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Gender statistics — Occupational segregation: extent, causes and consequences

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1st day
Monday 21 June 2004

08:30 **REGISTRATION**

09:00 **OPENING SESSION**

Welcome to the participants:
Mr U. Heilemann, Vice-chairman of CEIES
Mr S. Öberg, Director General of Statistics Sweden
Ms M. Epler, Chairperson of the CEIES Subcommittee on Social Statistics

09:30 **Keynote speech**
Mr A. Baigorri, European Commission, Eurostat

09:45 **INTRODUCTION: GENDER STATISTICS**
CHAIR: MR J. LAMEL, CEIES BUREAU MEMBER
Ms M. Tomassetti, European Commission, Directorate General Employment
Ms B. Hedman, Statistics Sweden
Ms A. Me, UNECE

10:30 - 11:00 Coffee break

Ms K. Winqvist, European Commission, Eurostat
Mr K. Oudhof, Statistics Netherlands

11:30 **OPEN DISCUSSION**

12.15 - 14.00 Lunch break

14:00 **OCCUPATIONAL SEGREGATION, EXTENT AND LABOUR MARKET ISSUES**
CHAIR: MR K. RYDENSTAM, STATISTICS SWEDEN
Ms H. Perista, CESIS, Centro de Estudos para a Intervençao Social, Portugal
Mr A. Franz, Scientific Adviser, Austria
Ms J. Varjonen, National Consumer Research Centre, Finland
Mr R. Blackburn, Faculty of Social and Political Sciences, Cambridge University, United Kingdom
Ms M. Fauvelle, European Commission, DG Research

15:30 - 16:00 Coffee break

16:00 **OPEN DISCUSSION**

16:45 **END OF FIRST DAY**

17:00 **COKTAIL**

THANKS IS GIVEN TO STATISTICS SWEDEN FOR THE SOCIAL EVENT

2nd day
Tuesday 22 June 2004

9:00 **OCCUPATIONAL SEGREGATION, CAUSES: FAMILY, CARE AND ATTITUDINAL RELATED CAUSES**
CHAIR: MS G. VUKOVICH, HUNGARY
Ms S. Keuzenkamp, Social and Cultural Planning Office, The Netherlands
Ms C. Hakim, London School of Economics and Political Sciences, United Kingdom
Ms R. Crompton , Department of Sociology, City University , United Kingdom
Ms H. Lutz, Österreichisches Institut für Wirtschaftsforschung;(WIFO), Austria

10:00 - 10:30 coffee break

Ms O. Toth, Institute of Sociology, Hungarian Academy of Sciences
Mr K. Rydenstam, Statistics Sweden

11:00 **OPEN DISCUSSION**

12.00 – 14.00 Lunch break

14:00 **OCCUPATIONAL SEGREGATION, CONSEQUENCES**
CHAIR: MS K. WINQVIST, EUROPEAN COMMISSION, EUROSTAT
Mr P. Swaim, Employment Analysis and Policy Division, OECD
Ms A. Parent-Thirion, European Foundation for the Improvement of Living and Working Conditions
Ms A. Löfstrom, University of Umeå, Sweden
Mr H. Figueiredo, European Work and Employment Research Centre, United Kingdom
Ms L. Sabbadini, Istat
Ms C. Colin, Insee

15:30 - 16:00 coffee break

16:00 **OPEN DISCUSSION**

16:30 **Summing up**
Ms I. Stoop, Member of the CEIES subcommittee on social statistics

16:50 **Reaction from Eurostat**
Mr A. Baigorri

17:10 **Closing remarks**

END OF THE SEMINAR

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Background and aim of the seminar

"Gender statistics is a new field that cuts across all traditional statistical fields and pertains to the entire statistical system. The main requirement for the production and dissemination of statistics that reflect the realities of women and men is that users and producers work together to identify the issues to be addressed and the necessary statistical output " ([1])

The seminar on Gender statistics follows a trend set in earlier seminars organised by the CEIES subcommittee on Social Statistics to discuss in depth social issues that require input from various statistical fields. Precursors are the seminar on Social Exclusion (1999), Education and Training Statistics and the Functioning of the Labour Market (2000), Life Long Learning (2001) Active Ageing Statistics (spring 2002), Labour Market Statistics – towards enlargement (autumn 2002) and Social Protection Statistics (autumn 2003).

