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The evolution of gender inequalities in the European Union: labour market participation, wage inequalities and unemployment in cross-national comparison

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Contents

I. INTRODUCTION.....	3
II. THE STATE OF THE ART: CRITICAL REVIEW.....	3
III. INDICATORS.....	13
IV. ANALYSIS OF EUROSTAT DATA.....	16
V. FINDINGS.....	18
CONCLUSION.....	39
BIBLIOGRAPHY.....	41

I Introduction¹

This paper consists of two parts: a critical review of the "state of the art" of empirical research on socio-economic gender gaps and their evolution in EC-/EU-member states since the 1980s; here a number of methodological difficulties are highlighted. In the second part time series data provided by Eurostat are used for analysing comparatively and over time the evolution of gender gaps in EU-member states. The basic question which this paper seeks to address is whether and in which respect we can observe a progressive narrowing of the structural gaps related to the labour market indicators of women and men in the European Union.

II. The state of the art: critical review

The current literature on gender gaps in the European Union can be divided into two groups, those that analyse methodological problems of comparison from theoretical perspectives and those that are primarily analysing various data sets.

Within the literature analysing methodological problems, we can broadly distinguish three different research interests: Firstly a rather fundamental critique of quantitative analyses partly combined with an appeal to link the quantitative analysis to qualitative approaches. Secondly general methodological problems are highlighted when cross national comparisons are carried out. Thirdly specific methodological problems regarding Eurostat are discussed.

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1. Methodological critiques:

1.1. Appeal to link quantitative analyses to qualitative approaches

Gottfried and O'Reilly (2000) have developed a conceptual framework for explaining the flexibilisation of work and gender segregation. The development of the embedded gender contract approach 'is based on the limitations of traditional ,productivist' frameworks focusing exclusively on economic production and industrial organisation, and the relationship between capital and labour'. (Gottfried and O'Reilly 2000: 1). Feminist approaches have made more apparent how the post-war social contract between capital and labour has been built on a gender relevant contract and compromise. Gottfried and O'Reilly argue that 'this narrow focus on the sphere of economic production has ignored other key elements on which the strengths of these systems were based'. The gender contracts refers to the 'unspoken rules, mutual obligations and rights which define the relations between women and men, between genders and generations and rights which define the relations between women and men, between gender and generations, and finally between the areas of production and reproduction (Rantalaiho 1993: 2, quoted in *ibid*: 2).

Linda Hantrais (2000) explains the changing employment rates between women and men by different government interests in women's labour. The period from the late 1970s brought far-reaching changes to the place of women in society. More women were entering the labour force and were developing more continuous working patterns. In the still expanding labour markets of the 1970s, governments had been prepared to consider ways of supporting women as workers to satisfy the demand for labour. During the recession of the 1980s female employment was again of interest to policy-makers because women were seen as a more flexible and less costly supply of labour. Hantrais uses Eurostat data to show that between 1985 and 1995, women with an equivalent level of educational achievement to men were still displaying lower economic activity rates than men, even for the younger age groups which is particularly obvious for Greece (Hantrais 2000: 5).

In the mid-1990s, women's working patterns varied from one member state to another and according to age. Hantrais illustrates trends in economic activity rates by age groups for women in 1985-1995 and for men in 1995 in EU member states. For comparative

purposes, it would be interesting to compare men's trends as well but this data is not provided. However, the figures show that in many countries, female economic activity rates peaked for women in their mid-twenties and then fell as women left the labour force to begin raising families; in Denmark, Finland, France, Germany, Portugal, Sweden and the UK rates increased at a later stage for women in their thirties and forties. Women were also more prone than men to shorten their working time than men to care for their families. Hantrais cites Eurobarometer statistics to show that the greater involvement of women to paid work was not accompanied by a redistribution of household labour. The greater economic independence of women due to their greater commitment in the labour market resulted in an increase of alternative, non-institutionalised family forms.

1.2. Methodological problems regarding cross-national comparisons

One of the most comprehensive analysis of the methodological problems involved when comparing different labour market systems is provided in Rubery et al (1998). Rubery et al warn of the pitfalls when comparing employment categories, as international standards do not ensure that like is being compared with like. The potential pitfalls are seen in mainly three areas, firstly the difficulties in comparing occupational categories, secondly the different pay structures and payment systems and thirdly consequences of patterns of segregation.

Similar occupational categories can include different levels of skills and forms of work organisation in different societies. The individual categories are difficult to compare as external factors play an important role, for example, it is important to consider whether employees are predominantly insured in the public or private health sector. The authors also stress that atypical work categories have different statuses as in some labour markets part-time work can be used to retain skilled female labour on the labour market during a period of domestic responsibility. In other labour markets, atypical categories are filled primarily by low skilled occupations, mostly occupied by young men or women returning to the labour market.

Problems in comparisons that can arise due to different pay structures and payments systems relate to the size of differentials between different job categories and the difference in the type of payment system, which result in different forms of penalty. For example, seniority as one important category in the payment system will penalise mothers with career breaks. The different pay structures also result in different opportunities associated with different job categories.

Another potential pitfall when comparing labour market data consists in the consequences of patterns of segregation for women and men. These have to be assessed against differences in extent and form of female participation in the labour market. The level and continuity of employment careers are important factors in influencing women's access to wage income.

Rubery et al suggest that methodologically, equal opportunities should be redefined and measured with reference to equality of labour market outcomes and in terms of economic rewards and power, rather than by measuring the progress towards homogeneity of employment patterns between men and women. This is necessary as the pay differentials for particular occupations are affected by the sex composition of the labour force, whereby the female dominated jobs are lower paid. When women enter male dominated jobs, these jobs are slipping down the pay hierarchy. The pay dispersion is also important in explaining the gender pay gap. For example in Sweden, there are relatively small gender gaps. However, this is a result of the narrow dispersion of pay and not the result of greater equality in the position of women and men within the pay system (Rubery et al 1998: 1-3).

Bothfeld et al (2000) compare seven "successful" countries with regard to the employment rate of women. They compare the USA, Denmark, Austria, Great Britain, the Netherlands and France. Based on the employment rate, the situation of women appears generally improving in these seven countries and the general wisdom to talk of a convergence of the employment rates of men and women can be confirmed. However, they put forward three arguments in favour of a more differentiated assessment of men and women in the national employment systems.

Firstly there is still a large difference between the unemployment and employment rates of men and women. The authors present a table based on the OECD figures which shows that the employment rate of women is between 10% (in Denmark) and 19% (in the Netherlands) below that of men. Thus the above mentioned convergence of the employment rate does not happen in all countries studied, in Denmark it has remained stable for the last ten years (Bothfeld et al 2000: 10).

Secondly the question on the extent and quality of the employment of women and men remains unresolved when the analysis is limited to the basic indicators. For this reason the authors suggest to include the total volume of work in order to observe the total development of the employment system. Eurostat publishes on top of the „normal“ employment rate also a "full-time equivalent employment rate"(FTEER) since 1998. For the FTEER, the percentage of part-time workers in a country are calculated into the equivalent of full time work. These rates are much lower than the values of the employment rates especially in countries with a high rate of part-time employment. The FTEER is thus more sensitive towards changes of the percentage of full time work than the normal employment rate (Bothfeld, Lepperhoff, Scheele 2000: 11). Even though Bothfeld et al stress that the differences in the employment rate between men and women is only one measurement to determine the quality of employment (other indicators mentioned are the employment segregation or the gender gaps in wages and incomes), they do not explain how they define that the employment rate is determining the quality of employment. The assumption seems to be that full-time work is rated as „better quality“ than part time work, which seems anachronistic given the current discussion within the trade unions in most EU countries about the redistribution of work and the feminist debates on a reduction of working time for everyone to have more time for caring and social activities (Frazer 1994)².

Thirdly the authors are sceptical to what extent the employment rate of women can be measured with basic indicators. On the one hand, these indicators are important as a gender-specific structure can be seen by differentiating the employment rates according to

² The latter is mentioned at a different point in the article though (Bothfeld et al 2000: 15).

socio-economic variables like age, parenthood, qualification. On the other hand, women form a large percentage of the „hidden reserves“ of persons in employable age which are not counted as the labour force according to the ILO regulations as only those are counted that are either employed or registered as unemployed and/or are ready to take up employment.

