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Women in Managerial Positions in Europe: Focus on Germany

Berlin, March 2006

IMPRESSUM

DIW Berlin
German Institute for Economic Research
Königin-Luise-Str. 5
14195 Berlin
Tel. +49 (30) 897 89-0
Fax +49 (30) 897 89-200
www.diw.de

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* DIW Berlin, SOEP, eholst@diw.de

Abstract

Prejudices and stereotypical beliefs about the role of women in society often limit their chances of reaching top leadership positions. This paper presents a detailed analysis of the socio-economic structure and the gender pay gap in managerial positions in Germany building on a review from a cross-national perspective of women's progress to high-ranking positions and of initiatives to overcome the "glass ceiling". Suggestions are made for improving the situation of women in order to permit more balanced gender participation in the economy, while also promoting national competitiveness and higher levels of wellbeing for the society.

Keywords: Women in management, "glass ceiling", socio-economic structure, horizontal and vertical segregation, gender pay gap, diversity awareness.

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1 Introduction – basic conditions*

Women in higher-ranking positions[1] are role models for other women. They show what women can achieve and that it is possible for them to follow their chosen careers. This is an important point because most women in managerial positions are working in traditionally male spheres with male-oriented norms that define what constitutes "leadership qualities". Because they do not necessarily conform to this norm and may possess different leadership skills, women are often confronted with prejudices and are expected to conform to stereotypes. Such attitudes have the potential to seriously limit women's chances to lead. Positive role models, on the other hand, have the potential to change norms and to provide a wider range of leadership styles that benefit employers.

These psychological and cultural aspects are generally not dealt with in traditional labor economics. Neoclassical models explain occupational gender differences mainly by differing preferences for work hours and different occupational interest.[2] The limits of this rational choice approach have frequently been discussed in the literature (Cook/Levi 1990). Many critiques have been directed at the "malestream" models (for example in Bergmann 1995, Humphries 1995, Nelson 1996), others emphasize the influence of the individual human actors and their beliefs (Ferber/Nelson 1993). Further, Michèle Pujol (1992, 1995) pointed out that the founding fathers of the neoclassical paradigm had strong patriarchal beliefs about women's and men's roles in society and their different abilities and were extremely concerned about the negative impact of women's employment on their household duties. Measures to increase the earning capacity of women and their opportunities in the labor market (for example by getting a better education) as well as the demand for equal wages for equal work were rejected by Marshall and Pigou, and Edgeworth claimed that equal wages would cause a "depression or débâcle of industry" that would ultimately be ruinous to wealth and family life" (cited by Pujol 1995: 19). "Ironically, the solutions to these 'problems' proposed by the heretofore'free market' economists relied on draconian interventions into existing labor market

* The author wishes to thank Marianne Ferber and Stephen Jenkins for helpful comments on an earlier version of this paper. All remaining errors and deficiencies are of course the author's own responsibility.

[1] Higher-ranking positions are not consistently defined in the literature. They can, for example, be limited to leadership positions or they may also include positions that require high qualifications and include extensive duties and managerial functions Examples will be seen below.

conditions" (Pujol 1995: 20). Pujol also reports that Edgeworth demanded complete exclusion of mothers with children under age of three from factories.

This male-oriented slant in economics also attributed gender-specific characteristics like "emotional" to women and "rational" to men. Neither of these attributions are value-neutral: they stand in a hierarchical relation to each other, with "rational" (male) abilities being valued more highly (Nelson 1996, Keller 1985). These artificial dichotomies (emotional versus rational) are reflected in neoclassical rational choice models by relegating emotion to externally determined preferences while including rational "hard" choices as independent variables. As a result, all attributes that cannot be employed in the mathematical models are viewed as individual preferences (and taken as given by the theory). This paradigm constrains the view of human motivation and the explanation of economic behavior significantly.

Patriarchal perceptions of the 19th century that treated women as subordinate to men were manifested in laws that seriously limited women's labor market participation and that continue to influence women's status today. The German Civil Code (BGB), for example, has its roots in the 19th century. Thus, despite the fact, that since 1949 the Basic Constitutional Law (Grundgesetz) of the Federal Republic of Germany guarantees equal rights of women and men in Article 3 ("Frauen und Männer sind gleichberechtigt"), the BGB entitled men to decide almost everything in the household until the late 1950s (Holst 2000). For instance, husbands could decide where to live and how to use the family's assets. The wife had the duty to manage the household and help her husband – if he considers it necessary – in his work. Therefore she was not allowed to decide on her labor market participation. The husband had the right to terminate her without her permission and against her will. Although after the BGB was changed in 1958, and wives could decide about their own assets, they were still not allowed to work in the labor market if it interfered with their household duties. Only since 1977 have women and men been treated equally within the family. Wives have the same right to work for pay as husbands do and there are no longer any gender-specific regulations concerning household duties.

This change in the law appears to have had a strong impact on women's labor force participation, which has increased since 1977. This would not have been possible without the recent

[2] Behavioral economics has attempted to integrate insights from these preferences into neoclassical rational choice theory. For an overview see Camerer/Loewenstein (2003).

increase in the availability of part-time jobs in the economy. Nevertheless, assumptions about the traditional abilities of women still influence their chances in the labor market. Part-time work does allow women to reconcile paid work and family duties, but in most cases it does not allow them to get a high-ranking position. Women's traditional responsibilities to the family still are a major part of beliefs in many cultures (not only in Germany) and make it difficult for women to achieve high-ranking positions with high time demands. One result is the "glass ceiling", an invisible barrier blocking the rise of women to top jobs (Wirth 2001, ILO 2004).