This seminar will cover the extent, causes and consequences of occupational segregation with the aim of

- bringing together data users and producers to discuss users' request, data availability, statistical lacunae, limitations of currently available data and their treatment in the light of new policy needs and priorities;
- considering what can be done to respond more effectively to the changing needs and policy context in the future.

The seminar is addressed to those producing and using systematic information on gender inequality in relation for instance with the labour market and informal care, and for those who are involved in general gender and emancipation monitoring initiatives.

What is CEIES?

CEIES stands for Comité consultatif européen de l'information statistique dans les domaines économique et social; in English: 'The European Advisory Committee on Statistical Information in the Economic and Social Spheres'. Its task is to assist the Council and the Commission in the co-ordination of the objectives of the Community's statistical information policy, taking into account user requirements and the costs borne by the information producers.

The committee was set up by Council Decision 91/116/EEC of 25 February 1991. The original decision was amended by Council Decision 97/255/EC of 19 April 1997 taking into account the accession of Austria, Finland and Sweden.

CEIES is chaired by the Commissioner responsible for statistics. The vice-chairman is Mr Ulrich Heilemann from Germany. CEIES is composed of two private members per Member State, three members from the European Commission, the Chairman of the Committee on Monetary, Financial and Balance of Payments Statistics (CMFB) and the Presidents or Directors-general of the National Statistical Institutes of the Member States.

The European Advisory Committee on Statistical Information in the Economic and Social Spheres
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Organisers: The CEIES Social Statistics subcommittee: Ms M. Epler, Ms I. Stoop, Mr F. Marques, Mr K. Degroote, Mr I. A. Mylonas and the working member: Ms B. Stadler

CEIES Secretariat: Ms A. Näslund-Fogelberg, Ms N. Lauwerijs and Ms D. Evans

([1]) Birgitta Hedman, Francesca Perucci and Pehr Sundström (1996) Engendering Statistics: a Tool for a Change. Stockholm: Statistics Sweden.

CONTENTS

The proceedings are a collection of papers prepared by the speakers in advance of the seminar. They do not include the open discussions nor the discussions in the round table/panel session.

The papers presented and published herein only represent the views of their authors and do not necessarily reflect an official position of their institutions or organisations.

KEYNOTE SPEECH

Antonio Baigorri
European Commission, Eurostat

1. Introduction

This CEIES-seminar has the focus on gender issues and, in particular, occupational segregation in the labour force and how to describe and analyse this topic with the help of statistics. This keynote will start with a short overview of demand for gender statistics - particularly linked to occupational segregation. Since the seminar will treat also the underlying causes and the consequences of occupational segregation, the paper summarises what Eurostat has done to meet demand for statistics in these areas. Finally there is also a description of future plans.

2. Documented demand for gender statistics

Gender differences are the result of learned roles, which change over time and vary widely within and across countries and cultures. Therefore it has always been important to produce statistics comparing women and men in different contexts. During recent years the concept of gender statistics has been perceived wider both worldwide, primarily with the Beijing Conference in 1995, and within the European Union.

2.1 Beijing conference

A strong demand for gender statistics was recognised at the fourth World Conference on women in September 1995. In the Beijing Platform of Action[1] adopted by the conference it is stated that the following actions should be taken by national and international statistical services:

"Ensure that statistics related to individuals are collected, compiled, analysed and presented by sex and age, and reflect problems, issues and questions related to women and men in society"

This was elaborated in quite some detail and three topics are particularly related to this seminar:

- Develop a more comprehensive knowledge of all forms of work and employment including quantitative assessment of unremunerated work that is outside the national accounts
- Develop an international classification of activities for time use statistics and conduct regular time use studies
- Produce statistics on women and men at all levels in decision making processes in the public and private sector.

2.2 EU policies - Gender mainstreaming

When the European Community was established in the 1950s, interpretation of the concept of equal opportunities was limited to the principle of equal remuneration. Nowadays, however, the principle of gender mainstreaming is integrated in EU policies and all aspects of gender equality are covered by the Framework Strategy on Gender Equality.

(1) Beijing Declaration and Platform for Action adopted by the Fourth World Conference on Women: Action for Equality, Development and Peace. Beijing 15 September 1995 (Q/CONF.177/L.5.)

