EVALUATING EQUAL PAY IN THE NORDIC COUNTRIES

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Project Group:
Evaluating Equal Pay

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Final report of the project
På sporet av likelön - Evaluating Equal Pay - Mælistikur á launajafnrétti.

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Preface

This report is the final product of the project *På sporet av likelön - Evaluating Equal Pay - Mælistikur á launajafnrétti*. The project was initiated by the Minister of Social Affairs in Iceland but financed by the Nordic Council of Ministers (ÄK-A & ÄK-JÄM) and administrated by the Centre of Gender Equality (Jafnréttisstofa) in Iceland.

Professor Lilja Mósesdóttir was the project coordinator. She worked on the project together with Sigurbjörg Ásgeirsdóttir, Kristjana Stella Blöndal, Andrea Gerða Dofradóttir, Þorgerður Einarsdóttir and Einar Mar Þórðarson. During the project period, the members of the project group were employed at three different institutions in Iceland or at Bifröst School of Business (Lilja), the Social Science Institute at the University of Iceland (Andrea Gerða, Kristjana Stella and Einar Mar) and Centre for Womens and Gender Studies at the University of Iceland (Þorgerður). Sigurbjörg Ásgeirsdóttir had a subcontract with the Centre for Gender Equality. Þorgerður Einarsdóttir, associate professor used her research time at the University of Iceland to work on the project. Lilja Mósesdóttir used a part of her research time at Bifröst School of Business on the project in order to ensure its completion. The project involved more work than originally planned due to difficulties involved in achieving comparable information across the five Nordic countries on statistical indicators and studies of the gender pay gap as well as measures to tackle it. The members of the project group cooperated extensively on the content of the report but the main responsibility for individual chapters was given to Lilja Mósesdóttir (preface, executive summary, chapter 2 and chapter 3), Þorgerður Einarsdóttir (chapter 4), Andrea G. Dofradóttir (chapter 5) and Sigurbjörg Ásgeirsdóttir (chapter 6).

The project group was in contact with experts on gender equality in the Nordic countries and at the Nordic statistical offices. Nordic experts who are not named as report authors but nonetheless made valuable contributions to background work, debates and discussions include: Ruth Emerek, Aalborg University, Denmark; Åsa Löfström, Umeå University, Sweden; Anna-Maija Lehto, Statistics Finland; Hege Torp, Social Research Institute, Norway; Margrét María Sigurðardóttir, Centre for Gender Equality in Iceland; Rósa G. Erlingsdóttir, Bifröst School of Business, Iceland.

At the statistical offices, the following persons provided essential information on data available on the gender pay gap in the Nordic countries: Hrafnhildur Arnkelsdóttir, the Institute of Labour Market Research/Statistics Iceland; Andreas Blomquist, Statistics Sweden; Knut Håkon Grini, Statistics Norway; Antti Katainen, Statistics Finland. Unfortunately, the project group did not have the means to pay for the assistance of Statistics Denmark. Finally, several persons provided us with important information on different aspects of good practices in the Nordic countries and we would like to acknowledge their assistance: Dr. Byrial R. Bjørst Lars Christensen; Deputy Ombud, Oslo; Martta October, Officer, Office of the Ombudsman for Equality, Helsinki; Eberhard Stuber, Equal Opportunities Ombudsman, Stockholm; Marja Erkkilä from the Federation of Labour in Finland (LO); Hildur Jónsdóttir, Equality Officer at the City of Reykjavík; members of Nordic Council of Ministers' Committees on employment and gender equality (Ämbets-mannakommitten för arbetsmarknads och arbetsmiljöpolitik (ÄK-A) & Ämbetsmannakommitten för jämställdhet (ÄK-JÄM)).

1. Executive summary

Introduction

The overall aim of the project *På sporet av likelön - Evaluating Equal Pay - Mælistikur á launajafnrétti* is to deepen our understandings of the gender pay gap in the five Nordic countries through a comparison of available statistical indicators, analysis of studies on the adjusted gender pay gap and review of measures or "good practices" to tackle the gender pay gap. The particularity of this study is that it involves a comparative study of the five Nordic countries but we were unable to locate another study on the gender pay gap covering all five countries.

The project group has divided this report into three parts. In the first part, we start by comparing statistical information on the gender pay gap in the Nordic countries. Then we identify trends and cross-country variations in the gap. The aim of this part is to make suggestions about more comparable survey samples, definitions of pay and working hours as well as about appropriate indicators to measure the (unadjusted)[1] gender pay gap. Moreover, we use data on the gender pay gap obtained from the Nordic statistical offices to compare performances and highlight developments over time regarding the private and public sectors, age groups, educational levels and occupations.

In the second part, our focus is on national studies across the Nordic countries of the adjusted gender pay gap or what is sometimes referred to as the unexplained pay gap. We start by studying critically techniques used to decompose the unadjusted gender pay gap into explained and unexplained parts, what control variables have been used to explain the difference between men's and woman's pay, and how extensive classification of control variables may conceal rather than clarify wage discrimination. The objective is to make researchers and policy–makers more aware of the limitations of the decomposition technique and of uncritical interpretations of its results.

In the final part, we attempt to identify "good practices" in the Nordic countries tackling pay differentials between men and women. These

1 We put the word *unadjusted* into brackets as the indicators are at least partly adjusted for different hours of work. The EU refers to the gender pay gap corrected for different hours of work as the unadjusted gender pay gap.

practices cover legal provisions such as equality plan, collective agreements and awareness raising measures. The aim of this part is to initiate a learning process by spreading information about effective methods to reduce the gender pay gap.

In the following, we will discuss the main conclusions and our recommendations based on our analysis in each chapter.

1.1 Pay surveys in the Nordic countries: Data and definitions

In this chapter, we compare pay surveys (coverage) and data availability as well as the various constructs of pay and hours used by Statistics Denmark, Statistics Finland, Statistics Iceland, Statistics Norway and Statistics Sweden. Since Nordic statistics on pay are not harmonised, the purpose of this analysis is to identify the extent to which sample surveys and definitions are comparable across the five countries.

Conclusions

EU Council Regulation No. 530/1999 1999 concerning Structural Statistics for Wages and Labour Costs which applies to all the Nordic countries serves as a minimum standard or a guideline for earnings[2] surveys. Statistical offices are free to go beyond this regulation or to make the database more inclusive. As a result, the coverage of the earnings data regarding economic activities, firm size, occupations and employees is and will not necessarily become comparable across the Nordic countries.

The earnings data provided by the statistical offices in Denmark, Finland, Iceland, Norway and Sweden differ in coverage (the public sector and various other economic activities in the private sector are excluded from the Icelandic data), firm size (firms with very few employees excluded in most countries), occupations (workers in the agricultural, fishery and forestry not well covered, expect in Sweden), the age of earners (lower age limit in Iceland and lower and upper age limit in Sweden) and the inclusion of irregular earnings and earners (all five countries exclude to some extent).

2 It should be noted that when we use the term earnings, we are referring to wage statistics

Only Statistics Denmark, Statistics Finland and Statistics Iceland were able to provide data on the gender pay gap in terms of hourly pay. However, the gender pay gap in the public sector of Iceland is in terms of monthly pay and available from the Public Sector Labour Market Institute. Data from Statistics Norway and Statistics Sweden are only published on monthly basis. Moreover, the data from Statistics Sweden does, not contain satisfactory figures on overtime hours and compensation, and we were, thus, unable to obtain gross figures on earnings.

National earnings data in the Nordic countries differ regarding definition of hours and earnings. At least two different definitions of hours are used (paid and worked hours) and the extent to which irregular earnings and the earnings of part-time workers as well as of irregular earners are covered in earnings data varies across the Nordic countries.

The gender pay gap in terms of net monthly earnings (overtime excluded) is the only indictor available across all five countries. The usual definition of net earnings is that it involves after (income) tax earnings; however, we use it to denote earnings without overtime payments The reason for differentiating between earnings with and without overtime is that gross earnings are often used to measure the gender pay gap without recognition that some statistical offices include in their calculations overtime payments and others do not.

The main deficiencies of net monthly earnings are that it that it excludes overtime payments and irregular payments as well as the earnings of public sector employees in Iceland (data from Statistics Iceland), part-time workers in Finland and irregular earners in Denmark to some extent. These differences may be an important source of variations in the size of the gender pay in terms of net monthly pay across the five Nordic countries. Moreover, this indicator underestimates the gender pay gap in Iceland especially as men are more likely than women to receive overtime payments. It should be noted that differences in overtime payments can reflect different methods of remuneration and contractual adaptations across industries and levels of occupation. If that is the case, then gender differences in pay will arise due to gender segregation in the labour market or to different allocation of men and women by industry or occupation.

Recommendations

The statistical offices in the Nordic countries need to harmonise both its sample survey (coverage) and earnings data (definitions of earnings and

hours) in order to minimise the effects of "technical" differences on the size of the gender pay gap.

Nordic statistical offices must make their sample survey comparable when it comes to data on earnings beyond what is required by the EU in order to enable a more meaningful comparison of the gender pay gap across the Nordic countries. In addition, definitions of hours need to be harmonised across the Nordic countries. Paid hours (regular hours + overtime hours) are, in our view the most appropriate definition of hours to use when comparing gross hourly earnings across countries. Worked hours are influenced by the composition of the labour force (e.g. how many of those difficult to employ as e.g. the disabled are in employment) and the composition of jobs (how stressful and dangerous jobs are).

The Nordic statistical offices need as well to harmonise their definition of earnings in accordance with EU Council Regulation No. 530/1999 which requires information on gross earnings for a representative month (distinguishing separately earnings related to overtime and special payments for shift work) on the one hand and gross annual earnings in the reference year (distinguishing separately bonuses paid irregularly) on the other hand. These two earnings indicators are still not available across all five Nordic countries. In our view, the (unadjusted) gender pay gap should be measured both in terms of EU's concept of gross monthly earnings and gross hourly earnings (gross annual earnings divided by paid hours). Gross monthly earnings are less influenced by different ways of registering paid hours than gross hourly earnings while the latter indicator includes irregular payments and not the former one [3]. It is important that the gender pay gap is measured in terms of more than one indictor as studies show that variations in the size of the gap may be attributed to definitions of earnings and hours (see Chapter 5). These two indicators should be based on data covering the whole economy (NACE, 1. digit for all sections), the main occupations (ISCO 88, 1. digit), all firm sizes - in view of the relatively small size of the Icelandic economy - and all age groups, allowing a separate analysis of those in the labour market (age 25-59 years) and including irregular earners and earnings as much as possible. Variations in coverage can be a source of gender inequality in pay and cross-country differences.

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3 It should, however, be noticed that gross monthly earnings are partly adjusted for different hours of work as the earnings of part-time workers are made full-time equivalent or converted into full-time earnings.

1.2 The gender pay gap in the Nordic countries: Patterns and trends

In this chapter, we use data on the gender pay gap in terms of *gross hourly earnings* and *net monthly earnings* obtained from the Nordic statistical offices to compare the performances and developments over time. It would have been more suitable to use gross monthly earnings (overtime payments included) than net monthly earnings (excludes overtime payments) as recommended by EU but the former indicator is not available for the majority of the Nordic countries.

The gender pay gap in terms of hourly earnings and monthly earnings is often referred to as the unadjusted gender pay gap or the gap not corrected for personal and job characteristics. We use EU's definition of the unadjusted gender pay gap which is the difference between average gross hourly earnings of male paid employees and of female paid employees as a percentage of average gross hourly earnings of male paid employees. When hourly earnings are not available across the EU member states, then monthly earnings are used by European Statistical Office (Eurostat). We also consider the gender pay gap in terms of these two indicators across the public and the private sectors, age groups, educational levels and occupations.

Conclusions

As was the case with the gross hourly earnings, the size of the gender pay gap in terms of net monthly earnings is widest in Iceland among the Nordic countries or on average 28% as oppose to 22% in Denmark, 19% in Finland, 14% in Norway and 17% in Sweden from 2000 to 2003. Moreover, the change over time was between 1-3% across the five Nordic countries that indicates a rather modest improvement over time as concerns the gender pay gap.

If we compare the size of the gender pay gap among the EU25 member states as well as Norway and Iceland in 2001, then it becomes apparent that the Nordic countries are not in a leading position as is the case with many other indicators on gender equality (see table 1.1). The performance of Norway, Denmark, Finland and Sweden is closer to the EU25 average than to the top performing countries. Italy, Malta and Portugal had the narrowest gender pay gap in 2001 while Iceland had the widest gap. One explanation for the small gender pay gap in, for example, Italy is that the

care of children and dependents is in most cases the responsibility of the family or women outside the formal economy while many unskilled women in the Nordic countries have been able to find low paid jobs in the care sectors. The female employment rate in Iceland is the highest in Europe or around 80%. Hence, the relative large share of unskilled women in the Icelandic labour market is an important factor contributing to the relative large gender pay gap in Iceland as well as the low pay of female dominated jobs as compared with male dominated jobs and the long hours' culture among men especially (see discussion below on occupational inequality).

Table 1.1 The gender pay gap in 2001*

Italian	6	Spain	17
Malta	9	Greece	18
Portugal	10	**Sweden**	**18**
Slovenia	11	Netherlands	19
Belgium	12	Austria	20
Poland	12	Czech Republic	20
Norway	**14**	Hungary	20
France	14	Germany	21
Denmark	**15**	UK	21
Latvia	16	Slovakia	23
Lithuania	16	Estonia	24
Luxemburg	16	Cyprus	26
Finland	**17**	**Iceland**	**30**
Ireland	17	EU(25)	**16**

* The gender pay gap in Denmark, Finland and Iceland is in terms of gross hourly pay while it is measured as net monthly pay in Sweden and Norway. The data for Iceland only covers the private sector.

Source: European Commission 2005: 50; Statistics Norway; Statistics Iceland

The gender pay inequality was greater among public sector workers than among those employed in the private sector in Sweden and Finland

while the opposite was true for Denmark and Iceland. Analysis of the European Community Household Panel (ECHP) data covering only the old member states or EU15 shows that pay inequality is on average greater among private sector workers than among public sector workers for the (Rubery et al. 2002: 5). One reason for the larger gender pay gap in the public sector in Finland and Sweden as oppose to the private sector is that relative greater number of employees with university education work as legislators, senior officials and managers as well as professionals in the public sector. Moreover, the difference in men's and women's earnings is largest for these occupational groups in the two countries. The negative wage premium in the public sector in the Scandinavian countries has also been attributed to better family-friendly policies for women and to the monopsony power (only one employer) of the public sector (sees Rubery et al. 2002: 11). It is, however, questionable whether policies are family-friendly if they lead to lower incomes of women.

As pointed out by Rubery et al. (2002: 49), relative high gender pay equity within the public sector is less meaningful if public sector pay is low compared to the level of private sector pay. This was the case in Denmark where women in the private sector earned significantly more than women in the public sector in 2002[4] but the gender pay gap was smaller in the latter sector. The local government was the main source of low pay in the public sector of Denmark. Contrary to Denmark, the average net monthly pay of Icelandic women in full-time work in the public sector was higher than in the private sector in 2003[5]. Hence, women in the public sector in Iceland enjoy both higher earnings and greater gender equality than women in the private sector. This is interesting in view of the fact that wage concealment is not allowed in the public sector (Upplýsingalög nr. 50/1996) as in the private sector and wages are determined to a much greater extent by collective agreements in the former than in the sector.

A common pattern across all five Nordic countries is that the gender pay gap widens with age and educational level. This age and educational pattern is in line with that of the EU15 member states (see e.g. Rubery et al. 2002). The main reason for widening gender pay gap with age is that

4 Women´s average net earnings in the public sector measured as a share of women´s average net earnings in the private sector was 90.4% in 2003.

5 Women´s average net earnings in the public sector measured as a share of women´s average net earnings in the private sector was 121.9% in 2003.

this factor often reflects different level of education and work experience among men and women. There was also a slower widening in the upper level of the age distribution than in the lower level across all five Nordic countries. A general pattern which also corresponds to that of the EU15 member states is a slight widening of the gender pay gap between those workers with upper secondary education as compared with those with primary education and a significant larger pay gap among workers with higher education (see e.g. Rubery et al. 2002). The reason why the gender pay gap is wider among the highly educated is that the wage dispersion in this group tends to be wider than among the low skill. More women than men tend to be at the lower end of the earnings dispersion such that a wider dispersion within the educational group creates larger gender pay gap.

A rather stable pattern occurred regarding occupational inequality. In Denmark, Finland and Sweden, the greatest gender inequality was always found in the 3 top occupations while occupations such as craft and related trades workers (ISCO88, 7) and technicians and associate professionals (ISCO88, 3) had the largest gender pay gap in Iceland. A common feature of these occupational categories is that men and women belong to different jobs within them. If we examine, for example, more closely the occupational category craft and related trades workers (ISCO88, 7), then we find on the one hand men working as craft workers with high earnings and many paid hours of work and, on the other hand, women employed as related trade workers with low earnings and few hours of work. Hence, it seems that the size of the gender pay gap depends on were jobs are positioned in the occupational hierarchy in Denmark, Finland, Norway and Sweden while it depends more on how gender segregated jobs are in Iceland. A clear pattern across the Nordic countries regarding occupational equality was not apparent. However, clerical work (ISCO88, 4) which is traditionally female-dominated was in most cases among the occupations with the greatest earnings equality. The trend over time in the gender pay gap across occupational groups revealed a mixed pattern across Finland, Iceland and Sweden. In other words, the extent to which the gender pay gap narrowed in the lower end of the occupational hierarchy and widened in the upper end varied across the Nordic countries.

Recommendation

A common pattern across the Nordic countries is that the gender pay gap tends to be largest among the highly educated which can be attributed to relative wide wage dispersion in this group. More women than men tend to be at the lower end of the earnings dispersion such that a wider dispersion within the educational group creates larger gender pay gap. This implies that special measures are needed to tackle widening gender pay gap as the number of highly educated women in the labour market continues to rise.

Lack of data makes it is difficult to undertake a comparison of the size of the gender pay gap across the five Nordic countries and its developments over time. Only one indicator of the gender pay gap (net monthly earnings) is currently available for the five Nordic countries. The main deficiencies of this indicator (net monthly earnings) as calculated by the Nordic statistical offices are that it that it excludes overtime payments and irregular payments as well as earnings of public sector employees in Iceland, part-time workers in Finland and irregular earners in especially Denmark. Moreover, it is still not possible to obtain a breakdown of this indicator according to all economic activities, the public and the private sectors, age groups, educational levels and occupations for all five countries. Hence, the statistical offices in the Nordic countries must be given the task of producing comparable data (coverage and definitions of earnings and hours) on the gender pay gap that can be used to make meaningful comparison of its size and trends as well as decomposition analyses of the gap. An annual comparison of the size of the gender pay gap in terms of gross monthly earnings and gross hourly earnings across the Nordic countries would intensify pressures on governments and the social partners (employers and unions) to take active steps to reduce the gap.

1.3 Reflections on decomposition techniques and theoretical approaches

In chapter 4, we attempt to clarify the context and theoretical groundings of recent studies of the adjusted gender pay gap that refers to the part of the unadjusted gender pay gap not accounted for by different personal and job characteristics of men and women. We discuss techniques to decompose the gender pay gap and focus on their advantages and

limitations. Decomposition techniques offer a simple and effective tool for identifying sources of the gender pay gap, but used uncritically they may conceal more than they clarify. In the chapter, we critically explore the underlying assumptions of decomposition techniques, the choice, number and classification of control variables, and other ambiguities. Last but not least, we explore the application and interpretation of decomposition techniques.

The method is grounded in the assumption of free choice, which implies that women's labour market participation (work experience, education etc.) is the result of free choice, and thus, beyond the scope of the labour market policy. Researchers have shown that gendered occupational characteristics are as likely to be caused by labour market discrimination as they are by a process of free decision making.

Another criticized assumption is that of productivity differences. Decomposition techniques aim at distinguishing an explained part of the gender pay gap attributable to productivity, and an unexplained part attributable to discrimination. The idea that wage setting reflects productivity assumes perfect markets, but usually data for imperfect markets are used. Since reliable information about alleged productivity is lacking, proxy measures, such as education and work experience, are used. An important point is that wage structures do not simply reflect alleged productivity, but also historical and social influences and processes. This is particularly important in the Nordic countries, where wage formation reflects social norms and notions of social justice, for example with respect to fair differentials. In the chapter, we want to make researchers and policy makers aware of these limitations, and encourage them to be aware of these limitations.

As regards the application of decomposition techniques, we critically explore the choice and number of control variables, as well as their classification. It is well known that the more variables the decomposition equation includes, the less discrimination. It is important to include all control variables believed to contribute to alleged productivity, but the tendency has been to include questionable control variables, reflecting a subjectivity in the choice of variables, such as marital status, number and age of children, employer size, leaves and job mobility have been used. The search for 'unobservable individual characteristics' contributing to the gender pay gap has in many cases led to an uncritical application of the most varied control variables. These variables can give valuable information about different sources of variation in wages, and their

relative importance in the actual wage formation. There is a risk, however, that they reflect discrimination rather than productivity. We encourage researcher not to confuse the two, and not to use arbitrary control variables without theoretical grounding or justification. In addition, we encourage both researcher and policy makers to be cautious in interpretations of results.

Related to this is the degree of classification of control variables. It is well known that more detailed the classification of control variables (for example of occupations or industry) the greater the explanatory power. Overly detailed occupational classifications tend to underestimate the discrimination, since they may pick up previous discrimination. For these reasons researchers recommend relatively broad classifications of around 6 to 12 categories. In the studies examined in this project, there are examples 368 categories of occupational groups.

There is a growing awareness that the factors behind the unequal pay are manifold and interrelated. This indicates that we take into consideration the complex interaction of labour market institutions with the employment structure and wage system. The main criticism of decomposition techniques is that they do not give correlations or explanations, but only manifest relationships between variables. Decomposition techniques attempt to compare like with like, and hence, they overlook the gender segregation of the labour market.

All the Nordic countries have adopted gender equality acts implying “equal pay for work of equal value”. Since studies of the adjusted gender pay gap, based on decomposition techniques, are often used in the context of policy debate and policy making, we call for a wider discussion on how they correspond to the legal framework in the Nordic countries. The main question is whether studies aiming at comparing likes with likes are consistent with the current legislation in the Nordic countries which aims at equal pay for work of equal value.

1.4 The adjusted gender pay gap: A review of national and international studies across the Nordic countries

The aim of the chapter is to examine recent studies on the adjusted gender pay in the Nordic countries in terms of our reflections on decomposition techniques and theoretical approaches. We have selected 19 national

studies conducted in the past six years, 2000-2005. Unfortunately, we were not able to find studies covering all five countries.

Each study is evaluated on the basis of several criteria or in terms of definition of the pay construct, calculation of the gender pay gap, coverage of the study, the choice and number of explanatory variables and of the classification of the explanatory variables.

Conclusions

According to these studies, the unadjusted gender pay gap, i.e. only corrected for hours worked, ranged in the Nordic countries from 12% to 24% depending on sample selected, pay construct, data source and country. The adjusted pay gap, or the unexplained gender pay gap, differed still more in the Nordic countries or from 2% to 18%, depending on technical details in the decomposition method, in addition to the sample selected, control variables, country etc.

Overall, occupation seems to have the greatest explanatory power, together with industry and sector. Personal characteristics, such as education and work experience, did not have large explanatory power. Moreover, the personal characteristics were found to explain less and less of the overall gender pay gap. Some of the studies reported that the gender pay gap was largest at the top-end of the wage distribution, i.e. among the highly educated. The importance of occupation and tenure (years of career) in explaining the gender pay gap indicates that there seems be more financially awarding jobs available for men than for women. All this indicates the growing importance of other factors than personal characteristics, such as the institutional and societal factors.

Many of the studies adopt the underlying assumption of the neo-classical economics, without any discussion. Hence, labour market features are assumed to be the playground for gender-neutral market forces, resulting in fair distribution of rewards. Moreover, many of the studies rely on technically advanced statistical procedures and adopt a wide range of control variables that have been questioned by scholars. The general assumption in these studies seems to be that the gender pay gap can be explained, given that all variables are known.

In some studies, the number of control variables is by far exceeding what is regarded as theoretically justified in the literature. It is well known that the larger the number of control variables, the more can be explained of the gender pay gap. For this reason, most studies use relatively broad classifications of around 6-12 categories. In the studies examined, many

variables such as education, occupation and industry are broken into extremely detailed categories.

The differences of the studies examined are so large that any simple comparison of the unadjusted and the adjusted pay gap would be unrealistic. The results have to be considered in a wider context. Our discussion has attempted to shed a light on the advantages and the shortcomings of these studies.

Recommendations

On the basis of the review of studies on the adjusted gender pay gap, several recommendations are put forward. It is, for example, of great importance to make clear accounts of the pay construct under study. The fact that different studies use different definitions of pay, and studies using more than one pay construct report different sizes of the gender pay gap, emphasises their incomparability. In order to make comparisons across countries we have recommended the use of gross monthly pay as well as gross hourly pay. Although this may not be possible in some cases, it is of major importance that researchers make an explicit account of the pay construct they use and are fully aware of what it involves as regards the presentation of the size of the gender pay gap.

There is no consensus whether women's or men's earnings should be the reference point when calculating the gender pay gap. The size of the gender pay gap is partly dependent on if the gender differences in pay are measured against the earnings of women or that of men. In our view, women's earnings should be used as reference point. By doing that, we answer the question of how many percentage points we have to raise the earnings of women in order to be equal to that of men, instead of asking how much we would have to decrease the earnings of men to be equal to that of women, as would be the case if we divided the difference by the earnings of men. If this is considered to be too far-reaching change from what is currently practiced, then the reference point should, at least, be explicitly accounted for.

Studies on the adjusted gender pay gap should make explicit accounts of the group being analysed, and an emphasis should be put on studying earnings of a fully representative group. Moreover, studies covering the total labour market of the respective countries are important, especially in terms of cross-country comparison.

The choice and number of control variables should be carefully considered, as well as how detailed the classification of these variables is.

Similarly, researchers should distinguish carefully between, on the one hand variables that illustrate the sources of variation in wages, and on the other hand variables that are relevant in adjusting the gender pay gap for different productivity.

It is important that studies follow trends and patterns in the long term development of the gender pay gap over time, at both the aggregated level as well as the personal level.

Comparative studies of the gender pay gap in the Nordic countries, as well as in other countries are necessary and should be undertaken to highlight specific features of the Nordic labour markets. As personal characteristics account for less and less of the gender pay gap in some of the Nordic countries, a greater emphasis should be put on capturing the effect of structural factors such as gender segregation and wage structure. Moreover, comparison of female and male dominated sectors demonstrates clearly the impact of gender segregation on the gender pay gap. Studies should try to capture the implications of gender segregated labour markets.

Researchers should reflect on how their results will be interpreted and how they fit with the gender equality acts of the Nordic Countries and the general ideas about gender equality in modern societies. One main criticism of decomposition techniques is that they do only show correlations between variables, but are not able to manifest causal relationships. Moreover, they attempt to compare like with like. All the Nordic countries have adopted gender equality acts implying “equal pay for work of equal value”. Since studies of the adjusted gender pay gap, based on decomposition techniques, are often used in the context of policy debate and policy making, we call for a wider discussion as to whether studies aiming at comparing "likes with likes" are consistent with the current legislation in the Nordic countries.

1.5 Good practices to reduce the gender pay gap in the Nordic countries

In this chapter, we discuss measures that are considered to have had a positive impact on the gender pay gap in the Nordic countries. Laws on gender equality and in particular the provisions on equality plan, the collective agreement systems and job evaluation are good practices most often mentioned by Nordic experts.

Conclusions

The Swedish and the Finnish Gender Equality Acts diverge from the acts of the other Nordic countries as they focus to a greater extent on equality in working life and include more direct instructions about how to achieve gender equality. The Norwegian and the Icelandic Gender Equality Acts consist of more general provisions about equality in regard to employment. The Danish Gender Equality Act differs from that of the other Nordic countries as it has two separate legislations on the gender equality; the Law on Equal Opportunity for Women and Men and the Equal Pay Act. The former legislation aims at promoting the equal status between women and men and ensures equal opportunities for everyone regardless of gender. The latter legislation seeks to ensure that wage differences are not on the basis of gender.

The Danish Gender Equality Act is clear on the prohibition of pay concealment which means that any employee has a right to pass on information relating to own wages conditions. This information can also be passed on to anyone. Moreover, union representatives have the right to wage information in Finland and Sweden. In Iceland, concealment of wages is widespread in the private sector but not allowed in the public sector. Moreover, wages are determined to a much greater extent by collective agreements in the public sector than in the private sector.

As a means to make the Gender Equality Acts of the Nordic countries more effective in ensuring equal pay for equal work or work of same value, amendments have been made to sharpen among others legal provisions on the equality plan.

The amended Gender Equality Act from 2005 in Finland outlines what equality plan should include and tightens its regulation by, for example, allowing fines in case of default behaviour. According to the new act, an equality plan must include:

- an analysis of the situation regarding gender equality in the workplace;
- a breakdown of the placement of women and men in different task, and an analysis of men’s and women’s tasks, pay, and pay differentials;
- measures, planned or implemented, to promote equality and equal pay;
- an evaluation of how measures in the existing equality plan have been implemented, and what results they have produced.

According to the Gender Equality Acts of the Nordic countries it is only obligatory to implement the Equality Action Plan in Finland, Sweden and Iceland. The Danish Acts are partly like guidelines and partly instructions of how to implement equal pay. The Norwegian Act is general and its provisions concerning fines could, for example, be sharpened. The Icelandic Act is also general and the main shortcoming is that it does not include provisions concerning breach of the Act (see table 1.2).

Table 1.2. Equality Plan / Action Plan

	Denmark	Finland	Norway	Sweden	Iceland
Actors	Employers with>35 employees	Employers with>30 employees	All enterprises	Employers with>10 employees	Employers with>25 employees
Frequency	Every year	Every year	Not specified	Every year	Not specified
Content	Information about wage statistics	Information about the situation, measures & evaluation of measures	The main aim is equal pay for work of equal value	Current situation evaluation of previous measures & measures to attain equal pay with 3 year period. Cost accounting & time plans	Efforts to equalise pay
Sanctions	No fine	Fine – special amount	No – fine	Fine – no special amount	None
Supervision	None	The Ombudsman for Equality	Board of Appeals and the Ombudsman	Equal Opportunities Ombudsman	No direct

Recent surveys in Finland and Sweden show that the smaller the private enterprises, the less likely they are to have the Equality Plan. Moreover, large firms in the private sector are almost as likely as public institutions in Sweden to have implemented the plan. Although public institutions in Sweden have been obliged to implement Equality Plan by law for years, the percentage of those that have not implemented the Equality Plan is 12 – 24%.

During the 1980s, the Nordic countries had a relatively narrow gender pay gap which was attributed to a compressed wage structure or centralised pay settings. Today, trade union membership is more widespread among women than men in the five Nordic countries.

The main advantage of centralised collective agreements for women is solidarity in wage policy which means that "powerful" employee unions do not take advantage of their position in order to secure large wage increases for their members. Moreover, centralised collective agreements in the Nordic countries have contained equality packages (equality supplements involving, for example, higher pay rise for female dominated occupations), flat-rate pay rises and/or low-wage supplements which both have especially benefited women who are traditionally over-represented among low-wage earners. At the same time as pay settings in the Nordic countries have become more decentralised, the gender pay gap in these countries has ceased to narrow and has in some instances widened.