1.3. Methodological problems regarding Eurostat data sets

Silvera (1998) presents the most critical analysis of Eurostat data. However, her arguments remain inconclusive for at least the most recent edition of the Eurostat data. Silvera compares the gender gap of wages using Eurostat data of 1996. She points out that the figures have to be compared carefully. For example, there is a big difference when comparing the gender gap in hourly income with that of monthly income, as in the latter the part-time work plays a more important role especially in the Nordic countries. However, as the Eurostat data is differentiated between part-time and full time work and into the "full-time equivalent employment rate" Silvera needs to specify which figures she is actually using. Silvera criticises that the Eurostat figures only exist for the manual workers and not for employees, the latter of which is more feminised and especially prone to part-time work. She also points out the importance of including bonuses, surplus hours or just the basic wage (Silvera 1998: 128). Again, her criticism is unjustified as all this is specified in the Eurostat database for the figures since the early 1970s, at least in the 1999 edition of the Labour Force survey. Possibly her criticism has contributed to Eurostat specifying their data in a more detailed form though.

2. Analysis of Eurostat data sets

The study by the Commission (1998) is based on the Structure of Earnings (SES) data, collected by Eurostat in 1995 which is more comprehensive than the yearly collected data of the Labour Force Survey. The data used in this study is a further analysis of the SES data than is possible by the published sources of the SES, as in the SES only one or two variables are tabulated at the time whereas the data for this study was especially extracted by Eurostat statisticians from the raw data to account for occupation, sector and education level or length of service or size of establishment and part-time/full-time, age, occupation and sector simultaneously (European Commission 1998: 2). The analysis is limited to nine countries due to the limited data available, the countries include Belgium, Denmark, Greece, Spain, France, Italy, Luxembourg, Sweden and the UK, although some data also exist for the other countries.

The SES also exclude agriculture which is less of a limitation though as only 2% of all employees in the Union were employed in agriculture in 1995. The focus is on hourly rather than monthly earnings and overtime bonuses are excluded. The explanation for these choices presented in the study is that both taking monthly earnings and including overtime bonuses would increase the gender gaps and therefore they are left out of the analysis. It is stated though that the inclusion of overtime payments would make a small difference in most countries with the exception of the UK. However, it still has to be questioned whether the above points might provide a hint that the point of the study is to keep the gender gap low. The analysis is also limited to full-time wages in order to avoid the results being affected by possible differences in hourly rates between full-time and part-time workers.

The average pay for women was 27.5% lower than that of men in all the countries and sectors. The gap was narrowest in the German new *Länder* at 12%, much less than in the old *Länder* (26%) and significantly less in Sweden (17%). The gap was widest in the UK at 34%, followed by Greece with 32% (the data only includes industry) and the Netherlands (31%).

The overall gap was found to be substantially affected by differences in gender specific employment patterns. In most countries, a large number of women stop working professionally either temporarily or permanently or reduce working hours when they have children. Especially in the South of Europe this tends also to happen when women get married (European Commission 1998: 2).

Women tend to be disproportionately less well represented than men in occupations where earning levels are high, like for example in managerial positions. Another important factor in determining the wage gap in a country is whether their wages are determined by collective agreements. Where this is the case, the difference between men's and women's pay tends to be narrower than in jobs where this is not the case. The exception to this is Denmark and France, where collective agreements are very important but the gap is wider in other jobs.

Marie-Paule Benassi (1999) from Eurostat makes a comprehensive analysis of the Structure of Earnings Survey data from 1995 and suggest that on average women earn at least a quarter less than men³. The averages reflect structural differences in the characteristics of working women and men – mostly age, education and occupation. Fewer women than men occupy management positions, which are amongst the best paid jobs. The imbalance in the representation of women or men in certain economic sectors and occupations is one of the determining elements of the gender pay gap. Even when trying to apply male structures to women's average earnings, the gap is reduced but remains around 15%. Benassi warns that the overall average wage data should be carefully looked at to take into account the different position of women and men in the EU labour market, especially due to concentration of women in certain types of jobs.

Firstly, women and men have different jobs. In the survey group, a third of women working full-time are office clerks compared to only 10% of men. And 47% of men are manual workers or plant operators, which is the case for only 18% of women. On average, manual workers are better paid than clerks.

Secondly, on average working women are younger: 44% are under 30 compared to 32% of men. This is because less of the older generation of women work and many women stop work to raise children. The consequence according to Benassi is that women tend to have less seniority and fewer opportunities to be in management positions, which in turn has an impact on salaries.

Thirdly, there is a difference in education: 51% of working women have no more than primary or general secondary level education but only 43% of men. And 36% of men have a technical secondary education and only 29% of women.

But even when looking at pay differences for groups of people that have the same characteristics according to the ILO work regulations, women are systematically paid less. For example, in the category characterised as 'managers' the report says inequality is especially great in 10 of the 15 Member States. This is because there are very few women at the top level where salaries can be extremely high.

³ The following summary of the analysis is taken from the Eurostat news release (1999) Women have a long

Another difference highlighted is that overtime is paid mainly to manual workers – predominately men – while most sales staff in low-pay retailing are women. Even in the 25-29 age group women's earnings are only 86% of men's, even though these women have had equal access to education and work. 'This shows that even for the younger generation there is unequal access to well-paid jobs. Furthermore, when these young women get older, some will make long career breaks and so it is very probable that the pay differences will increase and resemble the ones their mothers are currently experiencing' (Benassi 1999: 2).

In terms of gross hourly wages, the least inequality is found in the new *Länder* of Germany, including East Berlin, where women's earnings are 89.9% of men's (compared to 76.9% in the old *Länder*). Not far behind are Denmark (88.1%), Sweden (87.0%), Luxembourg (83.9%) and Belgium (83.2%).

At the other end of the scale are Greece (68.0%), the Netherlands (70.6%) and Portugal (71.7%). EU average is 76.3% Although her calculations are based also on the Structure of Earning Survey by Eurostat, she ends up with different data for the gender gaps in wages and incomes than the Commission study mentioned above.

Leitner and Wroblewski (2000) develop basic performance indicators, in which the employment rate, the employment rate according to the full-time equivalent, the unemployment rate and the percentage of the long-term unemployment and youth unemployment are considered (Leitner/Wroblewski 2000:13). On the basis of these indicators a country ranking of the EU member states is calculated. However, the weighting of each indicator for this ranking remains unexplained. The authors also present each indicator individually, based on the Eurostat Labour Force Survey of 1998 and Austria's position within this is analysed.

III. Indicators

Three key indicators are chosen to observe the development of socio-economic gender gaps in the EU member states: The employment rate gap, the unemployment rate gap and the wage gap. Finally, the correlation between the activity rate and the wage gap will be examined. Even though it would be desirable to compare these indicators since the inception of the first equal opportunities directive in 1975, the gender specific data provided by Eurostat is only partly available since 1975 regarding wage but not regarding the employment rate or unemployment rate.

1. Wage Gap

The gap in wages and income represents the persisting inequalities between men and women in the European Union. Equality in labour market participation is ultimately measured by earnings since this is perceived to capture the effects of various aspects of labour force participation trends - the persistence of employment rates, unemployment rates and segregation levels (Singh 1998: 48).

The wage presented in the following tables refers to the gross hourly wage for full-time workers in industry and services, bonuses excluded. The combination of industry and services provides two important areas regarding the wage gap. Women tend to be under-represented in the unionised industrial sector where wages are expected to be more equal and over-represented in the often non-represented service sector where wages are expected to be less equal (Singh 1998: 48). As stated by the European Commission (1998), including overtime bonuses in the statistics would increase the gender gaps as usually men work more overtime than women, however this data is not available within the Labour Force Survey of Eurostat. Also the public sector and common services are excluded, which together accounted for just under a third of all wage earners in the Union in 1995. This is particularly important when looking at gender gaps, as a much larger number of women are employed in these sectors than men. Also there is a tendency that well educated women are employed in these sectors (Commission 1998: 1).

2. Employment rate

The employment rate gap is chosen as an indicator for the inclusion of women and men into the labour force. The stress on the inclusion of women and men into the labour force and not into society as a whole is important as especially women are included into society in a variety of ways outside paid employment, through e.g. their involvement in voluntary organisation or their caring activities. The employment rate represents persons in employment as a percentage of the population of working age, i.e. all persons in paid employment (Eurostat 1998: 10). The employment rate is thus always lower than the activity rate as long as there is unemployment. The average working age in the EU is defined to be between 15-64 years. The definition of employment by Eurostat follows those adopted by the 13th International Conference of Labour Statisticians (Geneva, 1982) (Eurostat 1998: 9). According to these „ILO“ Definitions, persons in employment are those who during the reference week did any work for pay or profit, or were not working but had jobs from which they were temporarily absent. Family workers are included but not persons on lay-off. For operational purposes, the notion of "some work" may be interpreted as work for at least one hour (Eurostat 1999b).

3. Unemployment rate

The unemployment rate gap is selected as an indicator for social exclusion. It represents unemployed persons as a percentage of the labour force (Eurostat 1998: 10).