Four years ago the Council decided on a Framework Strategy on Gender Equality (2001 – 2005)[2] and under this strategy the Commission has written annual reports for the follow up of the progress and established annual work programmes.

In the strategy there is a straightforward demand for gender statistics which includes:

- Development and dissemination of comparable statistics broken down by sex in different policy areas
- Development of methodologies and indicators for evaluating policies and practices
- Publication of an annual report including the progress towards reaching of the benchmarks and the evaluation of the results reached

In the annual work programmes one of the priority actions is the systematic collection of gender disaggregated data as input into the relevant policy area, and using these data to develop indicators

2.3 EU policies - Specific areas

To complement the strategy of gender mainstreaming there are also areas where special attention has been given to develop equal opportunities between women and men. Within the employment and social inclusion processes one finds a number of issues where it is important to emphasize gender equality. On a number of occasions the European Council has set specific objectives and asked that the progress should be followed closely.

- The **Lisbon** Council in March 2000 fixed the objective of 60% of women aged 15 – 64 being in employment by 2010
- The **Stockholm** Council in March 2001 posed as a priority full employment and more and better jobs. A target for increasing the average EU employment among older women and men (55 – 64) to 50% by 2010. The Council and the Commission were invited to develop indicators on pay differentials between women and men and on the provision of care for children and other dependants by 2002
- The **French** Presidency in October 2000 addressed the problem of reconciling work and family life and proposed indicators on child care and care of other dependants
- The **Barcelona** Council stated that member states should remove disincentives for the female labour force and strive to provide child care to at least 90% of those aged 3 to mandatory school age and at least 33% of children aged 0-3

The European Council and the Presidency ask nowadays for a strict follow up of progress towards agreed goals and there is thus an increasing need for European statistics. Indicators have been developed and negotiated at a high political level meaning that Eurostat is requested to produce gender statistics that are comparable across Europe. Often the agreed indicators do not build on precise concepts and definitions and the development of the methodology must be done in policy expert groups in co-operation with working groups of national statistical experts.

3. Eurostat's contributions since 1995

Eurostat has adopted the idea of gender mainstreaming so that all data on individuals are collected by sex to the extent that they are available in the member states. Thus it is possible to include at least a presentation by sex in most publications on individuals. Gender statistics have been a special module in our work programme since 2003, and what is more important, gradually the awareness of gender analysis has grown as a result of promotion done within Eurostat. A couple of years ago, a catalogue was produced within a network of statisticians where all Eurostat statistics that could be broken down by sex were identified.

The 'equal opportunities' approach also applies to reports disseminated by the Commission. Normally gender mainstreaming should be applied, i.e. taking gender issues into account in all policy actions, so that all indicators on individuals are presented by sex. The Spring Report including structural indicators (systematically presented by sex since 2002) and the Annual Report on Equal Opportunities including indicators to measure

(1) COM (2000) 335 final

progress of equal opportunities (areas: paid work, income and pay, decision-making, knowledge and time-use) are presented to the annual Spring Council. Some changes in society happen very slowly and there is no real need for annual assessment. It would be possible to use other - adequate but less frequent - data sources but unfortunately they are seldom used in this context.

3.1 Presentation of gender statistics

Eurostat has published a large number of publications on gender issues. Short publications – Statistics in Focus – have covered, for example, education, entrepreneurs, temporary work contracts, persons working weekends, migration and elderly (links to the complete list is given in annex). A Panorama publication - The Life of women and men in Europe - was published in 2002; it will be considered later in this seminar.

Other Commission services have also produced publications - almost only about women - for example in the areas Agriculture, Science and Research. DG EMPL has launched a database on Women and Men in Decision Making which is available from their website.

The following paragraphs describe in more detail the recent accomplishments of Eurostat.

3.2 Specific areas

Gender pay gap

The gender pay gap is an important indicator to assess the policies of the MS. It is a structural indicator that is published annually in the Spring Report to the European Council. The main data source up until now has been the European Community Household Panel (ECHP) and results are available as a time series between 1994 and 2001. This household survey covers all private households and therefore the gender pay gap is estimated globally for employees in all activities of the economy. Furthermore analysis can be performed linking a persons pay to variables describing the individual, the household and the enterprise. A drawback for follow up and analysis has been that the data have become available fairly late and that the sample sizes are limited. Some countries have argued that household data are less suitable for measuring earnings and they have provided estimates from their earnings surveys instead.

