

Gender segregation in Turkish manufacturing industry: 1985-1998

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Abstract

This study attempts to quantify and analyze the magnitude of gender segregation in Turkey. Measures of gender segregation by economic activity are obtained for all sectors of the economy for the 1985-1998 period. The results suggest that there is gender segregation by economic activity within the aggregate economy. The manufacturing sector and its sub-sectors—in particular, the three sectors that comprise the highest shares in women's employment within the industry, namely a) food, beverages and tobacco, b) textile and wearing apparel, and c) chemical, petroleum and plastic products—are also investigated to determine the degree of sectoral gender segregation. Segregation indices by job status are estimated to see if segregation varies by job status. Three different indicators of gender segregation, namely, i) Coefficient of Female Representation (CFR), ii) Dissimilarity Index (DI), and iii) Women and Employment Index (WE), are calculated to study gender composition and segregation in the manufacturing industry. Women are over-represented in the food and textile industries and in non-production activities. Within the two female dominant sectors, food and textiles, we observe segregation by job status. Women are generally employed as unskilled workers to do routine office work. In production-related jobs, women have very low representation at the technical personnel level. In the case of non-production jobs, women are usually employed in standardized jobs and are seldom employed in management.

1. Introduction

The past decades have witnessed a change in the social and economic status of women in all countries. The efforts to integrate

women into the economic development process and women's own conscious demands to obtain greater shares in education, employment and income have contributed significantly to the direction and magnitude of these changes. Whether or not the end results are in favour of women depends on the specific development conditions of the country and the extent of women's participation in the process. Turkey as a developing country continues to experience changes regarding women's participation in the private as well as social spheres. Women's social and economic status is not only determined by their participation in the labour force but also by the types of work they perform in the labour market and their relative earnings at work.

The share of women in the 12-years-and-over age population is 50% in Turkey. The labour force participation rates for males and females were 76% and 35% respectively in 1989, and 69% and 26% respectively in 1998 (SIS, 1989-1998). The shares of females in the total labour force and among the total employed persons remained stable over the 1989-1998 period at approximately 28-32%. The seemingly high rate of participation of women reported in Turkey as a whole may be quite misleading; urban and rural participation rates show significant differences. The labour force participation rate for women in the urban areas of Turkey is 15%, while that of men is 65%. Share of females in the total labour force is 19% and their share in the total employed persons is 18% in the urban areas. These rates are substantially lower than the national average cited above. The unemployment rate for women in the urban areas is high, reaching 15% in 1998. In the rural areas, labour force participation rate for women is 42%. Women constitute 37% of the total labour force and the employed persons. The unemployment rate is 2% for women in rural areas. However, 93% of women are employed in agriculture and 82% of the employed women work as unpaid family workers in 1998 (see Tables 1-2).

The focus of this study is on the manufacturing sector; 8% of women and 17% of men were employed in the manufacturing sector in Turkey in 1989. These shares have increased, reaching 10% and 18% respectively in 1998. 29% of women and 28% of men in urban areas and 3% of women and 7% of men in rural areas were employed in the manufacturing sector in 1998. The manufacturing sector is the most important sector considering its contribution to GNP, to exports as well as to employment. Studies on the manufacturing industry in Turkey from the gender perspective are limited and the job and occupation segregation studies within the sector are very few. This study will be one of the first attempts to employ a detailed quantitative approach to analyze gender segregation in the manufacturing industry.

Table 1
Labour Force Characteristics by Gender, 1989-1998

	Labour force participation rate (%)		Share of females in total labour force (%)	Share of females employed population (%)	Unemployment rate (%)		Share of females unemployed population (%)
	Female	Male			Female	Male	
	Turkey						
1989	35.14	75.66	31.92	31.66	9.48	8.37	34.67
1990	31.83	73.80	30.51	30.27	9.63	8.61	32.93
1991	33.24	74.87	31.09	31.44	6.47	7.94	26.87
1992	30.64	72.96	29.89	30.05	7.60	8.30	28.07
1993	29.89	71.04	29.93	30.25	6.57	7.96	26.07
1994	31.13	71.10	30.76	31.27	6.89	9.08	25.21
1995	30.31	70.73	30.26	30.63	6.04	7.68	25.42
1996	30.06	70.17	30.21	30.64	4.93	6.86	23.74
1997	27.92	69.20	29.07	29.13	5.72	6.01	28.07
1998	26.42	68.99	28.01	28.03	6.31	6.43	27.64
Urban							
1989	16.38	71.82	18.15	15.48	26.34	10.69	35.33
1990	15.06	70.32	17.28	14.75	26.33	11.05	33.22
1991	15.30	69.95	17.62	15.88	20.93	10.47	29.95
1992	15.71	70.37	17.94	16.26	20.34	10.39	29.98
1993	15.03	67.65	17.90	16.30	19.39	9.99	29.74
1994	15.99	67.64	18.86	17.37	19.71	11.22	28.99
1995	14.92	66.60	18.06	16.89	16.40	9.39	27.79
1996	14.64	66.24	17.87	16.96	13.95	8.25	26.89
1997	14.46	64.37	18.43	17.34	14.60	7.99	29.22
1998	14.88	64.67	18.63	17.58	15.00	8.74	28.20
Rural							
1989	54.38	79.92	41.68	42.14	4.27	6.07	33.49
1990	49.19	77.74	40.29	40.74	4.33	6.10	32.39
1991	52.19	80.50	40.75	41.62	1.99	5.42	20.12
1992	46.86	76.01	39.47	40.25	2.96	6.04	24.21
1993	46.47	75.11	39.53	40.55	1.94	6.04	17.37
1994	48.48	75.35	40.41	41.59	2.04	6.71	17.09
1995	48.38	75.91	40.06	40.95	2.29	5.82	20.80
1996	48.65	75.21	40.31	41.21	1.66	5.28	17.54
1997	44.97	75.46	38.00	38.42	2.11	3.82	25.26
1998	41.52	74.93	36.65	36.99	2.24	3.69	26.01

Source: Household Labour Force Survey Results (SIS, 1989-1998).

Table 2
Percentage Distribution of Employment
by Gender and Economic Activity, 1989-1993

	1989	1990	1991	1992	1993
URBAN					
Female					
Agriculture, forestry and hunting	13.8	14.6	10.6	11.2	6.0
Mining, quarrying	0.3	0.1	0.4	0.4	0.1
Manufacturing industry	29.7	28.5	33.6	30.2	36.4
Electricity, gas, water	0.3	0.3	0.2	0.2	0.2
Construction	1.0	1.2	1.1	0.7	1.3
Wholesale, retail trade	11.3	10.8	11.4	11.5	13.6
Transportation, communication	2.2	2.7	2.5	2.1	3.2
Finance, insurance, real estate	7.4	8.2	8.6	7.3	6.9
Community, social, personal services	34.2	33.7	31.6	36.4	32.3
Male					
Agriculture, forestry and hunting	3.8	3.3	3.7	4.2	3.9
Mining, quarrying	1.5	1.2	1.2	1.5	1.0
Manufacturing industry	27.7	27.2	27.9	26.6	25.6
Electricity, gas, water	0.7	0.8	0.5	0.7	0.9
Construction	10.6	9.7	10.1	10.3	11.3
Wholesale, retail trade	23.2	24.2	24.3	23.6	23.8
Transportation, communication	8.0	7.8	8.2	7.9	8.3
Finance, insurance, real estate	4.2	3.8	4.0	4.4	3.6
Community, social, personal services	20.3	22.0	20.0	20.8	21.7
RURAL					
Female					
Agriculture, forestry and hunting	92.8	94.6	93.7	91.2	95.7
Mining, quarrying	0.1	0.0	0.0	0.0	0.0
Manufacturing industry	2.7	2.4	3.5	4.0	1.9
Electricity, gas, water	0.0	0.0	0.0	0.0	0.0
Construction	0.0	0.0	0.0	0.1	0.1
Wholesale, retail trade	0.7	0.5	0.2	0.8	0.4
Transportation, communication	0.2	0.2	0.1	0.1	0.1
Finance, insurance, real estate	0.2	0.3	0.3	0.6	0.2
Community, social, personal services	3.2	2.0	2.2	3.2	1.5
Male					
Agriculture, forestry and hunting	64.8	67.0	67.4	60.3	68.3
Mining, quarrying	1.6	1.4	0.9	0.6	0.8
Manufacturing industry	6.2	5.3	7.3	6.5	5.2
Electricity, gas, water	0.2	0.4	0.2	0.1	0.4
Construction	4.8	5.0	4.3	5.1	5.9
Wholesale, retail trade	6.7	6.4	5.9	8.1	6.3
Transportation, communication	4.5	3.7	3.2	4.6	3.8
Finance, insurance, real estate	1.0	0.7	0.5	0.9	0.6
Community, social, personal services	10.1	10.1	10.2	13.7	8.7