In all the Nordic countries, it is the responsibility of the social partners to decide on the minimum wages and wage increases of, especially women's wages who are in most cases over-represented among low-wage earners. In Finland, the aim of the tripartite agreement made in 2005 is to narrow the wage gap between women and men by a minimum of five percentage points by 2015.

The European Union directive on equal pay for women and men urges the member countries to develop the job evaluation systems. This has had a significant effect on the use and spread of job evaluation across the member states.

The main advantage of job evaluation is that it may lead to an increase in women's wages as they are over-represented in low-paid jobs. Moreover, it is claimed that the fewer the factors the job evaluation considers, the more likely it is to improve women's wages. Job evaluation is, also, a good tool for identifying and analysing wage differences between women and men in accordance with the provisions of the gender equality acts.

The main weakness of job evaluation is that it is expensive and time-consuming. Another weakness is that workplaces are often treated differently (different job evaluation schemes applied) and they have, therefore, not had much effect on the gender pay gap.

Evaluations of the implementation and results of different job evaluation schemes are seldom undertaken. Research shows very limited result of job evaluations regarding the gender pay gap. In Norway and Sweden, job evaluation has proven successful in workplaces where most of the employees are in the same sector with regard to education, experience and so on.

The limited results of job evaluation schemes, so far, have given rise to the question, whether it would not be better to use the money spent on job evaluation to increase wages of women.

It is noteworthy, that gender equality issues are seldom allocated to ministries where decisions on labour market issues are taken, except in Sweden and Iceland.

Recommendations

The following criteria are useful to identify good practices aimed at tackling the gender pay gap in the Nordic countries:

1. The practice has had an impact on the gender pay gap.
2. The practice involves collecting and analysing statistics as well as increasing awareness of the gender pay gap.
3. The practice includes action programme/measures as oppose to good intensions.
4. The practice involves job evaluations.
5. The practice involves a law tackling the gender pay gap and likely to have had impact on the gap.
6. The practice requires cooperation between different actors.
7. The practice cuts cross different sectors, occupations and enterprises.
8. The practice involves sanction if not carried out.
9. The practice involves collective agreements on the gender pay gap which have a far reaching effect.

The effectiveness and success of each measure implemented to tackle the gender pay gap need be evaluated systematically according to, for example, the criteria presented in table 1.3.

Table 1.3. The context and content of measures to reduce the gender pay gap

Actors and stakeholders:	Who are the main responsible actors for the development and the implementation of the practices? Who will benefit from the practices?
Institutional mechanism:	Do the practices involve law, regulation, institution and/or a special committee?
Policy:	Do the practices involve awareness raising, special measures, job evaluation projects, special clauses in collective agreements or national/regional/local action plans?
Aims and targets:	Are specific aims and targets mentioned and, if so, how are they specified? Do they include time limits? What will happen if they are not achieved?
Levels of implementation:	At what level are the practices implemented (e.g. national, regional, local or union level)?
Financing:	Who finances the practices and what is the estimated cost?
Evaluation:	Have the practices been evaluated and if so, by whom, how frequently and what are the main results?
Outcomes:	What are the views of the relevant actors about the effectiveness of the practices?

Job evaluation is only the first step to create equal pay. The second step involves making equal pay a part of the wage formation. Moreover, equal pay program must be made a part of or integrated into business plans in order to ensure results at the enterprise level.

Access of individuals and unions/union representatives to pay information needs to be secured across all the Nordic countries in view of that fact that individual pay settings are becoming more widespread.

Steps or measures to tackle the gender pay gap must contain measurable and timed goals as well as systematic evaluation of the implementation process and the results.

A greater coordination of labour market policies and gender equality policies is needed if we are to see a more successful identification and implementation of good practices to tackle the gender pay gap than is currently the case.

Trade unions and especially employers must take on a greater responsibility for the realisation of pay equality among men and women than they have, so far, done. Measures to ensure the access of unions/union representatives to pay information in individual pay settings will put a pressure on the employers to adhere to the law on gender equality.

The gender equality act needs to include provisions punishing breaches if the act is to taken seriously and prevent default behaviour.

We recommend that a Nordic comparative study of different job evaluation systems/schemes is undertaken which highlights their (in)effectiveness in terms of equal pay (e.g. gender impact assessments).

Finally, a research is needed on the implications of more individualised pay settings across the Nordic countries for the gender pay gap.

2. Pay surveys in the Nordic countries: Data and definitions

Introduction

In this chapter, our focus will be on the national earnings[6] data collected by the statistical offices in the Nordic countries. We will compare pay surveys and data availability as well as the various constructs of pay and hours used by Statistics Denmark, Statistics Finland, Statistics Iceland, Statistics Norway and Statistics Sweden. The purpose of this analysis is to identify the extent to which sample surveys and definitions are comparable across the five countries. We are interested in divergences in survey samples and definitions of earnings and working time as these can be important sources of cross-country variations in the gender pay gap (see also the discussion in Chapter 5). The chapter will conclude with a discussion of the most suitable indicators to measure the (unadjusted) gender pay gap across the Nordic countries.

2.1 The Survey sample

The earnings data of the Nordic statistical offices is still not completely comparable regarding economic activities, firms, occupations and employees covered. In most cases, statistical offices try to limit the response burden of small business enterprises by excluding those with very few employees and/or employees working few and irregular hours.

Efforts to harmonise wage statistics across the Nordic countries take place at the EU level. According to EU Council Regulation No. 530/1999 concerning Structural Statistics for Wages and Labour Costs, statistical offices across the European Economic Area, which extends to all five Nordic countries, should collect and publish earnings data covering economic activities as classified by NACE, 1. digit covering sections C-K[7]. NACE is a statistical classification system of economic activities at

6 It should be noted that when we use the term earnings, we are referring to wage statistics.

7 These sections involve: mining and quarrying (C); manufacturing (D); electricity, gas, water supply (E); construction (F); wholesale and retail trade, repair of motor vehicles,

the national level. Sections C-K in the classification system include economic activities in the private sector but exclude activities provided in most cases by the public sector in the Nordic countries (sections L-O)[8] as well as the agricultural sector.

In Denmark, Finland, Norway and Sweden, data on earnings is available from the statistical offices for economic activities in both the private and public sectors while it only covers the private sector in Iceland (see Table 2.1). In Iceland, however, data on the gender pay gap is measured in terms of monthly pay, including state employees and municipality workers in the city of Reykjavík, and is available from the Public Sector Labour Market Institute (Kjararannsóknarnefnd opinberra starfsmanna)[9]. Unfortunately, pay data from these two institutions in Iceland has not yet been harmonised regarding the method of collecting the data, classifications of the data and definitions of pay and hours. Statistics Norway classifies its data according to economic activities (NACE 1. digit) but does not provide separate information on earnings in the private and the public sectors, although the data covers both sectors.

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personal and household goods (G); hotels and restaurants (H), transport, storage, communication (I); financial intermediation (J), real estate, renting, business activities (K).

8 These sections are: public administration and defense, compulsory social security (L); education (M); health and social work (N); other community, social and personal service activities (0).

9 See http://frontpage.simnet.is/kos/

Table 2.1. Economic activities covered by the earnings data of the Nordic statistical offices

	Economic activities
Denmark	Data on earnings covers activities both the **private as well as the public sector**.
	Agriculture, forestry and fishing are not well covered.
Finland	Data on earnings covers activities both the **private as well as the public sector**.
	Agriculture, forestry and fishing are not well covered.
Iceland	The business survey of Statistics Iceland is based on a sample of **private companies**.
	Agriculture, forestry and fishing are not well covered. Moreover, the following activities are excluded for the private sector: mining and quarrying; electricity, gas, water supply; hotels and restaurants; financial intermediation and real estate, renting, business activities.
	The Public sector labour market institute (KOS) provides pay information covering state employees and municipality workers at the city of Reykjavík. Other municipalities are excluded from the database.
Norway	Data on earnings covers both activities the **private as well as the public sector**. Although data covers both sectors, Statistics Norway does not provide separate information on earnings in the private and the public sectors.
	The following activities are excluded: agriculture; forestry; hotels and restaurants; private households with employed persons; extra-territorial organisations and bodies.
Sweden	Data on earnings covers activities both **the private as well as the public sector**.
	No economic activity is excluded from the database.

The implication of omitting the public sector from the Icelandic pay data for the gender pay gap has not been calculated but evidence indicates that the gap is wider in the private sector, although the difference is not large (see e.g. Barth et al. 2002: 26). According to Barth et al (2002), the

gender pay gap measured in terms of gross hourly earnings[10] in Iceland was 24% in the public sector and 27% in private sector in 2000. For the private sector, this earnings data was obtained from the Institute of Labour Market Research (Kjararannsóknarnefnd) which merged with Statistics Iceland in January 2005. For the public sector it was obtained from the Public Sector Labour Market Institute. Around 24% of employees in Iceland work in the public sector. If we weigh the gender gaps according to the percentage of employees working in the two sectors, the total gender pay gap for the Icelandic labour market will be around 26%. Hence, the exclusion of the public sector from the data from Statistics Iceland leads to a slight overestimation of the gap (about 1 percentage point).

Economic activities included in the earnings data varies across the Nordic countries (see Table 2.1). The data from Statistics Iceland does not cover mining and quarrying (NACE, C), electricity, gas, water supply (NACE, E), hotels and restaurants (NACE, H), financial intermediation (NACE, J) and real estate, renting, business activities (NACE, K). In addition, Norway excludes hotels and restaurants (NACE, H) and earnings in the agriculture, forestry and fishing are to a large extent excluded from the Danish, Finnish, Norwegian and Icelandic earnings data. Hence, the Icelandic earnings data has a much smaller coverage than that of the other Nordic countries. In other words, economic activities employing around half of all employees in 2004 are not included in the earnings data from Statistics Iceland and these activities employ more men than women[11]. These limitations of the earnings data from Statistics Iceland will certainly have implications for the size of the gender pay gap which is difficult to predict. Moreover, a meaningful comparison of the size of the gender pay gap across the Nordic countries is difficult to undertake due to these variations in coverage of economic activities, especially concerning Iceland and, to a much lesser extent, Norway.

The size of business enterprises in terms of number of employees included in the sample survey varies across the five Nordic countries (see

10 Gross hourly earnings are gross average hourly wages excluding only piecework, irregular bonuses and various other irregular payments. Total hours are estimates for both the private and the public sector.

11 According the labour force survey, around 82100 of 156100 employees in 2004 were employed in NACE C, E, H, J , K, L, M, N and 0. The number of women employed in these sections were 51600 (Hagstofa Íslands 2005).

Table 2.2)[12]. Earnings data is only obtained from firms with at least 10 or more full-time workers in Denmark, at least five employees in Finland and Norway and at least 10 employees in Iceland. Active business enterprises with no employees, i.e. self-employed entrepreneurs, are excluded from the Swedish database. The EU Council Regulation No. 530/1999 requires that the earnings data covers enterprises with 10 employees and more. Hence, Sweden, Finland and Norway have more inclusive databases in terms of firm size than demanded by the EU while Denmark and Iceland follow its regulation more strictly. Moreover, Icelandic earnings data is the most exclusive in terms of firm size due to the relatively small size of the economy.

12 In most cases, the data on earnings in the public sector includes all employees (consensus data) while information on earnings is obtained by sample representing the main characteristics of the population.

Table 2.2. Firms covered by the earnings data of the Nordic statistical offices

	Firms
Denmark	The earnings data covers business enterprises employing **10 or more full-time employees**.
	Business enterprises in the agriculture, forestry and fishing sector are not well covered.
Finland	The earnings data covers enterprises with **at least five employees**.
	Business enterprises in the agriculture, forestry and fishing sector are not well covered.
Iceland	The earnings data covers business enterprises employing **at least 10 employees**.
	Business enterprises in the agriculture, forestry and fishing sector are not well covered.
Norway	The earnings data covers **most business enterprises but seldom those with fewer than five employees**.
	Business enterprises in agriculture, forestry, hotels and restaurants, private households with employed persons and extra-territorial organisations and bodies are excluded.
Sweden	The earnings data covers a **sample of enterprises within all branches of industry and a firm sizes with a minimum of one employee**.

Studies show that women tend to work in small firms in the private sector that pay lower wages than large firms. Large business enterprises pay higher wages since they are able to use economies of scale leading to lower production costs (see the discussion in Blau and Kahn 2000). If this is also the case in the Nordic countries, then the extent to which small firms are excluded from the survey sample will influence the size of the gender pay gap or lead to its overestimation.

The coverage of occupations in the targeted population also differs when compared across the five Nordic countries. Unfortunately, Statistics Norway does not classify its earnings data according to International Standard Classification of Occupations (ISCO88, 1. digit). In Iceland, earnings data does not include skilled workers in agriculture and fisheries (earnings in occupational category 6 is zero). Included in this occupational

category are seamen and farmers (the majority of whom are men) while fish processing workers (the majority of whom are women) are either classified as elementary workers (ISCO88, 9) or as craft and related trades workers (ISCO88, 7). This means that a relatively small group of workers, mainly men and in some cases high earners (seamen) are excluded from the data. If women working as fish processing workers and seamen were put into the same occupation category (ISCO88, 6), a large gender pay gap would appear as the earnings of women in this sector is much lower than that of men. The exclusion of this occupational category from the earnings data will only have a minor impact on the total gender pay gap as the share of those employed in agriculture and fisheries is about 5% (Hagstofa Íslands 2005: Table 3.12). Information on earnings in occupational group 6 for Denmark, Finland and Norway is also incomplete as it does not cover all employees belong this group. Hence, comparison of the gender pay gap in occupational group 6 is not very meaningful across Denmark, Finland and Norway and is impossible for Iceland.

The statistical offices in the Nordic countries also place restrictions on employees included in the targeted population involving age limits and/or minimum hours of work (see Table 2.3). There is a lower age limit in the Icelandic database (at least 18 years) and both lower and upper age limits in the Swedish one (at least 18 years and not older than 65 years). The Danish, Finnish and Norwegian databases do not apply age limits. Statistics Denmark applies instead a restriction on the hours of work. In other words, all employees covered by the Danish earnings data must be employed for more than one month and the average working time must exceed eight hours per week. Statistics Sweden has also a restriction on hours work, although it is less stringent than that of Statistics Denmark. In Sweden, those employees working fewer than 5% of the full-time hours are excluded from the data. This information indicates that the Finnish and the Norwegian earnings data is the most inclusive regarding employees and hours of work while the Swedish and the Icelandic data are the most exclusive, at least in terms of age limits.

Table 2.3. Employees covered by the earnings data of the Nordic statistical offices

	Employees
Denmark	*Age:* No age limit. Apprentices and young people under the age of 18 are included. *Hours of work*: The employee must have been employed for more than one month, and the average weekly working time must exceed eight hours.
Finland	*Age*: No age limit. *Hours of work*: No limit regarding hours.
Iceland	*Age*: Employees in the private sector should be at least 18 years old. *Hours of work*: No limit regarding hours.
Norway	*Age*: No age limit. *Hours of work*: No limit regarding hours.
Sweden	*Age*: Employees younger than 18 years and older than 65 years are excluded. *Hours of work*: Employees working less than 5 per cent of the full-time hours.

Data published by Eurostat on the gender pay gap should only include paid employees at work for 15 hours and more (see European Commission 2005). Hence, the coverage of the national earnings data in the Nordic countries in terms of hours of work exceeds that required by Eurostat. There is, however, a need for harmonization regarding age limits and minimum hours of work the across Nordic countries. Variations in the lower age limits make comparisons of the size of the gender pay gap in the youngest age category difficult as they are influenced by different ways of selecting the survey sample. The youngest age category is in most

cases defined as those 16-24 years old. Moreover, the inclusion of employees of school age or younger than 25 years and of retirement age or 60 years and older implies that our measurements of the gender pay gap are influenced by different educational and retirement polices across the five Nordic countries.

The EU's regulation of wage statistics across the European Economic Area serves as a guideline for earnings surveys and statistical offices are free to go beyond this regulation or to make the database more inclusive. Hence, the coverage of the earnings data regarding economic activities, firm size, occupations and employees, is and will not necessarily become comparable across the Nordic countries. In Table 2.4, groups excluded from the earnings data of the Nordic countries are listed. The main groups excluded are employees in economic activities classified as NACE, C, E, H, J K, L, M, N and O (Statistics Iceland) and NACE, H (Statistics Norway)[13], employees in small firms (all statistical offices), some workers in agriculture, forestry and fishing (Statistics Denmark, Statistics Finland, Statistics Norway and Statistics Iceland), employees younger than 18 (Statistics Iceland and Statistics Sweden) and older than 65 (Statistics Sweden) as well as irregular earners working very few hours or not belonging to the "traditional" labour force (all statistical offices to some extent).

13 NACE, 1. digit: mining and quarrying (C); manufacturing (D); electricity, gas, water supply (E); construction (F); wholesale and retail trade, repair of motor vehicles, personal and household goods (G); hotels and restaurants (H), transport, storage, communication (I); financial intermediation (J), real estate, renting, business activities (K); public administration and defense, compulsory social security (L); education (M); health and social work (N); other community, social and personal service activities (0).

Table 2.4. Employees excluded by the earnings data of the Nordic statistical offices

	Groups excluded
Denmark	Employees in the agriculture, forestry and fishing sector are not well covered. Employees who work at a company with less than 10 people. Employees who are paid an exceptionally low wage rate due to disablement or other reason. Employees who are paid the normal wage rate by the business enterprise, but where the enterprise receives public wage subsidies are included in the statistics. Employees who are not liable to tax in accordance with the general conditions in Denmark, including e.g. sailors working on ships recorded in the international shipping register. Foreign residents working in Denmark but who are liable to tax in accordance with the taxation rules of their country of origin. Danish residents stationed abroad who are paid in accordance with local rules. Danish residents working abroad, who are paid and liable to tax in accordance with the usual rules in Denmark are, however, included in the statistics.
Finland	Private sector: Employees in the agriculture, forestry and fishing sector are not well covered. Employees who work at a company with fewer than five people. Employees in leading position as, e.g. managing director, general manager or chairman of the board. Employees who are not Finnish citizens. Monthly paid employees, whose working contract begins or finishes during the statistical month. Public sector: Employees whose earnings are some kind bonuses which are not regularly paid, including people who care for close relatives etc.
Iceland	Public sector employees (data from Statistics Iceland). Skilled workers in agriculture and fisheries. Employees who work at a company with fewer than 10 people. Employees younger than 18 years. Self-employed people and apprentices. Employees in mining and quarrying; electricity, gas, water supply; hotels and restaurants; financial intermediation and real estate, renting, business activities. Employees in the public sector who are members of the Icelandic Federation of Labour (ASÍ).

Norway	Employees working in agriculture, forestry, hotels and restaurants, private households with employed persons and extra-territorial organisations and bodies. Employees not receiving payments in cash for the reference are excluded. Employees who work at a company with fewer than five people.
Sweden	Employees younger than 18 and older than 65 years. Employees working less than 5 percent of full time hours. Employees on leave of absence. Employees without negotiated or agreed salary related to certain working hours, which apply for instance to some owners and employees with task-based pay. Employees with temporary employment as part of vocational advancement or labour market policy programmes. Paid learners and trainees. Employees in Swedish companies based abroad or at sea.

2.2 Availability and definitions

This section clarifies different concepts of earnings used by the project group and then discusses the availability of the requested data as well as definitions of hourly earnings and monthly earnings in the five Nordic countries.

The project group requested data from the Nordic statistical offices on *gross* earnings and *net* earnings. The usual definition of net earnings is that they involve after (income) tax earnings but we used it to denote earnings without overtime payments. In other words, the difference between these two indicators is that gross earnings include overtime payments while net earnings do not. This distinction between gross and net applies to both hourly and monthly data. The reason for differentiating between earnings with and without overtime is to separate the importance of overtime payments in gross earnings. Gross earnings are often used to measure the gender pay gap without recognition that some statistical offices include in their calculations overtime payments and others do not (see e.g. Barth 2002: 7-8). In addition, the extent to which irregular earnings are included in gross/net earnings varies across the countries. Irregular earnings refer to addition allowances and bonuses that are paid irregularly such as year-end and other one-time bonuses which accrue over a period longer than a pay period. When both regular and irregular

earnings are included then we refer to *total* gross/net earnings. We use the term gross/net earnings in cases where only regular earnings are accounted for.

Availability

The EU Council Regulation No. 530/1999 requires the following details of earnings: gross earnings for a representative month (distinguishing separately earnings related to overtime and special payments for shift work); gross annual earnings in the reference year (distinguishing separately bonuses paid irregularly). In addition, the member states of the European Economic Area should provide information on the annual number of hours worked and annual number of hours paid. According to Eurostat, the gender pay gap in its unadjusted form is the difference between average gross hourly earnings of male paid employees and of female paid employees as a percentage of average gross hourly earnings of male paid employees[14]. However, the availability of the (unadjusted) gender pay gap in terms of hourly earnings and definitions of earnings and hours differs across the Nordic countries as well as across other EU countries.

The project group requested data from the five Nordic statistical offices for the period 1998-2003 on the gender pay gap as defined by Eurostat in terms of gross hourly earnings, net hourly earnings (without overtime payments), gross monthly earnings and net monthly earnings (without overtime payments). Only Statistics Denmark, Statistics Finland and Statistics Iceland were able to provide data on the gender pay gap in terms of hourly pay. The only indicator available across all five countries was the gender pay gap in terms of net monthly earnings (overtime excluded). The data from Statistics Sweden does not contain satisfactory figures on overtime hours and compensation, and we were thus unable to obtain gross figures.

Definitions of hourly earnings

The concepts of gross hourly earnings in Denmark, Finland and Iceland are not comparable regarding both the definition of earnings and the definition of hours (see Table 2.6). Statistics Denmark uses *total* gross earnings and includes regular as well as irregular payments, while

14 Information is available from:
http://europa.eu.int/estatref/info/sdds/en/earncost/gpg_base.htm

Statistics Finland and Statistics Iceland use regular earnings or what we call gross/net earnings. It is important that the statistical offices include both regular salaries as well as all additional regular and irregular payments paid to employees into their concept of earnings as men have traditionally been more likely to receive pay beyond regular salaries. Hence, the exclusion of additional payments is likely to have an impact on the size of the gender pay gap.

As mentioned earlier, the member states of the European Economic Area should, according to EU Council Regulation No. 530/1999, provide information on the annual number of hours worked and annual number of hours paid. Statistics Denmark gives the choice of using paid hours, worked hours and normal hours but we were only able to obtain worked hours from its website. *Worked hours* are understood to mean the number of hours actually performed by an employee. Hours off in connection with public holidays and hours of absenteeism due to sickness, etc. are excluded. Moreover, Statistics Finland uses *paid hours* (regular hours plus overtime hours) when turning gross monthly earnings into gross hourly earnings and Statistics Iceland applies *paid hours* (hours for daytime work and shift-work as well as overtime hours) to calculate gross hourly earnings. In Denmark, *normal hours* are defined as irregular/ordinary working hours according to collective agreements (e.g 37 hours of week) and are used to convert the earnings of part-time workers into full-time earnings.

Normal hours do not reflect the actual hours behind gross earnings as well as the concepts of paid (Finland and Iceland) and worked hours (Denmark). Since men are more likely to work overtime than women and gross earnings include regular overtime payments, gross hourly earnings based on normal hours will give a larger gender gap than if paid or worked hours were considered. This applies especially to Iceland where overtime work is much more common than in other European countries. In 2002, paid overtime hours among Icelandic men in construction were, for example, 32 hours a month whereas women's paid overtime hours were 20, a difference of 12 hours a month (see Table 2.5). In 2002 in the EU 25 member countries, both men and women were paid much fewer overtime hours than in Iceland, at five and two hours respectively. A distinct feature of the Icelandic wage system, especially covering unskilled and semi-skilled workers, is that wages for regular hours are relatively low such that overtime work is widespread or a part of the work culture.

Table 2.5. Paid hours per month in construction 2002

	Men		Women	
	Regular hours	Overtime hours	Regular hours	Overtime hours
EU25	169	5	169	2
Denmark	163	5	161	2
Finland	166	3	166	1
Iceland	163	32	159	20
Norway	161	7	161	3
Sweden	171	3	172	1

Source: Statistics Iceland[15]

According to calculations made by Pedersen and Deding (2000), the gender pay gap in Denmark is much larger when calculated according to normal hours (20%) than according to worked hours (12%). Women's worked hours in Denmark are lower than normal hours due to absence from work in case of illness. Moreover, Danish women are more likely than men to be absent from work than men. Hence, women's hourly earnings will be higher or become closer to that of men when worked hours are used (because we divide women's earnings by fewer hours). According to Nordic labour force surveys, the share of employees aged 15-66 absent from work due to illness for at least one week during 2003 was higher for women than men in the five Nordic countries (NOSOSCO 2003; table 6.4). However, if we, consider the duration of the absence, then more men than women were absent for long periods (180 days and longer) in Finland, Norway and Sweden while the opposite was true for Denmark (NOSOSCO 2003; table 6.6). Hence, gender differences in absence from work depend on whether we use headcounts or duration. Gender variations in absence from work may reflect different working conditions in male and female dominated jobs.

If Nordic women are more absent from work than Nordic men, then we can expect the gender pay gap to be smaller when worked hours (Denmark) are used instead of paid hours (Finland and Iceland). The definition of hours is the most restrictive in Denmark as absence due to illness is excluded whereas the concept of earnings is the most inclusive in this country as it covers both regular and irregular earnings. The concepts

15 This information is obtained from the website of Statistics Iceland. See http://www.hagstofa.is/?pageid=634&src=/temp/vinnumarkadur/laun.asp

of earnings (gross hourly earnings without irregular earnings) and hours (paid hours) in Finland and Iceland are comparable when calculation the gender pay gap in terms of gross hourly pay.

Definitions of monthly earnings

Data on gross monthly earnings was only available from Statistics Finland and Statistics Norway while data on the gender pay gap in terms of net monthly earnings could be obtained for all five countries. However, the gender pay gap in terms of net monthly earnings underestimates the gender pay gap in Iceland as men are more likely than women to receive overtime payments. It should be noted that differences in overtime payments can reflect different methods of remuneration and contractual adaptations across industries and levels of occupation. If that is the case, then gender differences in pay will arise due to gender segregation in the labour market or to different allocation of men and women by industry or occupation.

During the particular reference period, monthly earnings include regular payments or basic/fixed pay and additional regular payments in all five countries. In other words, the five Nordic statistical offices do not include all irregular payments which refer to addition allowances and bonuses that are paid irregularly such as year-end and other one-time bonuses which accrue over a period longer than a pay period. As already discussed, irregular payments can be an important source of pay difference between men and women. Moreover, the extent to which different groups of earners are included in the data varies across the Nordic countries. Data on monthly earnings only covers fixed salary-earners in Denmark and excludes part-time workers in Finland. The earnings of part-time workers are included in the data on monthly data from Statistics Denmark, Statistics Iceland, Statistics Norway and Statistics Sweden. Statistics Finland justifies the exclusion of part-time workers in its monthly earnings data by claiming that their earnings are insignificant compared to that of other workers. The pay data covering the public sector in Iceland only includes full-time earners. The Public Sector Labour Market Institute claims that the size of the gender pay gap will not change when part-timers are included. Moreover, the data for the public sector excludes earnings of those public sector employees who are members of the Icelandic Federation of Labour and those who are employed by municipalities other than the city of Reykjavík.

The data on monthly earnings for Denmark, Iceland (both private and public sector) and Norway are monthly averages while the other countries use earnings during one reference month. In Finland and Sweden, the reference month for data on monthly earnings is either September or October. This means that monthly earnings data is only based on earnings during one month that is believed to be representative in terms of average earnings. As discussed earlier, Statistics Finland converts monthly earnings into hourly earnings by adjusting for paid hours. In countries and occupations where earnings fluctuate considerably throughout the year as, for example, in Iceland and among seasonal workers in agriculture, forestry and fisheries, only monthly averages will give an accurate picture of monthly earnings.

To sum up, the only indicator on the gender pay gap available across all five countries is in terms of net monthly earnings. The main deficiencies of this indicator from the Nordic statistical offices are that it that it excludes overtime payments and irregular payments as well as part-time workers in Finland and irregular earners, especially in Denmark. These differences may be an important source of variations in the size of the gender pay in terms of net monthly pay across the five Nordic countries.

Table 2.6. Definitions of earnings and hours

Denmark	
Gross hourly earnings	*Earnings*: Gross earnings comprise each employee's total (regular and irregular) pay in connection with his/her job, including employees' or employers' share of any pension contributions, and income in the form of fringe benefits liable to tax. Earnings are divided into the following components in the statistics: - Nuisance bonuses, e.g. overtime bonuses, shift-work bonuses and various forms of bonus for dirty work. - Earnings and other payments in connection with other absenteeism, including payments for days off due to sickness, holidays, care, etc. - Holiday and public holiday allowances. - Fringe benefits (car and phone free of charge). - Pension contributions, including ATP (The Danish Labour Market Supplementary Pension Fund) and the special pension savings - Remuneration. *Hours:* Worked hours are understood to mean the number of hours actually performed by an employee. Hours off in connection with public holidays and hours of absenteeism due to sickness, etc. are excluded. *Part-time workers:* The earnings of part-time workers are included except for those working 8 hours or less a week.
Net hourly earnings	Not available on the website.
Gross monthly earnings	Not available on the website.
Net monthly earnings	*Earnings:* Net monthly earnings are only calculated for fixed salary-earners and exclude overtime payments. Monthly earnings are calculated on the basis of regular remuneration to which pension contributions and special holiday allowances converted to a monthly basis, are added. The conversion, which is conducted on a monthly basis, is calculated using the weekly working time of 37 hours. *Period:* Average monthly data.

Finland	
Gross hourly earnings	*Earnings* : Gross earnings contains all regular payments relating to the reference period including any overtime pay, shift premiums, bonuses paid regularly in each pay period, commission etc. Payments for overtime, allowances for night and weekend work, commissions. Bonuses and allowances paid regularly in each pay period. Payments for periods of absence and work stoppage paid for entirely by the employer. Payments in kind etc. The following are not included: Payment paid in this period, but relating to other periods. Periodic bonuses and gratuities not paid regularly at each pay date. Allowances for work-clothes or tools *Hours:* Paid hours are regular hours plus overtime hours. *Part-time workers:* The earnings of part-time workers are excluded in calculations of monthly earnings but calculations that concern hourly payments include part-time employees.
Net hourly earnings	Gross hourly earnings excluding overtime payments.
Gross monthly earnings	*Earnings:* Gross monthly earnings contains all regular payments relating to reference period including any overtime pay, shift premiums, bonuses paid regularly in each pay period, commission etc (see definition above). *Period:* Reference period is one month usually October. *Part-time workers:* The earnings of part-time workers are excluded.
Net monthly earnings	Net monthly earnings are gross monthly earnings minus overtime payments.

Iceland	
Gross hourly earnings	*Earnings* : Gross earnings include all regular payments excluding only piecework, irregular bonuses and various other irregular payments. *Hours:* Paid hours are hours for daytime work and shift-work as well as overtime hours. *Part-time workers:* The earnings of part-time workers are included.
Net hourly earnings	Gross hourly earnings excluding overtime payments.
Gross monthly earnings	Not available but will be published
Net monthly earnings	*Earnings:* Net monthly earnings include the remuneration for normal working hours per month excluding payments for overtime as well as piecework, irregular bonuses and various other irregular payments. *Hours:* Normal working hours are defined as ordinary working hours according to collective agreements. *Period:* Average monthly data. *Part-time workers:* The earnings of part-time employees are computed as full-time equivalents.