Time Use Surveys

A Gentlemen's agreement in the Statistical Programming Committee in 1994 was the initiation of Eurostat's development of Guidelines on Harmonised European Time Use Surveys (TUS). A working group has, for ten years, been a forum for the discussion of pilot surveys, development of guidelines and reports from national time use surveys. The result is that TUS have been conducted in 21 European countries between 1998 and 2004. The surveys have been financed by the countries and the focus on national time series rather than international comparisons means that the harmonisation is less good for some countries. However, comparable results can now be published for many countries.

Household satellite accounts

To quantify and value the unpaid work mostly done in households has been a major issue for a long time. Eurostat has supported this work with grants and the organisation of task force meetings. The aim was eventually to be able to produce guidelines on how to set up household satellite accounts according to the criteria used in the National Accounts. So far it has not been possible to reach a conclusion on how these accounts should be produced. There are different approaches and the final report from the Eurostat task force gives an overview of these including a list of areas where there is need for more research.

Care

From an employment perspective it is urgent to describe the obstacles for entering the labour market and the problems to reconcile work and family life. In the Employment Guidelines 2003, guideline no. 6, promoting gender equality, repeats the target set by the Barcelona Council. Therefore there has been a strong demand from the Council and the Commission services to develop indicators and statistics on child care and care of other dependants. The Indicators group of the Employment Committee has still not reached a final decision on how to define these indicators more precisely. Care traditions are very different in different MS and feasibility studies

have been carried out to see if it would be possible to produce statistics from national sources in both areas. Unfortunately there are significant problems of comparability.

4. Eurostat's plans as regards to gender statistics

Presentation of statistics will continue as before, also taking the gender aspect into account. In addition to this there are a number of areas with a strong demand for new statistics. To develop new comparable statistics is quite a lengthy process and in recent years Eurostat has prepared legal acts, in several areas, that will improve the information about gender issues. They concern employment, social inclusion and earnings.

Employment statistics

The Labour Force Survey (LFS) is naturally a very important source for analysis of gender differences. New variables 'Supervisory responsibilities' and 'Lack of care facilities' will be introduced from 2005 and will give additional knowledge on equal opportunities in the labour market. Each year there is an ad hoc module included in the EU-LFS. In 2005 the ad hoc module will treat reconciliation of work and family life. This module will cover eleven variables describing how child care and other care responsibilities are dealt with. It also aims to measure the take up of parental leave. The module is compulsory according to a Commission Regulation and has been developed in co-operation with the MS and DG EMPL.

Statistics on Income and Living Conditions (SILC)

The new Statistics on Income and Living Conditions (SILC) gradually replaces the ECHP and results for all countries will be available for the reference year 2005. It is a household survey which is less extensive than the ECHP. It covers individual and household information but only a very limited set of enterprise variables. In the SILC there is information about many areas that should be analysed in a gender perspective. Income in detail, living conditions, poverty and social inclusion are examples and DG EMPL has been closely involved in the preparations of the survey. Child care variables have been introduced in the SILC and from this information it will be possible to measure the number of hours of child care for each child by type of care. Results from the first countries (excluding child care) will be available at the beginning of next year and for all MS in the beginning of 2007.

Earnings statistics

There are good possibilities that European earnings statistics will improve in the future from both enterprise and household surveys. Eurostat has the support from the European Statistical System to gradually introduce a system of earnings statistics that wall cover the whole economy. The Structure of Earnings Survey (SES) will be conducted every fourth year 2002, 2006 etc and it will give information about earnings that can be linked to individual and enterprise variables. It will not give household information. On the other hand the SILC has variables to estimate gross hourly earnings at least for countries that have no other source for gross hourly earnings. There is also an ongoing test to see if it is possible to include a variable on earnings in the LFS.

Micro data are collected by Eurostat for LFS, SILC and SES.

Time Use Surveys

The Time Use Surveys project has now reached a final stage and it is expected to collect micro data from the national TUS. The micro data will be harmonised and stored in a data base. Programmes will be developed in order to produce statistical time use tables that are accessible via electronic media. At present there is not a strong demand to develop a new round of harmonised TUS. The same is true for the development of Household Satellite Accounts. These are areas where input from this seminar would be helpful when deciding on future priorities.