Public awareness of a "glass ceiling" has increased gradually over the years. In many countries, this phenomenon is now also discussed in connection with the declining proportion of men in workforce. The "information society" depends heavily on sufficient numbers of highly educated workers to assure economic prosperity. Women are well educated today – but their human capital is still used inadequately. The persistent gender gap in high-level managerial positions is, of course, a reflection of a lack of gender equality in society.[3] The size of this gap provides some insight concerning the extent to which women are accepted in non-traditional roles, and shows how power is distributed between women and men in different countries and societies.[4]

The second section of the paper provides a cross-national overview of the status of women as indicated by their share in top managerial positions. The third section describes some of the measures taken in the U.S.A., Norway, and Germany to increase the share of women in management positions. The fourth section focuses on Germany and provides detailed information on the socio-economic structure and the gender pay gap in managerial positions, followed by an analysis of women's earnings. Pre tax income is largely driven by market forces. Post tax income also reflects the effects of legislation, such as the income tax structure and government payments. Analysis of earnings and of net income provides some insight concerning these effects on the gender gap in income in Germany. The conclusion looks ahead to changes that may be expected in Germany as a result of current policies.

[3] Theoretical explanations for this resistance to equality for women can be found for example in Carly/Eagly 1999.

[4] It is interesting to note, however, that the very presence of some women in high-level positions appears to reduce prejudices against them. Quite some time ago Ferber/Huber/Spitze (1979) found that both women and men who had ever had a female "boss" were far less likely to prefer a male boss than those who had never had this experience before.

There are some methodological limitations concerning the measurement of high managerial positions held by men and women. Cross-national comparisons are difficult because data are missing for different countries and also there are varying definitions and classifications of managerial positions and inconsistencies in survey bases. These factors are taken into account in the discussion.

2 International comparison: Women in managerial positions

Seeing a woman in a management position is more the exception than the general rule. This is even more true, the higher the position in the company hierarchy. However, the degree of under-representation differs widely from country to country (Davidson/Burke 2004).