Eurostat data is collected by the national statistical offices in each member state. Even though the data of the European Labour Force Survey are not based on the registered unemployed and thus include those who are not registered with the employment offices but are still searching jobs or are willing to accept jobs, the suspected figure of the unemployment rate ought to be higher. This figure, often referred to as "hidden reserve" is higher for women than for men and is higher in those countries in which complicated registry systems are in place at the employment offices (Maier 1997: 26; Bothfeld et al 2000).

4. Correlating activity rate and wage

The activity rate represents the labour force, i.e. all persons in employment and unemployed persons as a percentage of the population of working age (15-64 years) (Commission 1998: 10). The activity rate is thus the result of the employment and unemployment rate which are also analysed individually.

IV. Analysis of Eurostat data

Unfortunately the Eurostat data for the wage gap are very incomplete, only Luxembourg, West-Germany⁴, United Kingdom, Italy and the Netherlands have provided data since the 1970s. For the employment rate and unemployment rate, data have existed since 1983 and 1995 for the newly joining member states and the analysis is thus limited to the older member states, as the time period of three years for Austria, Sweden and Finland is too short to draw any conclusion. Despite these drawbacks of the data, Eurostat Labour Force Survey data still seemed the most reliable and complete data source to use for the chosen indicators⁵. The Labour Force Survey database contains information relating to about 700,000 households annually.

The first Community Labour Force Survey was organised in the six original Member States in 1960 by the Statistical Office of the European Communities. Following a period of annual surveys between 1968 and 1971, the survey was conducted every two years between 1973 and 1981. From 1983 to 1991, annual surveys were carried out on the basis of a revised set of concepts designed to guarantee an improved degree of comparability between the Member States and also, as far as possible, with other countries. The data on wage gaps previous to 1983 must therefore be compared with caution as a slightly different methodology might have been used for each year.⁶

Comparability of results

Comparability among fifteen countries is difficult to achieve, even were it to be by means of a single direct survey, i.e. a survey carried out at the same time, using the same questionnaire and a single method of recording. According to Eurostat, the comparability of results is still much better than that of other statistics providing cross national comparisons which is due to:

⁴ Data from Germany excluding former GDR.

⁵ I have also looked at the ILO and Luxembourg Income Study data. I did not want to fill Eurostat missing values with for example ILO or OECD data or Luxembourg Income study data as this would have manipulated the data considerably due to the different methodologies used in the other surveys.

⁶ It was not possible to obtain the old methodologies by Eurostat.

- “a) the recording of the same set of characteristics in each country;
- b) a close correspondence between the Community list of questions and the national questionnaires;
- c) the use of the same definitions for all countries;
- d) the use of common classifications;
- e) the synchronisation of the survey in spring;
- f) the data being centrally processed by Eurostat.” (Eurostat Labour Force Survey 2000).

The Community Labour Force Survey, although subject to the constraints of the Community's statistical requirements, is a joint effort by Member States to co-ordinate their national employment surveys, which must serve their own national requirements. Therefore, in spite of the close co-ordination between the National Statistical Institutes and Eurostat, there remain some differences in the survey from country to country.

Comparability between the results of successive surveys

Since 1983 improved comparability between results of successive surveys has been achieved, mainly due to the greater stability of content and the higher frequency of surveys. However, according to Eurostat the following factors may somewhat detract from perfect comparability:

- “a) the population figures used for the population adjustment are revised at intervals on the basis of new population censuses;
- b) the reference period may not remain the same for a given country;
- c) in order to improve the quality of results, some countries may change the content or order of their questionnaire;
- d) countries may modify their sample designs;
- e) the manner in which certain questions are answered may be influenced by the political or social circumstances at the time of interview” (Eurostat Labour Force Survey 2000).

V. Findings

The calculations in the following tables were done by subtracting the female figures from the male figures (figures for men in year x - figures for women in year x = gender gap in year x). The result of the earlier year was then subtracted from the latter year (e.g. gap 1999 - gap 1983 = gender gap difference). The lines in the time series diagrams are merely tendency lines and are only included for those member states where the data was considered to be large enough.

1. Wages

Wages measured in ECU

Country ⁷	Year: Data from 1970s	Women's wages earliest data	Men's wages earliest data	Women's wages in 1998	Men's wages in 1998
Luxembourg	1978	3.43	5.37	8.37	11.3
West- Germany ⁸	1978	3.67	5.04	10.94	14.55
United Kingdom	1975	1.58	2.33	7.81	11.17
Italy	1975	1.62	2.06	(4.59) ⁹	(5.54) ¹⁰
Netherlands	1975	2.43	3.36	(6.05) ¹¹	(8.03) ¹²
	Data from 1980s				
Ireland	1985	4.48	6.71	7.41	10.11
Belgium	1982	4.47	6.12	8.57	10.76
Spain	1989	4.15	5.71	5.58	7.36
Greece	1989	2.9	3.73	4.15	5.26
France	1982	3.72	4.68	8.32	10.32
Portugal	1989	1.31	1.83	2.39	3.33
Average of bove countries ¹³				7,91	10,05
	Data from 1990s				
East - Germany ¹⁴	1995	7.92	10.22	8.28	10.35
Finland	1996	9.18	11.31	9.33	11.47
Denmark	1996	17.11	19.18	18.92	21.21

Source: Eurostat Labour Force Survey 2000

Notes: The data refers to full-time hourly wages in industry and services (without public service), bonuses excluded. As the starting years for the available data are very different, the countries could only be roughly grouped according to the starting period of data available. The order of the countries is determined by the average yearly convergence determined in the next table.

⁷ Data for Sweden and Austria are not available.

⁸ Data from Germany excluding former GDR.

⁹ Data is from 1985, later data are not available.

¹⁰ Data is from 1985, later data are not available.

¹¹ Data is from 1989, later data are not available.

¹² Data is from 1989, later data are not available.

¹³ The average is only calculated for the 1998 wages as the other data are too disparate regarding the year.

¹⁴ It is important to note here that national statistics show that the wage gap in the GDR before unification was one of the lowest in the EU. These figures are not available through the Labour Force Database by Eurostat though and are thus not included here.

Wage gap between the 1970s and 1998

Country ¹⁵	Years	Wage gap earliest data in the 1970s	Wage gap in 1998	Wage gap difference earliest data and 1998	Average yearly convergence of the wage gap
Luxembourg	1978	36.1	25.9	-10.2	-0.51
Netherlands	1975	27.7	(24.7) ¹⁶	(-3) ¹⁷	(-0.13) ¹⁸
West-Germany	1978	27.2	24.8	-2.4	-0.12
United Kingdom	1975	32.2	30.1	-2.1	-0.09
Italy	1975	21.4	(17.2) ¹⁹	(-1.2) ²⁰	(-0.05) ²¹
		Wage gap earliest data in the 1980s			
Ireland	1985	33.2	26.7	-6.5	-0.5
Belgium	1982	27	20.4	-6.6	-0.41
Spain	1989	27.3	24.2	-3.1	-0.34
Greece	1989	22.3	21.1	-1.1	-0.12
France	1982	20.5	19.4	-1.1	-0.06
Portugal	1989	28.4	28.2	-0.2	-0.02
Average of above countries ²²			22.3		
		Wage gap earliest data in the 1990s			
East-Germany ²³	1995	22.5	20	-2.5	
Finland	1996	18.8	18.7	-0.2	
Denmark	1996	10.8	10.8	0	

Source: Eurostat Labour Force Survey 2000

¹⁵ No data is available for Sweden and Austria.

¹⁶ 1989 data. No later data is available.

¹⁷ 1989 data. No later data is available.

¹⁸ Note that the time period studied here is different to the other member states.

¹⁹ 1985 data. No later data is available..

²⁰ 1985 data. No later data is available..