5. Conclusion

The purpose of the seminar is to bring users and producers together to discuss users' requests on gender statistics. It is important to consider what could be done to better respond to future policy needs taking into account that the resources are limited.

Eurostat is keen to hear participant's experiences and opinions on what might be improved and any new concrete demands – preferably from a European perspective. It would also be useful to know about priority areas.

INTRODUCTION: GENDER STATISTICS

Maria Tomassetti
European Commission,
DG Employment and Social Affairs – Unit Equality for women and men

Thank you for inviting me to this seminar on gender statistics. Today I would like to give you the point of view of the users, not only as final beneficiaries, but also as demander and active contributor to the development of gender statistics and indicators.

As you know the European Union is facing dramatic changes with the enlargement and the preparation of a new constitutional Treaty. The creation of an ever closer union of the peoples of Europe and the inclusion of ten new countries within the European Union has brought a wealth of experience giving an opportunity to refocus gender equality in Europe and to provide a fresh and promising impetus towards a gender equal society. This also implies a challenge not the least in relation to indicators and statistics as we now have to co-ordinate 25 Member States.

From the very beginning, gender equality has been a fundamental principle of the European Union, enshrined in the founding treaty with the principle of equal pay for male and female workers. Since then, the EU has continued to strive for gender equality and improve the status of women.

Over the years, this principle has been reinforced with legislation. Directives on equal pay, maternity leave and parental leave, equal treatment of women and men at work and in the area of social security are just some examples of European rules that directly influence our daily life. The Commission has recently proposed a directive on access to goods and services, based on Art. 13 EC, a basis for legislation combating discrimination beyond employment. This will cover, for example: financial services, housing, insurance.

Women are well educated but their potential is still under-utilised in Europe if compared to men. It is true that more women are in employment than in the past. However, major gaps still remain between women and men. Twenty three and a half million women need to enter the labour market to close the employment gender gap! Women will have to earn 16% more on average to close the gender pay gap! And this figure increases to 24% in the private sector.

To this, we must add that women are more at risk of poverty than men, in particular older women and lone mothers.

And a healthy balance between work and family life is still nothing more than a dream for most women and men!

The increase of women's active participation in the labour market and the reduction of gender gaps in all spheres of life are key to the European Union's competitiveness, economic growth and social cohesion. The Lisbon target of achieving at least 60% female employment rate by 2010 will not be reached without further effort in the field of gender equality. Six million women must enter the labour market by 2010, if we want to meet this target.

PROGRESS SO FAR

In the 1990s, the policy of gender mainstreaming was introduced – in line with the conclusions of the United Nations Fourth World Conference in Beijing in 1995. Gender mainstreaming combined with positive actions, forms the dual approach to achieving gender equality.

A general definition of gender mainstreaming is «the integration of the gender perspective into every stage of policy processes – design, implementation, monitoring and evaluation – with a view to promoting equality between women and men».

The dual approach of gender mainstreaming and positive actions is presented in a rolling five-year plan – the Community Framework Strategy on Gender Equality 2001 – 2005, which covers equality in economic, social and civil life, equal participation and representation, and changing gender roles and stereotypes.

The existence of gender statistics and indicators as well as sex-desegregated statistics, is a fundamental condition for gender mainstreaming as they represent vital tools for the establishment, monitoring and follow-up of political goals and targets.

The development of gender statistics, indicators and benchmarks is an important part of the strategic work in promoting gender equality. It goes hand in hand with increased use of indicators in other areas of social policy: employment, social protection, social inclusion. It is strongly linked to the Lisbon strategy and goals.

Important work has also been done by Presidencies to develop indicators specifically for the follow-up of the implementation of the Beijing Platform for Action, for example indicators on balanced participation of women and men in decision-making, indicators on the reconciliation of work and family life, indicators on equal pay and indicators on domestic violence. The Irish and the Dutch Presidencies are developing indicators on sexual harassment in the workplace, which will be considered by the Council in the autumn 2004.

Sometimes it is hard to obtain statistics broken down by gender because of the technical difficulties involved in changing data sets. While the Commission appreciates that there are real problems, it urges Member States and its partner organisations to collect and pass on disaggregated statistics wherever possible.