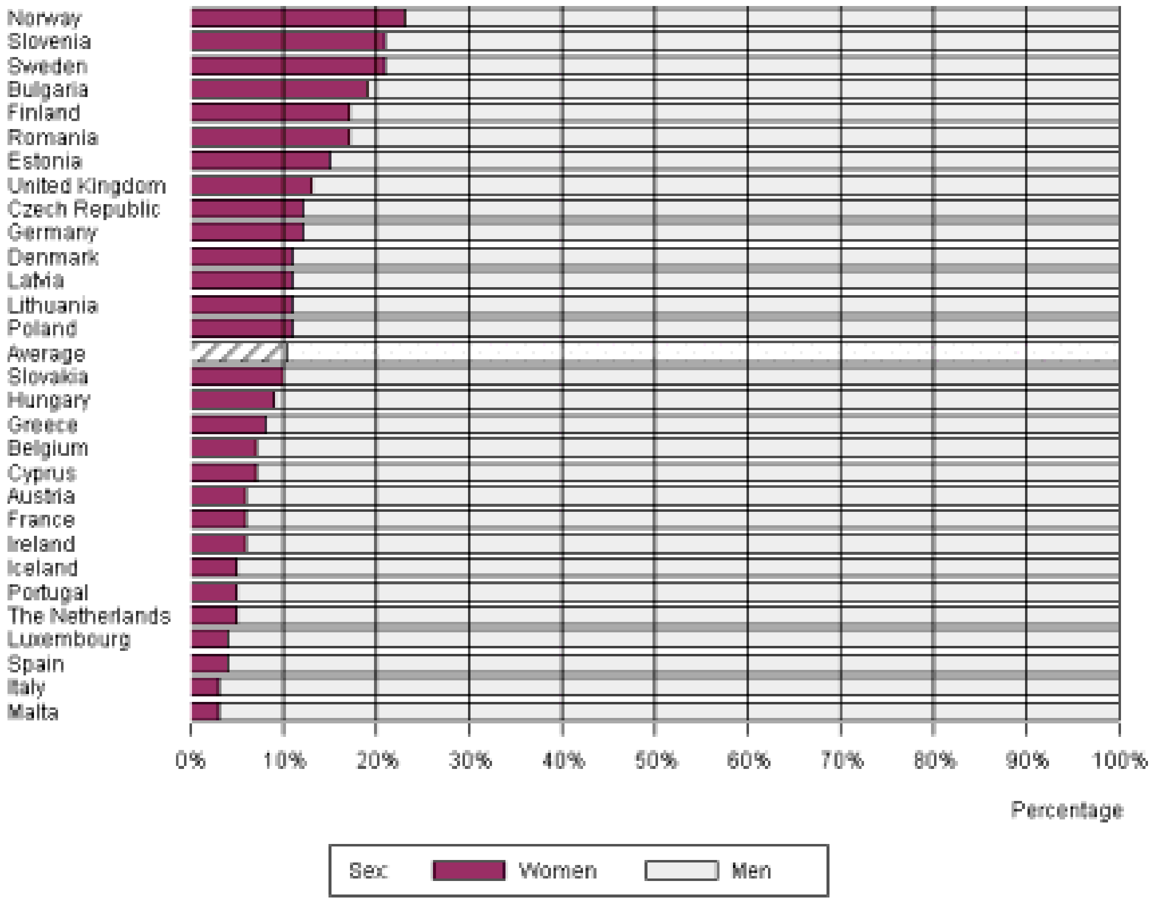
2.1 Board members

Key corporate planning and decisions frequently have to be approved by the supervisory board and hence a seat on this top decision-making body is of major importance. The CWDI (Corporate Women Directors International) Report for 2004 revealed that in June 2004 only 10.4% of all the seats on the boards of Fortune Global 200 companies worldwide were held by women. While in the U.S.A. women held at least one seat on the boards of all the 78 companies on this list (17.5% of all seats), the share of women in Great Britain was 12.5%, in Germany 10.3%, in the Netherlands 8.6%, in Switzerland 7.7%, in France 7.2% and in Italy only 1.8%. In the world's second largest economy, Japan (with 27 companies among the Fortune Global 200), only 3 of 431 board seats (0.7%) were held by women. Among the 22 companies, in which women hold at least one-quarter of the seats on the board, 15 are in the U.S.A. and three in Germany. The relatively good position of Germany in awarding supervisory board seats to women is undoubtedly the result of national laws on co-determination.[5] The women holding seats on the boards of those three companies all acquired their positions as representatives of workers.[6] While the codetermination law for these companies does not specifically refer to gender but rather deals with representation of workers, a law was passed in 2004 for companies with 200 to 2000 employees (DrittelbG 2004) which requires that the ratio of male and female representatives nominated to the supervisory board should correspond to their ratio in the company's workforce.

[5] The German law on codetermination, (Gesetz über die Mitbestimmung der Arbeitnehmer 1976) passed in 1976, applies to companies with more than 2000 employees, except for companies that are subject to the 'Montan-Mitbestimmung' (Co-Determination in the Coal, Iron and Steel-Industry). Not all European countries have regulations on codetermination. For information on workers' participation at the board level in the EU-15 countries see Taylor (2004).

[6] Among the 100 biggest companies in Germany, 7.5% of the total number of seats were held by women; more than 80% of these women acquired their seat as representatives of workers (Holst 2005).

Chart 1
Presidents and members of the highest decision-making bodies of Top-50 companies - in %



Source: EC 2005a

Another study of board members ("highest decision-making bodies") of the top 50 companies whose shares are sold on the national stock exchanges in 29 European countries was published by the European Commission (EC 2005a). In 2004 only one seat in ten was found to be occupied by a woman (Chart 1) but in two of the Scandinavian countries, Norway and Sweden, the rate was twice as high as the European average. These countries also have a high proportion of women between ages 15 and 64 in the labor force; in 2004 it was 75.7% in Norway and 75.6% in Sweden (ILO 2006). The more conservative southern European countries such as Spain, Italy and Malta, have the lowest percent of women in top positions – as well as a low proportion of women in the labor force (2004: Spain at 56.8%, Italy at 50.6%, Malta at 36%).

On average only 3% of the presidents of these European companies whose shares are publicly traded are women (most of them in Central and Eastern Europe, such as the Slovenia, and Latvia, Poland and Slovenia (EC 2005a). In 12 of the 29 countries, including Denmark, Germany, Sweden, and the United Kingdom, none of the country’s top 50 publicly traded companies had a woman president in 2004.

2.2 Managerial positions

The Eurostat provides Labor Force Survey (LFS) information about a wider range of leading positions, based on the International Standard Classification of Occupations from 1988 (ISCO88, group 1): see Table 1. The LFS distinguishes (a) legislators, senior government officials and senior officials of special interest organizations, (b) corporate managers, including directors and chief executives, production and operating managers as well as other specialist managers, and (c) managers of small enterprises.

Table 1
Percent of females in managerials positions in 25 European countries

	Legislators, senior officials, managers		
Country	2004	2004-1999	2004-1995
Lithuania[2]	45	(7)	/
Latvia	43	4	/
Estonia	37	2	/
France	37	3	0
Hungary	34	-1	/
Slovenia	33	4	/
United Kingdom	33	-1	0
Portugal	33	3	3
Italy[2]	33	(15)	(18)
Slovakia	33	-2	/
Poland	33	0	/
Average 2004	**32**	2	2
Spain	32	1	0
Sweden	30	2	/
Belgium	30	-2	-2
Norway[2]	29	(1)	/
Ireland	29	5	1
Finland	28	0	/
Czech Rep.	28	3	/
Germany	28	1	2
Luxembourg	26	-4	2
Greece	26	2	4
Netherlands	25	2	5
Denmark[2]	24	(2)	(5)
Malta	13	/	/

1 According to the International Standard Classification of Occupations (ISCO88) - ISCO88-group 1 - Civil Population
2 Irregularities in classification.

Source: Eurostat.

According to Eurostat data for 2004, in the European countries for which data are available, 32% of the managerial positions are held by women. Most Central and Eastern European countries rank above average as do the UK, Ireland and Portugal. Also, in France women held 37% of managerial positions, which is in stark contrast to the small proportion of females on boards in that country.[7] Surprisingly, the proportion of women in managerial positions is below average in Sweden, Norway, Finland, and Denmark. Finally, in Germany, women held only 28% of all managerial positions. Thus it is clear that Germany, just like the other European countries, is still far from having achieved equality for women in these positions –

[7] The low rate of females on boards in France might be explained by the long lack of codetermination laws in that country (Taylor 2004).

despite its “most formal and advanced system of worker representation at company level” (Taylor 2004: 58) in the EU-15 countries.

3 Selected initiatives to increase the share of women in top jobs

3.1 U.S.A.

Numerous studies have been published on management and gender ever since the 1970s, with research on leadership, qualifications and prejudices, especially in the U.S.A., but also in Germany (e.g. Krell, 2004). Two decades ago, the phrase “glass ceiling” appeared for the first time in the Wall Street Journal (Hymowitz/Schellhardt 1986). The term caught on and has been used since to describe a phenomenon that continues to get much attention. A few years later, in 1991, the Glass Ceiling Act was incorporated into the Civil Rights Act in the U.S.A. aiming to reduce discrimination against women in management, and the Federal Glass Ceiling Commission was created. The Commission’s function was to examine both the opportunities for, and obstacles to, the promotion of women in management and decision-making positions, and to put forward recommendations how to improve the situation. In 1995 the commission acknowledged that the low percentage of women in management positions had considerable negative effects on the American economy and suggested that demographic changes in the labor force and among consumers, as well as globalization, required new efforts to ensure that this situation would be remedied (Federal Glass Ceiling Commission 1995a, 1995b).