Norway	
Gross hourly earnings	Not available.
Net hourly earnings	Not available.
Gross monthly earnings	*Earnings:* Gross monthly earnings include basic paid salaries and variable additional allowances and bonuses, commissions and the like occurring in the reference period as well as overtime pay. As a rule, variable additional allowances are associated with special duties or working hours and the figures given are a calculated average per month for the period 1 January to the time of the census. Variable additional allowances cover allowances for working evenings and nights, call-out allowance, shift allowance, dirty conditions allowance, offshore allowance and other allowances that occur irregularly. Earnings during absence are only included when they are in connection with work or in accordance with contract for the position. Payment in cash or kind given for total absence either for sickness or education or children's sickness or other non-work related absences are not included in the statistics. The earnings statistics are an estimation of payment for a position or occupation regulated by contract of employment under the assumption that it is fulfilled. The only aim is to represent payment for a certain occupation in this position and does not cover individual differences due to absence and their individual causes. *Period:* Average monthly data. *Part-time workers:* The earnings of part-time workers are excluded.
Net monthly earnings	Net monthly earnings are gross monthly earnings minus overtime payments.

Sweden	
Gross hourly earnings	Not available.
Net hourly earnings (only overtime payments excluded)	Not available.
Gross monthly earnings	Not available.
Net monthly earnings	Net monthly earnings are gross monthly earnings minus overtime payments. *Earnings:* Net monthly earnings do not include overtime payments and consist of the following regular payments: Fixed salary including fixed salary increments; Variable salary (such as commission, bonus etc.); Compensation for inconvenient hours and shift hours; Compensation for stand-by hours; Benefits. Those employees on a leave of absence are excluded. For individuals with hourly wages, figures have been recalculated into monthly salary. *Period:* Between 1998 and 2000, the general reference period for the private sector was September and October together. Since 2001, the general reference period is September. The reference period for the central government sector is September. The reference period for the county council and municipal sector is November. *Part-time workers:* Figures have been recalculated into full-time equivalents for individuals working part-time.

2.3 Conclusion

The limitations of the earnings data provided by the statistical offices in Denmark, Finland, Iceland, Norway and Sweden are the exclusion of the following: important economic activities in the private sector and the public sector (Statistics Iceland); hotels and restaurants (Statistics Norway); small firms (all statistical offices); some workers in the agricultural, fishery and forestry sector (except Statistics Sweden); young workers (Statistics Sweden and Statistics Iceland) and older workers (Statistics Sweden); and, irregular earners working very few hours or not belonging to the "traditional" labour force (all statistical offices to some extent). Country-specific sample restrictions regarding economic activitites, firms, occupations and employees make it difficult to interpret variations in the size of the gender pay gap across countries, especially when we move to a more disaggregated level as, e.g. occupations. The Nordic statistical offices therefore need to harmonise their sample survey when it comes to data on earnings beyond what is required by the EU in order to facilitate a more meaningful comparison of the gender pay gap across the Nordic countries.

National earnings data in the Nordic countries differs regarding definition of hours and earnings as well as its availability. At least two different definitions of hours (paid and worked hours) are used and the extent to which irregular earnings and the earnings of part-time workers as well as of irregular earners are covered in earnings data varies across the Nordic countries. The only indicator on the gender pay gap available across all five countries is in terms of net monthly earnings (excludes overtime payments and irregular payments to large extent).

The definition of hours must also be harmonised across the Nordic countries. In our view, paid hours (regular hours plus overtime hours) are the most appropriate definition of hours to use when comparing gross hourly earnings across countries. Worked hours are influenced by the composition of the labour force (e.g. how many of those difficult to employ as e.g. the disabled are in employment) and the composition of jobs (how stressful and dangerous jobs are). In Denmark, Finland and to some extent in Sweden, the absence due to illness dropped slightly during the 1990s due to the increasing rate of unemployment (NOSOSCO 2003: 105). In addition, variations in worked hours across countries may arise

from different rights to sick leave, various registration methods and different ways of measuring absence. In Finland, sick days and industrial injuries and accidents are registered in two separate systems while the other Nordic countries collect this information in one database (NOSOSCO 2003: 105). Hence, if these two databases are not merged, absence will be underestimated for Finland. Divergences in the composition of the labour force and jobs as well as in rights to sick leave and registration methods will make variations in worked hours across countries and among men and women difficult to comprehend.

The Nordic statistical offices also need to harmonise their definition of earnings in accordance with EU Council Regulation No. 530/1999 which requires information on gross earnings for a representative month (distinguishing separately earnings related to overtime and special payments for shift work) on the one hand and gross annual earnings in the reference year (distinguishing separately bonuses paid irregularly) on the other hand. These two earnings indicators are still not available across all five Nordic countries. In our view, the (unadjusted) gender pay gap should be measured both in terms of the EU's concept of gross monthly earnings and gross hourly earnings (gross annual earnings divided by paid hours). Gross monthly earnings are less influenced by different ways of registering paid hours than gross hourly earnings while the latter indicator includes irregular payments and not the former one [16]. It is important that the gender pay gap is measured in terms of more than one indictor as studies show that variations in the size of the gap may be attributed to definitions of earnings and hours (see Chapter 5). These two indicators should be based on data covering the whole economy (NACE, 1. digit for all sections), the main occupations (ISCO 88, 1. digit), all firm sizes - in view of the relatively small size of the Icelandic economy - and all age groups, allowing a separate analysis of those in the labour market (age 25-59 years) and including irregular earners and earnings as much as possible.

16 It should, however, be noticed that gross monthly earnings are partly adjusted for different hours of work as the earnings of part-time workers are made full-time equivalent or converted into full-time earnings.

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3. The gender pay gap in the Nordic countries: Patterns and trends

Introduction

In this chapter, we will use data on the gender pay gap in terms of *gross hourly earnings* and *net monthly earnings* obtained from the statistical offices in Denmark, Finland, Iceland, Norway and Sweden to compare performances and developments over time regarding the public and the private sectors, age groups, educational levels and occupations. The usual definition of net earnings is that it involves after (income) tax earnings; however, we use it to denote earnings without overtime payments (see our discussion in Chapter 2). Overtime payments can be an important source of the gender pay gap and it is, therefore, crucial to add them to basic/fixed earnings. However, payments for overtime work may be an undifferentiated part of basic/fixed earnings for certain occupations such as that of managers and professionals. Unfortunately, we were unable to obtain data for three or more countries on the gender pay gap in terms of gross monthly data. Hence, we had to consider the gender pay gap in terms of net monthly earnings which is available for all five countries but in most cases excludes overtime payments.

Our initial search for information on the gender pay gap involved an examination of earnings data available on the websites of Statistics Denmark, Statistics Finland, the Institute of Labour Market Research Institute/Statistics Iceland[17], Statistics Norway and Statistics Sweden. The original plan was to download data on earnings free-of-charge directly from the websites but it soon became apparent that the availability of the data and its breakdown according to the private and the public sectors, age, educational level and occupations varied extensively. The project group therefore decided to request earnings data and information on the survey sample[18] directly from the five statistical offices.

17 During the project, the Labour Market Research Institute merged with Statistics Iceland.

18 We were forced to use statistical information from the webpage of Statistics Denmark due to the high price demanded by the statistical office for providing the project group with the requested information.

Our choice of indicators of the gender pay gap and their breakdown was influenced by EU Council Regulation No. 530/1999 and the EU's indicators for monitoring the Employment Guidelines and Structural Indicators[19]. We asked for data on the gender pay gap both in terms of hourly and monthly earnings on the one hand and a breakdown of the data according to sectors (public and private), age (16-24; 25-54; 55-64), educational attainment ISCED97: 0-2, 3, 5-7) and occupations (ISCO-88,1 digit) on the other hand. Moreover, we used the EU's definition of the unadjusted gender pay gap which measures the gender pay gap or the difference between men's and women's gross hourly earnings as a percentage of men's average gross hourly earnings. The reason for following the EU's guidelines was to enable comparison of our results with that of the EU. It should, however, be noted that the gender pay gap is smaller when measured as a ratio of men's earnings instead of women's earnings, although the latter ratio would tell us how much women's pay has to increase to be equal to that of men (Einarsdóttir and Blöndal 2004).

As already mentioned, the statistical offices in the five Nordic countries were asked for a breakdown of the data according to sectors (public and private), age (16-24; 25-54; 55-64), educational attainment ISCED97: 0-2, 3, 5-7) and occupations (ISCO-88,1 digit). This breakdown of the data involves variables commonly used to adjust the gender pay gap to different personal and job characteristics of men and women in order to obtain more comparable individuals. However, the distribution of earnings among men and women may be influenced by other factors such as firms' specificities (size and activities) and institutional features (bargaining systems etc.). Our decision to limit the number of variables used to breakdown the pay data was deliberate as at this stage we only wanted to examine the availability and comparability of those essential variables believed to have a strong "impact" on pay differentials between men and women across the five Nordic countries (see the discussion in Chapter 5). Unfortunately, we were unable to obtain information about the gender pay gap according to sectors (public and private sectors) and occupations (ISCO88, 1 digit) for Norway, age groups for Denmark and educational groups (ISCED97) for Iceland.

19 See http://www.logos-net.net/ilo/195_base/en/instr/eu_23.htm and http://europa.eu.int/comm/employment_social/employment_strategy/compendium_en.pdf

3.1 The gender pay gap adjusted for sectors

In this section, we will compare the size of the gender pay gap for the whole labour market in terms of gross hourly earnings and net monthly earnings as these indicators were the only ones available for at least three countries. We will also study each one of these three indicators broken down according to the private sector and the public sector. Unfortunately, data from Statistics Iceland does not cover the public sector. However, we have supplemented the data on the gender pay gap in the public sector measured as net monthly earnings with data from the Public Sector Labour Market Institute (KOS) which covers the majority of the public sector employees as well as employees of the City of Reykjavík. Moreover, the net monthly earnings in the public sector of Iceland do not include the earnings of part-time workers while net monthly earnings for the private sector are the full-time equivalent (part-time earnings converted into full-time earnings). Finally, we have estimated the size of the gender pay gap in terms of net monthly earnings for the whole labour market in Iceland by giving the gap in the public sector the weight of 24% and the gap in the private sector the weight of 76%[20].

Gross hourly earnings

Only the statistical offices in Denmark, Finland and Iceland were able to provide data on gross hourly earnings (overtime payments included). Unfortunately, information on the gross hourly earnings for the whole labour market adjusted for different working hours of men and women was only available from Statistics Denmark and Statistics Finland as data covering the public sector in Iceland is in terms of monthly earnings. During 2000-2003, the gender pay gap in terms of gross hourly earnings was smaller in Denmark than in Finland but this indicator gives an overall picture of pay inequality (see Table 3.1). Moreover, there was hardly any change over time in the size of the gender pay gap in these two countries. As discussed in Chapter 2, the definition of hours is the most restrictive in Denmark as absence due to illness is excluded whereas the concept of earnings is the most inclusive in this country as it covers both regular and irregular earnings. If Nordic women are more absent from work than Nordic men, then we can expect the gender pay gap to be smaller when

20 Public employees represent about 24% of the total number of employees in the Icelandic labour market. The remaining 76% is employed in the private sector.

worked hours (Denmark) are used instead of paid hours (Finland and Iceland) which is the case. The concepts of earnings (gross hourly earnings without irregular earnings) and hours (paid hours) in Finland and Iceland are comparable while definitions of earnings and hours are different for Denmark when calculating the gender pay gap in terms of gross hourly pay.

Table 3.1. Gross hourly earnings*

Year	Denmark	Finland	Iceland	Norway	Sweden
1998	-	19	-	-	-
1999	-	19	-	-	-
2000	14	20	-	-	-
2001	14	21	-	-	-
2002	14	20	-	-	-
2003	13	20	-	-	-

* The sign – denotes missing or non-available data in the table.
Sources: Statistics Denmark and Statistics Finland

In both the private sector and the public sector, the gender pay gap was also smaller in Denmark compared to that of Finland (see Table 3.2). In Iceland, the gender pay gap in the private sector was much larger than in the other two countries or on average 29%, as opposed to 16% (Denmark) and 19% (Finland). One possible reason for the much larger gender pay gap in Iceland is that men are more likely than women to work overtime. In 2002, paid hours among Icelandic men in construction were, for example, 32 hours a month whereas women were paid only 20 overtime hours, a difference of 12 hours each month. Equivalent paid overtime hours for Denmark were five for men and two for women, as well as seven for men and three for women in Norway[21]. It should be noted, however, that the coverage of the data from Statistics Iceland is much more limited in terms of economic activities than that of Statistics Denmark and Statistics Finland. In Chapter 2, for example, we estimated that the exclusion of the public sector from the data from Statistics Iceland leads to a slight overestimation of the gap (about 1 percentage point). Other important economic activities are also excluded from the data of Statistics Iceland.

21 This information is obtained from the website of Statistics Iceland. See http://www.hagstofa.is/?pageid=634&src=/temp/vinnumarkadur/laun.asp

Table 3.2. Gross hourly earnings – sectors*

Year	Sector	Denmark	Finland	Iceland	Norway	Sweden
1998	**Private**	-	19	29	-	-
	Public	11	21	-	-	-
1999	**Private**	-	18	30	-	-
	Public	11	21	-	-	-
2000	**Private**	17	19	31	-	-
	Public	12	21	-	-	-
2001	**Private**	16	19	30	-	-
	Public	13	23	-	-	-
2002	**Private**	15	19	28	-	-
	Public	14	23	-	-	-
2003	**Private**	14	19	28	-	-
	Public	13	23	-	-	-

* The sign – denotes missing or non-available data in the table.
Sources: Statistics Denmark, Statistics Finland and Statistics Iceland

The gender pay gap across the two sectors remained rather stable in the three countries during the period under consideration. The change was between 1-2 percentage points during this five year period. Moreover, the gender pay gap was wider in the public sector than in the private sector in Finland while it was wider in the private sector in Denmark. However, the difference between the two sectors in Denmark was only 1 percentage point in 2002 and 2003. One reason for the larger gender pay gap in the public sector in Finland as oppose to the private sector is that relative greater number of employees with university education work as legislators, senior officials and managers as well as professionals in the public sector (see discussion below on the gender pay gap according to educational groups and occupations).

Net monthly earnings

The difference in the size of the gender pay gap when measured in terms of gross hourly earnings on the one hand and net monthly earnings on the other is small for Iceland (private sector) and Finland - about 1% - while it is 8% for Denmark. The main difference between the two indicators is that net monthly earnings do not include overtime payments as is the case with gross hourly earnings. Moreover, the gross hourly earnings indicator for Denmark uses a more restrictive time unit than the net monthly earnings indicator as hours are corrected for women’s greater absence

from work (worked hours). This is not the case for Finland and Iceland, as these countries use paid hours (regular hours and overtime hours) which are not corrected for women's more frequent absences from work. It is actually surprising that there is not a greater difference between the size of the gender pay gap in terms of gross hourly earnings and net monthly earnings for the private sector in Iceland as men are much more likely than women to work overtime. In 2003, the gender pay gap measured in terms of net monthly pay was smaller in Norway and Sweden than in Denmark and Finland (see Table 3.3). As was the case with the gross hourly earnings, the size of the gender pay gap in terms of net monthly earnings is widest in Iceland. Moreover, the change over time was between 1-3% across the five Nordic countries, indicating a rather modest improvement over time.

Table 3.3. Net monthly pay*

Year	Denmark	Finland	Iceland**	Norway	Sweden
1998	-	19	28	15	18
1999	-	19	29	15	17
2000	22	20	30	15	18
2001	22	19	28	14	18
2002	22	19	27	14	17
2003	21	19	27	14	16

* The sign – denotes missing or non-available data in the table.

** The data on the private sector is obtained from Statistics Iceland while the data on the public sector is from the Public Sector Labour Market Institute. The gender pay gap covering the whole labour market in Iceland is our own estimate.

Sources: Statistics Denmark, Statistics Finland, Statistics Iceland, Statistics Norway and Statistics Sweden.

In Denmark, Finland, Iceland and Sweden, the gender pay gap became smaller in the private sector while it remained stable in Norway (see Table 3.4). Interestingly, the gender pay gap in the public sector in Iceland narrowed during the period while it changed only slightly in the other countries. Once again, it should be noted that the concept of net monthly earnings is not comparable across the private sector and public sector in Iceland as the earnings of part-time workers is included in the former sector but not the latter one. Moreover, public sector employees who are members of the Icelandic Federation of Labour (ASÍ) and employees of

municipalities other than city of Reykjavík are not included in the data on earnings in the public sector.

Table 3.4. Net monthly earnings – sectors*

Year	Sector	Denmark	Finland	Iceland**	Norway***	Sweden
1998	**Private**	-	20	30	16	17
	Public	15	19	23	16	18
1999	**Private**	-	19	31	16	16
	Public	16	19	22	16	17
2000	**Private**	24	20	32	15	16
	Public	16	19	23	15	18
2001	**Private**	23	18	30	14	16
	Public	17	20	22	14	18
2002	**Private**	22	17	29	15	15
	Public	18	20	21	15	18
2003	**Private**	20	17	29	15	15
	Public	17	20	20	15	18

* The sign – denotes missing or non-available data in the table.

** The data on the private sector is obtained from Statistics Iceland while the data on the public sector is from the Public Sector Labour Market Institute. The gender pay gap covering the whole labour market in Iceland is our own estimate.

*** Data from Statistics Norway, analysed by Pål Schøne, see background materials in Torp and Schøne (2005). Statistics Norway does not take responsibility for the results.

Sources: Statistics Denmark, Statistics Finland, Statistics Iceland, Statistics Norway, Statistics Sweden and the Pubic Sector Labour Market Institute in Iceland.

In Finland, the gender pay gap measured in terms of net monthly earnings increased in the public sector from 2001 and onwards but was greater for the whole period when measured in terms of gross hourly pay. In Sweden, the gender pay gap was wider in the public sector than the private sector during the whole period. The reason for this pattern is the same in Sweden as in Finland. In Sweden, a relatively greater share of employees with a university education worked during the period as legislators, senior officials and managers as well as professionals in the public sector than in private sector. In other words, if the gender pay gap was corrected for the different educational level in the public and the private sectors, then gap is likely to approach that of the public sector in

Finland and Sweden. In Norway, the gender pay gap is similar across the two sectors.

As pointed out by Rubery et al. (2002: 49), a relatively high gender pay equity within the public sector is less meaningful if public sector pay is low compared to the level of private sector pay. This was the case in Denmark where women in the private sector earned significantly more than women in the public sector in 2002[22] although the gender pay gap was smaller in the latter sector. The local government was the main source of low pay in the public sector of Denmark. Contrary to Denmark, the average net monthly pay of Icelandic women in full-time work in the public sector was higher than in the private sector in 2003[23]. Hence, women in the public sector in Iceland enjoy both higher earnings and greater gender equality than women in the private sector.

3.2 The gender pay gap adjusted age

Only Statistics Finland and Statistics Iceland were able to provide data on the gender pay gap according to the age groups (16-24; 25-54; 55-64) measured in terms of gross hourly pay. However, this information could be obtained from at least three statistical offices when measured in terms of net monthly earnings[24]. Hence, our discussion will only involve net monthly pay when comparing the gender pay gap across age groups and countries. It should be noted that the earnings data for Iceland only covers the private sector.

Net monthly earnings

The widest gender pay gap in the Nordic countries can be found in the oldest age group (55-65 years) while the narrowest occurred among those 16-24 years (see Table 3.5). This pattern is not surprising as the age variable includes different levels of education and work experience among

22 Women's average net earnings in the public sector measured as a share of women's average net earnings in the private sector were 90.4% in 2003.

23 Women's average net earnings in the public sector measured as a share of women's average net earnings in the private sector were 121.9% in 2003.

24 Unfortunately, we were not able to obtain the necessary information to calculate the gender pay gap according to different age groups using the data available on the website of Statistics Denmark. The data only covered the private labour market and information on the share of those in each age group employed in the private sector was not easily obtainable.

men and women, particularly in the older age groups, as well as pay practices such as the awarding of seniority payments (see Maier 2002:9). The widening with age was greater among the younger age groups than the older age groups. In other words, the percentage rise was larger when moving from those aged 16-24 to those aged 25-54 than from those aged 25-54 to those aged 55-64 across all four countries. In Finland and Sweden, the gender pay gap narrowed somewhat in all age groups from 1998 to 2003. The gender pay gap widened among those in the youngest age group in Iceland whiles it narrowed for those 25 years and older. In Norway, the gender pay gap remained rather stable across the three age groups.

Table 3.5. Net monthly earnings - age groups*

Year	Age	Denmark	Finland	Iceland	Norway	Sweden**
1998	**16-24**	-	12	12	6	8
	25-54	-	20	30	15	18
	55-64	-	26	37	19	22
1999	**16-24**	-	11	14	6	7
	25-54	-	20	32	15	17
	55-64	-	26	34	19	21
2000	**16-24**	-	12	15	5	8
	25-54	-	21	33	15	18
	55-64	-	26	35	19	22
2001	**16-24**	-	10	15	6	7
	25-54	-	19	31	14	18
	55-64	-	25	35	19	21
2002	**16-24**	-	9	15	6	7
	25-54	-	19	29	14	17
	55-64	-	24	35	19	21
2003	**16-24**	-	9	14	7	6
	25-54	-	19	28	14	16
	55-64	-	23	35	19	20

* The sign – denotes missing or non-available data in the table.
** 18-24 years instead of 16-24 years.
Sources: Statistics Finland, Statistics Iceland, Statistics Norway and Statistics Sweden

It should be noted that the youngest age group in Sweden and Iceland is, however, not completely comparable to that of the other countries since

it only includes those 18 years to 24 years. In Sweden, the exclusion of people younger than 18 years is based on the assumption that employment among those younger than 18 years is mostly temporary (such as low pay summer jobs or odd jobs, learners etc.) due to high enrolment of this age group in secondary education[25]. However, this is not the case in Iceland as the drop out rate for secondary education, among young men in particular, is relatively high (see discussion in Mósesdóttir 2004). Hence, the application of different age limits for the youngest age group makes differences across these countries difficult to interpret. Moreover, the inclusion of employees of school age or younger than 25 years and of retirement age or 60 years and older implies that our measurements of the gender pay gap are influenced by different educational and retirement polices across the five Nordic countries.

3.3 The gender pay gap adjusted for education

When comparing the size of the gender pay gap at the country or aggregated level, three educational categories (ISCED97) are often used. These categories are: (0-2) less than upper secondary education or what we term primary education; (3) upper secondary education; and, (5-7) tertiary education. We were only able to obtain information on the gender pay gap in terms of net monthly pay for the majority of the Nordic countries. Unfortunately, data on the gender pay gap according to educational attainments is not yet available for Iceland.

Net monthly earnings

The gender pay gap in terms of net monthly pay was widest among the highly skilled (5-7) and narrowest among the unskilled (0-2) in Denmark, Finland, Norway and Sweden (see Table 3.6). One of the reasons why the gender pay gap is wider among the highly educated is that the wage dispersion in this group tends to be wider than among the lower skilled. More women than men tend to be at the lower end of the earnings dispersion so that a wider dispersion within the educational group creates larger gender pay gap. In the four Nordic countries, there was a slight widening of the gender pay gap when moving to upper secondary education from those with primary education and a significantly larger

25 Information obtained from Andreas Blomquist at Sweden Statistics in April 2005.

widening when moving to higher education from those with upper secondary education. During the period under consideration, the size of the gender pay gap remained rather stable across the educational groups in the four countries for which data was available. The gender pay gap was smaller in Norway and Sweden than in Denmark and Finland in the different educational groups. This may indicate a slightly more compressed pay structure in Norway and Sweden than in Denmark and Finland.

Table 3.6. Net monthly earnings - educational attainments*

Year	Education**	Denmark	Finland	Iceland	Norway	Sweden
1998	**0-2**	-	-	-	13	14
	3	-	17	-	14	16
	5-7	-	26	-	22	24
1999	**0-2**	-	20	-	12	13
	3	-	18	-	14	16
	5-7	-	26	-	22	24
2000	**0-2**	16	21	-	13	14
	3	20	19	-	14	16
	5-7	26	27	-	22	24
2001	**0-2**	17	13	-	13	14
	3	21	18	-	14	16
	5-7	26	26	-	22	24
2002	**0-2**	18	16	-	13	14
	3	21	18	-	14	16
	5-7	26	25	-	22	23
2003	**0-2**	17	17	-	13	14
	3	20	18	-	14	15
	5-7	26	26	-	22	22

* The sign – denotes missing or non-available data in the table.

**(0-2) primary education, (3) upper secondary education and (5-7) tertiary education.

Sources: Statistics Denmark, Statistics Finland, Statistics Norway and Statistics Sweden

3.4 The gender pay gap adjusted for occupations

In the area of occupations, we will compare the gender pay gap across the Nordic countries measured in terms of gross hourly pay and net monthly

pay as this information is available for the majority of the countries. Unfortunately, Statistics Norway does not provide data adjusted for occupations as defined by International Standard Classification of Occupations (ISCO88, 1 digit). The data available on the website of Statistics Denmark only allowed calculations for the period 2000-2003. It should also be noted that the earnings data for Iceland only covers the private sector.

The occupational groups considered below are broken down according to ISCO88, 1 digit and they are: (1) legislators, senior officials and managers, (2) professionals, (3) technicians and associate professionals, (4) clerks, (5) service workers and shop and market sales workers, (6) skilled agricultural and fishery workers, (7) craft and related trades workers, (8) plant and machine operators and assemblers and (9) elementary occupations[26]. We will only consider every second year during the period 1998-2003, as changes from one year to another were small and more detailed information would make the tables on the gender pay gap according to the nine occupational groups difficult to comprehend.

Gross hourly earnings

Table 3.7 presents data on the gender pay gap in terms of gross hourly earnings (overtime payments included) according to 9 occupational groups for the years 1998, 2000, 2002 and 2003. The data covers occupations in Finland, Denmark (except 1998) and Iceland. In Iceland, data is not available for category 6 or for skilled agricultural and fishery workers in Iceland. In Finland and Denmark, the gender pay gap tended to be largest in the top three occupations in the occupational hierarchy or among (1) legislators, senior officials and managers, (2) professionals, (3) technicians and associate professionals. This pattern does not apply to Iceland where technicians (3) and craft workers (7) had the widest gender pay gap. The reasons for this divergence in Iceland remain to be studied but the share of employed men and women is rather equal among those classified as technicians while the occupational group craft workers is male dominated (see Hagstofa Íslands 2005: Table 3.12)[27]. The male dominated occupation called plant and machine operators and assemblers

26 We do not consider the armed forces (0) as few women are employed in this occupational group

27 In 2004, the share of men in occupational category 3 was 43% while it was 87% for category 7 (see http://www.hagstofa.is/Uploads/files/LH05/L050312.xls).

(8) also belonged to this group of occupations with the largest gender pay gap until 2000 but it was thereafter replaced by occupational group (1) legislators, senior officials and managers.

Table 3.7. Gross hourly earnings – occupations*

Year	Occup.**	Denmark	Finland	Iceland	Norway	Sweden
1998						
	1	-	24	19	-	-
	2	-	23	17	-	-
	3	-	23	38	-	-
	4	-	7	29	-	-
	5	-	17	23	-	-
	6	-	7	-	-	-
	7	-	17	30	-	-
	8	-	18	32	-	-
	9	-	17	8	-	-
2000						
	1	25	22	29	-	-
	2	13	24	14	-	-
	3	17	25	35	-	-
	4	2	9	19	-	-
	5	5	16	27	-	-
	6	5	4	-	-	-
	7	14	17	34	-	-
	8	12	17	31	-	-
	9	12	16	16	-	-
2002						
	1	23	26	29	-	-
	2	12	18	19	-	-
	3	17	20	35	-	-
	4	3	10	17	-	-
	5	5	14	24	-	-
	6	5	5	-	-	-
	7	13	16	34	-	-
	8	10	15	25	-	-
	9	13	16	16	-	-
2003						
	1	22	26	28	-	-
	2	12	18	16	-	-
	3	18	20	34	-	-
	4	5	10	17	-	-
	5	6	14	26	-	-
	6	5	5	-	-	-
	7	13	16	33	-	-
	8	9	15	23	-	-
	9	13	16	15	-	-

* The sign – denotes missing or non-available data in the table.

** (1) legislators, senior officials and managers, (2) professionals, (3) technicians and associate professionals, (4) clerks, (5) service workers and shop and market sales workers, (6) skilled agricultural and fishery workers, (7) craft and related trades workers, (8) plant and machine operators and assemblers and (9) elementary occupations.

Sources: Statistics Denmark, Statistics Finland and Statistics Iceland

A cross-country pattern regarding occupations with the smallest gender pay gap did not occur. However, in most cases, clerical work was among the occupations with the greatest earnings equality. In Finland, the size of the gender pay gap tended to be smallest among skilled agricultural and fishery workers (6) and clerks (4). In Iceland, the smallest gap was among clerks (4), those in elementary occupations (9) and professionals (2). In Denmark, clerks (4), service workers and shop and market sales workers (5) and skilled agricultural and fishery workers (6) had the smallest gender pay gap. However, we need to bear in mind that earnings in the agriculture, forestry and fishing sectors are to a large extent excluded from the Danish, Finnish and the Norwegian earnings data.

Over time, the gender pay gap became more unfavourable among those employed as legislators, senior officials and managers (1) in both Finland and Iceland while it narrowed for this group in Denmark. There was an overall improvement regarding the gender pay gap in the lower end of the occupational hierarchy in Finland. This pattern in Finland indicates that an improvement in women's relative wages at the lower end of the occupational structure has been more and less cancelled out by a growing gender inequality in the upper end such that the gender pay gap covering the whole labour market remained almost unchanged during the period (see also Table 3.1). The trend in the gender pay gap across occupations was more mixed in Denmark and Iceland with positive and negative trends at both ends.

Net monthly earnings

In Table 3.8, the gender pay gap within the main occupational categories measured in terms of net monthly earnings (overtime payments excluded) is presented for the years 1998, 2000, 2002 and 2003. The data covers Denmark, Finland, Iceland and Sweden. According to this indictor, the widest gender pay gap was in the top three occupations in Denmark, Finland and Sweden. This pattern also occurred for Finland and Denmark when we measured the gender pay gap in terms of gross hourly earnings. In Iceland, the widest gender pay gap was once again most often found among technicians and associate professionals (3) and among craft and related trades workers (7). Common to these occupational categories is that men and women belong to different jobs within them or are either in female dominated or male dominated jobs. If we examine, for example, the occupational category (7), then we find on the one hand men working as craft workers with high earnings and many paid hours of work and, on

the other hand, women employed as related trade workers with low earnings and few hours of work[28]. In Denmark and Finland, women employed as clerks (4) and skilled agricultural and fishery workers (6) had the most equal pay relative to men. In Sweden, the smallest gender pay gap occurred in the occupational groups (4) clerks and (5) service workers. In Iceland, the narrowest gender pay gap in terms of net monthly pay was among those working in the occupational group elementary occupations (9) as was the case with gross hourly pay. Other occupational groups with relatively small gender pay gaps in Iceland were professionals (2) and clerks (4). In other words, clerical work was, in most cases, among the occupations with the greatest earnings equality across the Nordic countries.