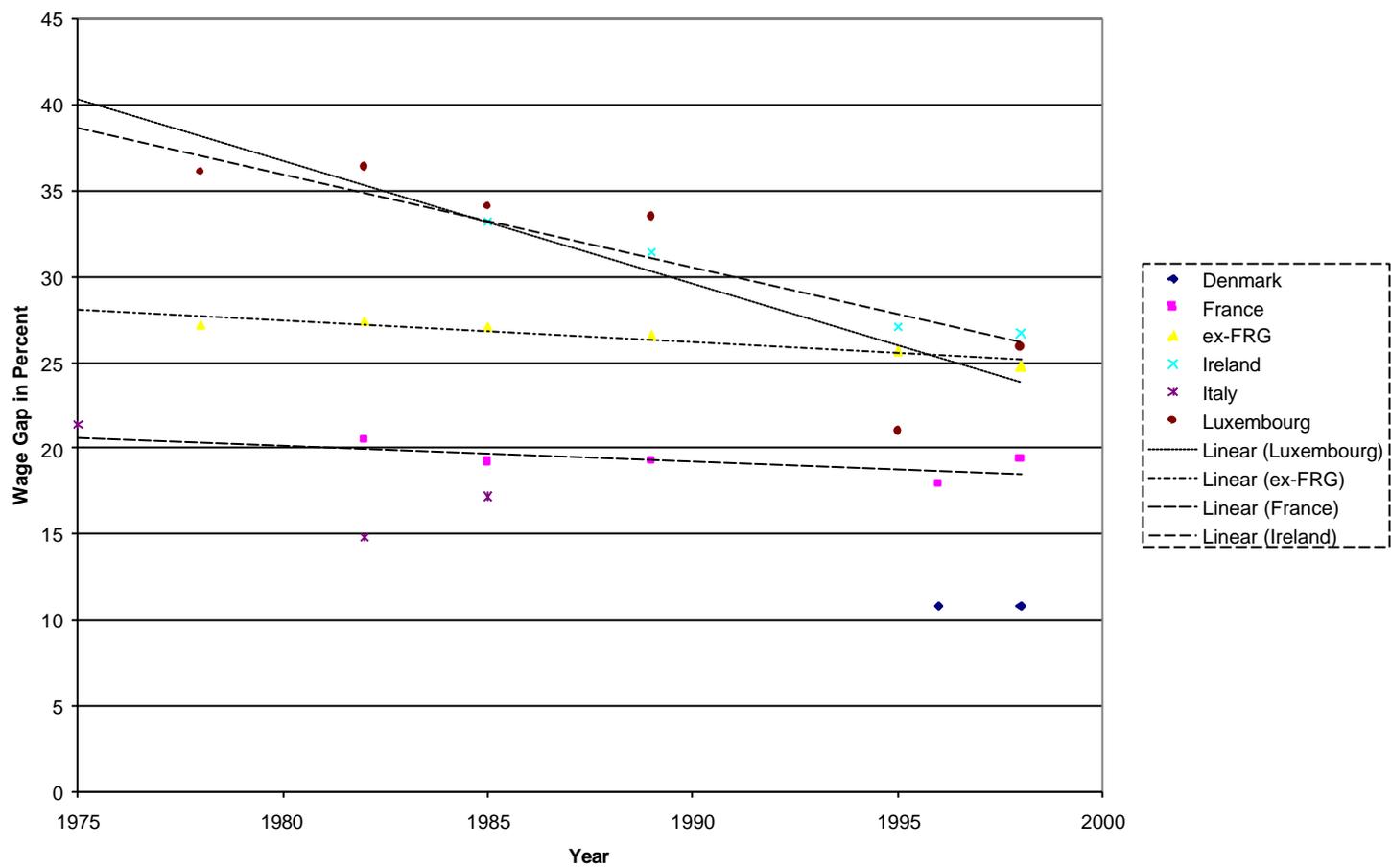
²¹ Note that the time period studied here is different to the other member states.

²² The average is only calculated for the 1998 wages as the other data are too disparate regarding the year.

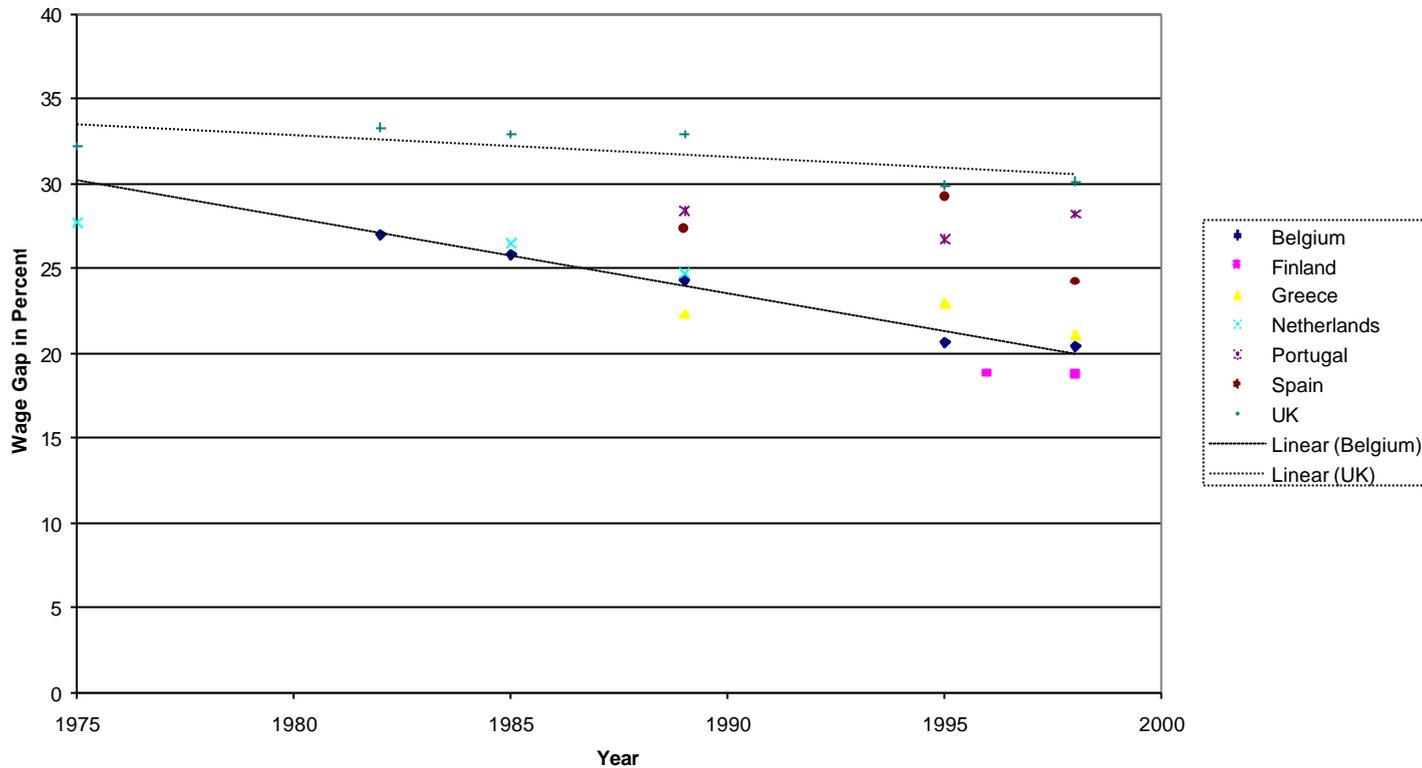
Notes: The data refers to full-time hourly wages in industry and services (without public service), bonuses excluded. All data provided are percentages, they refer to women's wages as to men's. For Example in Luxembourg in 1998, women earned 74.1% less than men, or to put it differently, women earned 25.9% of men's wage. As the starting years for the available data are very different, the countries could only be roughly grouped according to the starting period of data available. The difference between the earliest data available and the 1998 data is mainly provided for comparative purposes for each individual country, the figures between the country groups can only be compared to a limited extent.

²³ It is important to note here that national statistics show that the wage gap in the GDR before unification was one of the lowest in the EU, these figures are not available through the Labour Force Database by Eurostat though and are thus not included here

Wage Gap Time Series Part I



Wage Gap Time Series Part II



Developments in men's and women's wages

In 1998, the smallest wage gaps existed in two Nordic member states. In Denmark, women earned on average 10,8 % less than their male counterparts and in Finland 18,7%. The gap was widest in the UK with 30.1% and Portugal with 28,2%.

The largest convergence regarding men's and women's wages can be observed in Luxembourg, Ireland, Belgium and Spain, where the average yearly convergence was 0.5% in Luxembourg and Ireland, 0,4% in Belgium and 0,3% in Spain. In all other member states where data is available since the 1980s, the average convergence was around 0,1%. By far the smallest tendency towards convergence can be observed in Portugal, where the average yearly convergence was only 0,02%. However, the yearly average convergence can only be compared with caution due to three different reasons.

Firstly, the starting point for the availability of data is very different. For the member states for which data exists since the 1970s, we can see from the diagram that the actual convergence only took place in the 1980s, the only exception here is Italy, whose wage gap decreased between 1975 and 1982 by 6.6%, whereas the wage gap of all other countries with available data remain stable in this period of time. However, it may well be that in Belgium, Ireland, Spain, Greece and France, where Eurostat data is only available since the 1980s, a tendency towards convergence has taken place in the 1970s and this would considerably alter the average convergence per year.

Secondly, the magnitude of the wage gap is very different. For example Luxembourg of all member states whose data was available in the 1970s had the largest wage gap with 36,1% in 1978 and thus we would expect a large convergence here. Ireland had the largest wage gap of all member states whose data was available in the 1980s with 33.2% in 1985 and thus we would also expect a large convergence here. However, the United Kingdom which is the third member state which had a wage gap of above 30% in 1975 (32.2%) is the exception to the rule as hardly any convergence took place here.