Table 2, continued
 Percentage Distribution of Employment
 by Gender and Economic Activity, 1994-1998

	1994	1995	1996	1997	1998
URBAN					
Female					
Agriculture, forestry and hunting	13.8	9.5	11.1	12.6	10.9
Mining, quarrying	0.1	0.1	0.2	0.1	0.2
Manufacturing industry	29.5	29.6	28.6	26.2	29.1
Electricity, gas, water	0.5	0.3	0.3	0.4	0.4
Construction	1.3	1.5	1.5	1.7	1.1
Wholesale, retail trade	12.8	13.1	11.6	14.3	11.7
Transportation, communication	2.9	2.1	2.3	1.9	3.0
Finance, insurance, real estate	7.8	7.2	8.5	7.7	8.1
Community, social, personal services	31.3	36.5	36.0	34.9	35.5
Male					
Agriculture, forestry and hunting	3.9	3.7	4.0	4.3	4.1
Mining, quarrying	1.6	0.8	0.7	0.6	0.6
Manufacturing industry	28.3	26.7	27.2	26.3	27.8
Electricity, gas, water	0.9	0.8	0.7	0.9	1.0
Construction	10.2	10.6	10.5	10.8	10.9
Wholesale, retail trade	23.2	24.9	24.2	25.2	24.7
Transportation, communication	7.5	7.5	7.2	7.3	7.7
Finance, insurance, real estate	3.8	3.6	4.1	4.0	3.7
Community, social, personal services	20.7	21.3	21.3	20.6	19.6
RURAL					
Female					
Agriculture, forestry and hunting	92.6	95.6	94.9	93.8	93.4
Mining, quarrying	0.0	0.0	0.0	0.0	0.0
Manufacturing industry	3.9	2.0	2.7	3.0	2.6
Electricity, gas, water	0.0	0.0	0.0	0.0	0.0
Construction	0.0	0.0	0.1	0.0	0.0
Wholesale, retail trade	0.7	0.6	0.6	0.9	0.9
Transportation, communication	0.1	0.1	0.1	0.1	0.2
Finance, insurance, real estate	0.4	0.2	0.2	0.2	0.1
Community, social, personal services	2.3	1.5	1.4	2.0	2.9
Male					
Agriculture, forestry and hunting	67.8	68.3	64.2	65.7	63.4
Mining, quarrying	1.1	1.5	1.8	1.3	1.3
Manufacturing industry	6.2	5.8	6.4	6.7	7.2
Electricity, gas, water	0.5	0.5	0.6	0.6	0.5
Construction	4.9	4.8	5.0	5.0	4.7
Wholesale, retail trade	6.4	7.0	7.8	7.6	9.0
Transportation, communication	3.3	3.3	3.8	3.4	3.9
Finance, insurance, real estate	1.0	0.7	0.7	0.7	0.9
Community, social, personal services	8.8	8.1	9.7	9.1	9.2

The results presented in this paper are based on published and unpublished data collected on the manufacturing industry through the

Annual Manufacturing Industry Surveys and the *Household Labour Force Surveys* conducted by the State Institute of Statistics. The time period covered in the study is 1985-1998¹. In this study,

i) Firstly, measures of segregation² by economic activity in Turkey will be obtained by taking all sectors of the economy into account.

ii) Secondly, the manufacturing sector and its sub-sectors will be investigated to determine whether there is gender segregation in employment within the sector.

iii) Finally, the three sectors which comprise the highest shares in women's employment in the manufacturing industry, namely, a) food, beverages and tobacco, b) textile and wearing apparel, and c) chemical, petroleum and plastic products will be investigated. Segregation indices by job status within these sectors will be estimated to see if segregation by job status exists.

Three different indicators of gender segregation, namely, i) Coefficient of Female Representation (CFR), ii) Dissimilarity Index (DI), and iii) Women and Employment Index (WE), will be calculated to study gender composition and segregation in the manufacturing industry.

2. Debates on gender segregation in employment

Humphrey (1987) states that it is impossible to carry out a mature analysis of labour markets without making reference to an analysis of the composition and segregation of labour markets by gender. Industries in which women are occupied differ from those in which men are occupied. Certain skills are regarded as suitable for 'female work'. Women generally concentrate in jobs with low skill content and low status. Usually they are considered to lack commitment and are viewed as temporary workers. Hence, the acquisition of technical competence and skill is almost exclusively reserved for male workers (Jenson, 1989). Gender segregation in employment implies, not only the distribution of women and men to different occupations and sectors, but also the existence of barriers obstructing women from employment in jobs held

¹ Labour Force Surveys which are conducted semi-annually were launched on October 1988. In this study, the survey conducted in April 1989 is taken as the starting point. During the implementation of this study, the last available labour force survey results were those of the survey held on April 1998. Hence, in this study, the April 1989 survey is taken as the starting point in order to obtain consistency regarding employment structure among surveys.

² In this study, segregation is defined as the tendency for women and men to be separated in different occupations or industries. For gendered occupations due to this separation, segregation is viewed as a situation in which women work in female occupations and men in male occupations.

by men. Humphrey (1984) argued that works performed by women are at the bottom of the job hierarchy, while that of men are dispersed in a wide range of occupations requiring a wide range of skills and functions. According to Lewis (1982), women are employed in a limited range of occupations and industries. 'Sex-typing' and 'crowding' are two processes through which occupational segregation is observed (Roos, 1987). 'Segregation' may also be considered the initial stage of a lengthy process through which differences in status in employment and income differentials between women and men emerge (Moir and Smith, 1979; Petersen and Morgan, 1995). The clustering of women and men in separate occupations is a basic attribute of the employment structure and gender inequality. Continuance of occupational gender segregation is believed to be an important reason for women's persistent lower earnings and inferior status in employment (Blackburn *et al.*, 1993 and 1995).