The Commission argued that by creating a corporate culture favorable to women in high-level positions, companies could greatly improve the quality of their staff. Among other things the Commission recommended that executives should recognize the advantages of having more women in management positions women and should train them at an early stage in their careers in management. Thus, increasing the share of women in management should be part of their company's strategic business plan. Finally, the Commission stressed the need for better data for effective monitoring.

By 2003 86% of the companies on the Fortune 500 list in the U.S.A. employed at least one woman in a management position (Catalyst 2003) and the total share of women on company boards was 13.6%. Thus, while still far from having achieved the goals of the Federal Glass Ceiling Commission the U.S.A. leads the other countries examined in this paper. Moreover, according to ILO data from 2003 women held 46% of all managerial positions in the U.S.A.[8] This is the highest rate of any western industrialized country.

3.2 Norway

Norway currently has the highest share of women board members in the top-50 publicly traded companies in Europe (Chart 1). To improve the situation further, the Norwegian Government decided in 2002 to impose a quota (Norway 2005). Since January 2004, state-owned companies in Norway must ensure that 40% of the members of their boards are women (eiro 2005). Private companies must achieve this quota by the end of 2005,[9] although companies that cannot meet the deadline may be granted an extension up to 2007; otherwise their shares may no longer be traded on the stock exchange (Norway 2005).

As a result the Confederation of Norwegian Business and Industry (NHO) launched a pilot project entitled 'Female Future'. The aim of this initiative is to facilitate appointments of the required number of women without compromising the quality of executives. (EuropeanPWN 2005). NHO considers the main challenges to be, first, finding suitable candidates, and second, ensuring that they have the opportunity to acquire the competence and skills needed to perform successfully in a top-level position. The program consists of three sections: monitoring candidates for management and board of directors, providing support designed to develop competence and skills, finding appropriate measures to increase the acceptance of women in top management and encouraging a variety of management styles. As part of this program, the Norwegian Government has also set up a data bank with information about more than 4,000 highly skilled women who could take a position on a company's board.

3.3 The European Union and Germany

The EU is an important promoter of equal opportunities for women and men. EU countries – under the Amsterdam Treaty of 1997 – are required to implement EU Council directives on equal treatment in working life.[10]

[8] ISCO88 classification, group 1.

[9] Quota rules have not been proposed for small family enterprises where the owners are represented in person on the board (eiro 2005).

[10] EU directive 2000/78/EC, establishing a general framework for equal treatment in employment and occupation, was passed on 27 November 2000. Directives are part of European framework legislation that has to be implemented in national laws.

In Germany, an anti-discrimination law was introduced in December 2004 but had not been passed by parliament as of 2005.[11] It remains uncertain how much of the original draft will remain after additional readings in parliament. In 2001, the Federal Government did, however, pass a law on the implementation of equal treatment for men and women in the Federal administration (DGleiG 2001) with the aim of improving career and promotion prospects for women in government service. It was decided not to introduce similar legislation for the private sector but instead to rely on a voluntary agreement (Vereinbarung 2001) between the confederations of German industry and commerce and the Federal Government to promote equality of opportunity for men and women in business. According to this agreement, a 'balance sheet' is to be drawn up every two years (BMFSFJ 2001; Holst 2002). So far, a lot remains to be done in the private sector.

[11] This law was to implement four EU directives: Framework directive 2000/78/EC of 27 November 2000, the revised directive on equal treatment, 2002/73/EC of 23 September 2002, the directive on equality of the sexes of 13 December 2004 (Council Doc. 14438/04) and the anti-racism directive 2000/43/EC of 29 June 2000. For more detail see BMJ (2005).

4 A detailed look at persons in managerial positions in Germany

4.1 Status and development

If one only took qualifications into consideration, one might expect that close to half of managerial jobs in Germany would soon be held by women. More young women than men have the necessary qualifications to enter a university.[12] They also account for about half of new students at universities and of university graduates (BLK 2004). The labor force participation rate of women in Germany was 66.1% in 2004 and they held 44.8 % of all jobs. However – as noted before – they held only 28% of managerial positions.

A study based on the 80,000 biggest companies in Germany provides a more detailed look at gender shares in top and middle management of large and medium sized companies, such as owners, CEOs, directors, board members, and other managerial staff in different kinds of leading positions.[13] Of the 360,000 management jobs listed in 2004, only 10.4 % were held by women (Tables 2 and 3).

Table 2
Persons Employed in Management in Germany in 2004

	Big companies				Small and medium-sized companies			
	Total	Men	Women	% of women	Total	Men	Women	% of women
Top management	91 076	84 771	6 305	6.9	110 176	100 235	9 941	9.0
Supervisory Board	37 665	34 033	3 632	9.6	15 453	14 279	1 174	7.6
Middle management	67 890	61 231	6 659	9.8	86 579	74 447	12 132	14.0
Total	158 966	146 002	12 964	8.2	196 755	174 682	22 073	11.2

Source: Hoppenstedt Firmeninformationen GmbH, company data bank, December 2004; DIW Berlin calculations.

There is a larger proportion of women in managerial positions in medium-sized than in big firms (11% vs. 8%) and a smaller share in top-management than in middle-management positions (8% vs. 12%). On the other hand, while the share of women in top management has increased, their representation in middle management in medium-sized firms has dropped by 2.3 percentage points since 1995. There has been much more progress in the public sector and

[12] This refers primarily to individuals who have obtained a diploma from a German secondary school (Gymnasium) needed for university admission.

