1
midlevel occupations	39,4	38,4	37,8	37,4	38,8	38,0
higher occupations	16,8	17,1	15,1	15,5	16,2	16,4
scientific occupations	7,1	7,5	5,3	6,0	6,4	6,9
unknown	0,4	0,8	0,2	0,5	0,3	0,7

Source: CBS 1997, SCP treatment

16. It must be stressed that it is difficult to draw clear conclusions from these tables about the development of the 'positional gender segregation' in general. After all, developments in labour participation in general as well as developments in the structure of employment should be taken into account. So far, no research has been done in the Netherlands to analyse 'positional gender segregation' using some segregation measure. However, once again it will be difficult to analyse the developments over the last few decades, since the changes in classification systems that are used.

### Self employment

17. The number of self-employed men and women in the Netherlands has decreased from 987.000 in 1970 to 783.000 in 1983 to rise again to 897.000 in 1995. Since employment in general has grown in this period, the proportion of self-employed workers decreased for 16% in 1970 to 13% at present (SCP 1998).

Table 6 shows that while the proportion of self-employed men amongst all men in employment slightly decreased, the proportion of self-employed women amongst all women in employment has increased from 3.5% in 1975 to 6.7% in 1996. The proportion of self-employed women amongst all self-employed people has increased considerably (9.0% in 1975 and 24.8% in 1996).

Table 6 Contract of employment by men and women, 1975-1996 (in percent)

	men		women		proportion of women	
	1975	1996	1975	1996	1975	1996
Self-employed	12.8	12.2	3.5	6.7	9.0	24.8
Assisting partner	0.7	0.5	9.3	2.2	83.5	76.1
Employees	86.5	87.0	87.2	90.4	26.9	38.3

Source: CBS (AKT'75 and EBB'96).

### Pay differences

18. It is a well recognised fact that men are on average paid more than women. Table 7 gives the average hourly pay for employees in the Netherlands in 1984, 1989 and 1993, looking at different job levels<sup>2</sup>. Apart from situation at the lowest job level, the hourly earnings of women are lower on average than the hourly earnings of men. In 1993, men earned on average Fl.26.50 an hour and women Fl.19.50 which is about 74% of the hourly earnings of men.

<sup>2</sup> The Labour Inspection that carries out this research uses their own classification of job levels. The criteria that are used relate to the type of work, the knowledge and experience that is required and the degree of autonomy within the job.

19. As the job level becomes higher, the difference between the earnings of men and women increases. It is noteworthy however, that for 1993 this conclusion does not apply to the highest level. In 1993 the difference between the earnings of men and women is greatest at the fifth level: at this level women earn 80% of what men earn. Also noteworthy is that it seems as if the pay differences between men and women have decreased.

Table 7 Gross hourly earnings by working men and women (in FI) by function-level and proportion of women's earnings, 1988-1993 <sup>a</sup>

	women		men		women's hourly pay in % of men's hourly pay	
	1988	1993 <sup>b</sup>	1988	1993 <sup>b</sup>	1988	1993 <sup>b</sup>
I	14.00	16.00	13.50	16.00	104	99
II	12.50	16.00	15.00	18.00	83	89
III	15.00	18.50	18.00	21.50	83	87
IV	19.00	23.50	24.00	27.50	79	85
V	25.50	30.00	34.00	37.50	75	80
VI	33.50	43.50	44.50	52.50	75	83
total	15.50	19.50	23.00	26.50	67	74

<sup>a</sup> Employees working for the government are not included in this research.

<sup>b</sup> The data for 1993 only concern workers aged 23 and older.

Source: LTD (1988), I-SZW (1995).

20. Although men on average earn 26% more than women, this difference cannot be fully attributed to the gender of the workers. One factor that has to be taken into account is the fact that the average wages at the different job levels diverge considerably. Proportionally more women are engaged at the lowest job level where the wages are the lowest, and the employees working at the fifth job level are predominantly men. These differences are of influence on the average hourly earnings of all men and women. Another important factor is the distribution of men and women over different sectors of the labour market. The hourly pay differs between sectors, so when women are more often engaged in sectors with relatively low salaries, this also explains some of the difference in hourly pay between men and women. Other factors besides the sector of employment and the job level are of influence as well. The difference in hourly pay between men and women decreases to 9% when one reckons with: level of education, working hours, number of years one is employed by the current employer, age, job level, sector of the labour market, size of the company, and the presence of additional wage components.

## Literature

Blackburn et al. 1995

R.M. Blackburn, J. Siltanen and J. Jarman. The measurement of occupational gender segregation: current problems and a new approach. In: *Journal of the Royal Statistical Society. Series A, Statistics in society*, volume 158, part 2, pp. 319-331.

Faber et al. 1995

F. Faber, A. van Doorne-Huiskes en W. van Schuur. De beroepssegregatie tussen mannen en vrouwen in Nederland opnieuw in kaart gebracht. Veranderingen in de seksesamenstelling van de beroepen in Nederland tussen 1971 en 1989. In: *Mens en Maatschappij*, jrg 70 (1995) nr 3 (september) pp. 243-260.

Groot 1990

L.F.M. Groot. De onderwijs- en beroepssegregatie tussen mannen en vrouwen in de eerste helft van de jaren tachtig. In: Tijdschrift voor Arbeidsvraagstukken, jrg 6 (1990) nr 4, pp. 4-12.

Hooghiemstra en Niphuis-Nell 1993

B.T.J. Hooghiemstra en M. Niphuis-Nell. Sociale atlas van de vrouw. Deel 2: Arbeid, inkomen en faciliteiten om werk en de zorg voor kinderen te combineren. Rijswijk/Den Haag: Sociaal en Cultureel Planbureau/VUGA, 1993 (Cahier 97)

I-SZW 1995

Inspectiedienst SZW. De positie van mannen en vrouwen in het arbeidsproces. Den Haag: Ministerie van Sociale Zaken en Werkgelegenheid, 1995.

Plantenga et al 1997

J. Plantenga, G. Bruning, J.J. Schippers, J.J. Siegers. De sociaal-economische positie van vrouwen 1990-1995. Den Haag: Ministerie van Sociale Zaken en Werkgelegenheid/DCE.

LTD 1988

Loontechnische dienst. De positie van mannen en vrouwen in het arbeidsproces. Den Haag: Ministerie van Sociale Zaken en Werkgelegenheid, 1988.

Van Mourik en Siegers 1988

A. van Mourik en J.J. Siegers. Ontwikkelingen in de beroepssegregatie tussen mannen en vrouwen, 1971-1985. In: Economisch Statistische Berichten 10-8-1988, pp. 732-737.

SCP 1996

Sociaal en Cultureel Rapport 1996. Rijswijk/Den Haag: Sociaal en Cultureel Planbureau/VUGA, 1996.

SCP 1998

Sociaal en Cultureel Rapport 1996. Rijswijk/Den Haag: Sociaal en Cultureel Planbureau/VUGA, 1998 (to be published).

Tijdens 1990

Beroepssegregatie en werkgelegenheid. In: Tijdschrift voor Arbeidsvraagstukken, jrg 6 (1990) nr 4, pp 13-23.