3. Segregation measures

Three different indicators of gender segregation are calculated to study gender composition and segregation in the manufacturing industry. These are the Dissimilarity Index (*DI*), Women and Employment Index (*WE*), and the Coefficient of Female Representation (*CFR*). These segregation measures are defined below:

3.1. Dissimilarity index (*DI*)

The Dissimilarity Index was introduced by Duncan and Duncan (1955). It is the simplest and most widely used measure of occupational segregation. Its use also extends to the measurement of other types of inequalities such as poverty, schooling and housing. *DI* has a minimum value of zero and maximum value of 100. The higher *DI* is, the greater is the segregation by gender.

$$DI = (1/2) \sum_{i=1}^k |(N_{\phi i} / N_{\phi}) - (N_{\mu i} / N_{\mu})| * 100 \quad (1)$$

3.2. Women and employment index (*WE*)

This index is named the Women and Employment Index³ after the Women and Employment Report of OECD (1985). *WE* is defined as

$$WE = \sum_{i=1}^k |(N_{fi} / N_f) - (N_{mi} / N_m)| * 100 \quad (2)$$

3.3. Coefficient of female representation

³ For a comparison of *DI* and *WE* and a discussion on the flaws of *WE*, see Blackburn *et al.* (1993).

Women are said to be over-represented in a given occupation if the *CFR* for that occupation is greater than unity and under-represented if it is less than unity. *CFR* is defined as

$$CFR = (N_{fi} / N_{ii}) / (N_f / N_t) \quad (3)$$

where

N_{fi}	: Number of females in industry i
N_f	: Total female employment
N_{mi}	: Number of males in industry i
N_m	: Total male employment
N_{ii}	: Number of persons in industry i
N_t	: Total employment

4. Segregation in the manufacturing industry

In Turkey, the majority of women workers are employed in the agricultural sector. The share of women employed in agriculture declined from 78% in 1989 to 69% in 1998. The sector with the second highest share of women in employment is the community, social and personal services (12.3% in 1998). The third most important sector for women's employment is the manufacturing industry (10.3% in 1998).

DI, which is calculated for the distribution of employment by gender and economic activity, was 42.4 in 1989⁴. A consistent decline is observed in the *DI* (with the exception of the years 1995-1996) throughout the period of analysis, 1989-1998. In 1998, *DI* is equal to 37.5. *WE* followed a similar declining trend and decreased from 58.0 in 1989 to 54.0 in 1998 (Table 3). One of the factors that caused the declines in *DI* and *WE* is the higher rate of increase in the proportion of women employed in community and social services, wholesale trade, finance, and especially the manufacturing industry. During the period under study, the number of women employed in the manufacturing sector rose by 25%, while the number of men increased by only 5%.

⁴ *DI* and *WE* are found to vary between 32.8-44.4 and 42.3-58.7 respectively by economic activity for the period 1965-1990 (The World Bank, 1993).

Table 3
Percentage Distribution of Employment
by Gender and Economic Activity, Turkey

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Female										
Agriculture, forestry and hunting	77.61	78.88	77.08	72.82	75.19	73.93	75.29	74.68	72.49	69.48
Mining, Quarrying	0.15	0.04	0.11	0.08	0.02	0.02	0.05	0.05	0.03	0.05
Manufacturing industry	7.91	7.54	9.53	10.05	9.83	9.98	8.52	8.95	9.10	10.25
Electricity, gas, water	0.07	0.05	0.05	0.05	0.05	0.13	0.09	0.11	0.11	0.12
Construction	0.22	0.26	0.22	0.20	0.37	0.33	0.38	0.41	0.49	0.35
Wholesale, retail trade	2.76	2.51	2.43	3.25	3.42	3.57	3.51	3.28	4.42	4.00
Transportation, communication	0.55	0.65	0.60	0.56	0.82	0.72	0.55	0.61	0.57	0.97
Finance, insurance, real estate	1.61	1.85	1.92	2.14	1.73	2.14	1.85	2.20	2.17	2.45
Community, social, personal services	9.13	8.21	8.05	10.84	8.57	9.18	9.76	9.72	10.62	12.32
Male										
Agriculture, forestry and hunting	35.18	35.62	36.50	31.74	35.46	35.06	35.11	32.78	34.15	32.04
Mining, quarrying	1.58	1.34	1.04	1.07	0.89	1.36	1.13	1.23	0.95	0.88
Manufacturing industry	16.68	16.05	17.29	16.75	15.60	17.53	16.55	17.25	16.76	18.14
Electricity, gas, water	0.45	0.59	0.39	0.42	0.66	0.69	0.70	0.61	0.74	0.76
Construction	7.63	7.31	7.14	7.72	8.67	7.62	7.78	7.88	7.99	7.95
Wholesale, retail trade	14.70	15.14	14.85	16.00	15.20	14.97	16.23	16.40	16.62	17.28
Transportation, communication	6.18	5.73	5.64	6.31	6.08	5.46	5.48	5.60	5.39	5.92
Finance, insurance, real estate	2.56	2.27	2.21	2.68	2.13	2.41	2.17	2.50	2.40	2.36
Community, social, personal Services	15.05	15.95	14.95	17.31	15.32	14.89	14.85	15.76	15.01	14.67
Dissimilarity Index (<i>DI</i>)	42.43	43.26	40.58	41.08	39.73	38.87	40.18	41.90	38.34	37.54
Women and Employment Index (<i>WE</i>)	58.00	60.32	55.64	57.47	55.42	53.43	55.75	58.11	54.34	54.03

Source: Authors' own calculations based on *Household Labour Force Survey Results* (SIS, 1989-1998).

4.1. Segregation by sectors

In the next section we concentrate on employment in the manufacturing sector and study segregation of women and men in 9 sub-sectors of the manufacturing industry. Coefficients of female representation (*CFR*) for each sub-sector, and the *DI* and *WE* indices are estimated for total employment as well as two subdivisions of employment, namely, the production workers and other employees for the 1985-1998 period. The analysis of the manufacturing sector is done separately for the public and private sectors. Most of the employees in the public sector work in establishments employing 25-or-more workers⁵, and they are taken as a whole in segregation analysis. The private sector is divided into two groups: establishments with 10-24 workers and establishments with 25-or-more workers.

⁵ In 1998, there were 288 establishments in the public sector with 25-or-more workers employing a total of 144,592 persons, while the number of establishments with 10-24 workers was only 16 employing 289 persons in total.

4.1.1. Private sector establishments (employing 10-24 and 25+ persons)

The results related to production workers are as follows:

The lowest female representation coefficients (*CFR*) over the period are observed in the basic metal industries for establishments employing 10-24 and 25-and-more workers.

The highest *CFR* is obtained, as expected, in the textile sector. In textiles, the *CFR* values for different years are always above 1.5 in establishments employing 25-or-more workers, and above 2.1 for establishments employing 10-24 persons over the 1985-1998 period. No significant change is observed in this ratio over this period.

The next sub-sectors registering the highest *CFR* are the chemical, petroleum and plastic products sectors (over 0.6) for establishments with 10-24 workers and the food industry for establishments employing more than 25 workers (over 1.1). The food sector has the third largest *CFR* for establishments with 10-24 workers (over 0.5).

A decline in the *CFR* of the chemical industry and a slight variation in the *CFR* of the textile industry are observed over the period, while the *CFR* of the food sector increased in establishments employing more than 25 workers.

The *CFR*s of non-production workers are higher than that of production workers in all sectors with the exception of the food and textile sectors. This implies that relatively more women are employed in non-production activities, such as secretarial work, in the other sectors of the manufacturing industry (see Tables 4-5).

4.1.2. Public sector establishments

Metal products, basic metal industries, chemicals and wood products are sub-sectors having low *CFR*'s, while textiles and food are sub-sectors with high *CFR*'s (between 2 and 3 with the exception of 1985 in textiles and above 1.3 in food) in the public sector.

In sectors where the *CFR*'s are low for production workers, they turn out to be relatively high for non-production workers.