The third reason why we need to be cautious in comparing the convergence is that the development in the absolute wages are very different in the member states.

Generally we would expect that the higher the wages, the larger the tendency towards convergence of the wage gap. This is true for Luxembourg, Belgium and Ireland, where the male wages are relatively higher than in the other EU member states with more than ten ECU on average in 1998. However in the UK, in Germany and France this could not be confirmed and thus the magnitude of the absolute wages do not seem to play a significant role for the convergence of the gender gap.

2. Employment rate

Employment rate between 1983 and 1998

Country	Employment rate women in 1983	Employment rate men in 1983	Employment rate women in 1998	Employment rate men in 1998
Ireland	33.4	71.5	44.7	68
Belgium	36.4	69.9	47.5	67
Netherlands	34.5	68.5	58.9	79.6
Italy	34	75	36.7	65.1
West-Germany ²⁴	45.2	75.3	55.3	73.1
Portugal ²⁵	47.3	76.9	58.1	75.8
Greece	34.4	77.2	40.3	71.6
Luxembourg	38.6	78.7	45.6	74.6
France	50.5	75.8	52.9	67.2
United Kingdom	51.4	74.6	63.2	77
Spain ²⁶	25.1	63.3	34.8	64.9
Denmark	64.3	75.3	70.3	80.2
EU12 average	41.3	73.5	50.7	72.0
Austria	59.2	77.6	59	75.9
Sweden	72.4	74.7	66.4	70.8
Finland	58.1	61.4	60.5	66.2

Source: Eurostat Labour Force Survey 2000

Notes: The employment rate refers to full-time employed in %. The order of member states is determined by the next table.

²⁴ Germany excluding the territory of former GDR.

²⁵ Data is from 1986.

²⁶ Data is from 1986.

Employment rate gap between 1983 and 1998

Country	Employment gap in 1983	Employment gap 1998	Difference employment gap 1983 and 1998	Ranking
Ireland	38,1	23,3 ²⁷	-14,8	1
Belgium	33,5	19,5	-14,0	2
Netherlands	34,0	20,7	-13,3	3
Italy	41,0	28,4	-12,6	4
West-Germany ²⁸	30,1	16,1	-12,3	5
Portugal	29,6 ²⁹	17,7	-11,9	6
Greece	42,8	31,3	-11,5	7
Luxembourg	40,1	29,0	-11,2	8
France	25,3	14,3	-11,0	9
United Kingdom	23,2	13,8	-9,4	10
Spain	38,2 ³⁰	30,1	-8,1	11
Denmark	11,9	9,9	-1,1	12
EU12 average	32,3	21,2	-10,9	
	Employment gap 1995		Difference employment gap 1995 and 1998	
Austria	18,4	16,9	-1,5	
Sweden	2,3	4,4	2,1	
Finland	3,3	5,7	2,4	

Source: Eurostat Labour Force Survey 2000

Notes: The employment rate refers to full-time employed. Negative figures in the third column mean that the employment rate gap has decreased between 1983 and 1998. Positive figures in the case of Sweden and Finland mean that the employment gap has increased.

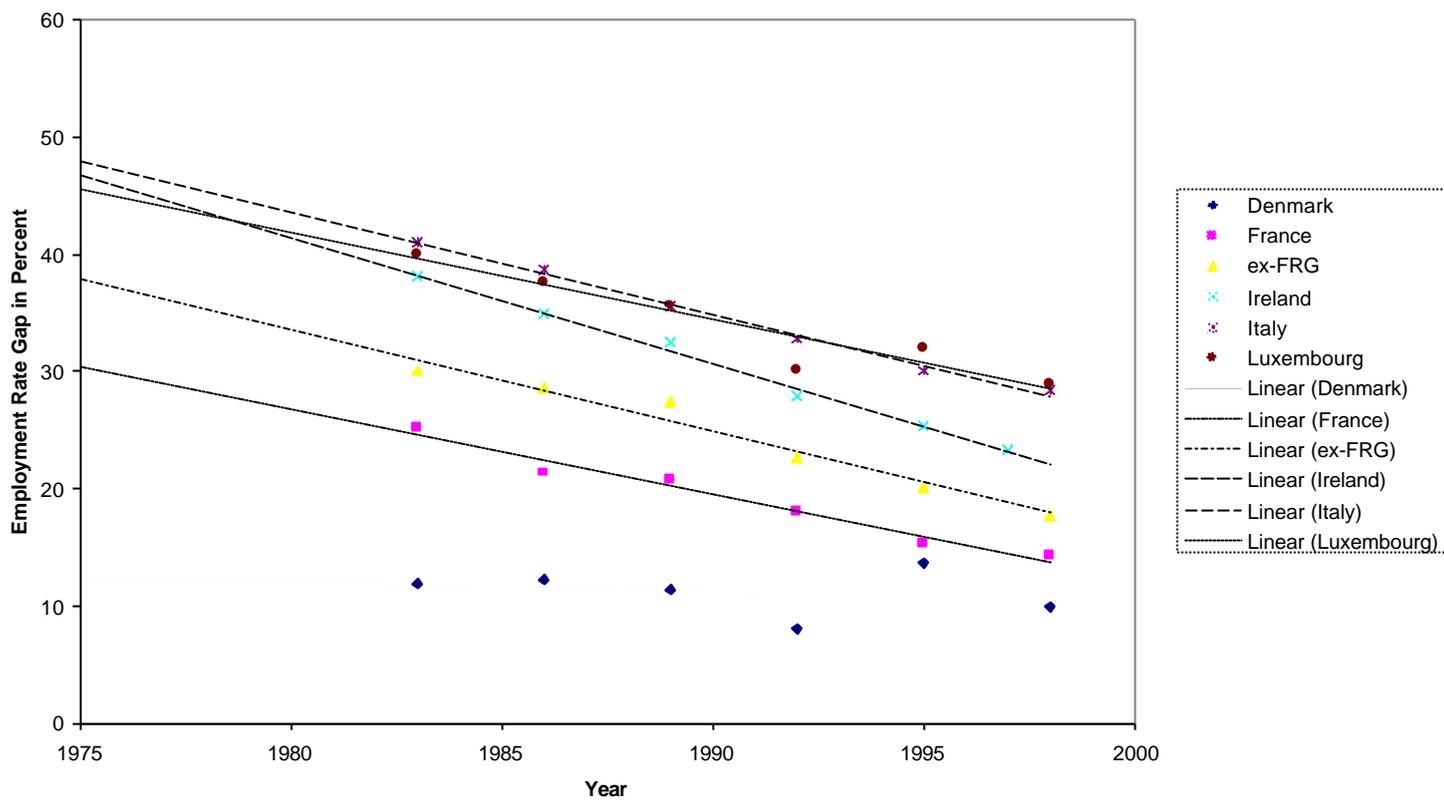
²⁷ Data is from 1997.

²⁸ Germany excluding the territory of former GDR.