[13] For a detailed definition see Hoppenstedt (2005).

in associations ("Verbände"[14]) where women comprise 20% in the middle management ranks - a rise of 8.5 percentage points since 1999, and in top management women held almost 13% (an increase of 2.3 percentage points since 1999). This suggests that associations and public authorities offer women a better opportunity to obtain a management position than the private sector. In all sectors the share of women in the middle ranks was considerably greater in all the observed years than at the top, with 20% - a rise of 8.5 percentage points since 1999. In top management women held almost 13% (2.3 percent more than in 1999).

Table 3
Development in the Share of Women in Management in Germany

	2004	1999 to 2004	1995 to 2004
	%	Percentage points	
Big companies			
Top management	6.9	1.9	3.7
Middle management	9.8	1.8	4.0
Small and medium-sized companies			
Top management	9.0	1.0	0.9
Middle management	14.0	-1.8	-2.3
Associations, public authorities			
Top management	12.9	2.3	3.6
Middle management	20.3	2.7	8.5
Total	10.4	1.2	2.3

Source: Hoppenstedt Firmeninformationen GmbH, company data bank, December 2004.

4.2 Socio-economic structure

Data from the German Socio-economic Panel (SOEP 2001) allow a closer look into the socio-economic structure and earnings of employees in managerial positions. They are defined here as (1) employees with (a) duties requiring high qualifications (e.g. scientists, attorneys, and other high level professionals); (b) heads of departments or others with wide-ranging responsibilities (e.g. managing directors, manager, heads of large firms or concern); (2) civil servants at the executive level (all those from Pay Plan A13 upwards, including judges and professional soldiers).

According to SOEP data for 2004, women held 30% of such managerial positions and 22% of the positions with wide-ranging managerial responsibilities (Table 4). The proportion of women in managerial positions is much larger in east Germany (which was formerly the German Democratic Republic GDR) (40%) than in west Germany (28%).

[14] „Verbände" or associations are groups of persons or organisations which – unlike companies – mainly have political aims. One of the most influential associations are employers' associations and unions.

Table 4
Socio-economic structure of employees in managerial positions 2004

	Civil servants (executive level) and employees in managerial positions		
	Total	Women	Men
Germany altogether (unweighted)	2152	631	1521
Germany (in %)	100	30	70
Duties requiring high qualifications	100	31	69
Wide-ranging responsibilities	100	22	78
West Germany	100	28	72
East Germany	100	40	60
Age (in %)			
Under 29 years	100	45	55
30-44 years	100	31	69
45-59 years	100	29	71
from 60 years	100	17	83
Employees in Managerial Positions (in %)	100	100	100
Highly qualified	89	92	88
Extensive managerial responsibilities	11	8	12
Western Germany	85	79	87
Eastern Germany	16	21	13
Nationality german (share of employees in %)	97	98	96
Age (in years)			
Average altogether	44	43	45
Highly qualified	44	43	45
Extensive managerial responsibilities	47	43	48
Age groups (%)			
Under 29 years	5	8	4
30-44 years	48	50	47
45-59 years	39	38	39
from 60 years	8	5	10
Married (share of employees in %)	65	52	70
Child(ren) (aged under 16 years) in household	34	28	37
Years of education	15	16	15
Tax class (%)			
I	35	41	32
II	4	9	2
III	38	10	51
IV	18	29	14
V	4	11	1
Job tenure (in years)	12	11	12
Part-time employment (share of employees in %)	11	28	4
Overtime worked (share of employees in %)	66	58	69
Actual working time (in hours)	44	40	46
thereof: Part-time employees	27	29	23
Full-Time employees	46	44	47
thereof: Highly qualified	46	44	47
Extensive managerial responsibilities	52	51	52
Working in occupation for which trained (share of employees in %)	80	85	78
Size of enterprize (in %)			
under 20 employees	15	20	13
20 to 200 employees	30	32	29
200 to 2000 employees	26	22	27
2000 and more employees	29	26	30
Public Service (share of employees in %)	35	45	31
Civil Servants ("Beamte") (share of employees in %)	13	12	14
Business sector (in %)			
thereof: Industry	28	16	34
Trade, hotels and catering, transport	12	13	12
Other services	59	72	54

[1] White collar employees with highly qualified duties or managerial function or with extensive managerial duties, civil servants (executive level).without employees and civil servants in managerial positions
Source: SOEP 2004, weighted results.

Managerial positions normally require a rather longer period of experience with a given employer, particularly relevant in Germany where most high-ranking positions are filled by promotion from within. The average female manager has worked for the same company for more than a decade and male managers even longer. Women in full-time positions in positions with wide-ranging managerial responsibilities work 51 hours a week on average, seven hours more than those in other positions requiring high-level qualifications. Half of the employees in managerial positions are between 30 and 44 years old, about four out of ten are between 45 and 59 years old. While females and males below the age of 30 hold rather similar shares of managerial positions, the gender gap becomes wider during the age when highly educated women are most likely to have children.

Most women in Germany stop working when they have a baby (Trzcinski/Holst 2005), although the opportunity costs of such a break are especially high for well-educated women in well-paid managerial positions, both in terms of career advancement and earnings (EC 2002). Part-time work offers one way that women can reconcile family and employment, but it also reduces the chances of reaching a top position. Higher earnings help to pay for hired workers at home such as nannies or for daycare. However, using such substitutes for a mother's care, particularly during the first years of a child's life, is often frowned upon, particularly in west Germany. Nevertheless, about 30% of females, though only 4% of males in managerial positions work part-time, much more commonly in the public than in the private sector. In top positions with wide-ranging managerial responsibilities, however, almost no one works part-time.