While *CFR*'s in the chemical, petroleum and plastic products sectors are high in the private sector, we observe that they are low in the public sector (see Table 6).

4.1.3. DI and WE for manufacturing industry

DI for the public sector reaches its highest value (48.25) in 1990 and lowest value (38.34) in 1998. The range of *DI* is 35.78 - 39.60 for private sector establishments with 25-or-more employees and 38.50 - 47.33 for

private sector establishments with 10-24 employees. The values of the index for the period concerned, with the exception of the year 1986, are always lower in the private sector for establishments with 25-or-more persons compared to public sector establishments. The *DI*s computed for private sector establishments employing 25-or-more persons are lower than for those employing 10-24 persons, except for the years 1988 and 1991. In comparing private sector establishments employing 10-24 persons and public sector establishments, the *DI* values for public sector establishments lie above that of private sector establishments in the period of 1987-1992 as well as in 1997 (see Table 7).

4.1.4. In summary

Women are over-represented in the textile industry in private sector establishments employing 10-24 persons and they are over-represented in the food and textile industries in private sector establishments employing 25-or-more persons and in the public sector.

Women are over-represented in the non-production activities.

The segregation in the public sector is higher than that in the private sector for establishments employing 25-or-more persons. For establishments employing 10-24 persons, segregation is higher than that in the public sector starting in 1993, with the exception of 1997.

4.2. Segregation by status in employment

As a next step we have chosen three main sub-sectors i) food. ii) textiles and iii) chemicals where women are either over represented or have relatively higher representation ratios. Furthermore we have considered the following division of workers by status: For production workers four groups are considered: i) High level technical personnel. ii) medium level technical personnel. iii) Foreman, supervisor and other skilled personnel and iv) unskilled workers. Non-production workers are divided into three groups: i) management and administrative personnel. ii) officers iii) others.

For the production workers classification, women are found to be over represented in the unskilled worker groups in the food and textiles sectors over the period studied for both medium and large establishments in the private sector and the public sector. There are no significant changes in the CFR's of unskilled worker category over the period studied.

Table 4
Summary Indicators of Gender Segregation
by Manufacturing Industry Sub-sectors, Private
(establishments employing 10-24 persons)

	Coefficient of female representation (CFR)								
	Food. beverages tobacco	Textile. wearing apparel. leather	Wood products furniture	Paper. printing. publishing	Chemical. petroleum plastic products	Non Metallic Mineral Products	Basic Metal Industries	Metal Products. Machinery equipment	Other
Production worker									
1985	0.46	2.42	0.20	0.51	0.76	0.58	0.13	0.43	1.63
1986	0.55	2.32	0.31	0.57	1.12	0.41	0.15	0.44	2.02
1987	0.67	2.28	0.29	0.52	0.94	0.51	0.11	0.42	1.84
1988	0.66	2.20	0.38	0.57	0.86	0.51	0.21	0.39	2.12
1989	0.60	2.38	0.47	0.63	0.90	0.44	0.07	0.37	1.80
1990	0.68	2.26	0.41	0.68	0.81	0.30	0.06	0.35	1.62
1991	0.71	2.15	0.35	0.56	0.74	0.42	0.14	0.40	1.71
1992	0.63	2.11	0.41	0.60	0.62	0.35	0.09	0.34	0.90
1993	0.60	2.25	0.35	0.51	0.76	0.26	0.04	0.28	0.96
1994	0.60	2.29	0.38	0.45	0.73	0.38	0.09	0.30	1.50
1995	0.55	2.24	0.31	0.75	0.61	0.32	0.08	0.34	1.62
1996	0.56	2.18	0.41	0.68	0.64	0.41	0.06	0.37	1.38
1997	0.66	2.10	0.47	0.62	0.68	0.34	0.10	0.35	1.30
1998	0.93	2.15	0.54	0.62	0.62	0.34	0.07	0.35	0.77
Other									
1985	0.83	1.14	0.80	1.12	1.16	0.72	0.92	1.02	1.21
1986	0.77	1.22	0.85	1.18	1.12	0.83	0.71	1.04	1.05
1987	0.52	1.10	1.43	1.01	1.09	0.91	1.00	1.22	0.89
1988	0.56	1.04	0.88	1.26	1.18	0.88	1.24	1.20	0.96
1989	0.50	1.22	1.16	1.14	1.24	0.91	1.07	1.08	1.49
1990	0.56	1.17	1.02	1.15	1.16	0.79	1.09	1.19	1.18
1991	0.45	1.26	1.20	1.05	1.27	0.84	0.93	1.26	1.33
1992	0.55	1.25	0.81	1.24	1.13	0.76	0.79	1.19	1.21
1993	0.48	1.25	0.96	1.30	1.33	0.87	0.87	1.15	0.95
1994	0.95	2.58	1.95	2.46	2.57	1.54	1.93	2.40	2.02
1995	0.55	1.27	0.92	1.37	1.23	0.75	0.84	1.10	1.14
1996	0.56	1.14	0.90	1.27	1.27	0.78	0.90	1.21	1.00
1997	0.59	1.16	0.90	1.42	1.14	0.88	0.92	1.17	0.88
1998	0.61	1.20	1.05	1.14	1.15	0.65	1.05	1.15	0.92
Total									
1985	0.55	2.18	0.31	0.67	0.88	0.60	0.28	0.56	1.55
1986	0.60	2.09	0.39	0.74	1.15	0.48	0.29	0.59	1.81
1987	0.64	2.04	0.53	0.70	1.01	0.59	0.32	0.60	1.64
1988	0.64	1.97	0.45	0.80	0.98	0.59	0.41	0.58	1.85
1989	0.58	2.14	0.58	0.83	1.02	0.55	0.30	0.55	1.74
1990	0.66	2.04	0.52	0.84	0.94	0.42	0.30	0.54	1.52
1991	0.65	1.95	0.49	0.74	0.91	0.53	0.31	0.62	1.63
1992	0.62	1.96	0.46	0.80	0.78	0.44	0.22	0.52	0.98
1993	0.58	2.07	0.44	0.77	0.94	0.38	0.18	0.46	0.95
1994	0.67	2.42	0.53	0.83	1.06	0.53	0.30	0.58	1.62
1995	0.56	2.03	0.41	0.96	0.83	0.40	0.27	0.53	1.51
1996	0.58	1.96	0.49	0.88	0.87	0.47	0.26	0.58	1.29
1997	0.66	1.89	0.53	0.94	0.85	0.45	0.27	0.54	1.21
1998	0.86	1.92	0.61	0.83	0.84	0.41	0.25	0.54	0.83

Source: Authors' own calculations based on *Annual Manufacturing Industry Statistics* (SIS, 1985-1998).