28 See e.g. http://www.kjara.is//files/{2db5d4fc-4e82-4ebc-9079-f43dfe73ccae}_044_starfatafla.xls

Table 3.8. Net monthly earnings – occupations*

Year	Occup.**	Denmark	Finland	Iceland	Norway	Sweden
1998						
	1	-	24	20	-	19
	2	-	20	17	-	21
	3	-	24	40	-	18
	4	-	9	30	-	3
	5	-	20	27	-	4
	6	-	7	-	-	5
	7	-	16	28	-	8
	8	-	16	25	-	7
	9	-	18	7	-	11
2000						
	1	26	22	30	-	18
	2	15	21	16	-	20
	3	22	25	36	-	19
	4	3	11	20	-	4
	5	11	20	31	-	5
	6	5	5	-	-	6
	7	15	17	32	-	10
	8	15	16	26	-	7
	9	12	16	15	-	11
2002						
	1	25	26	30	-	17
	2	15	19	20	-	19
	3	22	21	36	-	17
	4	6	9	19	-	3
	5	12	15	28	-	5
	6	5	7	-	-	8
	7	13	15	33	-	12
	8	13	15	22	-	7
	9	14	15	13	-	11
2003						
	1	23	26	28	-	17
	2	15	19	18	-	19
	3	23	21	36	-	17
	4	7	10	18	-	3
	5	12	16	31	-	4
	6	3	7	-	-	10
	7	11	15	33	-	13
	8	11	14	20	-	7
	9	14	14	12	-	10

* The sign – denotes missing or non-available data in the table.

**(1) legislators, senior officials and managers, (2) professionals, (3) technicians and associate professionals, (4) clerks, (5) service workers and shop and market sales workers, (6) skilled agricultural and fishery workers, (7) craft and related trades workers, (8) plant and machine operators and assemblers and (9) elementary occupations.

Sources: Statistics Denmark, Statistics Finland, Statistics Iceland and Statistics Sweden

In Sweden, there was an improvement regarding the gender pay gap in the upper end of the occupational structure which was only partially cancelled out by a more unfavourable trend in the lower end, so that there was a slight improvement in the gender pay gap covering the whole labour market (see Table 3.3). In Finland, an improvement in women's relative wages at the lower end of the occupational structure has been cancelled out by a growing gender inequality in the upper end. The pattern in the gender pay gap across occupations was more mixed in Denmark and Iceland with positive and negative trends in both ends. Over time, these developments also occurred when the gender pay gap was measured in terms of gross hourly earnings for Finland, Denmark and Iceland.

3.5 Conclusion

In this chapter, we examined patterns and trends regarding the gender pay gap in terms of *gross hourly earnings* and *net monthly earnings* across the Nordic countries. It would have been more suitable to use gross monthly earnings (overtime payments included) than net monthly earnings (excludes in most cases overtime payments) as recommended by the EU, but the former indicator is not available for the majority of the Nordic countries.

The difference in the size of the gender pay gap in terms of gross hourly earnings on the one hand and measured as net monthly earnings on the other hand is small for Iceland (private sector) and Finland – around 1% - while it is 8% for Denmark. The main source of variation between the two indicators is that net monthly earnings in most cases exclude overtime payments but they are included in gross hourly earnings. In addition, Statistics Denmark uses more restrictive time units when calculating gross hourly earnings indicator (hours corrected for absence of work) as compared with net monthly earnings indicator. Finland and Iceland use paid hours when measuring gross hourly earnings which does not correct for absence from work. It is, however, surprising that there is not a greater difference between the size of the gender pay gap in terms of gross hourly earnings and net monthly earnings for the private sector in Iceland as men are much more likely than women to work overtime.

As was the case with the gross hourly earnings, the size of the gender pay gap in terms of net monthly earnings is widest in Iceland, on average 28% , as opposed to 22% in Denmark, 19% in Finland, 14% in Norway

and 17% in Sweden from 2000 to 2003. Moreover, the change over time was between 1-3% across the five Nordic countries, indicating a rather modest improvement over time. The main deficiencies of this indicator (net monthly earnings) as calculated by the Nordic statistical offices are that it excludes overtime payments and irregular payments as well as the public sector in Iceland, part-time workers in Finland and irregular earners, especially in Denmark.

If we compare the size of the gender pay gap among the EU25 member states as well as Norway and Iceland in 2001, then it becomes apparent that the Nordic countries are not in a leading position as is the case with many other indicators on gender equality (see Table 3.9). Moreover, the size of the gender pay gap in Finland diverges (3%) from our data (see Table 3.1). The performance of Norway, Denmark, Finland and Sweden is closer to the EU25 average than to the top performing countries. Italy, Malta and Portugal had the smallest gender pay gap in 2001 while Iceland had the largest gap. One explanation for the small gender pay gap in, for example, Italy is that the care of children and dependents is in most cases the responsibility of the family or women outside the formal economy while many unskilled women in the Nordic countries have been able to find low paid jobs in the care sectors. The female employment rate in Iceland is the highest in Europe, at about 80%. Hence, the relatively large share of unskilled women in the Icelandic labour market is an important factor contributing to the relatively large gender pay gap in Iceland as well as the low pay of female dominated jobs as compared with male dominated jobs and the long hours' culture.

Table 3.9. The gender pay gap in 2001*

Italian	6	Spain	17
Malta	9	Greece	18
Portugal	10	**Sweden**	**18**
Slovenia	11	Netherlands	19
Belgium	12	Austria	20
Poland	12	Czech Republic	20
Norway	**14**	Hungary	20
France	14	Germany	21
Denmark	**15**	UK	21
Latvia	16	Slovakia	23
Lithuania	16	Estonia	24
Luxemburg	16	Cyprus	26
Finland	**17**	**Iceland**	**30**
Ireland	17	EU(25)	**16**

* The gender pay gap in Denmark, Finland and Iceland is in terms of gross hourly pay while it is measured as net monthly pay in Sweden and Norway. The data for Iceland only covers the private sector.

Source: European Commission 2005: 50; Statistics Norway; Statistics Iceland

The gender pay inequality was greater among public sector workers than among those employed in the private sector in Sweden and Finland while the opposite was true for Denmark and Iceland. The European Community Household Panel (ECHP) data covering EU15 shows that pay inequality is on average greater among private sector workers than among public sector workers (Rubery et al. 2002: 5). One reason for the larger gender pay gap in the public sector in Finland and Sweden as opposed to the private sector is that a relatively greater number of employees with a university education work as legislators, senior officials and managers as well as professionals in the public sector and the difference in men's and women's earnings is largest for these group in the two countries. The negative wage premium in the public sector in the Scandinavian countries

has also been attributed to better family-friendly policies for women and to the monopsony power (only one employer) of the public sector (sees Rubery et al. 2002: 11). It is, however, questionable whether policies are family-friendly if they lead to lower incomes for women.

A common pattern across all five Nordic countries is that the gender pay gap widens with age and educational level. This age and educational pattern is in line with that of the EU15 member states (see e.g. Rubery et al. 2002). The main reason for a widening gender pay gap with age is that this factor often reflects different levels of education and work experience among men and women. There was also a slower widening in the upper level of the age distribution than in the lower level across all five Nordic countries.

A general pattern which also corresponds to that of the EU15 member states is a slight widening of the gender pay gap between those workers with upper secondary education as compared with those with primary education and a significantly larger pay gap among workers with higher education (see e.g. Rubery et al. 2002). The reason why the gender pay gap is wider among the highly educated is that the wage dispersion in this group tends to be wider than among the lower skilled. More women than men tend to be at the lower end of the earnings dispersion such that a wider dispersion within the educational group creates larger gender pay gap. This implies that special measures are needed to tackle the widening gender pay gap as the number of highly educated women in the labour market continues to rise.

A rather stable pattern occurred regarding occupational inequality. In Denmark, Finland and Sweden, the greatest gender inequality was always found in the three top occupations while occupations such as craft and related trades workers (7) and technicians and associate professionals (3) had the largest gender pay gap in Iceland. Common to these occupational categories is that men and women belong to different jobs within them. For example, if we examine the occupational category (7), then we find on the one hand men working as craft workers with high earnings and many paid hours of work and, on the other hand, women employed as related trade workers with low earnings and few hours of work. Hence, it seems that the size of the gender pay gap depends on where jobs are positioned in the occupational hierarchy in Denmark, Finland, Norway and Sweden while it depends more on how gender segregated jobs are in Iceland. A clear pattern regarding occupational equality was not apparent, but clerical work which is traditionally female dominated was in most cases among

the occupations with the greatest earnings equality across the five Nordic countries. The trend in the gender pay gap across occupational groups revealed a mixed pattern across Finland, Iceland and Sweden. In other words, the extent to which the gender pay gap narrowed in the lower end of the occupational hierarchy and widened in the upper end varied across the Nordic countries.

To conclude, a lack of data makes it is difficult to undertake a comparison of the size of the gender pay gap across the five Nordic countries and its developments over time. Only one indicator of the gender pay gap (net monthly earnings) is currently available for the five Nordic countries. The main deficiencies of this indicator (net monthly earnings) as calculated by the Nordic statistical offices are that it that it excludes overtime payments and irregular payments as well as earnings of public sector employees in Iceland, part-time workers in Finland and irregular earners in especially Denmark. Moreover, it is still not possible to obtain a breakdown of this indicator according to all economic activities, the public and the private sectors, age groups, educational levels and occupations for all five countries. Hence, the statistical offices in the Nordic countries must be given the task of producing comparable data (coverage and definitions of earnings and hours) on the gender pay gap that can be used to make meaningful comparison of its size and trends as well as decomposition analyses of the gap. An annual comparison of the size of the gender pay gap in terms of gross monthly earnings and gross hourly earnings across the Nordic countries would intensify pressures on governments and the social partners (employers and unions) to take active steps to reduce the gap.

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4. Reflections on decomposition techniques and theoretical approaches

Introduction

Studies on pay differentials reveal persistent wage differences between men and women. Moreover, the size of the gender wage differentials differs extensively, even in studies undertaken within the same country at the same time. In Iceland, for example, recent studies have reported the adjusted gender pay gap ranging from 7% to 17%. These variations have initiated debate about statistical techniques, theoretical assumptions, choice of control variables, how to interpret the results and what conclusions to draw (Einarsdóttir and Blöndal, 2004). In a European context, especially in the EU, the lack of progress to reduce the gender pay gap has intensified efforts to design consistent indicators to monitor the process and to actively seek ways to improve the performance (Mósesdóttir, 2003).

As stated earlier, the overall aim of the project is to deepen our understanding of the gender pay gap in the five Nordic countries. In this chapter we attempt to clarify the context and theoretical groundings of recent studies of the gender pay gap. We investigate the advantages and limitations of the studies and try to shed light on decomposition techniques that are used to adjust the gender pay gap. We discuss their underlying assumptions: choice, number and classification of control variables; picking up of previous discrimination and feed-back effects. Last but not least, we explore the application of decomposition techniques. This chapter is an introduction to Chapter 5, where we will examine recent Nordic gender pay gap studies. Our discussion is based on Grimshaw and Rubery (2002), Mósesdóttir (2003) and Einarsdóttir and Blöndal (2004).

The main aim of the chapter is to make researchers and policy makers aware of the limitations and advantages of decomposition techniques as well as to encourage them to make an uncritical application and interpretation of them. Occupational gender segregation has been at the heart of debates about gender inequality. It is considered to be a significant factor in the discrepancy between the wages of women and men, imposing constraints on careers, and generally to be at the root of

gender inequalities (Reskin and Roos 1990). The main criticism of decomposition techniques is that they do not give correlations or explanations, but only manifest relationships between variables. One of the main characteristics of the decomposition techniques is that they attempt to compare like with like. They compare women and men as if they were equally distributed in the occupational structure, and hence, they overlook the gender segregation of the labour market. All the Nordic countries have adopted Gender Equality Acts implying "equal pay for work of equal value" and not only "equal pay for the same work". This is a very important recognition of the importance of the gender segregation of the labour market. In the most far reaching versions of decomposition techniques, the gender segregation of the labour market is "explained away". We conclude that an uncritical application of the decomposition approach, apparent in many recent studies, may actually conceal more of the gender pay gap than it clarifies. Since studies of the adjusted gender pay gap are frequently used in policy debates, we call for a wider discussion on whether studies comparing likes with likes are consistent with the current legislation in the Nordic countries which aims at equal pay for work of equal value.

4.1 Adjusting the gender pay gap

Women and men differ on many key characteristics of great importance in the labour market, such as the level of education and the length of work experience. Moreover, women and men are unevenly distributed across the occupational structure, both in terms of occupational status and sector of employment. These differences are believed to have some association to the level of earnings and thus, it is argued, the pay data has to be corrected, or adjusted, accordingly (see Mósesdóttir, 2003:34-35). This correction is done with statistical methods or decomposition techniques, attempting to compare like with like.

The most common decomposition method is the Oaxaca-Blindner technique (1973), based on neo-classical economics and the theory of Gary Becker (1957) which emphasizes the free choice of individuals in labour market participation. The aim is to identify the relative importance of different factors contributing to the gender pay gap. This method has been developing not least because it has proved to be efficient as a practical tool for policy makers. According to Oaxaca, "discrimination

against females can be said to exist whenever the relative wage of males exceeds the relative wage that would have prevailed if males and females were paid according to the same criteria" (Oaxaca 1973:694).

One example of the development of the decomposition techniques has been to resolve the so-called sample selection bias. Women in the labour force may not be representative for all women, but only a part of them. Depending on the social welfare system, women with lower human capital may be less likely to be in paid work. This bias is corrected by taking into account the probability of employment among different groups of women (see Grimshaw and Rubery, 2002:8). This can be considered to be of less importance in the Nordic countries than in many other countries, as the rate of female employment is high.

Another example is the Juhn-Murphy-Pierce (1991) decomposition, developed mainly by Blau and Kahn (1992, 1997). That technique minimises the sample selection bias mentioned before, and is more sensitive to gender specific factors within countries and across countries. It takes into account cross-national differences in the overall wage structure that affects the gender pay gap, such as the general wage distribution, the dispersion between the low paid and the high paid, and the concentration of workers at different points of the wage distribution (see Grimshaw and Rubery, 2002:9-10, 20).

4.2 Theoretical underpinnings and uncritical applications

Although the Oaxaca-Blinder technique offers a simple and effective tool for calculating the average pay gap between men and women, there are weaknesses connected to a number of its underlying assumptions and the way it is applied. We will now introduce the main critique of the decomposition technique. First we discuss a main theoretical assumption - the widely contested notion of free choice. After that we will discuss the following technical assumptions: the assumption that pay reflects productivity and the problem of estimating productivity differences; and, closely connected to that, choice and number of control variables; the problem of variables picking up previous discrimination, and feed back effects.

The issue of free choice

The notion of free choice is an underlying assumption associated with the theoretical legacy traced to Becker's theory of discrimination (1975). In neo-classical economics it is assumed that women's lower level of labour market participation, work experience, education and of occupational placement are, to a great extent, the result of free choice, and thus beyond the scope of the labour market policy. It is assumed that women freely choose to take on larger domestic responsibilities than men, which affects their educational and labour market choices. According to Grimshaw and Rubery, occupational characteristics between women and men are as likely to be caused by labour market discrimination as they are by a process of free decision making (2002:5).

The assumptions of productivity differences

Another theoretical assumption of the Oaxaca-Blindner decomposition technique is that individual characteristics translate into productivity, which, in turn, equates with pay. The Oaxaca-Blinder technique aims at distinguishing an explained part of the gender pay gap and an unexplained part attributable to discrimination. The characteristics believed to affect productivity are separated out or controlled for in the wage equation, in order to isolate the scope of discrimination.

According to Becker's theory, wage discrimination is the pay difference between two groups that is not accounted for by productivity differences. The idea behind this is that individual characteristics can be taken as approximate measures of productivity and that productivity equates with pay. Different levels of education, for example, are assumed to correlate with differences in productivity, and therefore with the level of pay.

Two problems arise here. The first one is that reliable information about productivity is lacking. The causal relationship between personal characteristics, productivity and pay, appears to be an underlying assumption. It is *assumed* that certain personal characteristics are associated with productivity and that pay is equated with productivity. A key problem in this respect is how to measure productivity and how to relate it to personal characteristics. There is no evidence as to whether the pay ratio reflects productivity since productivity is difficult, if not impossible, to measure (Grimshaw and Rubery, 2002:6).

As discussed above, there are reservations about the assumptions underlying the notion of productivity and its proxy measures. Even in his

early studies, Oaxaca noticed that indicators on human capital often have to be estimated due to a lack of information (Oaxaca 1973:697-698). Notwithstanding the reservations, we do not find it necessary to reject entirely the idea of productivity. Human capital factors such as education, work experience and job training, can be seen as the factors most commonly agreed upon in this respect. They are proxy measures, as close to alleged productivity as possible at present. Thus, for practical reasons they are accepted and used, but that should be done with awareness about the limitations.

The second problem arises from the fact that wage structures do not simply reflect productivity as they reflect current and historical influences of social and institutional processes. The assumption that wage systems reflect productivity differences is based on the perfect market model; however, researchers use data for imperfect markets. In the Nordic countries, wage formation reflects social norms and notions of social justice, for example with respect to fair differentials. This may be related to ideas about fair differentials to training and qualification, seniority, responsibilities, or fair differentials according to different types of work classified as heavy vs. light jobs, etc. Certain reservations are required regarding the concept of productivity as a basis for wage systems. It has to be recognised that productivity is not the only basis for wage formation and that social values of different kinds, such as the social justice arguments, are also of importance. This applies to the Nordic countries in particular.

Which control variables and how many

The choice and number of control variables and number of variables is of crucial importance. The idea behind the decomposition technique is that the model includes all variables of importance to productivity, as previously discussed. In the decomposition techniques, it is common to incorporate standard variables, such as education and job experience, but there is also a degree of subjectivism in the selection. Hence, occupation and sector are often included. Oaxaca himself was aware of this, as can be seen from the following comment: “A researcher’s choice of control variables implicitly reveals his or her attitude toward what constitutes discrimination in the labour market (1973:699). How can we make sure then that the decomposition does not also include characteristics that are unrelated to productivity?”

In many studies that uncritically apply the Oaxaca technique, it is *assumed* that 'unobservable' factors influence productivity, in addition to those knowingly contributing to alleged productivity. In one of the studies explored in the next chapter, the authors assume that more of the gender pay could be explained by 'unobservable' factors contributing to productivity, such as "capacity, engagement, motivation, bargaining power and visibility". If unobserved characteristics contributing to productivity are left out, then discrimination is overestimated. If irrelevant variables are included, then discrimination is underestimated. The problem is to find the relevant variables, and often the choice of variables simply reflects what data is available. In the studies explored in chapter 5 there are examples of questionable control variables, such as marital status, number and age of children, employer size, leaves and job mobility. Often these are used without any theoretical grounding or justification in relation to productivity.

It is a well known development in the decomposition approach to include more and more variables in the wage equations. These variables are often assumed to reflect characteristics associated with productivity. Research has revealed that the more variables the equation includes, the less discrimination occurs. (Grimshaw and Rubery 2002:26, Einarsdóttir and Blöndal 2004). Oaxaca was fully aware of this problem: "If it were possible to control for virtually all *sources of variation in wages*, one could pretty well eliminate labour market discrimination as a significant factor in determining wage differentials by sex (or race) […] The result is that whatever the wage differentials observed, it is completely justified on the grounds of alleged productivity differences. The other extreme is to control for virtually nothing and thereby minimize the role of the productivity differences" (Oaxaca 1973:699, authors' emphasis). The key aspect here, according to our view, is to distinguish between characteristics related to productivity and 'sources of variation in wages', as the latter can be a source of discrimination.

The number of variables in the wage equations also relates to more technical aspects of the classification of the variables. More detailed variables may pick up more and more of the discrimination. Thus, the more detailed the classification (for example of occupations or industry) the greater the explanatory power. Overly detailed occupational classifications tend to underestimate the discrimination. For these reasons, most studies prefer to use relatively broad classifications of around 6 to 12 categories, according to Grimshaw and Rubery (2002:29-30). In the

studies examined in the next section we have examples of far reaching classification of variables. In one study, occupation is classified into 368 categories, in another study education is broken down into 97 categories.

The picking up of previous discrimination

Gender segregation in various forms is the most conspicuous feature of the labour market. In his study, Oaxaca found that industry and occupation had the greatest explanatory power, and that gender differences in part-time work had much more explanatory power than personal characteristics, such as education and experience. He saw that part-time work was associated with lower wages for both men and women and the concentration of women in part-time work pulls down women's average wage. The effects of the structural patterns of gender segregation were thus obvious to Oaxaca even if he did not manage to resolve it. He concluded that *unequal pay for equal work* does not account for very much of the male-female wage differential. "Rather it is the concentration of women in lower paying jobs that produces such large differentials. Our results suggest that a substantial proportion of the male female wage differential is attributable to the effects of discrimination" (Oaxaca, 1973:708). The large explanatory power of certain variables in Oaxaca's study was because they *picked up* other variables, in this case gender differences in the occupational structure (Grimshaw and Rubery, 2002:10-12).

The problem of one variable picking up previous discrimination is at the heart of the question of whether variables ought to be defined as 'personal characteristics' contributing to alleged productivity, or as sources of variation in wages, which may indeed be tainted with previous discrimination. Blinder's (1973) decomposition technique deepened the understanding of the interaction between variables and how one variable might be picking up effects of another one. One such interaction is the co-variance between *age and occupation*. The age profile of women's earnings is much flatter than men's, which made Blinder conclude that the age variable picks up some of the occupation effect, in particular the failure of women to move up the occupational ladder within any of the broad occupational groupings (see Grimshaw and Rubery, 2002:15). This clearly shows the difficulties of separating out independent effects of one variable from another on the overall wage structure, an issue heavily discussed in the literature, which we return to below. Another example of the same phenomenon, discussed by Grimshaw and Rubery, is the

variable ‘working conditions’ (job monotony, autonomy, etc.) which is strongly associated with the ‘occupation’ variable and likely to be picked up by it. This insight suggests that it is important to focus on the inter-relationship between different variables (such as occupation, working conditions and part time work) and explore how these shape gender wage differentials (Grimshaw and Rubery 2002:29).

Feedback effects

The problem of ‘feedback effects’ refers to the relationship between the ‘explained’ and the ‘unexplained’ component of the pay gap. As previously stated, the model is based on the assumption that certain characteristics can be isolated in the wage equation in order to estimate the effects of different characteristics. In other words, we want to see how similar workers would be treated in the absence of discrimination. This simplifying assumption overlooks that certain variables may be imbued with previous labour market discrimination, as stated above. The occupational structure may, for example, reflect that women face larger obstacles than men in their access to training programs, resulting in obtaining higher positions later on. In this way, labour market discrimination may also shape the personal and job characteristics of men and women. Women’s perceptions of labour market sex discrimination may adversely affect decisions, such as whether to invest in education and training. The technique therefore confuses free choice with discrimination. In the same manner, the gender patterns concerning paid work, education, working hours, etc. may be consequences of labour market discrimination. These feedback effects imply that discrimination is likely to be underestimated (Grimshaw and Rubery, 2002:34).

How to interpret the results?

Another problem relevant when the Oaxaca technique is used as a policy tool instrument is how to interpret the results. Let’s assume that training is a key variable for explaining the gender pay gap. The causes of the training problem can be interpreted either as lack of job training opportunities for women or as a free choice of women due to household responsibilities. The policy measures following each approach are completely different. On the one hand, positive labour market inventions to increase training opportunities are required, on the other hand, the training problem is not subjected to policy measures as it reflects the free choice of women (see Grimshaw and Rubery, 2002:28). There is a

theoretical tension between the two approaches on the issue. On the one hand it can be seen as a voluntary decision of women to invest less in human capital because they expect a more interrupted work career; on the other hand, it may be a result of women's adaptation to the biases of the labour market, or to overt and covert discrimination. This example is taken here to illuminate the issue. In the Nordic countries, where women and men have the same educational attainment, this is of less importance than in many other countries.

4.3 The need for a societal horizon

Although the Oaxaca-Blindner decomposition technique offers a simple and effective tool for calculating the average pay gap between men and women, scholars find a number of conceptual problems with it, as our discussion has revealed. One problem is that factors affecting the gender wage gap may vary between countries, depending on differences in employment structures, wage systems, composition of industries and occupations, and differences in the share of self-employment, part-time employment, temporary employment etc. Thus, differences in pay between occupations may not be of the same importance in all countries depending on the overall wage structure. The effects of the overlap between the age and the occupation, for example, may be of different importance in different countries depending on the degree to which promotion is based on seniority. The same holds true for education, which is usually closely linked to the wage system and the employment structure, but to a different extent in different countries. It may explain a large part of the gender pay gap in one country but a small part in another country. Societal differences of this kind decrease the usefulness of a universalistic decomposition approach (Grimshaw and Rubery 2002:33-34). Another related problem revolves around gender division according to the public and private sphere. The Oaxaca-Blinder technique gives results on the gender pay gap as if men and women were equally represented in the public and private sectors. This is not the case as women are clustered in the public sector in many countries, and the relative pay differences between the public and private sectors may differ in different countries.

There is a growing awareness that the factors behind the unequal pay are manifold and interrelated indicate that need of not only comparing

likes with likes but also to take into consideration the complex interaction of labour market institutions with the employment structure and wage system. According to the recently developed 'comparative institutional approach' gender pay inequality is the result of wider societal mechanisms, which reflect and shape broader structural conditions of the labour market. These are institutional norms, labour market policy and employer practice leading to different opportunities for men and women and to differences in the relative value of occupations in society. Hence, a difference in occupational characteristics between men and women are neither seen simply as result of individual choice nor as a reflection of differences in productivity. Instead, occupational differences, such as the gender segregation of the labour market, are of key importance in the overall gender pay gap and are as likely to be caused by labour market discrimination as they are by a process of free decision-making (Grimshaw and Rubery, 2002:5, 30-34).

As stated earlier, the main aim of the chapter is to make researchers and policy makers aware of limitations and advantages of decomposition techniques, and an uncritical application of it. Even though decomposition techniques do not give causal explanations but only relationships between variables, they are often used in the context of policy debate and policy making. Against this background, the discussion can be related to the development of conventional policy options, as described by Grimshaw and Rubery. According to them, the development has been from emphasis on equal opportunities, to equal pay for the same work, to equal pay for work of equal value (Grimshaw and Rubery 2002:31). The Nordic countries can be considered to be beyond the first phase, equal opportunities policies, where emphasis is on the removal of formal hindrances for women's labour market participation. Regarding the other two approaches, we argue that decomposition techniques, where a large range of extensively classified control variables are used in an uncritical manner (cf. the discussion above), can be considered to reflect the equal pay for the same work approach, which emphasizes the formal equality in a narrow sense. Since all the Nordic countries have adopted Gender Equality Acts implying "equal pay for work of equal value", we call for a wider discussion of whether uncritical and far-reaching decomposing of the type we have described in the chapter, are in accordance with the purposes of the Act. Our conclusion is that uncritical application of decomposition techniques may actually conceal more of the gender pay gap than it clarifies.

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5. The adjusted gender pay gap: A review of national and international studies across the Nordic countries

Introduction

This section examines a number of studies on the adjusted gender pay in the Nordic countries. We will describe and discuss each study, according to its coverage of the labour market, measurement of major variables and main results. Moreover, we will present what we think are the advantages and limitations of each study in terms of the ideology and different issues as discussed in Chapter 4. After reviewing the studies, we will summarize our main findings and make concluding remarks concerning the adjusted gender pay gap or what is sometimes referred to as the unexplained gender pay gap.

Selection of studies

The aim of this part of the project is to review recent major research into the adjusted gender pay gap in the Nordic countries. Accordingly, we selected studies conducted in the past six years, from 2000-2005, covering the total or large parts of the labour markets of the respective countries. In order to obtain the relevant reports and research articles we searched the web sites of relevant institutions and research institutes concerned with gender inequality in the labour market of the Nordic countries, as well as the international web sites of the European Commission and the OECD. Moreover, we reviewed reference lists of reports already obtained and consulted Nordic experts on the gender pay gap in the respective countries[29]. Our search resulted in 19 national studies (see Table 5.1), which we will review in the following sections. We were neither able to find a joint Nordic study on the adjusted gender pay gap nor were the few

29 The Nordic experts consulted were Ruth Emerek (Aalborg University, Denmark), Anna-Maija Lehto (Statistics Finland), Hege Torp (Institute for Social Research, Norway) and Åsa Löfstrom (Umeå University, Sweden). The experts proved to be an important source of information on important research reports and articles and we thank them for their advice.

international studies that we came across applicable for our analysis since they only covered one or two of the Nordic countries.

Table 5.1. Number of studies included in the review

	Number of studies
Denmark	4
Finland	3
Iceland	4
Norway	3
Sweden	5
Total	19

Criteria for analysis of the studies

Our comments in terms of the criteria will be presented for each study under the heading of *Advantages and Limitations*. The studies will be reviewed in terms of the following:

- *Definition of pay*
  As discussed in Chapters 2 and 3, "technical" differences regarding definitions of earnings and working time may contribute to some of the variations in the size of the gender pay gap. Studies use different definitions of earnings and some of the variations in the estimated size of the gender pay gap reported in these studies may be attributed to these differences. As recommended in Chapter 2, the (unadjusted) gender pay gap should be measured both in term of the EU's concept of gross monthly earnings as well as in terms of gross hourly earnings (gross annual earnings divided by paid hours) as the latter indicator includes irregular payments but not the former one. The argument for using paid hours (regular hours plus overtime hours) instead of worked hours is that worked hours are influenced by both the composition of the labour force and the composition of jobs (see Chapter 2). In our analysis, we will elaborate on the pay construct used in each study in terms of how comparable it is to

our recommendations on the definition of earnings as well as how clearly it is explained.

- *Calculation of the gender pay gap ratio*
  Another factor concerns the calculation of the gender pay gap ratio. The size of the gender pay gap is partly dependent on whether the gender differences in pay are measured against the earnings of women or that of men. If the difference is divided by the earnings of men it tends to result in a narrower pay gap than if divided by earnings of women. This is because women tend to earn less on average than men earn. We recommend that researchers are aware of this issue and state explicitly whether the reference point is the earnings of men or women. By using the earnings of women as the reference point we answer the question of how many percentage points we have to increase the earnings of women in order to be equal to that of men, instead of asking how much we would have to decrease the earnings of men to be equal to that of women, as would be the case of we divided the difference by the earnings of men (Einarsdóttir and Blöndal 2004).

- *Selection of sample*
  The selection of workers whose earnings are being examined in each study may be an important source of variations in the size of the gender pay gap. For example, whereas earnings of some occupational groups may be characterised by a relatively narrow gender pay gap, other groups may show a much wider gap. In that respect, excluding, for example, managers from the analysis is likely to result in a narrower gender pay gap than if they were included. Hence, studies on the adjusted gender pay gap should take explicit account of the group analysed where an emphasis should be put on studying earnings of a fully representative group. Moreover, studies representing large parts of a country's labour market are important, especially for cross-country comparison.

- *Choice and number of explanatory variables*
  As discussed in Chapter 4, the choice of control variables and the number of variables is crucial when assessing the adjusted gender pay gap. The idea of the decomposition model technique is to include all variables of importance to productivity, but at the same

time no variables unrelated to productivity. There is, however, no general consensus on which variables are representatives of productivity. Variables commonly used to adjust the gender pay gap are occupation, education and job experience, but more questionable variables like family conditions in terms of adjusting for variations in productivity, are often included in wage equations. A related issue concerns the order of explanatory variables put into the decomposition model. The size of the adjusted gender pay gap is less debatable when the explanatory power of relevant control variables is presented separately from that of the variables, which are obviously debatable in terms of representing productivity differences. In that way it is possible to account for the relative impact of the latter variables separately.