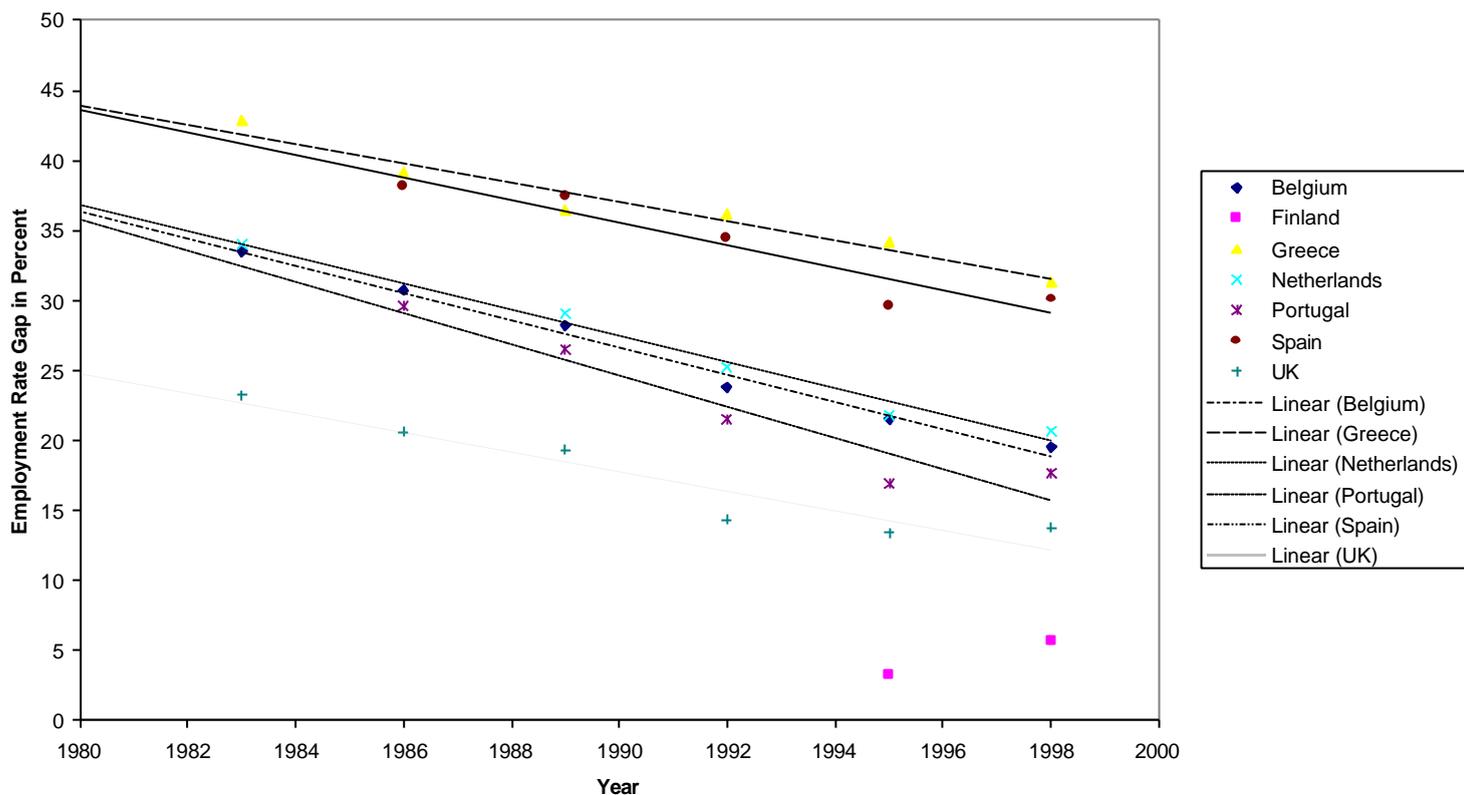
²⁹ Data is from 1986.

³⁰ Data is from 1986.

Employment Rate Time Series Part I



Employment Rate Time Series Part II



Developments in the employment rate

The employment rate gap decreased in all countries except Sweden and Finland. In Sweden and Finland however the period of examination is very small (only three years) and the employment gap in itself is very small (around two percent) and thus the development might be only seasonal³¹. The least development between 1998 and 1983 took place in Denmark, the employment rate only decreased by -1.1% and thus remained almost stable. The employment rate gap in Denmark was already relatively low in 1983 though with 11.9% and it decreased to 9.9% in 1998 which is the lowest gap in the employment rate after Sweden with 4.4% and Finland with 5.7%. The largest decrease in the employment gap took place in Ireland and Belgium with -14.8% and -14% respectively. The largest gap in the employment rate in 1998 was in Greece with 31.3%, Spain with 30.1% and Luxembourg with 29.9%. Greece (42.8%), Italy (41%) and Luxembourg (40.1%) had the largest employment gap in 1983, however their employment gap only decreased moderately by -12.6%, -11.5% and -11.2%.

When we take into the account the actual employment rate and not just the gap, we can see that the sources for the convergence regarding the employment gap are threefold. The first and most common source is that women's employment rate increases while that of men remains relatively stable. This occurred in Ireland, Belgium, West-Germany, Portugal, Luxembourg, United Kingdom and Spain. The second source for convergence is that women's employment rate increases while that of men decreases, which takes place in the Netherlands, Greece and Denmark. The least common source of convergence is that men's employment rate decreases while that of women remains relatively stable which is the case in Italy and France.

³¹ Due to the small period of data availability, these two countries as well as Austria are not included in the following analysis.

3. Unemployment rate

Country	Unemployment rate women in 1983	Unemployment rate men in 1983	Unemployment rate women 1998	Unemployment rate men 1998
Belgium	17.9	8.1	11.7	7.6
Portugal	11.9 ³²	7 ³³	6	4
West-Germany ³⁴	7.6	5.8	7.4	7.8
Ireland	16.2	14.7	10.2 ³⁵	10.5 ³⁶
Italy	14.3	5.7	17 ³⁷	9.8 ³⁸
France	10.5	6.1	14.2	10.5
Luxembourg	5.1	2.3	4.2	1.9
Netherlands	13.8	11	5.8	3.4
UK	9.9	12.1	5.4	6.9
Denmark	10.6	9.4	6.4	3.9
Greece	12.2	6.1	16.8	7.2
Spain	25.4	19.8	26.8 ³⁹	14 ⁴⁰
EU 12 average	13,0	9,0	11,0	7,3
	Unemployment rate women in 1995	Unemployment rate men in 1995		
Austria	4.9	4	5.6	5.4
Finland	16.3	18	13.6	13
Sweden	7.4	8.9	8	10

Note: The order of this table is determined by the following table.

³² Data only available from 1986.

³³ Data only available from 1986.

³⁴ Germany excluding the former ex GDR

³⁵ Data is only available from 1997.

³⁶ Data is only available from 1997.

³⁷ Data only available form 1997.

³⁸ Data only available from 1997.

³⁹ Data only available from 1986.

⁴⁰ Data only available from 1986.

Unemployment rate gap between 1983 and 1998

Country	Unemployment gap 1983	Unemployment gap 1998	Unemployment gap difference 1983 and 1998
Belgium	-9.8	-4.1	-5.7
Portugal	-4.9	-2 ⁴¹	-2.9
West-Germany ⁴²	-1.8	0.4	-2.2
Ireland	-1.5	0.3 ⁴³	-1.8
Italy	-8.6	-7.2	-1.4
France	-4.4	-3.7	-0.7
Luxembourg	-2.8	-2.3	-0.5
Netherlands	-2.8	-2.4	-0.4
United Kingdom	2.2	1.5	-0.7
Denmark	-1.2	-2.5	1.3
Greece	-6.1	-9.6	3.5
Spain	-5.6	-12.8 ⁴⁴	7.2
EU 12 average	-3.9	-3.7	-0.9
	Unemployment gap 1995		Unemployment gap difference 1995 and 1998
Austria	-0.9	-0.2	-0.7
Sweden	1.5	2	0.5
Finland	1.7	-0.6	-2.3

Source: Eurostat Labour Force Survey 2000.

Notes: Negative figures in the first two columns mean that the male unemployment rate is lower than that of women, i.e. more women are unemployed than men. Positive figures in the first two columns mean that the female unemployment rate is lower than that of men, i.e. more men are unemployed than women.

Negative figures in all three columns mean that the unemployment gap between men and women has increased, while positive figures in the third column and negative figures in the preceding columns mean that the gap has decreased.

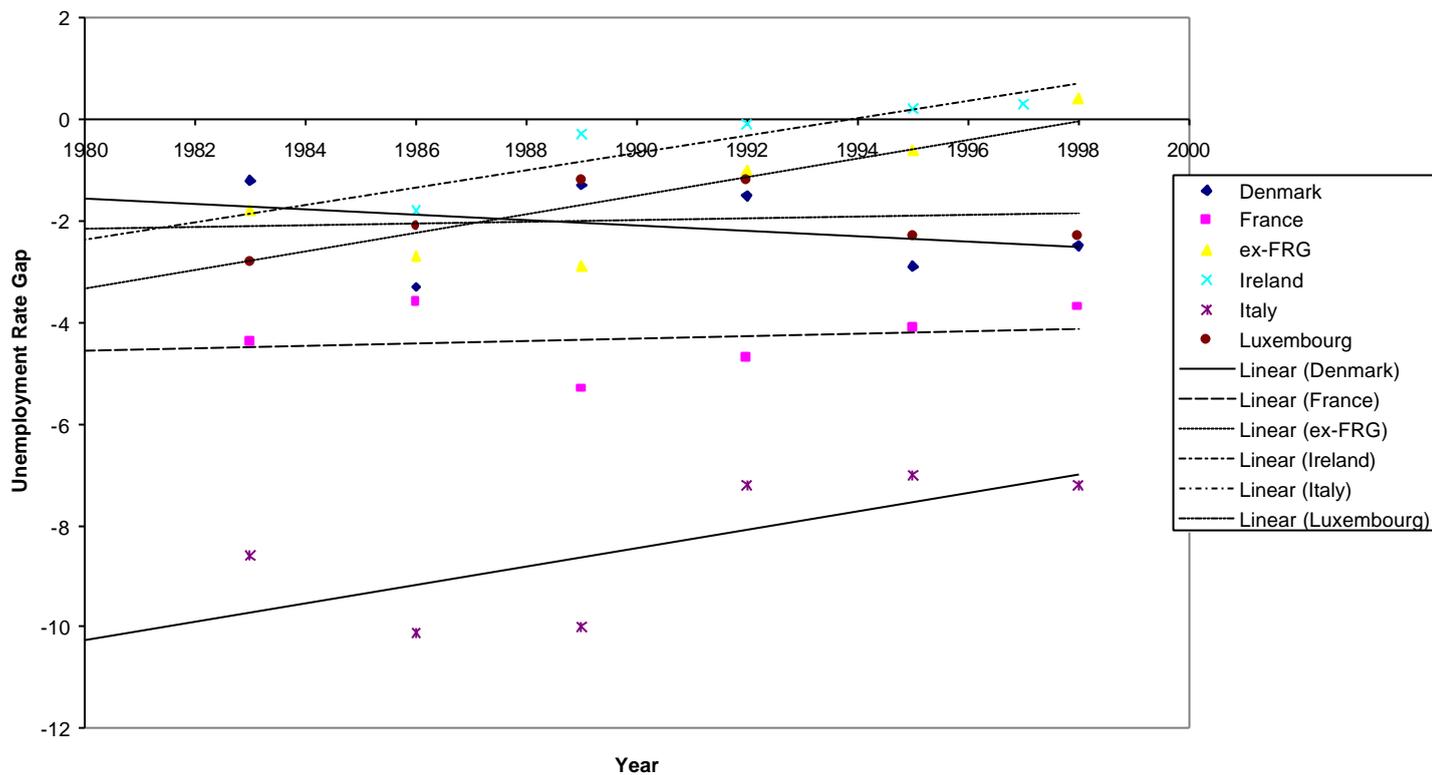
⁴¹ Data is only available from 1986.