Facing the adverse effects of career interruptions or the problems of combining paid work with family responsibilities ("the second shift", Hochschild 1989), women often react by postponing or even giving up their plans to have a family. In contrast, men benefit from the traditional gender roles, where wives support husbands' careers and take care of all household needs (Apter 1993). As a result, it is not surprising that German men in managerial positions are not only more likely to be married than women (70% vs. 52%) but also more often have children under the age of 16 years in the household (37% vs. 28%). It is for these reasons that Esping-Andersen (2002) suggested the need for a "new gender contract". "Women-friendly" policies are not only family and society-friendly as well, but also are a fundamental precondition for a productive post-industrial society. He further concludes that "true gender equality will not come about unless, somehow, men can be made to embrace a feminine life course" (Esping-Anderson 2002: 95).

4.3 The gender pay gap (gross salary)

The EC (EC 2005b) estimates that the gender pay gap in the EU Member States was 15% in 2003, two percentage points less than five years before. Among that group of countries, Germany has the fourth-highest pay gap of about 23% (about 1 percentage point less than in 1998). The SOEP provides monthly salary data before deduction of taxes and government payments.[15] These data show that in Germany the earnings of men working full-time in managerial positions were 27% higher than those of comparable women in 2004. The pay gap was as high as 29% between married but only 14% between unmarried male and female managers (Table 5).

Human capital theory explains how socio-economic characteristics, such as low educational attainment or short work experience, determine the pay gap. Age signals increased human capital for employees, which is important for wages. As would be expected, this is especially true for full-time employees, who earn more as they become older. But in all age groups, women earn less than men.

Compared to the income of those who work in companies with fewer than 200 employees, the income in firms with 200 but fewer than 2000 employees is almost one-tenth higher, and in companies with 2000 or more employees is 25% higher. However, the gender pay gap is particularly large in the smallest companies where males' pay is more than one-half above that of females. In medium-sized firms the difference is somewhat above a third and in large enterprises just above one quarter.

[15] Information was collected for the month before the survey was carried out. Overtime pay is included but not vacation pay or back pay. Also stock options and similar benefits – which top managers often receive - are not included Earnings are imputed in case of item-non-response (Frick/Grabka 2005).

Table 5

Full-time white collar employees and civil servants in managerial positions for the year 2004 per monthly gross and net payment

	Monthly gross payment			Monthly net payment					
	Total	Women	Men	Total	Women	Men	Share of gross payment men by share of gross payment women	Share of net payment men by share of net payment women	Difference column 7 minus 8
	1	2	3	4	5	6	7	8	9
	Euro			Euro			%		Percentage points
Full-time employees (cases)	1914	451	1463	1914	451	1463			
Average monthly gross payment - median (€)	4000	3300	4200	2449	1800	2640	127	147	-19
Full-time employees (cases)	1914	451	1463	1914	451	1463			
Marital status									
Married	4300	3520	4555	2720	1900	3000	129	158	-28
Not married	3458	3131	3581	1941	1693	2000	114	118	-4
Postion									
Duties requiring high qualifications	3873	3200	4050	2332	1786	2554	127	143	-16
Wide-ranging responsibilities	5000	4000	5250	3191	2000	3300	131	165	-34
Region									
West Germany	4073	3400	4314	2500	1800	2742	127	152	-25
East Germany	3200	2900	3360	1880	1650	1950	116	118	-2
Age group									
- 29 years	2900	3000	2760	1500	1400	1588	92	113	-21
30-44 years	3800	3200	3924	2400	1800	2528	123	140	-18
45-59 years	4500	3600	4700	3000	2100	3300	131	157	-27
60+ years	4600	4098	4663	3138	2100	3500	114	167	-53
Employer									
Public Service	3660	3200	3946	2400	1800	2650	123	147	-24
Others	4050	3312	4300	2500	1786	2620	130	147	-17
Employment									
Civil Servants ("Beamte")	4200	3800	4300	3200	2800	3300	113	118	-5
Employees ("Angestellte")	3999	3200	4151	2300	1750	2500	130	143	-13
Business sector									
Industry	4400	4000	4600	2700	2000	2800	115	140	-25
Trade, hotels and catering, transport	3700	2600	3850	2000	1500	2500	148	167	-19
Other services	3800	3131	4100	2370	1750	2600	131	149	-18
Size of enterprize (employees)									
Under 20 employees	3480	2400	3630	1968	1600	2100	151	131	20
20 to 200 employees	3700	3200	4000	2300	1786	2500	125	140	-15
200 to 2000 employees	4066	3300	4500	2500	1750	2700	136	154	-18
2000 and more employees	4400	3700	4700	2725	2000	3050	127	152	-25
Reporting:									
Part-time employees (cases)	214	171	43	214	171	43			
Monthly gross-net payment (€)	2322	2322	2200	1300	1300	1650	95	127	-32

Source: SOEP 2004, weighted results.

4.4 The gender pay gap (net salary)

How much of earnings one retains after taxes and government transfers, and to what extent earnings are augmented by government payments is also worthy of note. Net earnings show how much each person is really able to contribute to the income the household actually has at its disposal. It is the size of this sum that is likely to influence the power of an individual in the household and hence access to the household income (Vogler/Pahl 1994). The latter in turn affects the allocation of household expenditures and thus the welfare of various household members. Children, for example, do better, when their mothers control a larger fraction of family resources (Lindberg et al. 1996, Worldbank 2001). Therefore it is important to look at the effects of taxes and government payments on the earnings of women and men as well.