Moreover, there is a tendency to include more and more variables in the wage equations, increasing the number of characteristics that need to be adjusted. As more and more variables are put into the equation, more of the gender pay gap becomes explained, as each variable picks up more and more of the variation in wages. This may result in an overly adjusted gender pay gap. The key aspect is, therefore, to distinguish between characteristics related to productivity and 'sources of variation in wages', as the latter can be a source of discrimination.

- *Classification of explanatory variables*
  A more technical aspect of the decomposition of the gender pay gap concerns the classification of the variables, as discussed in Chapter 4. More detailed variables may pick of more and more of the impact of other variables, and thus, of possible discrimination. Hence, the more detailed the classification (of, for example, occupations or industry sectors) the greater the explanatory power. For this reason a relatively broad classifications of around six to 12 categories has been suggested (see Grimshaw and Rubery 2002).

In the following review of the recent studies on the adjusted gender pay gap in the Nordic countries three aspects of the gender pay gap will be presented: the *unadjusted gender pay gap*, the *explained gender pay gap* and *the unexplained gender pay gap*. The *unadjusted gender pay gap* is the difference between men's and women's earnings per hour/month. The

EU defines the unadjusted gender pay gap as the difference between men's and women's gross hourly earnings as a percentage of men's average gross hourly earnings (see Chapter 3). The *explained gender pay gap* refers to the size of the unadjusted gender pay gap "explained" by observable factors adjusted for, whereas the *unexplained gender pay gap* refers to the part of the unadjusted gender pay gap not accounted for by the adjusted observable factors.

5.1 Studies on the adjusted gender pay gap in Denmark

Lisbeth Pedersen and Mette Deding (2000), the Danish National Institute of Social Research

In a study on the gender pay gap in Denmark, Petersen and Deding (2000) analysed data for 1996 from the national registry Statistics Denmark, based on both private and public sector (local and central government). The data included all employees, 24-59 years of age, employed in business enterprises with more than 20 employees. Petersen and Deding studied three different pay constructs: *normal hourly earnings* (smalfortjenesten), *total earnings per normal hours* (fortjenesten pr. løntime) and *total earnings per hours worked* (fortjenesten pr. præsteret time), and found that the gender pay gap varied from 12% to 20% depending on the definitions of pay (normal or total) and hours (normal hours or hours worked). According to Petersen and Deding, a part of women's absence pay is included in normal earnings whereas absence pay for men is more often excluded in normal earnings. This results in a wider gap when measured by the total earnings (20%) versus the normal hourly earnings (15.5%). Moreover, different measures of working hours contribute to the variations in the gender pay gap. The fact that the gender pay gap is larger when it is calculated according to normal hours (20%) than according to actual hours worked (12%), can be explained in terms of women being more often compensated while absent from work, especially in terms of absence because of children (maternity leaves, absence because of sick children, etc.). Among women, this results in higher hourly earnings when measured by actual hours worked than by normal hours.

Using the Oaxaca-Blinder method to adjust for different factors when studying the gender pay gap, Petersen and Deding calculated the gap based on three different models (see Table 5.2). When adjusting for

human capital factors, sectors, industries and occupations, the gender pay gap was reduced by several percentage points. Depending on pay construct (normal hourly earnings, total earnings per normal hours or total earnings per hours worked) the first model, where the human capital variables (education, work experience, absenteeism, family conditions), sector and occupation were included, explained 9-13% of the gap. The second model which included information on industry (9 categories) instead of sector, explained 8-12% of the gap, and the third model, where industry was broken into 27 categories explained 10-14%. This means that after adjusting for these factors, the unexplained gender pay gap varied between 3-8% depending on pay construct and model used.

Table 5.2. Regression analyses of women's and men's earnings – Percentages

	Normal hourly earnings			**Total earnings/normal hours**			**Total earnings/hours worked**		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Unadjusted gender pay gap	**15.5**	**15.5**	**15.5**	**20.0**	**20.0**	**20.0**	**12.4**	**12.4**	**12.4**
Human capital variables Education, work experience, absenteeism, family conditions (being single, age of children, living in the capital)	3.0	3.0	3.0	3.5	3.5	3.5	2.8	2.8	2.8
Sector	5.4			8.6			5.1		
Industry (9)		3.2			5.8			3.1	
Industry (27)			4.2			7.2			3.9
Occuaption	1.1	2.2	2.8	1.0	2.6	3.0	1.0	2.2	2.7
Explained gender pay gap	**9.5**	**8.4**	**10.0**	**13.1**	**11.9**	**13.7**	**8.9**	**8.1**	**9.4**
Unexplained gender pay gap	**6.0**	**7.1**	**5.5**	**6.9**	**8.1**	**6.3**	**3.5**	**4.2**	**3.0**

Source: Petersen and Deding 2000

The study shows that the size of the gap, which is explained by each set of variables, depends on the combination of variables included in the model. Independent of pay construct, gender segregation of sectors explains a relatively large part of the gender pay gap, or about one third, whereas the human capital variables explain about 3% of the gap. Occupation seems to be the variable explaining the least, or 1-3%. Industry explains less than sector, or 3-7%, and where industry is adjusted for rather than sector, the occupational variable explains more. Moreover, when industry is broken into 27 categories it explains more (4-7%) than when it is a 9-category variable (3-6%).

Advantages and limitations:

- Although the legitimacy of some of the pay constructs can be questioned, applying three different constructs for comparison purposes may be viewed as an advantage of this study, since it clarifies the impact of different pay constructs.
- Another advantage of this study is that it calculates the gender pay ratio on the basis of women's earnings. By using the earnings of women as a reference point we answer the question of how many percentage points we have to increase the earnings of women in order to be equal to that of men, instead of asking how much we would have to decrease the earnings of men to be equal to that of women, as would be the case if we divided the difference by the earnings of men.
- The fact that the study is based on data from the national registry in Denmark, including all employees, 24-59 years of age, employed in business enterprises with more than 20 employees, covering both private and public sector, is a clear advantage of this study. The study can, therefore, be considered as representing the Danish labour market.
- Among the variables covered by 'human capital' are variables capturing family conditions, such as being single, having children, age of children, and living in the capital. It is questionable whether these are relevant variables to be included in the model, i.e. whether they are related to productivity.
- Moreover, the order of variables in the model is a matter of subjective choice. If variables with no impact on productivity are put into the model *before* those affecting productivity, the

explanatory power of the latter ones are impossible to separate out.

- The more detailed the classification of a variable the greater its explanatory power. In this study, the classification of industry is broken into 27 categories, which exceeds the broad classifications of around six to 12 categories suggested.
- Overall, the study involves a rather uncritical application of the Oaxaca-Blinder model. Moreover, there is limited awareness of the impact of the order in which the variables enter the wage equation.

The Confederation of Danish Employers (DA)(2001)

The Confederation of Danish Employers (DA) studied the gender pay gap among over 400,000 employees working in the Danish private sector. The analysis is based on those employees without management responsibilities. The pay construct that was analysed were the *total earnings per hours worked* (fortjenesten pr. præsteret time). The authors claim that this is the most relevant pay construct when comparing wages in terms of gender, since it includes all direct pay components received by the employee, such as payment while absent from work. However, this pay construct does not include some regular/irregular pay supplements, such as overtime pay (nuisance bonuses). By using hours worked, hourly pay is calculated in terms of actual hours worked and therefore does not include the time an employee is absent from work. Actual working hours may be underestimated since overtime is not registered for functionaries. The study is based on the Oaxaca-Blinder method. According to this study, the unadjusted gender pay gap is about 15%. Table 5.3 shows the results of the regression analysis. Almost 9% of the gap could be attributed to work experience, education (56 categories), occupation (368 categories) industry (110 categories), age of children, leaves of absence, region and full versus part-time work, which leaves about 6% of the gender pay gap still unexplained. Occupation, industry and education explained the most, or about 2-3% each, work experience 1.5% and each of the rest of the variables less than 0.5%. The author’s conclusions are based on the assumptions of free choice since they state that men and women have different priorities and choose different educational routes.

Table 5.3. Regression analysis of women's and men's earnings among employees in the DA-area – Log percentages

	Total earnings/hours worked
Unadjusted gender pay gap	**14.6**
Occupation (368)	2.8
Industry (110)	2.1
Education (56)	2.4
*Experience*education (10)*	1.5
Leaves of absence (2)	0.2
Region (2)	-0.3
Age of children (3)	-0.04
Explained gender pay gap	**8.7**
Unexplained gender pay gap	**5.9**

Source: DA 2001

Advantages and limitations:

- As recommended, earnings should include total gross earnings, including regular and irregular payments, such as overtime earnings. The pay concept used in this study did not include irregular pay supplements, such as overtime earnings, for any of the employees under study. This is a limitation of the study, as these kinds of pay supplements may be unevenly distributed among women and men. Another limitation of this study is that it analyses only one type of pay construct. Studies have shown that some of the variations in the estimated size of the gender pay gap may be attributed to definitions of pay and earnings. As a result, using more than one definition of pay would be an advantage.
- The calculation of the gender pay ratio is not clearly stated, which can be regarded as a limitation of this study. As previously discussed, the size of the gender pay gap is partly dependent on

whether the earnings of men or women are used as a reference point.

- Another limitation concerns the exclusion of employees with management responsibilities. It may lead to an underestimation of the adjusted gender pay gap, as men tend to dominate the top-end of the wage dispersion.
- The choice of variables is not sufficiently justified. This concerns variables, such as region, number of children, and leaves of absence. It is questionable whether these variables are relevant when it comes to presenting the size of the adjusted gender pay gap. For example, why should the number and age of children lead to lower salaries for mothers as compared to those for men?
- The classification of some variables is far-reaching as education is broken down into 56 categories, occupation into 368 and industry into 110. More detailed variables may pick up more of the discrimination and lead to an underestimation of the adjusted gender pay gap.

The Danish Confederation of Trade Unions (LO) and the Confederation of Danish Employers (DA) (2003)

In another study undertaken by the Confederation of Danish Employers (DA) in collaboration with the Danish Confederation of Trade Unions (LO), the gender pay gap was examined based on wage information from 260,000 employees working in parts of the labour market covered by LO/DA collective agreements. Two different pay constructs were examined: *Gross earnings per hours worked* (the same as total earnings per hours worked in the previous studies) and *direct remuneration*. Whereas gross earnings per hours worked are said to constitute the total cost of the employer to obtain one hour's work, direct remuneration does not include payments for leave of absence, fringe benefits and vacation and is therefore only an approximation of wages per agreed hour. As such it is said to resemble the wage rates in the collective agreements. The authors state that pay supplements in the form of nuisance bonuses are excluded in gross earnings as these do not represent a cost of labour. According to this study, the unadjusted gender pay gap for blue-collar workers is 14-15% and 19-20% for white-collar workers, depending on pay construct (see Table 5.4).

After adjusting for occupation, education, sector, experience, overtime, leave of absence, job mobility, region and age of children about 3-4% of the gender pay gap among blue-collar workers and 6-7% of the gap among white-collar workers remained unexplained. Occupation explained most of the variables included at 5-6%, education 2-3%, sector 1-2%, experience around 1%, whereas the rest of the variables included explained less than 1% each. It is noted in the report that although the decomposition method provides the opportunity to point out several factors explaining the gender pay gap it cannot be used to disclose all the causes of the gap as the unexplained part may capture both the effects of possible discriminatory factors and non-measurable factors. Moreover, possible discriminatory barriers in the labour market can affect the explanatory variables.

Table 5.4. Regression analyses of women's and men's earnings among employees in the DA/LO-area – Percentages

	Total earnings/hours worked		**Direct remuneration/hours worked**	
	Blue-collar workers	White-collar workers	Blue-collar workers	White-collar workers
Unadjusted gender pay gap	**14.3**	**19.0**	**15.4**	**19.7**
Occupation (179)	6.1	5.2	5.6	5.3
Education (35)	1.9	2.5	2.1	2.5
Sector (107)	1.7	1.3	2.1	1.2
Experience	0.5	1.2	0.6	1.2
Overtime		0.9		0.8
Region (3)	0.3	0.8	0.3	0.8
Leaves of absence (2)	0.3	0.6	0.3	0.6
Job mobility	0.1	-0.0	0.1	0.0
Age of children(3)	-0.0	-0.1	-0.0	-0.0
Explained gender pay gap	**10.9**	**12.4**	**10.9**	**12.3**
Unexplained gender pay gap	**3.9**	**6.6**	**3.9**	**7.4**

Source: LO and DA 2003

Advantages and limitations:

- The choice of pay construct (gross earnings per hour worked and direct remuneration) is justified with reference to the total cost of the employer to obtain one hour's work. It is worth noting that this is an example of an underlying assumption where the point of departure is to investigate the adjusted gender pay gap from the point of view of the employer. Moreover, the pay concept used in this study did not include nuisance bonuses, which can be regarded as a limitation of the study, as these kinds of pay supplements may be unevenly distributed among women and men. However, using more than one pay construct is an advantage in terms of clarifying the impact of different pay constructs.
- A limitation of the study is that the calculation of the gender pay ratio is not clearly stated. As already discussed, the size of the gender pay gap is partly dependent on whether the earnings of men or women are used as a reference point. Thus, the authors should make sure that information on the calculation of the gender pay gap is reported.
- Another limitation concerns the exclusion of employees with management responsibilities. This may lead to an underestimation of the adjusted gender pay gap, as men tend to dominate the top-end of the wage dispersion. Moreover, part-time employees are excluded.
- The choice of variables is not sufficiently justified, such as, region, age of children, leaves and job mobility. It can be questioned whether these variables are relevant when it comes to assessing the size of the adjusted gender pay gap. For example, why should the number and age of children lead to lower pay of mothers as compared to that of fathers in a country with extensive public child care? The classification of some variables is far-reaching, as occupation is broken into 179 categories, sector 107 categories and education 35 categories. More detailed variables may pick up more and more of the discrimination and lead to underestimation of the adjusted gender pay gap.

Metta Deding and Kennson Wong (2004), the Danish National Institute of Social Research

In a study based on the study by Petersen and Deding (2000), gender wage differentials in the Danish labour market were studied for the period 1997-2001. As in the original study, Deding and Wong analysed wage-data from Statistics Denmark. The data included all employees aged 25-29 in the private and public sector who were employed in business enterprises with more than 20 employees. As in the earlier study, three different pay constructs were analysed: *normal hourly earnings* (smalfortjenesten), *total earnings per normal hours* (fortjenesten pr. løntime) and *total earnings per hours worked* (fortjenesten pr. præsteret time). According to Deding and Wong, the gender pay gap was 12-19% during the period 1997-2001, depending on which pay construct was used. A detailed model specification for the pay decomposition is only presented for gross earnings per hours worked in 2001 (see Table 5.5). According to the analysis, the unadjusted gender pay gap in 2001 was 13%.

After adjusting for education and work experience, the gap is reduced by roughly 1%, and by a further 4% when adjusted for differences in various individual characteristics. After adjusting for sector and industry as well, which explained about 2% each, the gender pay gap amounted to about 6%. Occupation explained a further 2-7% of the gap, depending on number of categories it was broken into. After adjusting for all these factors, the remaining gender pay gap was 2-3%.

Although sector was found to explain a considerable part of the gender pay gap, the size of the gap varied across different sectors. It was found to be 14-17% in the private sector but 7-11% in the central government sector and 6-18% in the local government sector. Moreover, the size of the pay gap was relatively constant during the period in the private and central government sector while it increased in the local government sector. The authors point out that the variables adjusted have not been able to explain as much of the gender pay gap in both private and central government sector in recent years as was earlier the case. The authors attribute this to factors that are not easily observable but may be increasingly contributing to the pay gap. These are factors such as capacity, engagement, motivation, bargaining power and visibility.

Table 5.5. Regression analysis of women's and men's total earnings per hours worked in 2001 – Percentages

	Model specification							
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Unadjusted gender pay gap	**13.2**	**13.2**	**13.2**	**13.2**	**13.2**	**13.2**	**13.2**	**13.2**
Education	-0.7	0.5	-0.7	-0.7	0.0	-0.2	-0.6	-0.5
Experience	1.8	1.4	1.4	1.3	1.2	1.1	0.9	1.0
Single		-0.1	0.0	0.0	0.0	0.0	0.0	0.0
Age of children (3)		-0.1	-0.1	-0.2	-0.2	-0.1	-0.1	-0.1
Part-time work		1.1	1.1	0.9	0.6	0.5	0.4	0.5
Educational leave		0.3	0.3	0.2	0.2	0.2	0.2	0.2
Child-rearing leave		1.0	0.8	0.8	0.6	0.6	0.5	0.5
Sabbath leave		0.0	0.0	0.0	0.0	0.0	0.0	0.0
County		0.1	0.2	0.1	0.2	0.1	0.1	0.2
Fixed salary without overtime pay		1.7	1.8	1.8	1.0	0.9	0.8	0.8
Sector			2.0	0.5	-0.5	1.4	0.8	0.6
Industry				2.2	4.7	2.0	1.3	1.4
Occupation (9)					2.0			
Occupation (27)						3.9		
Occupation (110)							6.4	
Occupation (263)								7.1
Explained gender pay gap	**1.1**	**5.1**	**6.9**	**7.1**	**9.9**	**10.4**	**11.3**	**11.2**
Unexplained gender pay gap	**12.1**	**8.1**	**6.3**	**6.1**	**3.3**	**2.8**	**1.9**	**2.0**

Source: Deding and Wong 2004

Advantages and limitations:

- Although the legitimacy of some of the pay constructs can be questioned, applying three different constructs for comparison purposes may be viewed as an advantage of this study, since it highlights their impact.
- The gender pay ratio is calculated on the basis of women's earnings. This is an advantage. Using the earnings of women as a reference point we answer the question of how many percentage points we have to increase the earnings of women in order to be equal to that of men, instead of asking how much we would have

to decrease the earnings of men to be equal to that of women, as would be the case of we divided the difference by the earnings of men.

- The fact that the study is based on data from the national registry in Denmark, including all employees, 24-59 years of age, employed in business enterprises with more than 20 employees, covering both the private and public sectors, is a clear advantage of this study. The study can therefore be considered as representing the Danish labour market.
- The order of variables in the model is not discussed. The second group of variables added to the model, i.e. which measures the effect of being single, age of children, part-time work, educational leave, child-rearing leave, Sabbath leave, county and having fixed salary without overtime pay, can be questioned. At best they should enter the model after sector, industry and occupation. If variables with no obvious impact on productivity are put into the model *before* those affecting productivity, the explanatory power of the latter ones are impossible to separate out.
- The study shows that the more detailed the categories in the classification of occupation, the more is explained of the gender pay gap. The classification exceeds the most usually applied number of categories, i.e. 6-12, but more detailed variables may pick up more and more of the discrimination and lead to underestimation of the adjusted gender pay gap.
- It is assumed that unobserved characteristics contributing to productivity are left out, such as capacity, engagement, motivation, bargaining power and visibility. There are no theoretical grounds for this statement. The assessment of these characteristics is likely to be imbued with gender and thus pick up previous discrimination. Hence, contrary to what is stated, the inclusion of unobserved characteristics might result in an underestimation of the discrimination.

5.2 Studies on the adjusted gender pay gap in Finland

Reija Lilja (2000)

The gender wage differentials were studied in the manufacturing sector in Finland. The analysis is based on data gathered by the Confederation of

Finnish Industry and Employers (TT), which includes wage information on every fifteenth white-collar worker in the member firms during the period 1980-95. The analysis of gender wages differentials is studied over careers, which means that the study follows the employees from the point they are recruited and through the first ten years of employment within Finnish industry. The evolution of the wage differentials is studied for each educational group separately, i.e. those with basic education, secondary education and university education, in order to determine whether the same level of education provides similar career and earnings prospects for men and women. For each of the educational groups, the gender pay gap is analysed in terms of the gender differences in characteristics on the one hand and in terms of different returns to these characteristics (remuneration co-efficients) on the other hand. The pay construct applied is not mentioned in the report.

The results of the study indicate that the gender pay gap in the three educational groups is rather stable over time (see Table 5.6). Over different phases of their careers, women in the group with only basic education earn on average about 64% of what men with basic education earn, whereas the comparable ratio is 68% in the group with secondary education and 81% in the group with university education. Using a traditional human capital model and adjusting for *age in years, age squared, job requirement level (2) and wage group (3), job category (2), industry, plant size (2), job mobility (changes of workplace/ changes of job category), local area indicator, unemployment rate and time indicator (1985-89/1990-95)*, the gender wage gap narrowed considerably, particularly in the group with basic education. Among those with university education the gender pay gap narrowed only slightly after adjusting for the variables included in the model.

The study reveals that the decomposed gender pay gap evolves differently over the careers of the different educational groups. Among those with basic education, the explanatory power of the variables adjusted is relatively stable through the ten-year period. Hence a large part of the gender pay gap can be explained in terms of different characteristics of men and women with basic education. However, this is not the case for the other educational groups, especially the university educated. In these groups, the variables adjusted for explain gradually less and less through the ten-year period, explaining almost nothing at the end of the ten-years among those with university education. Based on the analysis, the author

reports that age and tenure (years of career) are the most important single factors behind the observed evolution of the gender pay gap.

Table 5.6. Overview of the size of the gender pay gap over ten years of a career within the Finnish industry (displayed in percentages)

	Year of career									
	1st	**2nd**	**3rd**	**4th**	**5th**	**6th**	**7th**	**8th**	**9th**	**10th**
Basic education										
Unadjusted gender pay gap	35	38	35	34	35	37	33	36	36	39
Explained gender pay gap	15	17	15	15	15	15	13	15	14	17
Unexplained gender pay gap	*20*	*21*	*20*	*19*	*20*	*22*	*20*	*21*	*22*	*22*
Secondary education										
Unadjusted gender pay gap	33	32	31	33	32	33	33	32	31	31
Explained gender pay gap	18	15	12	13	12	8	7	8	6	5
Unexplained gender pay gap	*15*	*17*	*19*	*20*	*20*	*25*	*26*	*24*	*25*	*26*
University education										
Unadjusted gender pay gap	19	18	17	15	19	18	21	23	20	19
Explained gender pay gap	6	4	2	1	2	1	2	3	2	1
Unexplained gender pay gap	*13*	*14*	*15*	*14*	*17*	*17*	*19*	*20*	*18*	*18*

Source: Lilja 2000

The author concludes that the fact that age and tenure have such a strong impact on the unexplained gender pay gap suggests that a differential movement along job ladders is an important potential factor in explaining the evolution of the gender pay gap over people's careers in Finnish industry, and that there appears to be more 'good' careers available for men than for women. Whereas the growth of the adjusted gender pay gap at the secondary and university educational level is in line with different promotional rates of men and women, the stability of the adjusted gap at the basic educational level may reflect scarce promotion possibilities of this group of employees as a whole.

Advantages and limitations:

- A clear advantage of this study is that it follows the earnings' development of individuals through time. This enables us to track differences in men's and women's career progression.
- The author does not give a definition of earnings. We therefore do not have information on which pay construct is being examined. Although this is quite important when assessing the size of the

adjusted gender pay gap, it is somewhat less important when studying the evolution of wage differentials over time.

- The study calculates the gender wage differentials as the ratio of female wages to male wages. The average earnings of women are reported as the proportion of the average earnings of men. This is a limitation of the study since it uses the earnings of men as the reference point. Thus, the question is not being answered about by how many percentage points the earnings of women have to increase to be equal to that of men. As women earn on average less than men this results in a narrower gap than if the earnings of women were used as reference point.
- The fact that the study is representative for white-collar employees in the manufacturing sector in Finland can be seen both as an advantage of the study as well as a limitation. On the one hand it is representative for that specific group but on the other hand it does not represent other important groups employed in the manufacturing sector in Finland.
- The choice and number of explanatory variables is questionable. The number of variables adjusted for is relatively large and it is not obvious that some of them have a direct relevance for productivity. For example, it is debatable if variables such as industry, plant size, local area indicator, unemployment rate, and time indicator are representative measures of productivity.
- The classification of the control variables is not very detailed.

Juhana Vartiainen (2002), Labour Institute for Economic Research

In a study on the adjusted gender pay gap in Finland, the wages of employees were analysed from a random 20% sample of full-time workers covered in the Earnings Structure Database of Statistics Finland. *Monthly wage income* was calculated by dividing total wage and salary income by total working hours, both measured over a one month period. According to the author, the aim was to include all such wage items that had continuity: the base wage, extras and bonuses based on working conditions, extra pay due to overtime and the value of perks. Similarly, total working hours was an estimated total labour input as measured in time units. According to this study the unadjusted gender pay gap was about 22% (see Table 5.7).

After adjusting for age, education, number of children and employer size, the gender pay gap decreased by less than 1%. As a result, it was concluded that these variables did not go far in explaining the gender pay gap. In the second model, where industry and occupation were also included in the equation the gender pay gap was, however, markedly reduced to 10%. In this study, as often reported in similar studies, age, occupation and industry seem to be major factors contributing to the gender wage gap, especially occupation and industry, which explained 5% and 6% respectively of the gender pay gap in this study.

Table 5.7. Regression analysis of women's and men's total earnings per hours worked, measured over a month in 1998(Log percentages)

	Model 1	**Model 2**
Unadjusted gender pay gap	**21.5**	**21.5**
Temporary	0.5	0.3
Occupation		5.2
Industry		5.8
Education	1.4	1.0
Employer size	0.3	0.3
Age in years	-4.2	-0.3
Age squared	2.7	2.4
Number of children under 18 years	0.2	0.1
Number of children under 7 years	-0.0	-0.0
Explained gender pay gap	**0.7**	**11.6**
Unexplained gender pay gap	**21.1**	**10.1**

Source: Vartiainen 2002

Advantages and limitations:

- A justification is given for the use of monthly wage income. Although this is in accordance with our recommendation, the fact that only one pay construct is analysed can be considered a limitation of the study. Studies have shown that some of the variations in the estimated size of the gender pay gap may be

attributed to definitions of pay and earnings. As a result, using more than one definition of pay would be an advantage.

- The calculation of the gender pay ratio is not clearly stated, which is a limitation of this study. As previously discussed, the size of the gender pay gap is partly dependent on whether the earnings of men or women are used as a reference point.
- The study can be criticized for excluding part-time workers, but apart from that, the data can be considered representative for a large part of the Finnish labour market.
- The choice of some control variables is not sufficiently justified. For example, are number of children and employer size relevant control variables? The variable 'employer size' is taken by scholars as reflecting a certain degree of subjectivity in the choice of variables.
- It is unclear how detailed the classification of certain variables is such as occupation, industry and education.

Pekka Laine (2003)

Laine conducted a comparative study of the gender wage gaps across the Finnish IT and Retail Sectors. Wages were analysed based on a sub-sample data from the Finnish Structure of Earning Survey (SES), covering only those employees who worked in the member firms of the Employer's Confederation of Service Industries in Finland (PT) and had their principal activity either in the IT or retail sectors.

According to the report, the retail sector in Finland is traditionally a predominantly female and relatively low-paid sector while the IT sector is a predominantly male and better-paid sector. Moreover, the IT sector was found to have clearly higher earnings, and although both sectors showed gender wage ratios favourable to men, women in the IT sector earned more on average per working hour than men in the retail sector. Table 5.8 presents the results of the regression analysis of the earnings of men and women in these sectors in 1995 and 1999. The pay construct under study was *monthly base wages per regular monthly working hours*, including benefits in kind and supplements for shift, night and Sunday work. As Table 5.8 shows, the unadjusted gender wage gap was wider in the retail sector than in the IT sector. This difference even increased during the period of 1995 to 1999.

After adjusting for age, tenure, number of regular working hours, firm size, employment contract (permanent job vs. fixed term) and education (model A), the gender pay gap either slightly narrowed or widened depending on sector and year, but age and education explained most of the gender pay gap. After adding occupation to the regression model (model B), the gender pay differentials were, however, reduced considerably, or between 5-9%, depending on sector and year. The unexplained part of the gender pay gap varied between 5-10%.

Table 5.8. Regression analysis of women's and men's monthly base wages per regular working hours employed in the Retail trade sector and IT sector in Finland in 1995 and 1999 (Log percentages)

	Retail trade sector				**IT sector**			
	1995		**1999**		**1995**		**1999**	
	Model A	Model B	Model A	Model B	Model A	Model B	Model A	Model B
Unadjusted gender pay gap	**14.5**	**14.5**	**18.1**	**18.1**	**17.4**	**11.2**	**15.7**	**13.4**
Age	-2.0	-1.4	-1.2	-0.8	1.8	0.8	-2.3	-1.4
Tenure	-0.2	-0.1	0.0	-0.0	0.0	0.0	-0.1	-0.0
Regular hours	-0.4	-1.2	-0.2	-1.1	0.1	-0.0	-0.0	-0.1
Firm size	-0.6	-0.4	-0.6	-0.4	0.1	-0.0	0.0	0.0
Permanent job	0.1	0.0	0.0	0.0	0.0	-0.0	0.1	-0.0
Education (76/97)	0.7	0.4	2.8	1.1	1.0	-0.7	0.4	-0.0
Occupation		8.9		9.8		5.8		7.0
Explained gender pay gap	**-2.5**	**6.3**	**0.7**	**8.5**	**3.1**	**5.8**	**-1.8**	**5.5**
Unexplained gender pay gap	**17.0**	**8.2**	**17.3**	**9.6**	**14.3**	**5.4**	**17.5**	**7.9**

Source: Laine 2003

According to the author, the study shows that the gender wage gap interconnects closely with the occupational segregation of these sectors, in which occupation appears to be one of the key factors for the existence and size of the gender pay gap in both sectors. Laine also points out that since age captured to a large extent the effect of occupation in model A (the share explained by aged decreased from models A to B), it could be concluded that older men had succeeded much more effectively in advancing during their work career than older women. Hence, occupational segregation is interlinked with career advancement prospects.

Advantages and limitations:

- The advantage of this study is that it clearly illustrates the impact of the gender segregation on gender wage differentials in the chosen sectors.
- In accordance with our recommendations, the study analyses the pay concept of gross monthly earnings. However, the fact that only one pay construct is studied can be considered a limitation of the study, as some of the variations in the estimated size of the gender pay gap may be attributed to definitions of pay and earnings. Thus, using more than one definition of pay is considered an advantage.
- The study calculates the gender wage differentials as the ratio of female wages to male wages. The average earnings of women are reported as a proportion of the average earnings of men. This is a limitation of the study since it uses the earnings of men as a reference point. Thus, the question is not being answered about by how many percentage points the earnings of women have to increase to be equal to that of men. As women earn on average less than men this results in a narrower gap compared to that of using the earnings of women as a point of reference.
- The selected group is not entirely representative for the whole Finnish private service sector, since it only covers those firms with principal activity within the IT or retail sectors.
- Apart from firm size, the control variables seem to be relevant in terms of assessing the size of the adjusted gender pay gap.
- It is unclear how detailed the classification of the occupation variable is. In addition, the classification of education is too detailed, or 76-97 categories, depending on sector under study.