Table 5
Summary Indicators of Gender Segregation
by Manufacturing Industry Sub-sectors, Private
(establishments employing 25+ persons)

Coefficient of female representation (<i>CFR</i>)									
	Food. beverages. tobacco	Textile. wearing apparel. leather	Wood products. furniture	Paper. printing. publishing	Chemical. petroleum. plastic products	Non metallic mineral products	Basic Metal Industries	Metal products. machinery equipment	Other
Production worker									
1985	1.13	1.72	0.32	0.43	0.78	0.42	0.02	0.44	1.73
1986	1.11	1.85	0.40	0.34	0.64	0.39	0.06	0.41	1.66
1987	1.06	1.84	0.39	0.36	0.70	0.37	0.08	0.41	2.06
1988	1.10	1.79	0.38	0.34	0.66	0.33	0.05	0.40	1.71
1989	1.06	1.76	0.36	0.31	0.66	0.32	0.04	0.40	1.42
1990	1.13	1.76	0.35	0.28	0.65	0.30	0.05	0.44	1.28
1991	1.30	1.73	0.29	0.31	0.58	0.28	0.05	0.45	1.30
1992	1.31	1.67	0.37	0.32	0.52	0.27	0.04	0.45	1.09
1993	1.24	1.69	0.31	0.34	0.54	0.32	0.04	0.44	1.08
1994	1.46	1.55	0.23	0.34	0.50	0.27	0.03	0.44	0.78
1995	1.37	1.56	0.23	0.34	0.55	0.28	0.04	0.47	0.95
1996	1.30	1.55	0.21	0.34	0.51	0.28	0.03	0.46	1.11
1997	1.25	1.61	0.23	0.28	0.49	0.28	0.04	0.46	1.04
1998	1.27	1.63	0.21	0.35	0.50	0.27	0.05	0.45	0.86
Other									
1985	0.76	1.29	1.13	1.18	1.05	0.50	0.86	0.99	1.26
1986	0.80	1.34	1.15	1.13	1.07	0.54	0.84	0.98	1.21
1987	0.70	1.41	0.92	1.32	0.97	0.62	0.86	0.97	1.28
1988	0.71	1.39	1.02	1.05	1.07	0.61	0.80	0.96	1.10
1989	0.76	1.41	0.92	0.97	1.00	0.64	0.74	0.94	1.26
1990	0.75	1.44	0.84	0.96	0.90	0.54	0.74	1.02	1.45
1991	0.72	1.46	0.97	0.83	0.95	0.63	0.82	0.98	1.29
1992	0.71	1.50	0.95	0.78	0.99	0.69	0.86	0.88	1.19
1993	0.88	1.36	0.85	0.86	1.00	0.59	0.74	0.92	1.29
1994	0.88	1.42	0.93	0.69	1.01	0.60	0.73	0.86	1.52
1995	0.87	1.44	0.92	0.67	1.03	0.65	0.60	0.83	1.11
1996	0.80	1.46	0.83	0.61	1.04	0.66	0.70	0.84	1.12
1997	0.83	1.40	0.78	0.85	1.00	0.64	0.62	0.86	0.97
1998	0.79	1.43	0.99	0.87	1.04	0.64	0.66	0.83	1.08
Total									
1985	1.05	1.70	0.43	0.61	0.83	0.43	0.13	0.53	1.71
1986	1.04	1.82	0.50	0.53	0.74	0.42	0.18	0.51	1.61
1987	0.98	1.80	0.47	0.60	0.76	0.41	0.20	0.52	1.96
1988	1.00	1.76	0.48	0.52	0.76	0.37	0.18	0.51	1.63
1989	0.99	1.73	0.45	0.48	0.74	0.38	0.15	0.50	1.40
1990	1.03	1.73	0.43	0.48	0.72	0.34	0.17	0.55	1.31
1991	1.15	1.70	0.42	0.47	0.69	0.35	0.20	0.56	1.30
1992	1.16	1.66	0.47	0.45	0.66	0.34	0.20	0.54	1.11
1993	1.15	1.65	0.41	0.52	0.69	0.37	0.19	0.55	1.12
1994	1.32	1.54	0.36	0.46	0.66	0.33	0.17	0.54	0.90
1995	1.25	1.54	0.35	0.46	0.71	0.35	0.15	0.55	0.98
1996	1.17	1.54	0.32	0.45	0.70	0.36	0.17	0.55	1.11
1997	1.14	1.57	0.33	0.46	0.69	0.36	0.16	0.55	1.02
1998	1.14	1.59	0.34	0.53	0.71	0.35	0.17	0.53	0.91

Source: Authors' own calculations based on *Annual Manufacturing Industry Statistics* (SIS, 1985-1998).

Table 6
Summary Indicators of Gender Segregation
by Manufacturing Industry Sub-sectors, Public

Coefficient of female representation (CFR)									
	Food. beverages. tobacco	Textile. wearing apparel. leather	Wood products. furniture	Paper. printing. publishing	Chemical. petroleum. plastic products	Non metallic mineral products	Basic metal industries	Metal products. machinery equipment	Other
Production worker									
1985	1.63	0.82	0.02	0.70	0.02	0.02	0.00	0.14	-
1986	1.50	2.06	0.12	0.63	0.15	0.43	0.05	0.52	-
1987	1.75	2.11	0.13	0.45	0.14	0.64	0.06	0.40	-
1988	1.81	1.96	0.17	0.66	0.15	0.37	0.06	0.42	1.24
1989	1.83	2.06	0.18	0.58	0.12	0.36	0.07	0.26	0.97
1990	1.86	1.99	0.17	0.49	0.12	0.37	0.06	0.23	1.05
1991	1.81	2.16	0.14	0.50	0.14	0.39	0.07	0.25	0.98
1992	1.71	2.23	0.14	0.53	0.17	0.41	0.07	0.23	0.55
1993	1.62	2.14	0.15	0.82	0.15	0.47	0.07	0.31	0.53
1994	1.54	2.29	0.20	0.69	0.20	0.60	0.07	0.36	0.60
1995	1.53	2.44	0.19	0.59	0.14	0.56	0.05	0.33	0.50
1996	1.28	2.94	0.16	0.90	0.16	0.56	0.07	0.31	0.69
1997	1.35	3.37	0.36	0.84	0.16	0.37	0.08	0.30	4.60
1998	1.32	3.32	0.22	0.71	0.24	0.56	0.08	0.37	1.17
Other									
1985	1.30	1.01	0.72	1.50	0.40	0.20	0.37	0.57	-
1986	1.19	1.22	0.90	0.88	0.61	0.62	0.77	1.22	-
1987	1.08	1.32	1.02	1.19	0.66	0.76	0.97	0.99	-
1988	1.11	1.78	1.11	0.79	0.72	0.70	0.88	1.00	0.97
1989	1.15	1.76	1.16	0.81	0.74	0.74	0.77	1.06	0.71
1990	1.10	1.92	1.22	1.04	0.78	0.63	0.81	0.93	0.88
1991	1.08	1.80	1.10	1.10	0.79	0.65	0.90	0.86	8.93
1992	1.26	1.27	1.18	0.99	0.79	0.69	0.72	0.83	1.60
1993	1.38	1.33	0.91	0.57	0.90	0.68	0.75	0.63	1.21
1994	1.12	1.37	0.84	0.91	0.95	0.42	0.98	0.82	1.68
1995	1.22	1.54	0.65	1.21	1.01	0.40	0.73	0.60	1.69
1996	1.17	1.86	1.08	0.65	0.85	0.67	0.80	0.79	2.50
1997	1.16	1.23	0.86	1.20	1.02	0.17	0.77	0.69	2.26
1998	1.05	1.43	1.30	0.88	1.05	0.72	0.90	0.80	3.50
Total									
1985	1.55	0.86	0.10	0.89	0.12	0.06	0.09	0.21	-
1986	1.42	1.97	0.28	0.70	0.29	0.48	0.22	0.67	-
1987	1.58	2.01	0.32	0.72	0.31	0.68	0.22	0.54	-
1988	1.64	1.95	0.36	0.70	0.34	0.46	0.25	0.60	1.19
1989	1.68	2.05	0.37	0.65	0.32	0.45	0.23	0.44	0.96
1990	1.70	2.00	0.40	0.64	0.36	0.44	0.24	0.38	1.04
1991	1.60	2.09	0.42	0.66	0.39	0.47	0.26	0.41	1.08
1992	1.57	2.03	0.39	0.68	0.39	0.50	0.27	0.39	0.80
1993	1.55	1.98	0.39	0.71	0.46	0.53	0.28	0.42	0.71
1994	1.41	2.09	0.41	0.82	0.52	0.54	0.30	0.53	0.91
1995	1.43	2.24	0.37	0.81	0.49	0.50	0.25	0.44	0.82
1996	1.24	2.67	0.44	0.80	0.50	0.58	0.28	0.50	1.19
1997	1.28	2.76	0.52	1.06	0.56	0.31	0.29	0.46	3.72
1998	1.22	2.80	0.56	0.83	0.62	0.57	0.33	0.54	2.05

Source: Authors' own calculations based on *Annual Manufacturing Industry Statistics* (SIS, 1985-1998).