In contrast to countries that tax individuals – such as Sweden, Austria, and the UK - Germany has a system where married couples are treated as a single unit for tax purposes (Dingeldey 2001). The income of both spouses is added together and represents the total tax liability for the couple. That is divided by two, and the income tax is applied to each half. The so-called "splitting effect" emerges when there is a difference in the incomes of the two spouses. The rate that applies to the income of the main earner is significantly less progressive than it would be for a single person. As a result of these regulations the spouse with lower (higher) income has a higher (lower) tax burden compared to what it would be if they did not make a joint tax declaration. Inevitably, this provides a strong disincentive for secondary earners to work for pay (Steiner/Wrohlich 2004) and privileges traditional breadwinner families.

The SOEP not only provides information about net earnings of employees in managerial positions, which are the reported monthly earnings after deduction of taxes and social security, as well as unemployment and health insurance.[16] It also provides information on taxation of these employees.

In Germany tax classes III to V are applicable to married employees. Tax class III represents the lowest tax bracket and can be chosen by married employees when a spouse is not in the labor force or is in the highest tax bracket (tax class V). Tax class III is most attractive for main earners, while secondary earners most often choose tax class V. SOEP data show that

[16] Information for the earnings from the month before the survey was carried out. Earnings are imputed in case of item-non-response (Frick/Grabka 2005).

more than half of the men but only one out of ten women in managerial positions are in tax class III (Table 4[17]). In contrast, almost no men but only somewhat more than one out of ten women are in the highest tax bracket (tax class V).[18] Finally, a considerably larger proportion of women than men do not gain from the "splitting effect".

The gender pay gap after reduction of tax and social contributions is 20 percentage points higher than that in gross earnings (Table 5). Male managers working full time have net earnings almost 1.5 times as high as those of women in full-time managerial positions and married men receive net earnings 1.6 times as high as those of married women. The "splitting-effect" in favor of men increases with age. While the net payment for younger men in managerial positions – who are less often married - is about 1.1 times as much as that of women in their age group, men who are 30 to 44 years old earn 1.4 as much, those 45 to 59 years old get 1.6 times as much and finally men older than 60 receive 1.7 times as much.

4.5 Multivariate analyses of the gender pay gap (gross salary)

The bivariate statistics presented so far provide information about the correlation between two variables, like income and age, but do not control for additional ones, such as education, working time per week etc. To identify the effect on wages of one variable controlling for differences in a variety of other characteristics we now present a multivariate analysis.

There are significant differences in pay and career ladders between private employees and civil servants ("Beamte"). Therefore, the multivariate analysis focuses on the private sector only. This paper reports estimates for full-time employees in managerial jobs.[19] They tend to be the "very best" employees in the private sector, highly educated and labor market orientated. The aim of these analyses is to find out if there is a gender pay gap even between these women and men when controlling for a variety of individual characteristics.[20]

We run a logistic regression (estimated for women and men separately):

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[17] When both spouses earn about the same, they are more likely to choose both the same tax class IV with a tax burden similar to that of unmarried employees. The other tax classes in Table 4 are assigned to singles.

[18] This might not be very surprising because wives of men who earn a great deal are less likely to be in the labor market while husbands will generally be employed no matter how much the wife earns.

[19] A separate regression would be needed for part-timers.

[20] It is not the aim to control for sample selection effects (estimating another Probit model on being in managerial positions in the first place; for these kind of (Heckman) sample selection models see Greene 1993: 706ff.). See also footnote 20.

$$\ln(y) = ß'X + e$$

where the dependent variable ln(y) represents the natural logarithm of the monthly gross earnings for an individual; ß′X is a vector of human capital, firm and industry/sector variables with their estimated coefficients; e is the error term. Coefficients of less than 0.1 can be interpreted as the approximate rates of return. The "rate of return" to the k^{th} regressor (x_k) is:

$$\text{Rate of return } (x_k) = 100\,(\exp(ß_k)-1)\,\%$$

which is approximately equal to (100 $ß_k$ %) for 'small' ß's. According to the adjusted R-square in Table 6, the estimated model explains 39% of the variance in ln gross earnings for females and 40% for males.

Table 6
Determinants of ln monthly (gross) earnings

Full-time employees in managerial positions in the private sector (civil servants exluded)

		Women	Men
Age (in years)		0.068***	0.065***
Age squared		-0.001***	-0.001***
Married (ref. not married)		0.020	0.074***
Number of children		0.004	0.015
Youngest child is aged less than 7 years		-0.049	0.060*
East Germany (ref. West Germany)		-0.255***	-0.302***
In a job with wide-ranging responsibilities (reference: In a job with duties requiring high qualifications/managerial functions)		0.215***	0.338***
Education (in years)		0.054***	0.026***
Job tenure		0.012***	0.003**
Actual working time per week (in hours)		0.010***	0.009***
Firm has 200 to 2000 employees (ref. under 200 employees)		0.085**	0.135***
Firm has more than 2000 employees (ref. under 200 employees)		0.123***	0.200***
Agriculture, fisheries	reference: manufacturing (incl. mining)	0.000	-0.302**
Energy sector		-0.024	-0.119*
Building industry		-0.035	-0.053
Trade, hotel and restaurant industry, tourism		-0.300***	-0.116***
Transportation		-0.141	-0.004
Money and banking		-0.042	0.036
Real estate and legal advice		-0.180***	-0.009
Public administration		-0.145***	-0.113***
Public and private services		-0.280***	-0.058
Gross earnings imputed		-0.150**	-0.140***
Constant		5.069***	5.321***
Observations		388	1246
Adj. R-squared		0.39	0.40

*** p<0.01, ** p<0.05, * p<0.1
Source: SOEP 2004.

The estimations show that married men earn significantly more than those who are not married while marriage makes no difference for women. The effect of age on earnings is non-linear. Up to about the mid 30s pay increases for women and men, after that it declines. Marital status has a substantial impact on earnings for men but not for women. The returns to an additional years of education and an extra year with the same employer are greater for women than for men. These results are consistent with a recent study of the European Commission (EC 2002).