5.3 Studies on the adjusted gender pay gap in Iceland

Hrefna Guðmundsdóttir and Kristjana Stella Blöndal (2001) and Andrea G. Dofradóttir, Eva Heiða Önnudóttir, Friðrik H. Jónsson, Kristjana Stella Blöndal and Ævar Þórólfsson (2004), Social Science Research Institute at the University of Iceland

Several studies on gender pay differentials have been conducted at the Social Science Research Institute at the University of Iceland. Among these studies are the wage surveys undertaken for the Commercial Workers' Union of Reykjavík (VR), using its members who work in the private sector. Unlike most of the other studies reviewed, these studies are based on a postal survey, which is distributed to the whole population of union members. One of the main shortcomings of postal surveys is a low response rate, which in the case of the VR-surveys has been around one third (29-32%) of the target population. Although this may seem a relatively low response rate, analysis of the group of respondents has revealed that it is representative for VR-members, apart from the youngest group 17-20, which seems to be under-reported in these surveys. This in turn explains the under-reporting of employees' wages in supermarkets and grocery stores. Another possible shortcoming of using survey-data as opposed to register-data is that the former may include less accurate information on wages than the latter, since it is based on self-reports. However, a comparison between gross earnings in these studies and payments to the union, which is calculated on the bases of actual gross earnings, show that these are comparable. The study includes employees working 70% or more of full-time work. The earnings of those working less than full-time are converted into full-time equivalent earnings.

Unlike other studies reviewed in this chapter, these surveys do not present the unadjusted gender pay gap, i.e. gross wages corrected for differences in hours of work. Instead, earning differentials are presented independent of working time. The analysis is based on full-time equivalent earnings and has, therefore, been partly adjusted for different working hours. According to the results of these surveys, the totally unadjusted pay gap measured in terms of gross monthly earnings was 26% in 2000 and 22% in 2003, while the gap in terms of fixed monthly earnings was 17-18% during these years. Whereas these indicators are not adjusted for hours of work (except for those working less than full-time),

fixed monthly earnings refers to the regular salary and *gross monthly earnings* includes fixed monthly earnings as well as all other pay supplements. After adjusting for occupation, hours worked, age, period of employment in job or comparable job and education, the pay gap decreased by several percentage points independent of which pay construct was applied, or to 18% in 2000 and 14% in 2003. The result of the regression analysis is presented in Table 5.9.

Table 5.9. Regression analysis of women's and men's earnings among members of the Commercial Workers' Union of Reykjavík (Percentages)

	2000		**2003**	
	Total monthly earnings	**Fixed monthly earnings**	**Total monthly earnings**	**Fixed monthly earnings**
Unadjusted gender pay gap	**26***	**18**	**22***	**17**
Hours worked	x	x	x	x
Occupation (6)	x	x	x	x
Age in years	x	x	x	x
Experience	x	x	x	x
Education (4)	x	x	x	x
Explained gender pay gap	**8**	**0**	**8**	**3**
Unexplained gender pay gap	**18**	**18**	**14**	**14**

x = Variables included in the model
* Not adjusted for actual hours of work
Source: Guðmundsdóttir et al. 2001 and Dofradóttir et al. 2003

Advantages and limitations:

- The pay construct studied is gross earnings including both regular as well as irregular supplements. This is a clear advantage of the study as supplement pay has been found to be unevenly distributed among women and men, especially in Iceland. Moreover, as two different pay constructs are analysed, the study

has the advantage of elaborating on their relative impact regarding the size of the gender pay gap.

- Another advantage of this study is that it calculates the gender pay ratio on the basis of women's earnings. By using the earnings of women as a reference point we answer the question of how many percentage points we have to increase the earnings of women in order to be equal to that of men, instead of asking how much we would have to decrease the earnings of men to be equal to that of women, as would be the case of we divided the difference by the earnings of men.
- The study suffers from the 'sample selection bias' as it only covers the Commercial Worker's Union of Reykjavík (VR), which is not comprehensively representative of the private sector. Moreover, the youngest age group is under-represented among the respondents. In addition, the response rate is low and information about earnings may be inaccurate as it is based on self-reported information provided by the respondents.
- The studies lack a discussion of the detail of classification of variables such as occupation, education etc. The more detailed the classification of a variable is the greater its explanatory power. It is therefore of great importance that authors clearly state the classification of control variables.
- Along with the adjusted pay gap, the study also presents the gender pay gap without adjusting for different working hours of those in full-time work. This type of information is missing in studies of the other countries. In Iceland, there is a culture of long working hours and difference in work time of men and women is seen as the outcome of unequal gender division of paid and unpaid work in Iceland.

Sigurður Jóhannesson, Institute of Economic Studies at the University of Iceland (2004)

In a report on the economic power of women in Iceland, Jóhannesson analysed the gender wage gap using data from the Labour Market Institute. This data covered 16,500 individuals employed in 108 business enterprises and municipalities, across the whole labour market, apart from those who are employed at the central government level and in the municipality of Reykjavik. The pay construct used in this study was *fixed*

salary, including basic salary and bonuses, as well as food and tool-supplements for basic salary. Moreover, the earnings of part-time employees were converted into full-time earnings. According to this study, the total gender wage gap (entirely uncorrected) for fixed salary was 32% in the public sector in 2001. The results of the regression analysis are presented in Table 5.10.

Table 5.10. Regression analysis of women's and men's fixed salary in the public sector (Log percentages)

	Fixed salary
Unadjusted gender pay gap	**32**
Marital status (5)	0
Children (4)	0
Supervision (2)	1
Apprenticeship	2
Type of wages (4)	1
Fixed earnings	2
Experience	0
Age	0
Age squared	0
Countryside	0
Occupation (61)	2
Industry (60)	13
Explained gender pay gap	**21**
Unexplained gender pay gap	**11**

Source: Jóhannesson 2003

After adjusting for a number of variables, e.g. marital status, children, supervision, education, type of wages, period at present workplace, age, region, occupation and industry, the pay gap decreased to 11%. According

to Jóhannesson, what remains of the gender pay gap is accounted for by, among other things, marriage and children, as these factors affect the earnings of women and men differently.

Advantages and limitations:

- A limitation of this study is that the pay construct, fixed salary, did not include irregular additional payments, which are more often an important part of men's earnings than women's in Iceland. Moreover, since this was the only pay construct studied, the impact of different pay constructs on the gender pay gap is not elaborated on in this study.
- The study calculates the gender wage differentials as the ratio of female wages to male wages. The average earnings of women are reported as a proportion of the average earnings of men. This is a limitation of the study since it uses the earnings of men as a reference point. Thus, the question is not being answered about by how many percentage points the earnings of women have to increase to be equal to that of men. As women earn on average less than men this results in a narrower gap compared to that of using the earnings of women as a point of reference.
- A limitation of the study is that it does not include employees of banks, state employees and those working for the city of Reykjavík.
- The study includes a wide range of control variables without any discussion of their theoretical grounding.
- Similarly, the classification of control variables is far reaching. For example, occupation is classified into 61 categories and industry into 60 categories.
- It is stated that the rest of the remaining gender wage gap is accounted for by marriage, children and other factors affecting the earnings of men and women differently. This statement reveals the underlying assumption of unobservable characteristics contributing to alleged productivity. This is neither discussed nor justified theoretically.
- The model is poorly discussed and illustrated in the report.

Heiður H. Jónsdóttir and Kristjana Stella Blöndal (2004), Social Science Research Institute at the University of Iceland

The Social Science Research Institute conducted a comparable study to those conducted for the Commercial Workers' Union of Reykjavík. They examined members of three different unions of employees working in the public sector: the Association of Academics (BHM), the Confederation of State and Municipal Employees (BSRB) and the Icelandic Teacher's Union (KÍ). A sample of 3,500 members of these unions received the questionnaire of which half (50%) returned the questionnaire. Although this is rather low response rate, an analysis of the group of respondents revealed that it is representative for the member populations of the respective unions, apart from the youngest group in the Confederation of State and Municipal Employees, 34 years old or younger, who were relatively under-reported. According to Jónsdóttir and Blöndal, it is likely that the youngest group includes a relatively greater number of individuals employed on an irregular basis or newly employed who therefore do not consider themselves to be active union members. Moreover, using survey-data as opposed to register-data may include less accurate information on wages than the latter, as it is based on self-reports. The analysis is based on employees working 70% or more of full-time work. The earnings of those working less than full-time are converted into full-time earnings.

The total wage differentials among full-time workers are presented independent of actual hours worked (see Table 5.11). The gender pay gap is studied on the basis of two different wage constructs: *fixed monthly earnings* and *gross monthly earnings*. Whereas fixed monthly earnings refers to the regular salary, gross monthly earnings includes fixed monthly earnings as well as all other pay supplements. According to the results, the unadjusted pay gap in terms of gross monthly earnings was 28% in 2004, while fixed monthly earnings was 10% during these years. After adjusting for occupation, education, age, overtime and shift compensation, the pay for gross monthly earnings 17% and 7% for fixed monthly earnings.

Table 5.11. Regression analysis of women's and men's earnings among members of three different unions (Percentages)

	2004	
	Total monthly earnings	**Fixed monthly earnings**
Unadjusted gender pay gap	**28***	**10**
Occupation (6)	x	x
Education (6)	x	x
Age in years	x	x
Overtime	x	x
Shift compensations	x	x
Explained gender pay gap	**11**	**3**
Unexplained gender pay gap	**17**	**7**

x = Variables included in the model
* Not adjusted for actual hours of work
Source: Jónsdóttir et al. 2004

Advantages and limitations:

- This study applies the same methodology as the other studies of the Social Science Research Institute at the University of Iceland. The pay construct studied is gross earnings, including both regular as well as irregular supplements. As supplement pay has been found to be unevenly distributed among women and men, especially in Iceland where it tends to be more often a part of the earnings of men, this is a clear advantage of the study. Moreover, as two different pay constructs are analysed, the study has the advantage of elaborating on their relative impact regarding the size of the gender pay gap.

- Along with the adjusted pay gap, the study also includes the total pay gap for the same reasons as in other studies from the Social Science Research Institute.
- Another advantage of this study is that it calculates the gender pay ratio on the basis of women's earnings. By using the earnings of women as a reference point we answer the question of how many percentage points we have to increase the earnings of women in order to be equal to that of men, instead of asking how much we would have to decrease the earnings of men to be equal to that of women, as would be the case of we divided the difference by the earnings of men.
- The groups included in the study are not representative for the public sector as it only covers three public employees' federations, although these are the largest ones. The response rate is low and information about earnings may be inaccurate as the study is self-reported by the respondents and not based on registry-data.
- As with the former studies conducted at the institute, the report lacks a discussion of how detailed the classification of variables is, such as occupation, education etc.

5.4 Studies on the adjusted gender pay gap in Norway

Erling Barth, Marianne Røed and Hege Torp (2002), Institute for Social Research, Oslo

In a report prepared for the European study *Towards a Closing of the Gender Pay Gap* (2001-2003), funded by the European Commission's Community Framework Strategy on Gender Equality (2001-2005), estimates of the adjusted gender pay gap in Norway are presented. As Table 5.12 shows, three different sources of data were obtained from Statistics Norway. Data sources 1 and 2 came from the Register of Employers and Employees in 1991 and 1997. Data 1 was based on all employees, regardless of hours of work and Data 2 was based on employees with more than 30 hours of work per week, but it was not adjusted for variations in hours above this level. Finally, Data 3 was based on self-reported earnings information from Level of Living Survey in 1991 and 2000, where information on actual hours of work was available.

As Table 5.12 shows, the gender pay gap calculated on the basis of the gross wages for all employees was 35% on average for the year 2000 at the advantage of male employees, whereas it was 24% among those working more than 30 hours a week. These results show that a considerable part of the gap can be explained by men working longer hours than women on average. Moreover, controlling for experience, seniority and years of education did not result in reduction of the gender pay gap, whereas controlling for actual hours of work reduced the gap somewhat. According to the authors, the pay gap was estimated to be 24% in the private sector and 12% in the public sector in the year 2000, and the adjusted gender pay 16% (private sector) and 8% (public sector).

Barth et al. further analysed private and public sector separately using data from the Level of Living Survey covering the period 1980-2000 and found that years of education, experience and experience squared accounted for around 25-30% of the pay gap in each sector. They concluded that the pay gap was slowly decreasing, and the adjusted gender pay gap was decreasing at a somewhat higher speed.

Table 5.12. Estimates of the gender pay gap and adjusted gender pay gaps in Norway in 1990 and 2000, based on different sources of data (Percentages)

	1990			**2000**		
	Data 1	**Data 2**	**Data 3**	**Data 1**	**Data 2**	**Data 3**
Unadjusted gender pay gap	**-36**	**-24**	**-21**	**-35**	**-24**	**-20**
Experience		x	x		x	x
Seniority		x	x		x	x
Years of education		x	x		x	x
Working hours			x			x
Explained gender pay gap	**-**	**0**	**3**	**-**	**-1**	**5**
Unexplained gender pay gap	**-**	**-24**	**-18**	**-**	**-25**	**-15**

Source: Barth et al. 2002

Advantages and limitations:

- An advantage of this study is that it examines the impact of different hours of work on the gender pay gap.
- The authors state that the pay concept under study is gross earnings, but do not discuss it further. For example, it is not clear whether irregular pay supplements are included or not. Moreover, they do not analyse the gender pay gap according to different definitions of pay.
- The study calculates the gender wage differentials as the ratio of female wages to male wages. The average earnings of women are reported as the proportion of the average earnings of men. This is a limitation of the study since it uses the earnings of men as a reference point. Thus, the question is not being answered about by how many percentage points the earnings of women have to increase to be equal to that of men. As women earn on average less than men this results in a narrower gap compared to that of using the earnings of women as a point of reference.
- The data used in the study is of different quality. Data 3 is based on self reported wages and hours of work. Information on response rate is missing.
- Overall, few control variables are included in the model, probably due to lack of data. This can be considered an advantage of this study. For example, occupation and industry are not controlled for, but they have a large explanatory power in other studies.
- As variables, such as occupation, industry and type of education, are not adjusted, the problem of classification of variables is not a concern in this study.

Erling Barth and Harald Dale-Olsen (2004), Institute for Social Research, Oslo

Barth and Dale-Olsen studied the development of gender differences in earnings from 1970 to 2001. The gender pay gap was calculated on the basis of three different sources of data. The data sources applied are for the most part sub-samples, prepared for research purposes, based on the earnings and income surveys conducted at Statistics Norway. The analysis conducted for the time period 1973-1997 is based on the Income and Earnings Surveys (Inntekst- og Formueundersøkelser: Data 1 – see Table 5.13), whereas the analysis in the period 1997-2001 is based on the Wage

Statistics from Statistics Norway, including all full-time employees in the public sector and over half of those employed in the private sector (Data 3) and Life Conditions Survey (Levekårsundersøgelserne: data 2), including a representative sample. The results cover employees aged 20-60 years. In Data 1 (see Table 5.14) the adjusted gender pay gap was presented as an average woman's yearly earnings as percentage of a man's adjusted for education, experience (and experience squared). In Data 2 and 3, the adjusted gender pay gap is presented on the bases of hourly earnings adjusted for the same factors as in Data 1.

The results of the regression analysis show that gender pay gap reduced considerably during the period 1973-1997. Whereas the yearly earnings of women were 45% less than those of men in 1973, this proportion was 34% in 1997. Calculating the hourly earnings based on the same data, Barth and Dale-Olsen reported a difference of 23% in 1997. Using other sources of data (Data 2 and 3) they reported a difference of the adjusted gender pay gap of 13-14% in 1997 and 14-16% in 2000-2001. According to the authors, the reduction in the gender pay gap during the time period can be explained partly in terms of women's increased job activity over the year (number of working weeks), partly in terms of their increased hours of work per week, and partly in terms of women's increased hourly earnings. The authors speculate on the possible explanations for this development and conclude that the increased participation of women in the labour market as well as their increased level of education and working hours has resulted in the narrowing of the gender pay gap up to a certain point, but since about 1985 there has been a relative stagnation in the narrowing of the gap.

Table 5.13. Overview of the adjusted gender pay gaps in Norway in the period of 1997-2001, based on different sources of data (Percentages)

Year	Data 1: Yearly earnings	Data 2: Hourly earnings	Data 3: Hourly earnings
1973	-46.6		
1976	-42.8		
1979	-41.0		
1982	-37.0		
1984	-36.2		
1985	-36.1		
1986	-39.2		
1988	-37.3		
1989	-34.8		
1990	-37.1		
1992	-32.5		
1993	-33.7		
1994	-32.5		
1995	-33.5		
1996	-32.3		
1997	-34.1	-13-13.5	-13.1
1998			-13.5
1999			-14.0
2000		-15.5	-13.6
2001			**-13.7**

Source: Barth and Dale-Olsen 2004

Advantages and limitations:

- The main advantage of this study is that it gives an overview of the changes in the size of the gender pay gap over a 30 year period.

- The definition of either yearly or hourly earnings is unclear. It is not clear from reading the report whether gross earnings or net earnings (without overtime payments) are being used or if the hourly earnings are based on collectively agreed hours or actual hours of work.
- The study calculates the gender wage differentials as the ratio of female wages to male wages. The average earnings of women are reported as the proportion of the average earnings of men. This is a limitation of the study since it uses the earnings of men as a reference point. Thus, the question is not being answered about by how many percentage points the earnings of women have to increase to be equal to that of men. As women earn on average less than men this results in a narrower gap compared to that of using the earnings of women as a point of reference.
- The coverage of the different data sets is insufficiently accounted for. Overall, the data can be said to represent the Norwegian labour market to a large degree.
- Few control variables are included in the model, which can be considered an advantage. For example, occupation and industry are not controlled, but they have a large explanatory power in other studies.
- As variables, such as occupation and industry, are not adjusted, the problem of classification of variables is not of concern in this study.

Pål Schøne (2004), Institute for Social Research, Oslo

In a study on the development of pay differentials in the Norwegian public and private sectors, Schøne calculated the adjusted gender pay gap based on data from the Wage Statistics of Statistics Norway, including all employees in the public sector and a large part of individuals employed in the private sector. The analysis is based on full-time employees. The pay construct *hourly earnings* (timeløn) was calculated based on fixed monthly earnings, plus bonuses and other fixed and varied pay divided by the normal hours of work (collectively agreed hours). Table 5.14 shows the estimates of the gender pay gap after adjusting for experience and education. As can be seen, the pay gap was greater in the private sector than in the public sector. Moreover, the gender pay gap was found to be relatively stable in both sectors during the time period observed. Whereas

women in the private sector earned on average 13-14% less per hour than men in their sector, women in the public sector earned about 9% less than the men in the public sector when adjusted for work experience and education. Education explained more of the gender pay gap than experience, and it explained more of the pay gap in the private sector than in the public sector. Moreover, education was found to explain slightly more of the pay gap by each year.

Table 5.14. Estimates of the adjusted gender pay gap in terms of hourly earnings in Norway in the period 1997-2001 (Log percentages)

	Public sector					Private sector				
	1997	**1998**	**1999**	**2000**	**2001**	**1997**	**1998**	**1999**	**2000**	**2001**
Unadjusted gender pay gap	**14.7**	**14.3**	**14.6**	**15.0**	**15.3**	**22.9**	**23.8**	**23.4**	**23.4**	**23.0**
Experience	1.4	1.3	1.2	1.2	1.4	2.7	2.7	2.6	2.5	2.6
Experience squared	-0.02	-0.02	-0.02	-0.02	-0.02	-0.04	-0.04	-0.04	-0.04	-0.04
Education	4.5	4.4	4.5	5.0	5.2	6.8	6.9	6.9	7.0	7.1
Explained gender pay gap	**5.9**	**5.7**	**5.7**	**6.2**	**6.6**	**9.5**	**9.6**	**9.5**	**9.5**	**9.7**
Unexplained gender pay gap	**-8.8**	**-8.6**	**-8.9**	**-8.8**	**8.7**	**-13.4**	**-14.2**	**-13.9**	**-13.9**	**-13.3**

Source: Schøne 2004

Schøne further reported that the gender pay gap seemed to widen with more experience across all sectors, including the private, local and governmental sector. Similarly, it was found to widen with more education in the private and local sectors. The largest difference between the hourly earnings of men and women was among those with high level of experience and education in the private sector.

Advantages and limitations:

- The study illustrates clearly what impact both sector and education have on the gender pay gap, and to what extent these two factors are interrelated. In addition, the study illustrates how the gender pay gap has developed during recent years according to these factors.
- The pay construct studied is gross earnings, including both regular as well as irregular supplements. This is a clear advantage of the study as supplement pay may be unevenly distributed among women and men. However, the gender pay gap is only studied according to one pay construct. The impact of different definitions of pay is not examined.
- The study calculates the gender pay ratio on the basis of men's earnings. This is a limitation of the study since it uses the earnings of men as a reference point. Thus, the question is not being answered about by how many percentage points the earnings of women have to be raised to be equal to that of men. As women earn on average less than men this results in a narrower gap compared to that of using the earnings of women as a point of reference.
- The study can be said to cover the Norwegian labour market, apart from the fact that part-time employees are excluded.
- Overall, few control variables are included in the model, possibly due to lack of data. For example, occupation and industry are not controlled, but they have a large explanatory power in other studies. This can, however, be seen as an advantage of the study.
- As variables, such as occupation and industry, are not adjusted, the problem of classification of variables is not of concern in this study.

5.5 Studies on the adjusted gender pay gap in Sweden

James Albrecht, Anders Björklund and Susan Vroman (2001), the Institute for the Study of Labour (IZA), Bonn

Albrecht et al. found that the gender log wage gap increased throughout the wage distribution and accelerated in the upper tail of the distribution. The authors refer to this as the glass ceiling effect, e.g. a glass ceiling on women's wages in Sweden. Using data for 1998 from Statistics Sweden, based on a nationally representative random sample of 300,000 people of all ages who were followed over time and complemented with new immigrants and newly born individuals, the unadjusted gender pay gap was found to range from 5% at the 5th percentile of the wage distribution, 13% at the median and 39% at the 95th percentile of the wage distribution. The analysis is based on quantile regressions for *monthly earnings for full-time equivalents*, where the gender pay gap is presented across different percentiles of earnings (see Table 5.15). Overall, the gender pay gap reduced considerably, depending on the control variables adjusted. However, although adjusting for different factors in different models the gender pay gap remained relatively narrow and stable at the lower end of the wage distribution whereas it remained much higher at the top-end of the distribution. For example, after adjusting for age, education, immigrant status, education fields, sector, industry and occupation, the gender pay gap was reduced by about 2 percentage points to 3% at the 5th percentile of the wage distribution, whereas it reduced somewhat at the median to 5% and considerably at the 95th percentile of the wage distribution, or to about 9%.

The authors concluded that the glass ceiling of women's wages was confirmed by the extremely large gap between men and women at the top of the wage distribution, especially since the average gender pay gap in Sweden is quite small by international standards. This pattern was not reported in comparable analyses for immigrants and non-immigrants in the Swedish labour market as well as for the U.S. labour market. Thus, it was concluded that the results suggest that a gender-specific mechanism in the Swedish labour market hinders women from reaching the top of the wage distribution. Moreover, an analysis of data at other points in time showed that the glass ceiling in Sweden was much more pronounced in the 1990s than was earlier the case.

Table 5.15. Overview of estimated gender pay gaps for monthly earnings for full-time work in 1998 (Log percentages)

	Percentiles						
	5th	**10th**	**25th**	**50th**	**75th**	**90th**	**95th**
Unadjusted gender pay gap	**-4.8**	**-6.5**	**-9.8**	**-13.3**	**-19.8**	**-33.6**	**-38.7**
1. Adjusted gender pay gap: *Age, age-squared, education (7) and immigrant*	-5.9	-7.9	-11.5	-15.8	-21.1	-26.6	-29.3
2. Adjusted gender pay gap: *Age, age-squared, education (7), immigrant and field of education*	-5.3	-6.9	-10.0	-13.4	-17.7	-22.1	-25.4
3. Adjusted gender pay gap: *Age, age-squared, education (7), immigrant, field of education and sector*	-5.0	-6.5	-8.5	-11.3	-15.0	-18.0	-20.6
4. Adjusted gender pay gap: *Age, age-squared, education (7), immigrant, field of education, sector and industry*	-4.8	-5.5	-7.1	-10.1	-13.8	-16.8	-18.5
5. Adjusted gender pay gap: *Age, age-squared, education (7), immigrant, field of education, sector, industry and occupation*	-2.6	-3.8	-5.1	-5.4	-8.0	-8.0	-8.6

Source: Albrecht et al. 2001

Advantages and limitations:

- The study illustrates very clearly the importance of taking the overall wage structure into account. This is one of the major advantages of the study.
- The awareness of the gendered divisions of the Swedish labour market illuminates how variables can pick up previous discrimination.
- A sharp focus and a targeted comparison with the labour market in the US results in a comprehensive understanding of the glass-ceiling women face in the Swedish labour market.

- The definition of monthly earnings is not clearly stated in the report. It is unclear whether it represents gross or net monthly earnings.
- The calculation of the gender pay ratio is not clearly stated, which can be regarded as a limitation of this study. As already discussed, the size of the gender pay gap is partly dependent on whether the earnings of men or women are used as a reference point.
- The study has the advantage of being representative for the labour market in Sweden, covering both full-time and part-time workers.
- The choice and classification of control variables can be criticised to some extent. However, the size of the adjusted gender pay gap is less debatable when the explanatory power of relevant control variables is presented separately from that of variables, which are obviously debatable in terms of representing productivity differences. In that way it is possible to account for the relative impact of the latter variables separately.

Carl Le Grand, Ryszard Szulkin and Michael Tåhlin (2001)

In a study of the development of the wage structure in Sweden, Le Grand et al. analysed data on the basis of the Level of Living Survey (Levnadsnivåunder-sökningarna) in 1968, 1974, 1981, 1991 and 2000. The analysis is based on employees aged 19-65 with 10 or more hours of work per week. The pay construct used was *gross hourly earnings* based on normal working hours (collectively agreed). Table 5.16 gives an overview of the development of the adjusted and unadjusted gender pay gap for the total labour market, as well as for each sector. In calculating the adjusted gender pay gap, years of education and work experience were applied as explanatory variables. According to the findings of the study, the gender pay gap reduced considerably in the 1960s and 1970s, from 29% in 1968 to 17% by 1981 to the advantage of men. The gender pay gap remained rather stable in the 1980s and reduced slightly in the 1990s. However, the adjusted gender pay gap has increased steadily since the 1980s.

Table 5.16. Overview of the development of the gender pay gap for gross hourly earnings (Percentages)

	1968	1974	1981	1991	2000
Total					
Unadjusted gender pay gap	28.5	22.1	16.8	17.6	15.5
Explained gender pay gap	4.6	3.6	3.5	1.8	-0.9
Unexplained gender pay gap	**23.9**	**18.5**	**13.3**	**15.8**	**16.4**
Public sector					
Unadjusted gender pay gap	30.1	23.1	16.7	16.1	15.5
Explained gender pay gap	9.0	7.3	6.0	4.9	2.9
Unexplained gender pay gap	**21.1**	**15.8**	**10.6**	**11.2**	**12.6**
Public sector					
Unadjusted gender pay gap	32.6	24.9	19.1	18.4	13.8
Explained gender pay gap	5.2	3.9	4.3	2.8	-0.2
Unexplained gender pay gap	**27.4**	**21.0**	**14.8**	**15.6**	**14.0**

Source: Le Grand et al. 2001

In a further analysis of the gender pay gap, Le Grand et al. studied the effects of variations in observable characteristics (education and work experience) as well as structural factors, i.e. differences in reward to those characteristics, by using the Juhn-Murphy-Pierce decomposition method. Based on the results of the decomposition analyses, Le Grand et al. concluded that although the differences between women and men in terms of level of education and work experience had diminished over the last two decades, the wage dispersion had increased. Since women tend to be relatively concentrated at the lower end of the wage dispersion, this widening of the wage dispersion has absorbed the effects of an increased level of education and work experience, which has basically resulted in the enlargement of the adjusted gender pay gap (adjusted for education and experience) in the 1990s. The authors mention several possible explanations for these results, such as increased discrimination against women, potential wage-setting factors becoming more important, inflation of pay among executives where women are underrepresented, women

having similar length of education as men but a different field of education that is less rewarded etc. Accordingly, the causes of the negative effect of the changes in the pay structure for women should be approached in future studies.

Advantages and limitations:

- The study illustrates clearly the advantages of the Juhn-Murphy-Pierce decomposition method and stresses the importance of investigating the wage structure.
- Apart from taking the overall wage structure into account, another major advantage of this study is that it investigates the development of the gender pay gap over time.
- In accordance with our recommendation, the study used gross hourly earnings but is based on normal working hours instead of paid hours. However, the study analysis only this one pay construct. Studies have shown that some of the variations in the estimated size of the gender pay gap may be attributed to definitions of pay and earnings. As a result using more than one definition of pay would be an advantage.
- The study calculates the gender pay ratio on the basis of men's earnings. This is a limitation of the study since it uses the earnings of men as reference point. Thus, the question is not being answered about by how many percentage points the earnings of women have to be increased to be equal to that of men. As women earn on average less than men this results in a narrower gap compared to that of using the earnings of women as a point of reference.
- The study has the advantage of covering a large part of the Swedish labour market.
- The study has the advantage of adjusting only for variables commonly associated with productivity, i.e. years of education and experience.
- As years of education and experience are the only control variables applied in the study the problem of a far-reaching classification of control variables in not of concern.

Matz Johansson, Katarina Katz and Håkan Nyman (2001)

In another study on the development of the Swedish gender wage gap over the last decades, Johansson et al. analysed a sub-sample of the Swedish Household Income Survey (HINK), conducted annually since 1970s. The data consists of 3,400-5,600 respondents 20-64 years of age, reporting any labour related income, but self-employed, farmers, full-time students, agricultural, forestry and fishery workers were excluded. The pay construct used was *wages per hour*, but according to the authors, the construct was defined somewhat differently during the time period of 1981-1991 compared to the period 1993-1998. Whereas in the former period it was not possible to calculate hourly wages on the basis of actual hours worked, this was possible for the latter period. This means that absences due to sickness, parental leave or holidays are included in the working time for the former period but not for the latter.

According to the findings of Johansson et al. (see Table 5.17), the gender pay gap was between 15-20% up until 1989, when there was a relatively sharp increase in the gap, ranging between 20-25% in the 1990s. Johansson et al. further analysed the gender pay gap by adjusting for several factors. The following factors were applied in the regression analysis: age, age squared, education (4 categories), blue-collar work, white-collar work, industry (8 categories), region (6 categories), sector (3 categories), citizenship (3 categories), and percentage of females in occupations. After adjusting for these factors, the gender pay gap reduced considerably.

Table 5.17. Overview of estimated gender pay gaps for hourly earnings (Percentages)

Year	Unadjusted gender pay gap	Explained gender pay gap	Unexplained gender pay gap
1981	18.3	9.5	8.8
1982			
1983	14.4	6.7	7.8
1984	15.0	7.7	7.3
1985	17.0	11.1	5.8
1986	15.0	6.5	8.5
1987	15.6	2.9	12.7
1988	18.0	9.3	8.7
1989	16.4	6.6	9.8
1990	21.1	9.7	11.4
1991	19.2	9.4	9.8
1992			
1993	23.0	12.1	10.9
1994	21.9	11.0	10.8
1995	24.5	12.9	11.6
1996	23.5	12.0	11.5
1997	21.8	11.5	10.4
1998	22.8	11.5	**11.4**

Source: Johansson et al. 2001

According to the authors, the adjusted gender pay gap seems to be more stable over time than the total gender wage gap. '*When endowments are evaluated according to the male wage function, a gender gap of 6-9% is unexplained in 1981-91 and of 10-11% in 1993-1998. When the female wage function is used, the 'discrimination term' corresponds to a gender gap of 11-15% in 1981-91 and 15-19% in 1993-98. Thus, in these terms we see an increase in the gender wage gap over time despite some convergence in observed characteristics which, all else equal, would have decreased it. This agrees with other studies of the 1980s and 1990s*'. The authors conclude that the difference between the adjusted and unadjusted

pay gap has increased over the period, which they attribute to changes in the wage structure. This means that the decrease in the gender pay gap (due to convergence in education and experience) is counteracted by changes in the wage structure.