DG Employment and Social Affairs contributes to the development of gender statistics, among others, through the Council decision establishing the Programme relating to the Community Framework Strategy on Gender Equality for the period 2001-2005. In fact, Strand 2 « analysis and evaluation» of the Programme covers «the development and dissemination of comparable statistics, broken down by sex and, if possible, by age, and statistical series on women and men's situation in different policy areas». This allows to finance the development of statistics and to closely co-operate with Eurostat.

Examples of cooperation on gender statistics:

Childcare

The supply of childcare services in order to facilitate women's participation in the labour market has always been a milestone in the European Employment Strategy. Following the conclusions of the Barcelona Council, two targets on childcare were also endorsed:

«to provide childcare by 2010 to at least 90% of children between 3 years old and the mandatory school age and at least 33% of children under 3 years of age».

Indicators to meet these targets have also been included among the set of indicators to monitor the European Employment Strategy.

However, the National Action Plans on employment show that, despite the improvements made in the last years, data on childcare remains scarce in Member States and not comparable between countries. There are still discrepancies in the type of childcare included in the data, in the length of the services provided, in the age of children, etc.

The Commission and Eurostat have started an intense work on childcare statistics. The aim of this cooperation is twofold: to have comparable and reliable data on care for children and to fine-tune the indicator on childcare in order to be able to monitor the Barcelona target. Two feasibility studies, were financed and at the same time

work started on the Labour Force Survey and on the new Statistics on Income and Living Conditions (EU-SILC). The results are very positive:

- A new variable on childcare has been introduced in the EU-SILC, which will start gradually between 2003 and 2005. This variable will provide information on type of childcare and number of hours of care per week. It will fill the indicator, and therefore will measure progress towards the Barcelona and the Lisbon goals.
- In 2005 a LFS ad hoc module on «Reconciliation between work and family responsibilities» will be financed, where more data on aspects such as quality, affordability and accessibility of care services will be available.
- Just a few weeks ago, an agreement was reached on the content of the indicators on childcare and care for other dependants, on common definitions and methodologies

This is a very good and encouraging example of co-operation at political, technical and administrative levels towards the common goals set in Lisbon.

Time use statistics

The aim of the Time Use survey (TUS) is to fill a number of gaps in the statistical information available in the social domain. Comparable and EU wide data on how women and men use their time are important to show existing gender gaps in the way they spend their time. For instance they display important gaps in the share of domestic and caring tasks, which is at the core of reconciling family and work responsibilities. This data can also be used to analyse men's and women's working patterns, in line with guideline 3 of the European Employment Strategy and the working time directive; the quality of life, in particular for elderly men and women; lifelong learning; transport; sport; culture. Some of these domains are covered by employment policies and all are encompassed by the Gender Equality Programme.

TUS-data is a complementary source to the LFS to estimate total working hours. In addition, TUS can also provide statistics on working rhythms, voluntary work, care, mobility and leisure time. The development of these surveys has been recommended by ILO and the UN.

The Commission, in cooperation with ESTAT, has contributed to several projects aiming at a progressive setting up of a European database on Time Use. The objective is to set up a database of harmonised microdata from as many European countries as possible and to create a tool for production of statistical tables that can be accessed by approved external users. This will facilitate the use of data from Time Use Surveys in the development and follow up of Community policies.

As a result, national time use results are now available for 14 European countries and will be available for another 4 MS within a year and for another 2 MS and 1 Candidate country in a couple of years. The reference years vary from 1998 until 2004. Publishing data is an efficient way of demonstrating how the TUS-data can be analysed and used for European purposes. The following projects have been finalised/started:

- Basic tables from 13 countries has been collected and published in a Statistics in Focus (May 2003)
- A working paper with time use results (13 countries) by lifecycle, employment and sex is available on the website of Eurostat
- A more extensive publication (Pocket book) will be issued in July, 2004.
- A team of experts investigate methods of analysis and presentation of TUS data, which can contribute to enhanced knowledge in general and in the relevant Community policy areas in particular (final report June, 2004).

Gender Pay Gap

The principle of equal pay has been enshrined in Community law from its origins and strengthened over time. However, progress is much too slow and the European Union has set up a goal for a substantial reduction of it by 2010.