The bivariate analysis suggested that the gender pay gap was particularly large in the smallest companies. However, narrowing the sample to employees in managerial positions in the private sector, the multivariate analysis suggests that, other things being equal, men profit more from working in a larger company than women. The consequences of occupational segregation become visible when economic sector is included as an explanatory variable. There is no sector in which employees in managerial positions have significantly higher earnings than in manufacturing (where, as shown before, men are overrepresented).

The difference in earnings between women in jobs with wide-ranging responsibilities as opposed to those merely requiring high qualifications is much smaller than for men. In other words, being in a job with comprehensive managerial duties is much more rewarding for men. Women and men both earn significantly less in east Germany (former GDR) than in west Germany, but the regional difference is greater for men.

The gross earnings of women and men increase with the number of hours worked per week. One might point out that “work hours" are a choice variable and so including it as a regressor may lead to endogeneity problems. Excluding this variable however changed the regression results only very little. It could also be argued that endogeneity problems might appear with the inclusion of “sector” as a regressor because individuals with particular types of (unobserved) characteristics may be more likely to choose particular sectors to work in. Again though, running the regressions excluding the sector variables changed the results only very little.

4.6 Oaxaca-Blinder-decomposition of the gender pay gap

The Oaxaca-Blinder decomposition[21] divides the gender pay gap into two components. One is due to differences in individual and job characteristics between women and men (differences in X), and one is due to differences in the remuneration for these characteristics (differences in ß). Usually men are taken as the reference group.

The components were estimated using the public domain Stata program 'oaxaca' (Jann 2005). The gender pay gap among full-time managers in the private sector was 38%. Of this, 22 percentage points (these are 58% of the total gap) was due to differences in average characteristics. The remaining 16 percentage points (42% of the total gap) was accounted for by differences in returns to characteristics.[22]

[21] The decomposition method was originally proposed by Blinder 1973 and Oaxaca 1973.

[22] Note that this estimation understates the differences in returns to characteristics compared to a decomposition model that takes care for sample selection effects. Running such a model showed a much higher rate of differences in returns to characteristics (see also footnote 21).

5 Conclusions

The OECD (1998:9) concluded that “occupational segregation excludes women from occupations which are associated with the greatest prestige, power and highest incomes. These occupations are generally ‘reserved’ for men.” This paper, focusing on managers, and especially those in top-ranked positions, confirms these claims for Germany and suggests that the same is likely true in all the countries examined here.

Even among a particularly select group of full-time managers in the private sector women’s earnings were found to be significantly lower than men’s. The Oaxaca-Blinder decomposition showed that 42% of the total gap was accounted for by differences in returns to characteristics and that 58% was apparently explained by differences in characteristics.

A bivariate analysis revealed that the gender pay gap is even larger that it would otherwise be as a result of taxes and social contributions. Individual taxation instead of a spouse-based splitting system would lower this effect (Lindberg et al. 1996).

A number of other issues remain to be explored in future work. For instance, occupation and firm size may not have much explanatory power over and above the variables already controlled for in the regression since there have been substantial barriers to women’s entry into a good many occupations and it may even be that they encounter varying degrees of resistance to entry into firms of different size. Such segregation by occupation and firm size would keep women‘s earnings lower than they otherwise would be. Although the norms, stereotypes and prejudices discussed in the introduction were not taken into account in the regression models, many studies confirm their negative effect on women’s opportunities in management (e.g. Powel/Graves 2003, Stahlberg/Sczesny 2001, Davidson/Burke 2000) and show that they make it very difficult for women to prove their leadership abilities because the pool of potential women leaders from which companies can draw is seriously reduced (Catalyst 2005).

As Kanter (1977) showed, a woman in a high-ranking position among an entirely male dominated group is marginalized and merely seen as a “token”. One outcome of this situation is that her behavior is often considered to be typical for her entire gender. Therefore Krell (2005) suggests it would be better not to focus on typical “female” or “male” leadership styles but rather on how particular pictures of reality are constructed. Increasing the number of women in top positions would be expected to decrease the “token” effect and would facilitate change. Further, a recent study of CEOs (Bell 2005) found that women leaders are more likely than men to promote other women into the highest ranks of the corporate hierarchy and therefore argues for affirmative action at the very top of the corporate hierarchy. In addition, more women in high-level managerial positions would also tend to have a substantial effect as role models.

Women's leadership, their strengths and skills, whether or not they styles really differ from those of men, is valuable for the success of business and government alike.[23] To increase the opportunity for this, male and female employees need to be made aware to what extent there are gender differences and how to best take advantage of those that are useful (Catalyst 2005). Therefore "diversity awareness training" would be very desirable (Gieselmann/Krell 2004) because it would help to create an environment where both women and men can thrive and achieve more nearly optimal performance.

As noted above, the Confederation of Norwegian Business and Industry already argues for measures to increase the number of women in top management and encourages acceptance of a variety of management styles. They further suggest doing more to encourage promotion of suitable candidates as well as providing support designed to develop competences and skills. In view of the demographic changes in the labor force in Germany, efforts to increase the share of women in management are in the best interest of the organizations they work for or could work for.

[23] A study in Denmark showed these positive effects of the share of women in top management (Smith/Verner 2005). The decisive factor appears to have been the high level of qualification of the women in these jobs.

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