⁴² Germany excluding the territory of former GDR.

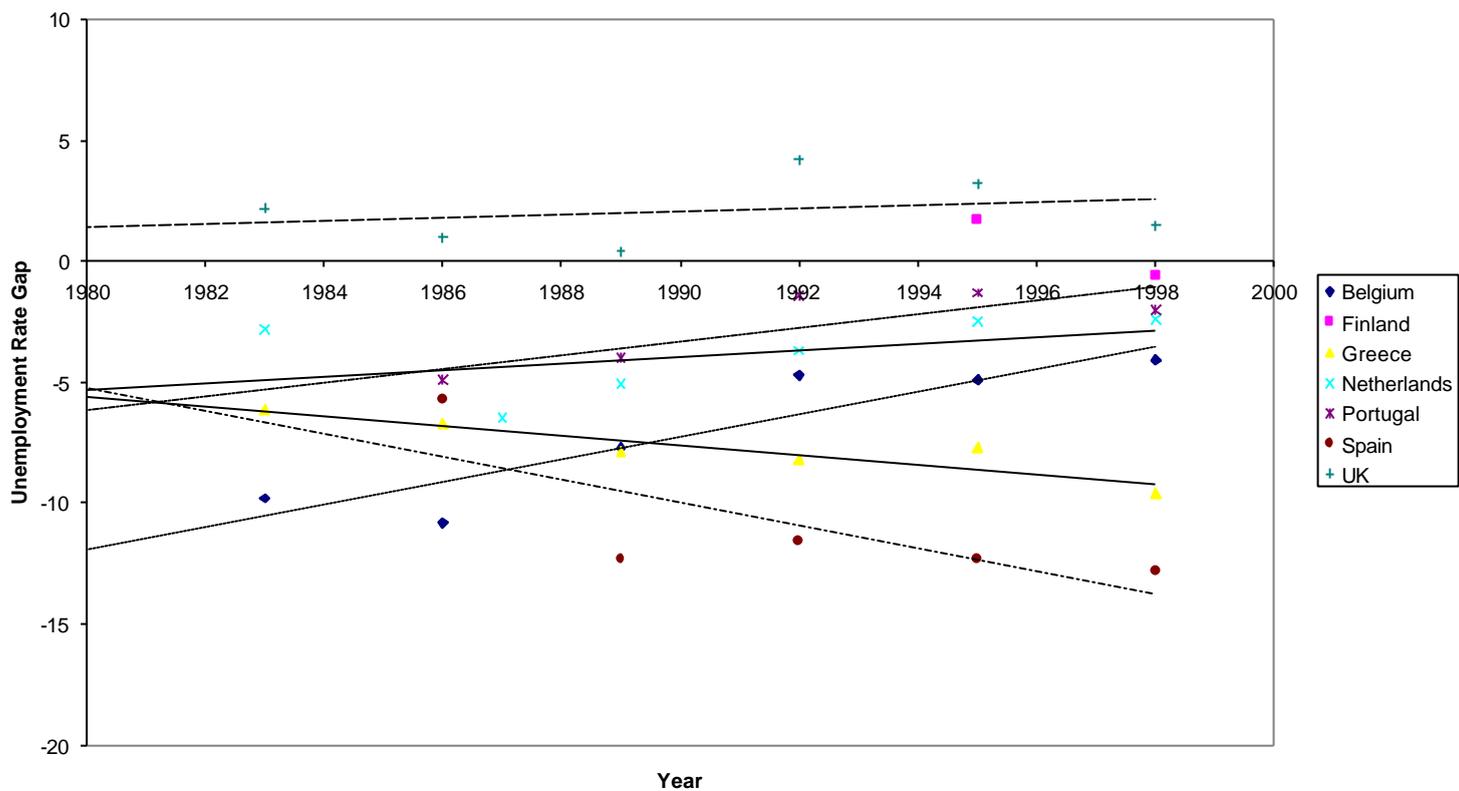
⁴³ Data is only available from 1997.

⁴⁴ Data is only available from 1986.

Unemployment Rate Gap Part I



Unemployment Rate Gap Part II

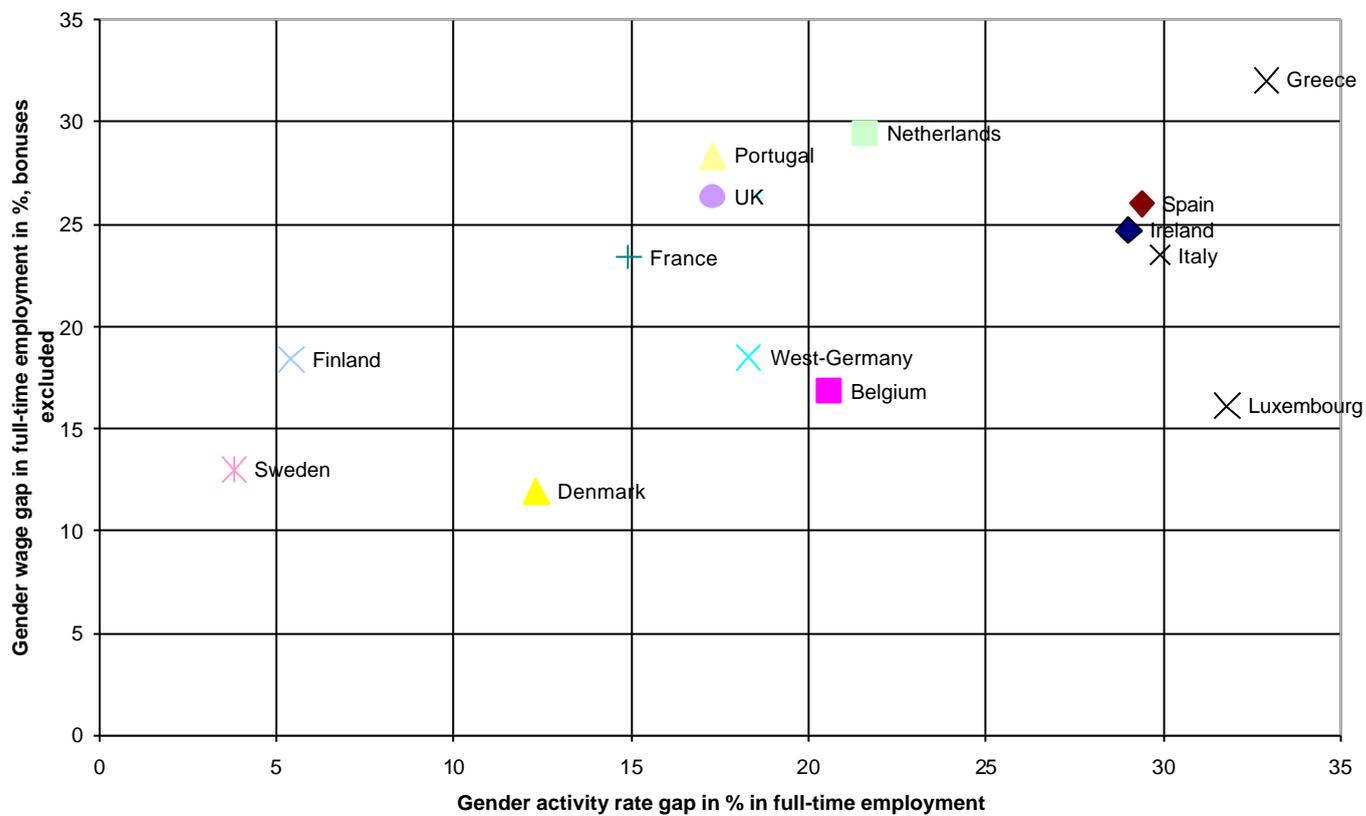


Developments of the Unemployment Rate

In almost all member states, the unemployment rate of women is higher than that of men. The exceptions are the UK in both 1983 and 1998 where men's unemployment rate is higher by 2.2% and 1.5% respectively and Germany and Ireland in 1998 where it is higher 0.4% and 0.3% respectively.