Member States are asked to pursue policies which, «with a view to its elimination, (…) will aim to achieve by 2010 a substantial reduction in the gender pay gap in each Member State, through a multi-faceted approach

addressing the underlying factors of the gender pay gap, including sectoral and occupational segregation, education and training, job classifications and pay systems, awareness raising and transparency.»

The gender pay gap - measuring the difference in average gross hourly earnings between men and women across the whole economy and all establishments – is one of the structural indicators to monitor progress in the framework of the Lisbon Strategy. It is also one of the key indicators of quality in work. Moreover, it was approved as one of the indicators to monitor the European Employment Strategy.

Women and men in decision making

The Commission has just launched a database on women and men in decision –making. The database covers women and men in decision-making positions in the European Union Member States, most of the Acceding Countries and the EEA countries. The database measures progress in the political, public, juridical, social and economical domains and show the gender distribution in European governments and parliaments, in national central administrations, top 50 publicly quoted companies, central banks, major NGOs, social partners and more.

It is fundamental to continue to develop reliable and comparable data, in all fields of decision-making, to measure progress in the national and international commitments towards the goal of a balanced representation of women and men.

The Finnish and Italian Presidency have developed indicators on women and decision making in the political and economic sectors respectively. This is also a part of the Member States follow up of the strategic objectives and actions set in the Beijing Platform for Action in 1995.

THE WAY FORWARD

Despite the progress made so far, much still remains to be done in order to collect on a regular basis, comparable and reliable statistics. There is a need to provide systematically data broken down by sex to be able to analyse the situation of men and women in all spheres of life and the impact that policies and measures have on women and men.

Gender indicators are tools for monitoring progress in the field of gender equality. In addition, it is crucial that gender indicators are also developed and used in all relevant policy areas of the European Union. Thus, work on gender statistics and indicators cannot be limited to indicators developed for measuring gender equality; rather all relevant indicators and statistics must be engendered.

Figures and facts to make visible the current situation of women and men in the Member States are a prerequisite for political decisions on further steps to promote gender equality. It is also main tools for making governments and other stakeholders accountable for progress.

In its first Report on Equality between women and men 2004 addressed to the Spring Council this March, the Commission calls for:

- efforts by Member States and the Commission to improve the provision of coherent, comparable and timely data disaggregated by sex as well as by other background variables, in all relevant policy fields;
- a commitment by Member States, the Commission and the Council of Ministers to further develop gender equality indicators, as a tool for gender mainstreaming, for assessing progress in different policy areas

In the annex of the Report, a set of indicators was presented that should give an easy and quick overview of the situation of women and men in the European Union.

In order to do this, there is a need to improve the availability, comparability and reliability of gender statistics in several areas and in particular in relation with the pay gap, reconciliation between family and work, Time Use Statistics and the situation of women and men in decision making posts.

[2] http://europa.eu.int/comm/employment_social/women_men_stats/index_en.htm

Gender pay gap

It is fundamental to guarantee a reliable source to analyse the gender pay gap and its causes in line with the need for the structural indicator and the monitoring of the European Employment Strategy. In particular, the source should allow to base the measurement of the gender pay gap indicator on data/observations for the whole economy, ideally with a breakdown into private and public sectors, have regular available data (annual) of good quality. It is important to stress that the data needs for the gender pay gap cover both an aggregated indicator with possibilities for breakdowns by variables such as education, sector, occupation, age, etc, as well as data suited for more detailed analysis on the structural and explanatory components of the gender pay gap. Experience also shows that in the analysis of gender segregation on the labour market and in particular as regards the gender pay gap, the international standard classification of occupation represents a problem, as it provides very detailed sub-categories for typically male jobs, while providing very broad categories for women.

Data collection for the ECHP stopped in 2001, and the whole survey will be replaced by the EU-SILC.

The problem we are now facing is due to the fact that the question introduced in the EU-SILC in order to measure the gender pay gap, is not compulsory for Member States. A smooth transition to new statistical data sources such as the continuous Labour Force Survey (LFS) and the new reference database for statistics on income and living conditions (EU-SILC), should be ensured. This data should be transmitted in harmonised format and be available according to the delays foreseen for the provision of EU-SILC data.