Advantages and limitations:

- A major advantage of this study is that it investigates the development of the gender pay gap over time.
- The wage construct is not the same for the whole period. The wage gap increases after 1992, but would have increased even more if the same definition of working hours had been applied. Thus, absences due to sickness, parental leave or holidays are included in the working time for the former period but not for the latter. This makes the comparison over time complicated, as the pay gap is sensitive to the definition of the pay construct. This is especially important for comparisons over time and raises questions about the conclusions.
- Another advantage of this study is that it the gender wage differentials are expressed as a percentage of women's earnings. By using the earnings of women as reference point we answer the question of how many percentage points we have to increase the earnings of women in order to be equal to that of men, instead of asking how much we would have to decrease the earnings of men to be equal to that of women, as would be the case of we divided the difference by the earnings of men.
- Apart from the self-employed, full-time students, farmers, agricultural workers and employees working in forestry and fishing, the data covers the entire Swedish labour market.
- The choice of variables is not sufficiently justified. It is questionable whether variables, such as industry, region, sector, citizenship, and percentage of females in occupations, are relevant when it comes to presenting the size of the adjusted gender pay gap.
- Apart from adjusting for some questionable variables, in terms of adjusting for variations in productivity related factors, the classification of variables is, however, acceptable.

Statistics Sweden (2004)

In a study on gender pay differentials in Sweden the adjusted gender pay gap was 8%. The study, based on the Wage Statistics of Statistic Sweden, is representative for the whole Swedish labour market. It includes all employees working in the public sector and a stratified sample of around half of those employed in the private sector. The pay construct under study was *monthly earnings* (månedslönn) in 2001, including fixed salary as well as varied extra pay and supplements, such as performance-based supplements, provision, agreed bonuses and profit-based supplements, as well as fixed pay supplements, such as individually negotiated extra pay based on supervisory functions shift-compensations, etc. The analysis was based on full-time work, meaning that the earnings of part-time workers were converted into full-time earnings. The analysis covered employees in the age group 18-64. The adjusted and unadjusted gender pay gap for different subgroups of the labour market is presented in Table 5.18. As the table shows, women earn on average 18% less than men on monthly basis. However, the gender pay gap varies considerably depending on which sub-group is examined. The gender pay gap was largest in occupations and industries with great wage dispersions, or 27-28%. The findings of this study indicate that the gender pay gap is relatively narrow in occupations dominated by men in Sweden, or around 3%. The gap in occupations dominated by women was also relatively small, or around 4%.

In calculating the adjusted gender pay gap, the following factors were adjusted: age, full-time or part-time work (3 categories), firm size (5 categories), region, sector, education (6 categories), industry (56 categories) and occupation (113 categories). After adjusting for these factors the gender pay gap reduced considerably for the total labour market, as well as for most of the sub-groups under study. However, the gender pay gap in the male-dominated occupations increased after adjusting for these factors, or from 3% to 10%. These results mean that in this group the women possess on average more of the characteristics that have positive effects on wages.

Table 5.18. Regression analyses of full-time equivalent monthly earnings in 2001 (Percentages)

	Gross monthly earnings
Unadjusted gender pay gap	**17.6**
Age	x
Full-time or part-time employment (3)	x
Firm size (5)	x
Stockholm	x
Sector	x
Educational level (6)	x
Industry (56)	x
Occupation (113)	x
Explained gender pay gap	**9.5**
Unexplained gender pay gap	**8.1**

Source: Statistics Sweden 2004

Advantages and limitations:

- The study calculates the gender pay ratio on the basis of men's earnings. This is a limitation of the study since it uses the earnings of men as reference point. Thus, the question is not being answered about by how many percentage points the earnings of women have to be raised to be equal to that of men. As women earn on average less than men this results in a narrower gap compared to that of using the earnings of women as a point of reference.
- An important advantage of this study is that it covers the whole labour market of Sweden, including full-time as well as part-time workers.
- The choice of variables to control can be criticized. It is questionable whether variables such as sector, industry, region,

and firm size are relevant when adjusting gender pay gap for different productivity.

- The more detailed the classification of a variable is the greater is the explanatory power of it. The classification of some variables is far-reaching as education is broken into 56 categories, occupation into 113 categories and firm size into five categories. The more detailed the classification of variable the more of the discrimination it may pick up and lead to underestimation of the adjusted gender pay gap.

The Confederation of Swedish Enterprise (SN) (2004)

The Confederation of Swedish Enterprise conducted a study on the adjusted gender pay gap. The confederation is an interest organisation representing close to 54,200 Swedish companies covering 70% of the Swedish private sector. Yearly, the confederation collects information among the member businesses representing the wages of the 1.5 million employees aged 18-64, covered by the federation. The analysis is based on wage information for September 2004. The definition of earnings among skilled employees (tjänestemän) included normal monthly wages, benefits and commissions (provision, tantiem), whereas among workers (arbetare) it included hourly wages, including performance related pay (accord), shift and holiday payments.

Table 5.19. Overview of estimated adjusted gender pay gap for monthly earnings (Percentages)

	All	Skilled employees	Workers
Unadjusted gender pay gap	**14.4**	**21.9**	**10.6**
1. Occupation (4 digits)	6.2	10.9	5.8
2. Occupation (4 digits) and age (6)	6.3	11.2	6.4
3. Occupation (4 digits), age (6) and education (2 - 4 digits)	7.0	11.9	7.3
4. Occupation (4 digits), age (6), education (2 - 4 digits) and firm	9.6	15.5	8.4
Explained gender pay gap	**7.0**	**15.5**	**8.4**
Unexplained gender pay gap	**4.8**	**6.5**	**2.2**

Source: The Confederation of Swedish Enterprise (SN) 2004

The results show that the gender pay gap narrowed considerably when adjusted for occupational group, age, education and at which firm people were employed. According to the authors, presenting the adjusted gender pay gap at a firm level is of great importance as wage discrimination is only possible within a workplace. The authors state that the gap could be further reduced by adjusting for other factors that influence wages, such as level of difficulty, job turnover rate, financial responsibility, number of subordinates, previous work experience, the skills of the employed, etc.

Advantages and limitations:

- In accordance to our recommendations, earnings are in terms of monthly pay. However, the impact of different pay construct on the gender pay gap is not studied.
- The study calculates the gender pay ratio on the basis of men's earnings. This can be considered a limitation, since the question is not being answered about by how many percentage points the earnings of women have to be raised to be equal to that of men. As women earn on average less than men this results in a narrower gap compared to that of using the earnings of women as a point of reference.
- The covers a large part of the Swedish private sector, including both full-time and part-time employees.
- The choice of some of the variables is debatable. The relevance of the control variable firm should have been justified as a means of adjusting for productivity differences.
- The detailed classification of the control variables education and occupation, is of major concern in this study. Such unusually far-reaching classification is likely to pick up more and more of the variation in earnings in which some discrimination may be imbued and as a result lead to underestimation of the adjusted gender pay gap.

5.6 Conclusion

In the chapter we shed light on recent studies of the gender pay gap in the Nordic countries in the context of our discussion in Chapter 4, which was a critique on the widely used decomposition techniques. Unfortunately,

we were not able to find studies covering all five countries. In Chapter 4, we introduced basic assumptions of the Oaxaca-Blinder technique. The method is grounded, firstly, in the neo-classical notion of free choice; secondly, the assumption that individual characteristics reflect productivity, which leads to the third assumption, that productivity is believed to translate into pay. In the most far-reaching versions of the approach the overall structure of the labour market is taken for granted; it is assumed that the gendered occupational structure is the result of free choice and that employees are fairly rewarded. The problem – or the task - is to find the variables contributing to the employee's productivity. The search for 'unobservable individual characteristics' contributing to the gender pay gap has led, in many cases, to an uncritical application of the most varied control variables.

We found that the unadjusted gender pay gap, i.e. on that was only corrected for hours worked, ranged in the Nordic countries from 12-24% depending on sample selected, pay construct, data source and country (Iceland is not included here as in most Icelandic studies the hourly wage differentials are not presented separately, i.e. the size of the gender pay gap). The adjusted pay gap, or the unexplained gap, differed still more in the Nordic countries or from 2% to 18%, depending on technical details in the decomposition method, in addition to the sample selected, control variables, country etc. (Iceland is included in that comparison).

Overall, occupation has the greatest explanatory power, together with industry and sector. Personal characteristics such as education and work experience do not have large explanatory power, except in Norway. It has diminished in Finland and Sweden in recent years. The educational attainment of women in the Nordic countries has become more or less equal to that of men. However, personal characteristics tend to explain less and less of the overall gender pay gap as, for example, the widening of the wage dispersion which has cancelled out the positive earnings effect of increased educational and work experience. The gender pay gap has been found to be largest at the top-end of the wage distribution, i.e. among the highly educated. The importance of occupation and tenure (years of career) in explaining the gender pay gap indicates that there seems to be more 'good jobs' available for men than for women. All this indicates the growing importance of other factors than personal characteristics, such as the institutional and societal factors, for example wage structure, in explaining the existence of the gender pay gap as discussed in Chapter 4.

Many of the studies adopt the underlying assumption of the neo-classical economics without any discussion. Hence, labour market features are assumed to be the playground for gender-neutral market forces, resulting in the fair distribution of rewards. Moreover, many of the studies rely on technically advanced statistical procedures, uncritically adopting a wide range of control variables that have been questioned by scholars. Often, the general assumption is that the gender pay gap can be explained, given that all variables are known. The problems discussed in the previous chapter, such as the theoretical groundings, the issue of free choice, questionable control variables, the problem of one variable picking up previous discrimination, and feedback effects, are rarely discussed.

The number of control variables in some studies far exceeds what is regarded as theoretically justified in the literature. It is well known that the larger the number of control variables, the more can be explained of the gender pay gap. For this reason, most studies use relatively broad classifications of around 6-12 categories (cf. Chapter 4). In the studies examined, many variables such as education, occupation and industry are broken into extremely detailed categories. For example, in one of the studies reviewed occupation is broken down to as many as 368 categories.

The differences of the studies examined are so large that any simple comparison of the unadjusted and the adjusted pay gap would be unrealistic. The results have to be considered in a wider context. Our discussion has attempted to shed a light on the advantages and the shortcomings of the studies chosen.

The criteria put forward at the beginning of the chapter involve several recommendations concerning the study of the adjusted gender pay gap. Firstly, it is of great importance to clarify accounts of the pay construct under study. In the review of the studies above, we have become aware that different studies use different definitions of pay and that studies using more than one pay construct report different sizes of the gender pay gap depending on the construct. In order to make comparisons across countries we have recommended the use of gross monthly pay as well as gross hourly pay (see the discussion in Chapter 2). Though this may not be possible in some cases, it is of major importance that researchers make an explicit account of the pay construct they use and are fully aware of what it involves regarding the presentation of the size of the gender pay gap.

Secondly, there is no consensus whether women’s or men’s earnings should be the reference point when calculating the gender pay gap. In our

view, women's earnings should be used as reference point. By doing that, we answer the question of how many percentage points we have to increase the earnings of women in order to be equal to that of men, instead of asking how much we would have to decrease the earnings of men to be equal to that of women, as would be the case if we divided the difference by the earnings of men. If this is considered to be too far-reaching change from what is currently practiced, then we recommend that the reference point is explicitly accounted for.

Thirdly, we recommend that studies on the adjusted gender pay gap take explicit account of the group being analysed, and that an emphasis should be put on studying the earnings of a fully representative group. Moreover, studies covering the total labour market of the respective countries are important, especially in terms of cross-country comparison.

Fourthly, we recommend that the choice and number of control variables is carefully considered, as well as how far-reaching the classification of these variables is. Similarly, researchers should distinguish carefully between variables that illustrate the sources of variation in wages, and those that are relevant in adjusting the gender pay gap for different productivity.

Fifthly, it is important to follow trends and patterns in the long term development of the gender pay gap over time, at both the aggregated level as well as the personal level.

Sixthly, comparative studies of the gender pay gap in the Nordic countries, as well as other in other countries, are necessary to highlight features of the Nordic labour markets. As personal characteristics account for less and less of the gender pay gap, a greater emphasis should be placed on capturing the effect of structural factors such as gender segregation and wage structure on the gap. Moreover, comparison of female and male dominated sectors clearly demonstrates the impact of gender segregation on the gender pay gap. Studies should try to capture the implications of gender segregated labour markets.

Finally, we recommend that researchers reflect on how their results will be interpreted and how they fit with the Gender Equality Acts of the Nordic Countries and the general ideas about gender equality in modern societies. One main criticism of decomposition techniques is that they only show correlations between variables, but are unable to manifest causal relationships. Moreover, they attempt to compare like with like. All the Nordic countries have adopted Gender Equality Acts implying "equal pay for work of equal value". Since studies of the adjusted gender pay

gap, based on decomposition techniques, are often used in the context of policy debate and policy making, we call for a wider discussion as to whether studies aiming at comparing "like with like" are consistent with the current legislation in the Nordic countries.

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5.8 Appendix

Advantages (A) and limitations (L) of studies conducted on the adjusted gender pay gap in the Nordic countries 2000-2005

			Critera for analysis of studies					
Year	**Name of report**	**Author(s)**	Definition of pay	Calculation of the gender pay gap ratio	Selection of sample	Choice and number of explanatory variables	Classification of explanatory variables	Other advantages/ limitations
Denmark								
2000	Lønforskelle mellem kvinder og mænd i Danmark	Pedersen, L. and Deding M., Danish National Institute of Social Research	A/L	A	A	L	L	
2001	Labour Market Report	The Confederation of Danish Employers (DA)	L	L	L	L	L	
2003	Women's and Men's Wages	The Danish Confederation of Trade Unions (LO) and The Confederation of Danish Employers (DA)	A/L	L	L	L	L	
2004	Mænds og kvinders løn: En analyse af løngabet 1997-2001	Deding, M. and Wong, K., the Danish National Institute of Social Research	A/L	A	A	L	L	

Year	Name of report	Author(s)	Critera for analysis of studies: Definition of pay	Calculation of the gender pay gap ratio	Selection of sample	Choice and number of explanatory variables	Classification of explanatory variables	Other advantages/ limitations
Finland								
2000	Similar education, Different Career and Wages? Comparison of the Gender Wage Differentials over Careers in Finland	Lilja, R.	L	L	A/L	L	A	A - the group of employees is followed over a 10 year period
2002	Gender wage differentials in the Finnish labour market	Vartiainen, J., Labour Institute for Economic Research	A/L	L	A/L	L	L	
2003	A Comparison Study of the Sectoral Gender Wage Gaps Between The Finnish IT and Retail Sectors 1995-1999	Laine, P.	A/L	L	L	A	L	

Year	Name of report	Author(s)	Critera for analysis of studies: Definition of pay	Calculation of the gender pay gap ratio	Selection of sample	Choice and number of explanatory variables	Classification of explanatory variables	Other advantages/ limitations
Iceland								
2001	VR's wage survey (Launakjör félagsmanna í Verzlunarmannafélagi Reykjavíkur 2000)	Guðmundsdóttir, H. and Blöndal, K. S., Social Science Research Institute at the University of Iceland	A	A	L	A	L	A - The totally unadjusted gender pay gap is presented (not adjusted for hours of work)
2003	VR's wage survey (Launakjör félagsmanna í Verzlunarmannafélagi Reykjavíkur 2003)	Dofradóttir, A. G. et al. Social Science Research Institute at the University of Iceland	A	A	L	A	L	A - The totally unadjusted gender pay gap is presented (not adjusted for hours of work)
2004	Efnahagsleg völd kvenna: Skýrsla nefndar um efnahagsleg völd kvenna	Jóhannesson, S., Institute of economic studies at the University of Iceland	L	L	L	L	L	
2004	HASLA: Starfskjarakönnun	Jónsdóttir, H. H. and Blöndal, K. S., Social Science Research Institute at the University of Iceland	A	A	L	A	L	A - The totally unadjusted gender pay gap is presented (not adjusted for hours of work)

Year	Name of report	Author(s)	Critera for analysis of studies: Definition of pay	Calculation of the gender pay gap ratio	Selection of sample	Choice and number of explanatory variables	Classification of explanatory variables	Other advantages/ limitations
Norway								
2002	Towards a closing of the Gender Pay Gap: Country report on pay differentials between Men and Women - Norway	Barth, E., Røed, M. and Torp, H., Institute for Social Research, Oslo	L	L	L	A	A	
2004	Lønnforskjellene mellom kvinner og menn i et 30 års perspektiv	Barth, E. and Dale-Olsen, H.	L	L	A	A	A	A - the size of the gender pay gap is measured over a period of 30 years
2004	Lønnforskjeller i offentlig og privat sektor	Schøne, P., Institute for Social Research, Oslo	A/L	L	A	A	A	
Sweden								
2001	Is There a Glass Ceiling in Sweden?	Albrecht, J., Björklund, A. and Vroman, S, The Institute for the Study of Labor (IZA), Bonn	L	L	A	A	A	A - the study illustrates the importance of studying the gender pay gap across different segments of the wage structure

Year	Name of report	Author(s)	Critera for analysis of studies: Definition of pay	Calculation of the gender pay gap ratio	Selection of sample	Choice and number of explanatory variables	Classification of explanatory variables	Other advantages/ limitations
Sweden								
2001	Lönestrukturens förändring i Sverige	Le Grand, C., Szulkin, R. and Tåhlin, M	A/L	L	A	A	A	A - the study takes into account the overall wage structure as well as investigating the development of the gender pay gap over time
2001	Wage differentials and gender discrimination - changes in Sweden 1981-1998	Johansson, M, Katz, K and Nyman, H.	L	A	A	L	A	A - the investigates the development of the gender pay gap over time
2004	Löneskillnader mellan kvonnor och män i Sverige: Ansatser till beskrivning med hjälp av den officiella statistiken	Statistics Sweden	A/L	L	A	L	L	
2004	Lika eller inte - om än och kvinnor i lönestatistiken	The Confederation of Swedish Enterprise (SN)	A/L	L	A	L	L	

6. Good practices to reduce the gender pay gap in the Nordic countries

Introduction

We often hear claims that the Nordic countries are the most gender equal societies in the world. Thus, in social science discourse, the "Nordic welfare model" and the "Swedish model" are often mentioned as best practices concerning gender equality (see e.g. Ólafsson and Stefánsson 2005).

According to a new report from the World Economic Forum (2005) the Nordic countries - Sweden, Norway, Iceland, Denmark and Finland - have the highest score among 58 countries in 2004, when the position of women's empowerment is estimated. The study measures the extent to which women have achieved full equality to men in five critical areas: economic participation, economic opportunity, political empowerment, educational attainment and health and well-being. However, the Nordic countries are no longer among the best performing countries when the gender pay gap measured as gross hourly pay in these countries is compared with the EU member countries. On this aspect of gender equality, the Nordic countries only reach an average position compared with EU member countries. In 2001, Italy, Portugal and Belgium had a smaller gender pay gap than the Nordic countries and the size of the gap in France is similar to that of Norway and Denmark, which have the smallest gap among the Nordic countries (see European Commission 2005 and Chapter 3).

The question that therefore arises is why the Nordic countries only reach an average position when it comes to closing the gender pay gap. Is it possible that measures aimed at reducing the gender pay gap have not been priorities or lack sufficient budget to be carried out or sanctions in case of default behaviour?

In this chapter, we will discuss measures that are considered to have had a positive impact on the gender pay gap in the Nordic countries. These measures can both be policies and institutional features. The aim is to facilitate a learning process whereby good practices such as laws and pay systems and their influence on the wage formation and the gender pay gap across the five Nordic countries will be examined. The measures

which we will discuss are the Gender Equality Acts, the centralised collective agreement system and the job evaluation and the way it is practiced in some of the Nordic countries. The Gender equality act in the Nordic countries will be examined in regard to provisions of equal pay for the same job or for a job of equal value, provisions of the Equality Plan and sanctions if the law is broken. Before we can describe the main features of good practices, we need to discuss the criteria used to select and evaluate them.

The method

The project group decided on nine criteria to identify good practices implemented in the Nordic countries aimed at tackling the gender pay gap during the last five years. These were:

1. The practice has had an impact on the gender pay gap.
2. The practice is in accordance with the goal of this project which is to collect information and statistics as well as to increase awareness of the gender pay gap.
3. The practice includes action programme/measures as opposed to good intensions.
4. The practice involves job evaluations.
5. The practice involves a law tackling the gender pay gap and is likely to have had impact on the gap.
6. The practice requires co-operation between different actors.
7. The practice cuts cross different sectors, occupations and enterprises.
8. The practice involves sanctions if not carried out.
9. The practice involves collective agreements on the gender pay gap which have a far reaching effect.

Experts in the area of gender equality across the Nordic countries were then asked to locate three to five good practices[30]. Good practices most

30 These were members of Nordic Council of Ministers' Committees on employment and gender equality (Ämbetsmannakommitten för arbetsmarknads och arbetsmiljöpolitik (ÄK-A) & Ämbetsmannakommitten för jämställdhet (ÄK-JÄM)) as well as the following experts: Ruth Emerek, Aalborg University, Denmark, Åsa Löfström, Umeå University, Sweden, Anna-Maija Lehto, Statistics Finland and Hege Torp, Social Research Institute, Norway.

often mentioned by these experts were the laws on gender equality plans, the collective agreement systems and job evaluation schemes. The experts were also asked to provide information on issues and aspects of the good practices which are listed in Table 6.1. Our intention was to use this information to evaluate the effectiveness and weakness of each of these practices. Unfortunately, very few practices have been evaluated.

Table 6.l. The context and content of measures to reduce the gender pay gap

Actors and stakeholders	Who are the main actors responsible for the development and the implementation of the practices? Who will benefit from the practices?
Institutional mechanism	Do the practices involve law, regulation, institution and/or a special committee?
Policy	Do the practices involve awareness raising, special measures, job evaluation projects, special clauses in collective agreements or national/regional/local action plans?
Aims and targets	Are specific aims and targets mentioned and, if so, how are they specified? Do they include time limits? What will happen if they are not achieved?
Levels of implementation	At what level are the practices implemented (e.g. national, regional, local or union level)?
Financing	Who finances the practices and what is the estimated cost?
Evaluation	Have the practices been evaluated and if so, by whom, how frequently and what are the main results?
Outcomes	What are the views of the relevant actors about the effectiveness of the practices?

In the following, we will try to evaluate the above mentioned aspects of gender equality plans as they appear in the Gender Equality Act of each of the five countries, the collective agreement systems in the Nordic countries and job evaluations. Finally, we will examine what implications advertising campaigns aimed at pay equality have had for the gender pay

gap. Experts in Iceland and Norway mention them as an important tool for raising awareness.

6.1 The Gender Equality Acts

All the Nordic countries have implemented Acts on Gender Equality, based on the EU directive 75/117/EEC concerning equal pay for men and women, which gives individuals the right to equal pay for the same work or work of equal value. However, a persistent gender pay gap exists across the Nordic countries, although this right has been valid for more than a decade (see Chapter 3). What can be done then? Are there some elements in the laws that prevent a narrowing of the gender pay gap? A comparison of Gender Equality Acts is not the main task of this project, but we need to look at those sections of the Acts which are believed to have implications for the gender pay gap. The Acts are the starting-point on which all projects aiming at closing the gender pay gap are based. Hence, we will in the following now examine and compare the Gender Equality Acts in the Nordic countries. Our focus will be on the obligation to pay equal pay for equal work or work of equal value, the equality plans and sanctions.

The aim of all the Nordic Gender Equality Acts is to establish and maintain equal status and equal opportunities for women and men. Both direct and indirect discrimination on grounds of sex in relation to pay is also prohibited. The Swedish and the Finnish Acts diverge from the Gender Equality Acts of the other Nordic countries as they focus to a greater extent on equality in working life and include more direct instructions about how to achieve gender equality. The Norwegian and the Icelandic Gender Equality Acts consist of more general provisions about equality in regard to employment. The Danish Gender Equality Act differs from that of the other Nordic countries as it has two separate pieces of legislation on the gender equality; the Law on Equal Opportunity for Women and Men and the Equal Pay Act. The former legislation aims at promoting the equal status between women and men and ensures equal opportunities for everyone regardless of gender. The latter legislation seeks to ensure that wage differences are not on the basis of gender.

Apart from the fact that all of the Nordic countries have implemented the Gender Equality Act there are certain provisions of the laws which obligate every employer to pay equal wages regardless of gender or

implement an equality plan. The methods of implementation differ between countries however.

In the Norwegian Gender Equality Act there is a general clause about the duty to promote gender equality. “Enterprises that are subject to a statutory duty to prepare an annual report shall in the said report give an account of the actual state of affairs as regards gender equality in the enterprise. An account shall also be given of measures that have been implemented and measures that are planned to be implemented in order to promote gender equality and to prevent differential treatment in contravention of this Act.” In other words, this is a clear provision about the duty of enterprises to pay equally for the same work or work of equal value. In addition, the Norwegian Gender Equality Act gives also a definition of the term pay in Section 5: “The term “pay” shall mean ordinary remuneration for work as well as all other supplements or advantages or other benefits provided by the employer.” It does not only include the employee’s salary but also other kinds of wages that the employer offers the employee. In the other Nordic countries, Gender Equality Acts are similar but not as concrete. The aim of the Norwegian Act is clear but every employer is free to choose how he will fulfil these obligations. It is not obligatory to make an equality plan concerning equal pay but the employers have to report to the authorities on what they are doing, or are planning to do to reduce the gender pay gap. Moreover, public authorities and public enterprises that are not obliged to prepare an annual report are required by the Act to give a corresponding account in their annual budget. The duty to inform about measures to promote equal pay is clear. All the same, there is no penalty although employers neglect this obligation. So far, there exists no statistical information on how many enterprises and institutions have reported on their efforts to secure equal pay.

In the Danish Gender Equality Act there is a clause in Part 3 which discusses the obligation of public authorities to write reports on gender equality. Section 5.1 states: “Prior to 1 September of every second year, ministries, state institutions and state owned undertakings shall prepare a report on gender equality. State institutions and state-owned undertakings shall prepare reports only if their number of employees exceeds 50.”

Most important for the closing of the gender pay gap in Denmark is the Equal Pay Act which covers the whole labour market, both the private and the public sector. The aim of this legislation is to guarantee basic rights which are not covered in a collective agreement as stated in the following

provision in Section 5.1: “An employee may not waive his rights under this Act.” In other words, an individual cannot waive his rights, for example in an individual pay agreement. Since 2000, the Danish Equal Pay Act states in Section 5.a that enterprises with 10 employees or more are obliged to work out wage statistics broken down on gender and other criteria, but as this provision has never come into operation in reality, this section of the Act has been under revision and there is a proposed amendment as follows, coming into operation on 1 January 2007: “An employer with 35 employees or more shall every year work out wage statistics based on gender for groups of 10 people or more of each gender [...] for informative use of the employees on wage differences between men and women in the enterprise.”[31] According to the revised Section 5.3, which may possibly come into operation on 1 January 2007, the employer is obliged to send data on the relevant enterprise and later on he can turn to the Danish Statistical Department and require information about wage statistics in his/her enterprise.

The Danish Act is clear on the prohibition of pay concealment which is, for example, not the case in the Iceland law. This prohibition pay concealment states that any employee has a right to pass on information relating to his or her own wages conditions. There is no special gender equality authority in Denmark as in the other Nordic countries; the Equal Opportunities Board decides on matters of accusations.

In the Swedish Gender Equality Act, Section 11 concerns gender equality plans : “The plan shall state what pay adjustments and other measures are necessary to be implemented to attain equal pay for work which is to be regarded as equal or of equal value. The plan shall be implemented as soon as possible and at the latest within three years.”

Section 12 states: “The employer shall supply an employees’ organisation in relation to which the employer is bound by a collective bargaining agreement, with the information that is necessary to enable the organisation to collaborate in the survey, analysis and preparation of a plan of action for equal pay.”

There are also provisions on sanctions in the Swedish Equality Law, in Section 34: “If the employer does not comply with a request pursuant to Section 33, the Equal Opportunities Ombudsman may order the employer to do so on pain of a default fine.” The section is about the employer’s duty to provide information for the Equal Opportunities Ombudsman, as

31 This is our own translation of the text.

well as access to the workplace for investigations that may be of importance for the monitoring of pay (in)equalities between men and women. The Equal Opportunities Ombudsman has complained about difficulties in obtaining information on pay covering the whole labour market which is now more decentralised than was the case a decade ago. Moreover, employers have shown little interest in the equality plans and equal pay and that is a matter of deep concern because the gender pay equality will not be implemented without the participation of the employers. In Sweden there is also an increasing tendency toward local agreements on pay and growing indifference when it comes to wage statistics, analysis and implementation of the Equality Plan (Equal Opportunities Ombudsman 2003).

The Finnish Equality Act between Women and Men was reviewed in 1995 involving the inclusion of new demands on employers. These include a requirement to implement active measures to promote equality. Employers with more than 30 employees are obligated to implement the Equality Plan. The law also includes a provision in which the employer is obliged to report on his or her procedures when discrimination is suspected. To this obligation a new aspect is added which gives an employee representative at the workplace an independent right of access to information on the wages and the employment relationship of employees. An inquiry can be carried out if there is reason to suspect wage discrimination on the basis of sex. The Act on Equality also prescribes compensations in a case of discrimination. An employer who has violated the prohibition on discrimination has to pay compensation to the affected person. The amount of the compensation can vary between EUR 2500 and EUR 9000.

The amended Gender Equality Act (April 2005) outlines in more detail what equality plans should include. The new law also tightens the older regulation, making the obligation on the employer stricter than before.

An equality plan must include:

- an analysis of the situation regarding gender equality in the workplace
- a breakdown of the placement of women and men in different tasks, and an analysis of men’s and women’s tasks, pay, and pay differentials
- measures, planned or implemented, to promote equality and equal pay

- an evaluation of how measures in the existing equality plan have been implemented, and what results they have produced.

If an employer fails to meet the obligation to draw up an equality plan, the Ombudsman for Equality will set a deadline for making the plan, thereafter the employer may be ordered to comply under a penalty of a fine.

The Icelandic Act on Equal Status and Equal Rights of Women and Men is similar to other Equality Laws in the Nordic countries. In Part 3, Section 13, rights and duties concerning the labour market are mentioned: "Employers and labour unions shall make systematic efforts to equalize the status of the sexes in the labour market. Employers shall make specific efforts to equalise the status to the sexes within their companies or institutions and make efforts to promote occupations that are not categorised as specific women's jobs or men's jobs." Furthermore it states: "Companies and institutions employing more than 25 people shall prepare a programme on matters of equality or include specific provisions on gender equality in their personnel policy. It shall specifically state aims and measures to be taken to ensure for their employees the rights provided for in Articles 14-17 of this Act." These provisions are pay equality, vacant positions, vocational training and continuing education, reconciliation of occupational and family obligation and sexual harassment, which all are similar to other Nordic Equality Laws.