Table 7
Summary Indicators of Gender Segregation

		PUBLIC		PRIVATE			
		<i>DI</i>	<i>WE</i>	Establishments employing 25+ persons		Establishments employing 10-24 persons	
Status in employment				<i>DI</i>	<i>WE</i>	<i>DI</i>	<i>WE</i>
Production worker	1985	42.03	64.26	35.78	53.44	44.59	77.74
	1986	39.05	68.99	39.10	61.55	40.97	70.31
	1987	45.40	80.52	38.51	60.79	39.06	66.89
	1988	44.95	79.78	39.60	61.37	39.38	66.42
	1989	47.52	84.22	39.06	59.81	42.55	72.35
	1990	48.25	85.38	38.50	59.53	41.38	70.32
	1991	47.66	85.51	39.29	60.52	38.83	65.50
	1992	46.23	82.88	38.62	58.99	43.69	72.07
	1993	43.08	77.13	38.13	59.01	47.33	78.29
	1994	41.89	75.80	37.88	57.06	46.05	76.68
	1995	42.62	77.00	36.89	55.51	46.70	77.43
	1996	39.93	73.21	36.18	54.70	43.70	73.16
	1997	41.75	77.31	37.42	56.72	41.46	69.78
1998	38.34	70.97	38.25	58.49	38.50	65.08	
Other	1985	23.36	38.25	10.61	17.06	7.45	12.05
	1986	13.15	23.27	11.11	18.23	9.83	15.39
	1987	7.54	13.36	12.82	20.73	13.64	21.58
	1988	9.96	17.76	13.09	21.00	13.77	21.73
	1989	12.17	21.86	12.86	20.57	14.17	22.34
	1990	11.46	20.53	13.76	21.95	14.50	23.02
	1991	9.85	17.50	13.70	21.48	20.03	31.25
	1992	13.20	23.41	15.29	24.14	17.49	26.52
	1993	17.27	30.58	11.42	17.73	18.62	28.16
	1994	7.66	13.62	14.38	22.21	29.24	51.41
	1995	14.54	25.81	15.89	24.21	17.37	25.46
	1996	13.19	23.78	16.97	25.60	17.14	25.22
	1997	10.70	19.16	15.05	22.17	15.52	22.74
1998	6.20	11.14	16.00	23.87	15.09	21.51	

Source: Authors' own calculations based on *Annual Manufacturing Industry Statistics* (SIS, 1985-1998).

In the chemicals industry, *CFR* for the unskilled worker group was close to one since 1985 in the private sector and decreased consistently until it reached 0.69 in 1998, while it has been rather low in the public sector.

On the other hand, representation of women in the high level technical personnel group is low in the private food and textile sectors for establishments employing more than 25 workers.

CFR values are above one for officers, while they are below one for the administrative personnel in the textile and food industries.

An interesting finding for the chemicals sector is that the *CFR* values for high level technical personnel are above one, meaning that women are

well represented in that industry in the period 1985-1998 in both private sector establishments employing 25-or-more workers and in public sector establishments. The same is true for the period since 1995 for private sector establishments employing 10-24 persons, although it is not considerably below one before 1995.

The Dissimilarity Index by job status ranges between 18-25, 10-16 and 13-25 for the food, textile, and chemical industries respectively, for establishments employing 25-or-more persons in the private sector.

DI values are relatively low, in all years, for establishments employing 10-24 persons in the food and textile sectors, indicating there is less segregation by job status in smaller food and textile establishments. The reverse is true for the chemicals sector. Less segregation is observed in the large chemical, petroleum and plastic manufacturing industries in the private sector.

DI values are always above 50 in the public sector chemical industries, indicating more segregation in the public sector by job status (see Tables 8-10).

5. Conclusions

Our results can be summarized as follows:

- There is gender segregation by economic activity in the aggregate economy.
- In the manufacturing sector as whole and its three sub-sectors, discrimination is at work through different channels.
- Some industries are female dominant and some are male dominant.
 - Women are over-represented in the food and textile industries
 - Women are over-represented in non-production activities.
- The segregation in the public sector is greater than that in the private sector for establishments employing 25-or-more workers. There is no consistent trend when comparing private sector establishments employing 10-24 workers either with private sector establishment employing 25-or-more workers or with public sector establishments.

Table 8
Indicators of Gender Segregation by Status in Employment, Private
(establishments employing 10-24 persons)

	<i>DI</i>	<i>WE</i>	Number of females Per hundred males	COEFFICIENT OF FEMALE REPRESENTATION						
				Production worker				Other		
				Technical personnel		Foreman	Unskilled worker	Administrative personnel	Officer	Other
				High level	Mid-level					
Food, beverages and tobacco										
1985	19.63	36.32	8.10	1.12	0.79	0.18	0.87	0.83	2.45	2.66
1986	19.36	35.12	10.26	1.46	1.08	0.25	0.89	0.49	1.83	1.79
1987	10.63	19.15	10.99	0.86	0.35	0.41	1.09	0.71	1.57	1.08
1988	11.77	21.03	11.90	1.01	0.68	0.36	1.09	0.52	1.82	1.07
1989	12.40	22.50	10.18	1.14	0.53	0.45	1.06	0.42	2.22	0.78
1990	14.59	26.12	11.70	0.57	0.50	0.19	1.12	0.61	1.84	0.87
1991	15.19	27.09	12.17	0.56	0.08	0.60	1.14	0.47	1.75	0.61
1992	12.05	21.34	12.91	0.98	0.43	0.29	1.06	0.50	2.11	0.87
1993	13.58	24.27	11.89	0.85	0.20	0.24	1.10	0.50	1.86	0.97
1994	14.85	26.64	11.49	0.92	0.13	0.34	1.10	0.47	2.07	0.86
1995	10.99	19.68	11.69	1.00	0.48	0.32	0.99	0.68	2.50	0.99
1996	12.62	22.63	11.48	1.17	0.49	0.53	0.95	0.57	2.61	1.15
1997	11.93	21.11	13.03	1.44	0.42	0.20	1.00	0.86	2.47	0.77
1998	10.44	17.74	17.64	1.17	0.59	0.33	0.05	0.72	1.92	0.87
Textile, wearing apparel and leather										
1985	9.67	13.53	42.84	0.51	0.94	0.52	1.09	0.51	0.83	0.82
1986	8.87	12.03	47.48	0.84	0.89	0.64	1.08	0.45	0.97	0.95
1987	11.64	15.94	46.11	1.05	0.88	0.48	1.11	0.49	0.89	0.76
1988	12.08	16.24	48.69	0.68	1.00	0.69	1.11	0.49	0.88	0.58
1989	8.90	11.68	52.36	0.83	1.04	0.74	1.08	0.46	0.87	0.97
1990	9.29	12.51	48.52	0.71	1.06	0.72	1.08	0.53	0.93	0.70
1991	8.68	11.68	48.63	0.79	1.08	0.62	1.07	0.51	1.04	0.90
1992	6.90	8.79	56.85	0.91	0.98	0.74	1.06	0.63	1.03	0.73
1993	7.75	9.61	61.19	0.86	0.86	0.72	1.06	0.61	0.97	0.73
1994	7.67	9.59	59.87	0.91	0.63	0.76	1.06	0.61	0.96	0.89
1995	8.33	10.37	60.74	0.74	0.68	0.63	1.06	0.65	1.06	0.90
1996	9.22	11.99	53.73	0.83	0.88	0.57	1.07	0.63	1.09	0.70
1997	9.56	12.79	49.53	0.69	0.79	0.56	1.07	0.69	1.22	0.69
1998	8.27	11.00	50.33	0.98	0.78	0.62	1.05	0.71	1.34	0.74
Chemical, petroleum and plastic products										
1985	21.68	38.11	13.79	1.07	0.57	0.49	0.84	0.64	2.57	2.88
1986	17.05	28.06	21.53	2.14	0.44	1.08	0.82	0.92	1.81	1.07
1987	12.61	21.30	18.41	0.82	0.20	0.55	0.96	0.93	2.02	1.09
1988	18.07	30.23	19.54	0.95	0.31	0.36	0.93	0.69	1.98	1.68
1989	17.49	29.25	19.58	0.86	0.38	0.53	0.89	0.88	1.92	1.89
1990	18.97	32.25	17.67	0.98	0.13	0.52	0.88	0.79	2.08	1.77
1991	22.62	38.30	18.15	0.76	0.56	0.19	0.84	1.11	2.32	1.62
1992	22.61	38.69	16.88	0.96	1.06	0.41	0.77	1.14	2.61	1.33
1993	23.88	39.49	20.92	0.01	0.50	0.30	0.81	0.88	2.50	1.77
1994	23.34	39.04	19.56	0.97	0.32	0.41	0.81	1.01	2.65	1.44
1995	30.71	51.90	18.32	1.28	0.31	0.26	0.72	1.17	2.82	1.79
1996	31.07	52.53	18.30	1.23	0.53	0.21	0.71	1.34	2.83	1.84
1997	26.73	45.48	17.56	1.33	0.96	0.21	0.75	1.18	2.72	1.79
1998	32.58	55.63	17.15	1.25	0.62	0.17	0.69	1.38	3.13	1.82