The average unemployment rate of the twelve EU member state (before the joining of Austria, Finland and Sweden) was 13% for women in 1983 and 9% for men, in 1998 these figures decreased to 9% and 7.3% respectively. In Portugal, Ireland, Luxembourg, Netherlands, UK and Denmark, the unemployment rate decreased for both men and women during the above time period, while it increased for both women and men in Italy and France. In Belgium it only decreased for women, whereas men's remained relatively stable with only a slight decrease, in Greece women's unemployment rate increased while that of men remained rather stable with a slight increase. In West-Germany men's unemployment rate increased while that of women remained quite stable and finally in Spain women's remained almost stable with a slight increase while that of men decreased. The largest tendency towards convergence of the unemployment gap took place in Belgium, where the gap decreased by 5.7% between 1998 and 1983. Spain and Greece have had the largest increase of the unemployment gap by 7.2% and 3.5% respectively. The third country of the twelve „older“ member states whose unemployment gap increased slightly is Denmark (by 1.3%), in all other member states the gap decreased.

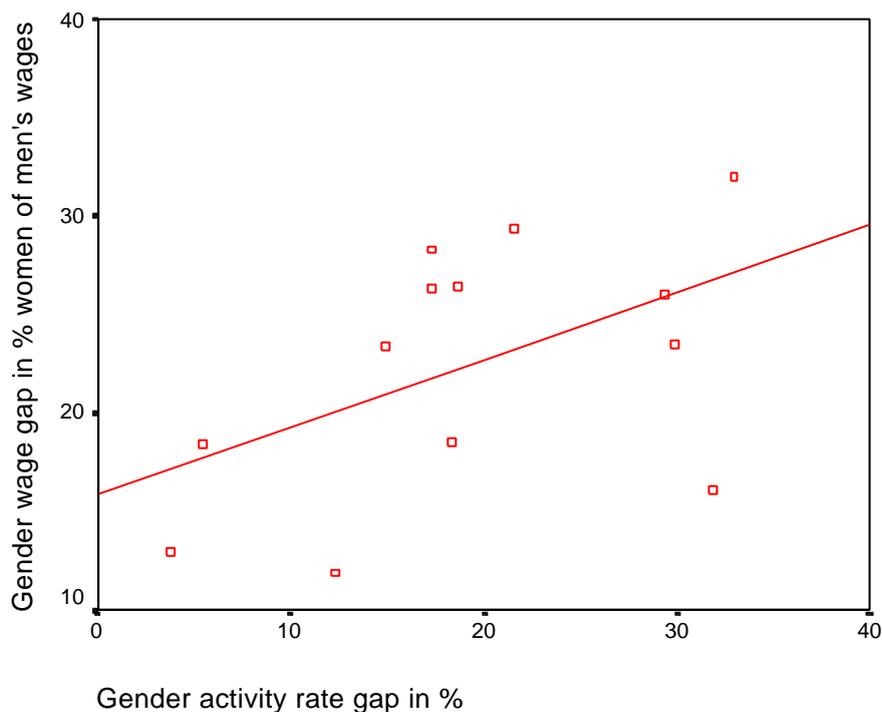
Gender activity rate gap - Gender wage gap relation in EU member states in 1995 (Sources: Eurostat (2000): Labour Force database; Eurostat (1999): Statistics in Focus)



Gender Gap -Wage Gap relation

We can observe a correlation between the wage gap and the activity gap (for a more technical analysis, refer to the next section). Sweden, which has the lowest activity gap with 3.8% also has a relatively low wage gap with 13%. Denmark with the lowest wage gap also has a relatively low gap in the activity rate. On the other extreme of the slope is Greece, which has the highest gap of the EU member states in the activity rate with 32.9% and the highest wage gap with 32%.

Gender activity rate gap- Gender wage gap relation with coefficient analysis



Correlations

		ACTIVITY	WAGE
ACTIVITY	Pearson Correlation	1,000	,506
	Sig. (2-tailed)	,	,078
	N	13	13
WAGE	Pearson Correlation	,506	1,000
	Sig. (2-tailed)	,078	,
	N	13	13

I hypothesise in this section that the activity gap correlates with the wage gap. As the majority of the points in the above diagram lie in quadrant I and III (if we were to include

four quadrants), we can say that the wage gap and the activity gap are positively correlated. Although a positive correlation coefficient of the above diagram has been calculated to be $r = 0.506$ using the Pearson correlation, this does not need to indicate causality. In particular, because the correlation coefficient only measures the degree of association between two variables, a causal relationship is but one of four reasons why the presence of correlation can be observed. In addition, variables may seem correlated if both variables effect each other, if the two variables are both related to a third (or several other) variable, if the variables are systematically associated by coincidence (Schroeder et al 1986). In any case, a correlation coefficient of 0.506 is rather weak. For the gender activity gap and gender wage gap diagram, the value of the r^2 is 0.256. One can thus say that the regression line explains 25.6% of the total variation of the wage gap. Stated somewhat differently, it can be said that 25.6% of the variation in the wage gap has been explained by variation of the activity gap. Other variables like e.g. education, seniority, age and ethnicity need to be considered to account for the prevailing gender specific wage gap.

Conclusion

We can observe a progressive narrowing of the gender specific employment gap and wage gap in all EU member states between the 1970s and 1990s.⁴⁵ The unemployment rate gap development is more complex. The unemployment rate gap decreased in most member states, but increased in Denmark, Greece and Spain. Denmark's unemployment rate decreased for both men and women during the above time period however proportionally more so for men than for women. In Greece, women's unemployment rate increased proportionally much more than men's and hence the increase in the gap. In the Spanish case, we see that the increase of the unemployment gap was caused by a large decrease of the male unemployment rate while women's unemployment rate increased only slightly.

Even though it is difficult to compare all three indicators due to the different starting points of available data particularly regarding the wage, we can see that some countries' structural gaps converged more than others. However, a ranking for all member states is not done, as the unemployment rate depends very strongly on the employment rate and thus a ranking of these two variables would be deceiving.

However, we can still observe some general tendencies looking at the indicators. Ireland and Belgium are the two countries where we can observe a tendency towards convergence most clearly regarding all three indicators. Ireland's employment rate gap and her wage gap decreased considerably and in both cases Ireland is the leader of the EU member states studied during this time period. It seems that due to the enormous economic success of Ireland, the country could not longer miss out on women's labour force and this also had an effect on the wage differences. The unemployment rate difference is almost equal to zero in Ireland, though the actual unemployment rate was still relatively high with around 10% for both gender in 1998. Belgium's unemployment rate gap had the highest decrease from all EU member states (except the three new member states) and her employment rate gap decreased second highest after Ireland. Regarding the wage gap, Belgium again had the second highest narrowing of the wage gap after Ireland, when we compare the countries whose data is available since the 1980s.

⁴⁵ Sweden and Finland are the exceptions regarding the gap but as discussed earlier, the time period is too short to draw conclusions from this.

When we look for laggards regarding the convergence of the three indicators, Spain would be the most obvious example. Spain's employment and unemployment rate gap decreased much less than the other countries', with regard to the unemployment rate Spain is the „worst case“ country, with regard to the employment rate she comes second last. However, Spain's wage gap decreased quite considerably since 1989 where she „scored“ in the middle field compared with the other EU member states. Denmark shows also very little movement towards convergence with regard to the three indicators studied, however, her structural gaps have been consistently relatively low since the 1980s.

Looking at the correlation between the wage gap and the activity rate we could find some positive correlation between the two, this was however not highly significant and we can only conclude from this that other factors than the activity rate also have an important impact on the wage gap.

Even though the meagre availability of data does not allow us to make grand conclusions, we could at least observe some general tendencies towards convergence of the structural gaps in almost all countries. The question which inevitably arises now is to what extent the convergence of the structural gaps was actually caused by the EC equal employment policies and the implementation of the directive in the member states. Or to put it differently, was the convergence of the structural gaps merely a parallel development in different European states caused by national factors such as national women's movements?

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