There is a part concerning sanctions in the Icelandic Gender Equality Act which includes provisions on compensation for financial and non-financial loss and there is also a discussion about fines in Section 29. "Violations of this Act may be liable to fines to be paid to the State Treasury." There is neither a direct provision on the fines if the employers do not implement the Equality Plan nor are they obliged to make such a plan. In a survey which the Equal Status Bureau and the Ministry of Social Affairs administrated in 2004, only 16.7% of all the employers in the sample responded and only about 60% of these had implemented the Equality Plan (see Bjarnadóttir 2004).

Assessment

One of the criteria we think should be used to evaluate measures is whether the practice involves a law tackling the gender pay gap that is likely to have or have had an impact on the gap. The Equality Plan includes such practice and we will now compare its legal provisions

across the Nordic countries in order to identify the most effective way of carrying it out (see also Table 6.2).

Table 6.2. Equality Plan / Action Plan

	Denmark	Finland	Norway	Sweden	Iceland
Actors	Employers with>35 employees	Employers with>30 employees	All enterprises	Employers with>10 employees	Employers with>25 employees
Frequency	Every year	Every year	Not specified	Every year	Not specified
Content	Information about wage statistics	Information about the situation, measures & evaluation of measures	The main aim is equal pay for work of equal value	Current situation evaluation of previous measures & measures to attain equal pay with 3 year period. Cost accounting & time plans	Efforts to equalise pay
Sanctions	No fine	Fine – special amount	No – fine	Fine – no special amount	None
Supervision	None	The Ombudsman for Equality	Board of Appeals and the Ombudsman	Equal Opportunities Ombudsman	No direct

According to the Gender Equality Acts of the Nordic countries it is only obligatory to implement the Equality Action Plan in Finland, Sweden and Iceland. In Norway and Denmark, the Act requires only that employers implement equal pay for equal work and work of same value.

The Danish Acts are partly guidelines and partly instructions of how to implement equal pay. The prohibition of pay concealment in Denmark is an important tool to uncover pay discrimination. In Finland and Sweden, union representatives have the right to obtain information about wages.

The Norwegian Act is general and its provisions concerning fines could, for example, be sharpened. The Icelandic Act is also general and its shortcoming is that it does not include provisions concerning breach of the Act (see Table 6.2).

The Finnish survey from 2002 was taken in the private sector and covered 90% of workplaces. It showed that equality plans had only been implemented in 27% of the companies which should have created such plan. It is also interesting to see that only 12% of firms with 30-49 employees had implemented an equality plan, 29% of firms with 50-99 employees, 22% of firms with 100-499 employees and 91% of firms with 500 or more employees (see Lilja 2004a). In other words, the smaller the firm, the less likely it was to have implemented an equality plan.

The aim of the Finnish Act from 2005 is, therefore, to sharpen legal provisions on the equality plan until it becomes valid as a tool to make equal pay a part of reality. Sanctions are an important tool to force employers to comply with law and it will be interesting to see the results of that provision. The aim of the tripartite agreement made in 2005 is to narrow the wage gap between women and men by a minimum of five percentage points by 2015.

Statistics Sweden investigated the success of the implementation of the Equality Plan in 1999 and also in 2004. The results of these surveys show that during these five years more public institutions and private enterprises implemented the Equality Plan but in the meantime the number of municipalities with such a plan decreased by 4%.

The results from 2004 are that 76% of government administration institutions with 10-199 employees have implemented the Equality Plan and 84% of those with 200 or more employees; 70% of municipalities (kommuner) have implemented the plan and 88% of the city councils (landsting). In the private sector, 25% of enterprises with 10-49 employees have implemented the plan, 57% of enterprises with 50-199 employees and 79% of enterprises with 200 or more employees. Although

public institutions have been obliged to implement Equality Plan by law for years, the percentage of those that have not implemented the Equality Plan is 12 – 24%. As was the case in Finland, the smaller the private enterprises in Sweden, the less likely they are to have the Equality Plan. Moreover, large firms in the private sector are almost as likely as public institutions in Sweden to have implemented the plan. So far, the Equality Plan has not yet succeeded in closing the gender pay gap but it has probably called attention to the existence of pay inequalities between men and women at enterprise level.

It seems that the Equality Plans are more widespread in Sweden than in the other Nordic countries. However, the new amendments to the Gender Equality Act in Finland and the abovementioned tripartite agreement about narrowing the gender pay gap may push Finland closer to Sweden concerning active measures implemented to tackle the gender pay gap.

6.2 The Collective Bargaining System and the Gender Pay Gap

During the 1980s, the Nordic countries had a relatively narrow gender pay gap which was attributed to a compressed wage structure (see e.g. Blau and Kahn 1996, Rice 1999). However, during the 1990s, the gender pay gap in these countries ceased to narrow and in some instances widened at the same time as pay settings became more decentralised (see e.g. Mósesdóttir 2003, Emerek 2002; Lehto 2002; Spånt and Gonäs 2002 and Chapter 3 in this report). Moreover, Rubery et al. (2002: 95) claim that women's pay has tended to be better protected by more co-ordinated and articulated bargaining systems. We will now discuss the main features of the bargaining system in the five Nordic countries, recent changes and the implications for the gender pay gap in each countries.

The main characteristics of the Nordic labour markets are high trade union membership and high employment rate among women. In 2002, trade union density[32] was 87.5% in Denmark, 85.4% in Iceland, 79.9% in Finland, 79.9% in Sweden and 56.0% in Norway (Eironline 2005). What attracts attention is that union density among women was higher than

32 Trade union density is defined as the proportion of a specific group (e.g. those in employment) who are union members.

among men in all the Nordic countries. The greatest differentials in 2003 were found in Finland and Sweden, over 10 percentage points, and almost 9 percentage points in Iceland, but there were also smaller differences in Norway and Denmark (Eironline 2005). Although women are in a majority among those in trade unions, they are far from having power and influence according to their numbers. All the same, the collective bargaining of the union is of great importance for wage formation in all the Nordic countries, although its influence has diminished in recent years.

It is an old tradition in the Danish labour market that decisions of collective bargaining have been made by individual Employers' Associations in the Confederation of Danish Employers (DA) and the Danish Confederation of Trade Unions (LO). In the collective bargaining, there are time-based rates and different pay systems in accordance with different skills, age and experience of the employees: the traditional standard-wage, minimum wage, and minimum-pay. The standard-wage system has mainly been used in the public sector and for unskilled and low-pay employees, while the minimum-wage system is used for highly paid and skilled employees in the private sector. In recent years, the minimum-pay system has been introduced where there is in principle no collectively agreed basic rate and the pay is negotiated on a personal level based on the relevant collective agreement. Now the minimum-pay system covers the majority of employees in Denmark (see Emerek 2002: 26).

The changes from collective bargaining to individual pay negotiations have not promoted equality but rather led to increased flexibility and competition in the labour market. There was also a tendency in the public sector to implement a more individually based and market-oriented wage system. "The purpose of these systems is to create a more differentiated and decentralized wage forming system, which is able to reward individual qualifications, special functions and achievements instead of seniority" (see Reinicke 2002: 12). Emerek remarks that it still is too early to evaluate the New Wage system from a gender perspective but the tendency seems to be that men fare better than women in this new system (see Emerek 2002: 23).

The Finnish labour market is unique in the sense that part-time employment is not as widespread as in some other countries. As in the other Nordic countries, collective bargaining plays a decisive role in wage-setting in Finland. It has also led to the development of more centralisation of income policy agreements in recent years, even though

the tendency has been towards decentralised agreements in the long run. According to Lehto (2002), this development is fortunate from women's perspective because centralised agreements have been better for women than decentralised agreements. The main advantage of centralised collective agreements for women is solidarity in wage policy which means that "powerful" employee unions do not take advantage of their position in order to secure large wage increases for their members. Moreover, centralised collective agreements have contained equality packages (equality supplements) or low wage supplements which have especially benefited women. "Broad centralised income policy has also led to the establishment of common working groups for job evaluations and emphasised research programmes and projects on gender equality at the workplace level" (see Lehto 2002: 23). The recession in Finland during the early 1990s brought back centralised agreements but with the economic growth there has been a tendency towards more individualised pay agreements and especially local negotiations. Lehto (2002) also claims that women do not have enough power at the local level so that their bargaining position is weak.

Although women have more education and nearly the same work experience as men, the gender pay gap in Finland is still around 20%. Neither the changes in the wages system nor a long tradition of job evaluation have succeeded in destroying the gender pay gap.

The Swedish labour market is known for its long tradition of corporatism. Hence, it is interesting to look at how it has tackled the gender pay gap. Spånt and Gonäs (2002) describe changes on Swedish labour market and state that collective agreements are used within workplaces or occupations as a way to control and maintain the principle of equal pay. "Nevertheless, nationally co-ordinated wage negotiations have become less important on the Swedish labour market, while branch agreements have taken a more important role" (see Spånt and Gonäs 2002: 33). The consequences are that individual wage settings and market-adjusted wages are becoming more common on Swedish labour market, and are now parallel with widening wage dispersion. This development is making it more difficult to achieve pay equality. Since women tend to be relatively concentrated at the lower end of the wage dispersion, this widening of the wage dispersion has absorbed the effects of an increased level of education and work experience, which has basically resulted in the enlargement of the adjusted gender pay gap

(adjusted for education and experience) in the 1990s (Le Grand et al. 2001).

"The possibilities for trade unions to conduct central wage setting are now diminishing as the individual wage setting is dominating both within the private and public sector" (see Spånt and Gonäs 2002: 33). One of the things that characterises the Swedish labour market, as well as the labour markets in the other Nordic countries, is segregation and it is sometimes argued that Sweden has two labour markets - one for women, and one for men. For a long time, women have been the majority of those working in the public sector but during the last decade their numbers in the private sector have increased. In the private sector, the wages are higher but the gender pay discrimination is more common. Finally, the problems of high levels of segregation and few women in decision-making positions in Swedish business life remain unresolved (Equal Opportunities Ombudsman 2003).

The Norwegian collective bargaining system is highly centralised and the unions have a strong influence on wage setting, even in the private sector. The trade union density is much lower in Norway than in other Nordic countries and there are no automatic or legalised procedures to extend the collective agreements to non-members or non-covered workers. In practice the collective agreement is extended locally, and at least acts as a floor on wages to any similar employees within the establishments. It seems clear that the central employees' organisations attempt to co-ordinate the outcomes, even at this level (see Barth, Røed and Torp 2002: 12-15). According to Barth, Røed and Torp (2002), the changes in the labour market with more local agreement could have an influence on gender pay gap. Wages increases in absolute terms (flat-rate increases), which are typical for the centralised agreements (but not without exceptions), tend to make the overall wage dispersion smaller. Centralised agreements with flat-rate pay rises tend to reduce the gender wage differences, as women typically are over-represented among low-wage earners. "A development towards more local bargaining and more individual payment *may* increase the wage dispersion in general and thus also the gender pay gap. However, in local agreements as well, it is possible to give women and male dominated occupations priority" (see Barth, Røed and Torp 2002: 17). Many of the agreements for the Norwegian labour market concluded in 2004 provided special pay increases for women, in attempt to raise the pay level of the female dominated sector. These special pay increases or "pots" allocated to

female-dominated occupations have also been negotiated in Sweden and Finland in recent years in hope of diminishing the gender pay gap. In all the Nordic countries the traditional female-dominated sector has been a "low wage sector". Therefore it is important to raise the wages in these sectors as a means to reduce the gender pay gap.

The Icelandic labour market is similar to other Nordic countries in the way that the women's employment rate is relatively high and it is also gender segregated. The labour movement has been weak in the wage determination system and a double pay system has developed in the Icelandic labour market. The double pay system involves on the one hand negotiated wage rates and on the other hand fringe benefits and/or additional payments paid by employers to raise the pay of qualified workers above the standard wage rates negotiated by the trade unions. "Examples of the fringe benefits are fixed overtime payment, service bonuses (þóknunareiningar) and car benefits" (see Jónsdóttir 1995: 31). "Fringe payments have been more widespread in the public sector than in the private sector as it has been more difficult for the former to pay wage rates exceeding the negotiated wage rates. Moreover, women have been much more likely than men to receive pay according to negotiated wage rates" (see Mósesdóttir 2001: 18). This flexible pay system has primarily benefited qualified workers.

During the 1990s, the wage determination system in Iceland was characterised by a widening gender pay gap among unskilled workers. One reason for the widening of the gender pay gap among unskilled workers is that unskilled women have been hard hit by efforts to reduce costs and to increase efficiency. Unskilled women are seldom employed in booming sectors where employees have been able to press through pay increases above the negotiated pay increases (see Mósesdóttir 2001: 17-18). In Iceland there is a 1980 law which gives collective bargaining the legal status of law.

In recent years, the social partners have not used the collective bargaining system actively to tackle the gender pay gap. Contrary to the other Nordic countries, Iceland has never had a strong centralised collective bargaining system and a double pay system has developed. Moreover, concealment of wages is widely accepted, especially in the private sector. Hence, it is difficult for employees to obtain accurate information about wages of others in work of same or comparable worth. This concealment of wages is not allowed in the public sector (Upplýsingalög nr. 50/1996) and wages are determined to a much greater

extent by collective agreements than in the private sector. It is therefore not surprising that the gender pay gap appears to be smaller in the public sector than the private sector (see Chapter 3 in this report). The individualised pay system or New Wage (Ny Løn) system in Denmark, and later on in Iceland, includes rewards according to individual qualifications. "This means that individual organisations decide what factors are used to determine salary framework and wages, taking into account the individual needs of the organisations themselves and their employees. ... The official purpose of the New Wage system ... is to make it easier to use success and performance as a basis for wages ... and promote efficiency and productivity" (see Einarsdóttir and Kristjánsdóttir 2002: 12).

Assessment

There are no minimum pay legislations in the Nordic countries and minimum wages are determined in collective agreements. In all these countries, agreements made by organisations of employers and trade unions play an important role in wage formation. In Denmark, decentralisation of the collective bargaining system during the last decade, as well as changes in the pay system or more market or individualised pay settings, made centralised agreements more like a safety net than a wage formation system. Special targets or provisions to promote gender equality have not been a part of collective bargaining in Denmark.

Since the early 1990s, the bargaining system in Finland has become more centralised. There are signs that it will become more decentralised, however. The income policy settlement for 2003-2004 contained a special equality increase of 0.3% in 2003 to be used for improving gender wage equality (see Lilja 2004b: 3). Norway still has a rather centralised wage system, but many labour market agreements concluded in 2004 provided for special pay increases for women. Today, Sweden has a more decentralised pay system than a decade ago. However, there have been efforts to promote gender equality, such as the idea that if there are unmotivated wage differences in private companies, these should be adjusted through negotiations (see Berg 2004: 4).

In Iceland, flexible pay and individualised pay is common and there have not been special gender pay agreements until recently when workers in female dominated occupations received a special salary increase through a collective agreement. The individual pay system has become more widespread in Denmark and Iceland. In Denmark, pay concealment

is prohibited while pay concealment is quite common in the private sector in Iceland. Privatization has also played a role in the development of the gender pay gap during the last decade as it has reduced solidarity in pay settings.

The labour markets in the Nordic countries are gender segregated with the majority of men working in the private sector and women employed in the public sector. Wages tend to be lower in the female-dominated occupations than in the male-dominated occupations. Collective agreements in some of the Nordic countries have tackled this problem by making special pay agreements for women which involve higher pay rises for female-dominated occupations. In all the Nordic countries, it is the responsibility of the social partners to decide on the minimum wages and thus the increases, especially in women's wages, since in most cases this gender is over-represented among low-wage earners.

6.3 Job Evaluation

The third measure considered to be important in tackling the gender pay gap in the Nordic countries is job evaluation. Our focus in this section will be on different job evaluation schemes because they have been used to revaluate jobs, especially traditionally "female" jobs. Our discussion will start with a brief history of job evaluation. Thereafter, our focus will be on two Swedish job evaluation schemes or systems (HAC and *Steps to Equity Pay*) and then we will discuss the Finnish and Icelandic experiences of implementing job evaluation systems.

Job evaluation was first developed in the United States in the late 19th century and then it was used to evaluate new jobs which had been created by a new technology. It was used to decide the wages of unskilled employees, especially in the industry. In the middle of the 20th century, job evaluation was applied to other employees such as managers, specialists and technicians. Then the job evaluation changed and instead of one single system many flexible systems were developed. Job evaluation has been widespread in United States, Canada and New Zealand. In the Nordic countries, Finland has the longest experience of job evaluation but during the last decade Sweden has developed such a system as a means to reduce the gender pay gap. The European Union directive on equal pay for women and men urges the member countries to develop the job evaluation systems and it has had a significant effect on

the use and spread of job evaluation (Equal Opportunities Ombudsman 2003).

As a response to a proposal made by the Swedish government, the Labour Market Institute (s. Arbetslivinstitutet) developed the HAC job evaluation system which is similar to *Equity at Work* used in New Zealand. Both these job evaluation systems are considered to be gender neutral. The traditional job evaluation systems, as for example HAY, were criticized for being male biased as they had originally been created to evaluate traditionally "male" jobs (see Starfsmat 1999). The aim of job evaluation today is to create a tool which can abolish the traditional attitude towards women's work, which believes that it is of lesser value than that of men.

A simpler version of the HAC system, called *Steps to Pay Equity*, also exists for a quicker procedure of how to analyse pay and pay differentials. The *Steps to Pay Equity* scheme is accessible to everybody on the Internet and said to be suitable for every kind of company:
http://www.jamombud.se/en/docs/Stepstopayequity.pdf.

The authors of *Steps to Pay Equity* are Anita Harriman and Carin Holm. This job evaluation scheme is based upon the main areas, factors and aspects which are listed in Table 6.3.

Table 6.3. Steps to Pay Equity

Skill	Responsibility	Working conditions
Education/experience 20%: number of years of education, occupational experience, training, further education	Material resources and information 10%: financial value, what the responsibility entails, independence, consequences	Physical conditions 5%: physical strain, strain on the senses, unpleasant physical conditions, risk for personal injury or illness.
Problem solving 15%: type of problem, creativity, independence, decision-making, development, versatility	People 10%: what the responsibility entails, independence, consequences	Mental conditions 5%: concentration, monotony, availability, trying relationships, stress
Social skills 15%: communication, co-operation, contacts, cultural understanding, empathy, service	Planning, development, results, management 20%: the focus and scope of the responsibility, independence, consequences	

The evaluation should be carried out by at least three people who should have a broad knowledge of the company, its operations and objectives. They must not represent any interest group but rather, by using their knowledge and sound judgement, determine what level of difficulty is to be assigned to each job. The evaluators will have job descriptions, factor definitions, description of levels and their combined knowledge of the job and the company to assist them.

According to Harriman and Holm (2001), it is important to consider the following points in the evaluation process:

- It is the work demands and not the jobholder's ability that will be evaluated in *Steps to Pay Equity*.
- There must be both women and men in the evaluation group.
- All members of the group are to have the same amount of influence.
- The evaluation process is not a negotiation but a group discussion until a common position and a joint decision is reached.
- If information is lacking or ambiguous, further information must be obtained.

- All jobs are to be evaluated under one factor before proceeding to the next factor.
- The results will be recorded in an evaluation document under each level and factor for factor.
- It is important to bear in mind that it is the demands and difficulties of the job that are evaluated from various perspectives. Under the main area "skill" it is the *knowledge* that is to be measured and not how often it is applied, under the main area "responsibility" it is the *responsibility* and not the effort that is to be measured, and under the main area "working conditions" it is the *strains of the job* that are to be measured.

This kind of job evaluation has been applied in both the public and the private sectors in Sweden. It has been introduced in municipalities in the Gothenburg region, in a multinational industrial company with subsidiaries in Sweden, one of Sweden's largest banks, a media company and a printing firm. In addition, a large Norwegian company has also implemented this job evaluation system. The outcome of this job evaluation system is considered to be the first step to equal pay. There are other forms of job evaluations schemes which have been used in Iceland and in Finland. These forms are similar to *Steps to Pay Equity*, but have more factors and are more detailed.

Assessment

According to Harriman and Holm (2001), job evaluation is a systematic method for determining the demands and degree of difficulty found in different jobs. It provides a basis for determining whether work that is different is nevertheless of equal value when the demands are aggregated. The evaluation applies to the work itself, and to the demands it places upon the employee. Therefore, it is not the employee's skill or ability that is evaluated but rather the demands imposed by the work, irrespective of who performs it. According to Löfström (1999), the job evaluation system can increase women's wages and the fewer the factors it evaluates, the more likely it is to improve women's wages. A job evaluation is a good tool for identifying and analysing wage differences between women and men in accordance with the provisions of the Equal Opportunities Act (see Harriman and Holm 2001). However, the job evaluation is only the first

step to create equal pay settings because it is the wage formation which implements the equal pay.

We have used the criteria listed in Table 6.1 to evaluate the context and content of the job evaluation system *Steps to Equity Pay* (see Table 6.4). The problem with this job evaluation system, as with other similar systems, is that is has not been evaluated by experts. Moreover, it takes time to implement job evaluation schemes and it is difficult to obtain information about what such measures cost. According to the Swedish Equal Opportunities Ombudsman, most managers have focused on the job evaluation system when considering the pay gap between similar groups within companies. It is also important that the equal pay program is made a part of or integrated into business plans (Equal Opportunities Ombudsman 2003: 9). Unfortunately, a special survey of enterprises' experience of *Steps to Equity Pay* is not available. It would have been interesting to take a close look at the results of such a survey as most research on job evaluation focuses on the public sector. A Gothenburg University report on equal pay projects, of which *Steps to Equity Pay* was a part, states the following: "The network participants, though, have run into some obstacles when applying the tools. One problem is fears among some trade unions that the tools might be used as a wage setting instrument. Another is the difficulty of maintaining factual objectivity during the entire process, i.e. the fact that it takes time to go through all the jobs in an organisation" (Hällsten and Gran 2003: 31).

Table 6.4. Context and content of Steps to Equity Pay

Actor	Institution	Policy	Aim and target	Result
Enterprises, municipalities	Part of European equality project	To fulfil the obligation of gender equality	Implementation of the same value for the same job or similar	Good within similar groups, but not between different ones

The Norwegians have also tried to implement the job evaluation scheme. They have used a system which is similar to *Steps to Equity Pay*. In Norway, it is Hartmark Consulting which has implemented the "FAKIS" job evaluation programme in private enterprises, municipalities and public institutions. In total, 15 companies have been part of this experiment. After having evaluated the FAKIS programme, Becken and Berg (2005) conclude that job evaluation is good in companies where employees have similar education, experience and so on. However, the

job evaluation has not done much to increase wages in the female-dominated workplaces. They also criticise the job evaluation schemes for being expensive in view of their limited results. Becken and Berg (2005) raise the question of whether it would be better to use the money spent on job evaluation to increase female wages.

Job evaluation in practice

We will now discuss job evaluation systems in Iceland and Finland in light of our criteria listed in Table 6.1.

Job evaluation has now been applied for two years by Reykjavík, the largest municipality in Iceland. The city council and the Mayor of Reykjavík decided to make the Equality Plan valid for all the employees working for the city in order to implement equal pay for equal work and work of same value. This decision was approved in the city council on 15 October 1996. In 1997, special pay increases for women were negotiated in collective agreements covering municipality workers in the city of Reykjavík. However, wage differentials continued to exist, mainly due to additional payments such as overtime payments, bonuses and car benefits that men were more likely to receive than women. It was, therefore, considered to be necessary to reconstruct the collective bargaining system by using the job evaluation. Hence, the employer (the city council) decided to make a job evaluation scheme as a part of the collective bargaining system. The conclusion was the Single Status Job Evaluation System (SSJES), which is built on same model as the HAC system and similar to *Steps to Pay Equity*. The aim was to create a comprehensive, sound and gender neutral pay system. The sub-goals were: to erase the division of rights and entitlements between the so-called blue and white collar workers which meant an upgrade of the jobs of blue collar workers; to simplify and harmonise wage agreements (there were 37); to move a series of bonuses and extra payments into the regular pay scale; to create one single pay system for everyone. A committee was established with representatives from the Reykjavík City Council and from three employees' unions. These three associations covered 70% of the employees working for the city. In future, the implementation of job evaluation will cover all collective bargaining for the city of Reykjavík.

All the costs involved in the implementation of job evaluation were paid by the city of Reykjavík. The job evaluation committee set a time limit for the implementation process which was the end of 2002 but it took longer and was not completed until the end of 2004.

One of the main obstacles to the implementation of the job evaluation for the employees of Reykjavík City Council is that wages of other sectors than the female dominated sectors are not supposed decrease. In other words, pay increases in one job group are not meant to involve a pay deterioration of another group, although the former group turns out to be more valuable than the latter one according to the job evaluation scheme. In addition, those with higher education, working for Reykjavík City Council, are afraid that their wages may not increase and are therefore not the least interested in taking part in the implementation of the scheme. It will also take some time to narrow the gender pay gap, as the city's financial resources are limited. Independent experts have not been given the task of evaluating the implementation and the effectiveness of the job evaluation system for the employees of Reykjavík City Council. According to the job evaluation committee, the implementation of the job evaluation system has fulfilled most of its initial goals. However, it is necessary to ensure that a trustworthy job evaluation will be available in the long run (see Sveinsdóttir 2005).

Job evaluation has been practiced in Finland for more than a decade. The main problem regarding job evaluation in Finland has been that two separate measures of job evaluation have often been used in the same municipality. One evaluation concerns the technical personnel, which consists of more than 90% men, and another concerns the rest of the personnel, of which the majority is women in low-income jobs. Therefore women and men in the same workplace are evaluated with different evaluation scales. This kind of job evaluation has especially been used in the municipalities, but government administration institutions have used only one evaluation system to evaluate all jobs in the whole organization (see Rantanen 2005).

"If we want to promote equal pay, we have to insist that all jobs in a workplace are evaluated with the same evaluation method," says Lea Rantanen, a specialist who has participated in many job evaluation projects in Finland, both in private enterprises and municipalities. For this reason, it would be important that each workplace practiced planned pay policy. Organisations should define themselves how much job demands affect the salary level and how high their total salary level should be (see Rantanen 2005).

According to Lehto (2002), job evaluation does not appear to have achieved many good results and the current gender pay gap supports that conclusion. The weakness of the Finnish job evaluation system is that

different sectors in one and the same workplace were treated differently and therefore it made no real difference for reducing the gender pay gap.

6.4 Advertising campaigns for Pay Equality

One measure mentioned by experts as being important in the fight against the gender pay gap is the possibility of using advertising campaigns, and in Iceland we have an example of this kind. However, experts point out that none has been able to prove that these campaigns have had an impact on the gender pay gap.

At the end of the last millennium, the Icelandic Commercial Workers' Union of Reykjavík, VR, which is the largest trade union incorporating 20,000 members in more than 100 occupations, decided to implement the minimum-pay system in its collective agreement. The main reason for this change was that a large gap existed between pay rates in the collective agreements and the pay which were paid to most employees.

The Commercial Workers' Union's aim is to improve and defend the position of shop and office workers in private enterprises and also in municipalities of Reykjavík and nearby townships. For a long time, women have been the majority of its members. The percentage of those with secondary education increased during the last decade and is now close to 30%.

When the minimum-pay system or market-pay system was implemented in the collective agreement the trade union VR called for a survey on wage statistics and it showed a gender pay gap of about 26% and when adjusted for different occupations, working hours, age and work experience it was about 18% (see discussion of pay surveys among VR members in Chapter 5). In the wake of these results, the management of VR launched an advertising campaign in the media which showed women asking their employer for much lower wages than men. The examples shown were based on real stories. Concurrent to the advertising campaigns, VR has organised self-confidence training courses for women in order to teach them how to demand higher wages. In spite of these training courses, annual pay surveys among the members of the VR during the last six years and the advertising campaigns show little sign of change in the gender pay gap among its members. It is now around 14% when adjusted for different occupations, working hours, age and work experience.

VR has financed these campaigns. They are expensive and their results have been limited or constrained to a greater public awareness about equality issues. Nevertheless, a union representative claims that more women are taking training courses and that they are demanding higher wages when they are negotiating with their employer[33].

6.5 Conclusion

Although all the Nordic countries have implemented the Gender Equality Act over nearly thirty years, the results are still far from what could be expected regarding the gender pay gap. In all these Acts, there is a provision on the obligation of equal pay for the same work or work of same value. All the same, the gender pay gap is larger in the Nordic countries than in, for example, Italy, Portugal and Belgium. However, the Nordic countries are among the top-performing countries when it comes to women's employment, education and health. Women's wages are better protected after the implementation of the Gender Equality Act but the gender pay gap shows little sign of change. The Equality Plans have been implemented in the public sector as well as the private sector for decades in some of the Nordic countries but without acceptable results. The problem is that it has not been taken seriously, not least because there are no fines or other penalties in case of default behaviour.

The strong collective bargaining system in the Nordic countries has not succeeded in destroying the gender pay gap. The individual pay settings have become more widespread in Denmark and Iceland. In Denmark, pay concealment is prohibited while pay concealment is quite common in the private sector in Iceland. Privatisation has also played a role in the development of the gender pay gap during the last decade as it has reduced solidarity in pay settings. In all the Nordic countries, it is the responsibility of the social partners to decide on the minimum wages and thus raise women's wages who are typically over-represented among the lower paid.

In some cases, job evaluation has led to a reduction in the gender pay gap but its implementation is time-consuming and expensive, especially in

33 Based on an interview with Elías Magnússon, head of the wage division at VR (forstöðumaður kjaramálasviðs Verzlunarmannafélags Reykjavíkur), on December 29. 2005.

view of the limited results. A precondition for successful implementation of the job evaluation plan is that it creates discussions about wages and how they are decided. The main advantage of the job evaluation as a tool to tackle gender pay gap is that it brings to light how wages are determined and can be an effective measure to achieve greater gender equality.

The key players in the equality process now are the employers. Without their participation the gender pay gap will never be closed. Surveys in Finland and Sweden show that the smaller the private enterprises, the less likely they are to have the Equality Plan. Moreover, large firms in the private sector are almost as likely as public institutions in Sweden to have implemented the plan. So far, the Equality Plan has not yet succeeded in closing the gender pay gap but it has probably called attention to the existence of pay inequalities between men and women at the enterprise level.

It is noteworthy that gender equality issues are seldom allocated to ministries where decisions on labour market issues are taken, except in Sweden and Iceland. In Denmark the Ministry of Social Affairs is responsible for gender equality as well other social matters but the Ministry of Employment is responsible for legislation on the labour market. Equality matters fall within the scope of the Ministry of Social Affairs and Health in Finland. The Ministry is also responsible for family, social welfare, health, insurance and safety at work for example. The Icelandic Ministry of Social Affairs is responsible for labour market legislation, family policy, social welfare and gender equality. In Norway is the Ministry of Children and Family Affairs responsible for family policy and gender equality. It is the Ministry of Labour and Social Affairs which controls the labour market. The Swedish Ministry of Industry, Employment and Communications is responsible for labour market policy and gender equality. It is only in Iceland and Sweden that both gender equality and labour market legislation are in the same Ministry. A greater co-ordination of labour market policies and gender equality policies is needed if we are to see a more successful identification and implementation of good practices to tackle the gender pay gap than is currently the case.

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