Source: Authors' own calculations based on *Annual Manufacturing Industry Statistics* (SIS, 1985-1998).

Table 9

Indicators of Gender Segregation by Status in Employment. Private

	DI	WE	Number of females Per hundred males	COEFFICIENT OF FEMALE REPRESENTATION						
				Production worker			Other			
				Technical personnel		Foreman	Unskilled worker	Administrative personnel	Officer	Other
				High Level	Mid-level					
Food, beverages and tobacco										
1985	23.92	35.67	34.15	0.59	0.21	0.14	1.26	0.24	1.08	0.34
1986	19.90	31.29	27.20	0.65	0.23	0.32	1.22	0.34	1.14	0.42
1987	21.81	34.76	25.46	0.53	0.24	0.21	1.23	0.39	1.27	0.34
1988	23.74	37.09	28.04	0.58	0.19	0.22	1.26	0.32	1.21	0.35
1989	22.12	34.31	28.91	0.72	0.22	0.16	1.23	0.47	1.21	0.36
1990	22.11	34.10	29.68	0.53	0.26	0.25	1.24	0.40	1.15	0.37
1991	24.11	35.61	35.44	0.66	0.29	0.26	1.27	0.34	1.08	0.32
1992	24.68	36.19	36.40	0.64	0.37	0.24	1.28	0.38	1.01	0.30
1993	18.49	27.40	34.99	0.73	0.32	0.33	1.19	0.60	1.16	0.50
1994	24.20	32.92	46.99	0.62	0.33	0.25	1.26	0.46	0.90	0.46
1995	22.14	30.72	44.14	0.58	0.28	0.27	1.23	0.38	1.07	0.50
1996	20.99	29.95	40.19	0.66	0.27	0.31	1.22	0.40	1.09	0.49
1997	18.07	26.00	39.03	0.69	0.27	0.46	1.18	0.47	1.16	0.61
1998	18.76	27.26	37.63	0.61	0.41	0.37	1.19	0.52	1.20	0.54
Textile, wearing apparel and leather										
1985	15.39	18.14	69.68	0.61	0.52	0.53	1.12	0.43	0.73	0.57
1986	16.27	20.34	59.99	0.44	0.46	0.38	1.13	0.44	0.97	0.42
1987	13.83	17.34	59.52	0.53	0.49	0.43	1.11	0.50	1.00	0.54
1988	14.59	17.90	62.96	0.51	0.52	0.50	1.12	0.57	1.01	0.50
1989	14.05	17.03	65.03	0.58	0.66	0.44	1.11	0.61	0.96	0.53
1990	13.32	16.43	62.16	0.51	0.54	0.47	1.10	0.50	1.03	0.60
1991	13.16	16.19	62.57	0.49	0.53	0.49	1.10	0.53	1.08	0.70
1992	11.99	14.80	61.98	0.62	0.62	0.48	1.09	0.59	1.07	0.68
1993	11.96	15.02	59.23	0.57	0.68	0.47	1.09	0.62	1.10	0.63
1994	11.08	13.88	59.69	0.69	0.66	0.54	1.08	0.61	1.15	0.66
1995	10.88	13.51	61.06	0.66	0.56	0.50	1.08	0.66	1.16	0.75
1996	10.05	12.53	60.34	0.68	0.60	0.50	1.07	0.70	1.22	0.79
1997	9.56	11.74	62.97	0.62	0.57	0.50	1.06	0.67	1.20	0.85
1998	10.05	12.45	61.50	0.63	0.55	0.50	1.06	0.69	1.21	0.80
Chemical, Petroleum and plastic products										
1985	13.77	22.03	25.00	1.13	0.68	0.37	1.07	0.55	1.50	0.64
1986	16.28	27.60	17.96	1.28	0.68	0.37	0.96	0.65	2.06	0.66
1987	13.44	22.65	18.73	1.27	0.76	0.38	1.00	0.71	1.78	0.60
1988	15.42	25.69	20.06	1.13	0.69	0.29	0.97	0.82	1.93	0.65
1989	13.89	23.11	20.24	1.35	0.63	0.40	0.99	0.71	1.78	0.70
1990	14.05	23.63	18.89	1.26	0.87	0.38	1.00	0.71	1.77	0.58
1991	17.79	30.00	18.57	1.13	1.03	0.30	0.89	0.73	1.91	0.76
1992	22.34	37.88	17.96	1.35	1.09	0.27	0.83	0.88	2.10	0.67
1993	23.38	39.42	18.59	1.22	1.01	0.26	0.80	0.84	2.12	0.67
1994	22.76	38.16	19.26	1.20	0.87	0.37	0.78	0.97	2.15	0.76
1995	17.86	29.48	21.17	1.09	0.86	0.27	0.80	1.01	1.91	1.04
1996	21.43	35.54	20.61	1.16	0.96	0.34	0.73	1.00	2.10	1.06
1997	25.27	41.92	20.59	1.48	0.86	0.31	0.68	1.05	2.15	1.10
1998	24.23	40.28	20.30	1.09	0.86	0.40	0.69	1.05	2.33	1.14

Source: Authors' own calculations based on *Annual Manufacturing Industry Statistics* (SIS, 1985-1998).

Table 10
Indicators of Gender Segregation by Status in Employment. Public

	DI	WE	Number of females per hundred Males	COEFFICIENT OF FEMALE REPRESENTATION						
				Production worker				Other		
				Technical personnel		Foreman	Unskilled worker	Administrative personnel	Officer	Other
				High level	Mid-level					
Food, beverages and tobacco										
1985	23.09	30.19	52.95	0.35	0.02	0.06	1.22	0.34	0.64	0.76
1986	17.01	28.41	19.76	0.53	0.04	0.28	1.18	0.38	1.43	0.65
1987	17.95	29.46	21.87	0.45	0.87	0.46	1.20	0.60	1.37	0.47
1988	20.15	32.93	22.38	0.46	0.93	0.40	1.23	0.68	1.34	0.40
1989	21.80	35.48	22.90	0.44	0.08	0.13	1.24	0.31	1.27	0.42
1990	22.52	36.47	23.52	0.48	0.14	0.09	1.24	0.31	1.29	0.37
1991	21.11	35.10	20.26	0.61	0.13	0.21	1.22	0.46	1.52	0.48
1992	19.76	32.92	20.08	0.69	0.06	0.19	1.18	0.44	1.71	0.57
1993	14.43	24.05	20.00	0.68	0.11	0.19	1.12	0.51	1.70	0.75
1994	13.45	23.12	16.33	0.62	0.15	0.88	1.10	0.68	1.81	0.61
1995	18.31	31.33	16.89	0.65	0.12	0.24	1.14	0.43	2.05	0.64
1996	13.85	24.68	12.23	0.64	0.30	0.42	1.05	0.58	2.46	0.69
1997	10.68	19.08	11.91	0.86	1.13	1.08	0.93	0.49	2.29	0.83
1998	9.52	17.12	11.24	1.01	1.18	0.88	0.97	0.65	2.37	0.73
Textile, wearing apparel and leather										
1985	13.32	21.54	23.70	0.75	0.38	0.07	1.12	0.44	1.34	0.87
1986	15.74	24.27	29.66	0.62	0.57	0.09	1.15	0.35	1.15	0.39
1987	16.91	26.11	29.57	0.54	0.58	0.06	1.15	0.27	1.38	0.42
1988	13.66	21.38	27.76	0.70	0.58	0.13	1.11	0.20	1.53	0.72
1989	16.61	25.65	29.49	0.72	0.41	0.08	1.14	0.28	1.51	0.56
1990	14.91	23.11	29.05	0.66	0.41	0.13	1.12	0.28	1.68	0.67
1991	13.58	21.19	28.16	0.76	0.35	0.13	1.10	0.35	1.69	0.62
1992	18.76	29.44	27.48	0.79	0.35	0.16	1.17	0.37	1.66	0.41
1993	16.08	25.30	27.16	0.94	0.47	0.16	1.15	0.43	1.40	0.47
1994	15.15	23.99	26.32	0.66	0.73	0.15	1.14	0.44	1.34	0.48
1995	13.58	20.99	29.41	0.63	0.93	0.12	1.14	0.55	1.00	0.69
1996	11.86	18.16	30.67	0.69	1.11	0.25	1.11	0.46	1.17	0.75
1997	15.53	23.95	29.71	0.87	0.86	0.45	1.16	0.32	1.09	0.45
1998	17.16	26.41	29.98	0.53	0.40	0.18	1.17	0.47	1.12	0.47
Chemical, petroleum and plastic products										
1985	67.39	131.22	2.72	0.76	0.38	0.00	0.18	2.18	6.92	0.46
1986	50.04	96.67	3.52	2.36	0.85	0.10	0.39	1.44	7.33	0.60
1987	54.36	104.88	3.67	2.38	0.42	0.09	0.37	2.16	6.23	0.55
1988	51.76	99.62	3.91	1.87	0.38	0.11	0.40	2.24	5.88	0.58
1989	58.10	112.09	3.67	2.67	0.26	0.10	0.25	2.91	6.21	0.61
1990	61.13	117.32	4.21	2.40	0.22	0.08	0.24	2.61	5.85	0.45
1991	60.60	116.23	4.27	2.14	0.62	0.08	0.24	2.78	5.75	0.47
1992	55.91	107.18	4.33	2.23	0.89	0.08	0.26	3.18	4.61	0.49
1993	59.33	112.83	5.17	1.13	0.82	0.06	0.24	3.26	4.61	0.32
1994	52.24	99.06	5.46	1.25	0.75	0.30	0.22	2.82	4.07	0.53
1995	56.33	107.03	5.25	1.23	0.37	0.31	0.16	2.72	4.11	0.62
1996	60.32	115.39	4.55	1.44	0.32	0.37	0.19	3.33	4.40	0.32
1997	61.14	116.58	4.90	1.53	0.29	0.13	0.15	3.31	4.11	0.48
1998	57.40	108.92	5.40	1.66	0.40	0.18	0.23	2.87	3.94	0.41

Source: Authors' own calculations based on *Annual Manufacturing Industry Statistics (SIS, 1985-1998)*.

- Within the two female dominant sectors, food and textiles, we observe segregation by job status.
 - Women are usually employed as unskilled workers and to do regular office work.
 - Women have very low representation at the high technical personnel level when we consider production-related jobs.
 - When looking at non-production jobs, the picture is not very different; women are not, in general, employed as high level administrative personnel.
- For the chemicals industry, the *CFR* values for high level technical personnel are above one, meaning that women are well represented in that industry for the period of 1983-1990 in both the private and public sectors.
- High segregation indicators for the public sector might be an indicator of the government's negative attitude toward women's employment in a period of privatization and high unemployment throughout the economy plus the common social norm that men are the bread earners of the family.
- On the other hand, concentration of women in unskilled and non-technical jobs might be the result of their low capital endowment, and their lack of education and experience. It may also be closely related to the preferences of employers and to the effects of social norms.

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Özet

Türk imalât sanayiinde toplumsal cinsiyet ayrımı: 1985-1998

Bu çalışmada 1985-1998 yılları arasında, önce Türkiye’de ekonomik faaliyet alanlarına göre toplumsal cinsiyet ayrımı olup olmadığı saptanmıştır. Daha sonar, kadınların yoğun olarak çalıştıkları sektörlerden biri olan imalât sanayi alt sektörlerine göre farklı ayrımcılık ölçütleri kullanılarak ayrımcılık düzeyleri saptanmıştır. Özellikle ‘tekstil, giyim ve deri sanayi’ ve ‘gıda, içki ve tütün sanayi’ alt sektörlerinde toplumsal cinsiyete göre ayrımcılık olduğu bulunmuştur. Hem kamu hem de özel sektör işletmelerinde ayrımcılık ciddi boyutlardadır. Ayrıca kadınların, üretim dışı faaliyetlerde yoğunlaştıkları görülmüştür. Tekstil, gıda ve kimya sanayi alt sektörleri için, işteki duruma göre hesaplanan indeksler, üretimde çalışanlar grubunda, kadınların daha çok vasıfsız işçi grubunda yer aldıklarını, teknik personel düzeyinde çok az temsil edildiklerini göstermektedir. Üretim dışı çalışanlar grubunda ise, kadınların standart işleri yaptıkları, yönetici olarak çok az çalıştıkları bulunmuştur. Sonuç olarak, tüm dünyada olduğu gibi Türkiye’de de imalât sanayiinde incelenen dönem içinde toplumsal cinsiyet bazında, hem alt sektörlerde, hem de işteki duruma göre ayrımcılık olduğu sonucuna varılmıştır.