Reconciliation between work and family life

Despite the enormous progress we made in this field, there will be a time lag between now and the first data available on the EU-SILC to fill the childcare indicator and to measure progress towards the Barcelona target. Thus, it is fundamental that Member States commit themselves to provide national data in their National Actions Plans in the best possible way, both for childcare and for care for other dependants.

It will also be important to fully use the results of the 2005 LFS ad hoc module on reconciliation, and possibly «cross» them with the first results of the childcare variables of the new EU-SILC.

Time Use Statistics

There is still much to do to reinforce and extend the work already done with a view to run a fully European database on Time Use. More countries still have to come on board and it will require regular updating. This is needed in order to have a more comprehensive picture on how women and men spend their time.

We will also need to make potential users more aware of the new possibilities offered by comparable and reliable time use data. They should not remain in the remit of the European Institutions and some research institutes but should be made available to a wide range of stakeholders, including social partners and NGOs.

We will have reflect further on how to make the best use of these data in developing reconciliation measures, working time provisions, long life learning with a view to promote gender equality.

ENGENDERING STATISTICS – 20 YEARS OF DEVELOPMENT

Birgitta Hedman
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1. Introduction

In 1983, now twenty-one years ago, Statistics Sweden was the first national statistical office who started to work with gender statistics in a formalised way and established a special unit for gender statistics. We started from scratch without any written guidelines and manuals. The only thing we had to guide us was the needs for statistical information expressed by users working with gender issues in society – and that was the most important thing. These users came from both government agencies and non-governmental organisations, NGOs.

Today we can look back and state that our way of working has been a success story. Great progress has been made in Sweden over the years. In addition, we have co-operated with other countries to develop gender statistics.

Gender concerns are to a large extent universal. These issues can not be seen as something additional to improvement in other policy areas in a democratic society. They have to be integrated in all policies and plans at all levels to ensure that economic and social development benefit women and men to the same extent. Most countries have adopted a national plan of action to reach gender equality. International conferences related to gender issues have been held regularly since 1975 resulting in declarations and platforms for actions.

The need for improved statistics on women and men has increasingly been recognised around the world. Statistical methods is a scientific field of international usefulness and can make statistical information comparable between countries. This gives a good base for co-operation between countries to share ideas on how to use statistics in the work with gender concerns and to identify common needs for improvement of statistics.

Gender statistics needs were clearly stated at international level by the Third World Conference on Women in Nairobi 1985. The needs were further strengthened in the Platform for Action adopted at the Fourth World Conference on Women in Beijing 1995. The Conference urges governments, the international community and civil society to take action on twelve critical areas of concern related to gender. A number of paragraphs in these areas comprise need for improved statistics in various statistical fields, including health, education, work and economic activities, violence, power and decision-making. In addition, a number of paragraphs of specific importance for improvement of national statistical systems are presented under "Strategic objective H.3. Generate and disseminate gender-disaggregated data and information for planning and evaluation". Some of these paragraphs will be referred to in the following.

The demand for statistics with a gender perspective is also expressed by the European Union in the Community Framework Strategy on Gender Equality 2001–2005 (Council Decision of 20 December 2000). Actions to be taken are specifically indicated under strand 2 as follows:

1. "The development and dissemination of comparable statistics, broken down by sex, and, if possible, by age, and statistical series on women's and men's situation in different policy areas."
2. "The development and dissemination of methodologies and indicators for evaluating the effectiveness of gender equality policies and practice (benchmarking)."

In the following sections crucial elements for a successful gender statistics development at national level will be highlighted. The conclusions made are based on the goal and demands for gender statistics together with experiences from twenty years of gender statistics work in Sweden and other countries.

2. Goal and demands for gender statistics

Gender statistics shall reflect problems and questions related to the situation of women and men over the life cycle in all spheres of society, social as well as economic. Such statistics are needed to:

- Raise consciousness, persuade policy makers and promote changes
- Inspire measures for change
- Provide an unbiased basis for policies and measures
- Monitor and evaluate policies and measures.

This implies that statistics are needed during the whole process of policy making, planning, implementation and evaluation of the work to reach gender equality.

The distinction between the words *sex* and *gender* has to be made clear, specifically for producers of statistics. Statistics are always collected by *sex*, the biological identity of individuals, which is fixed and unchangable. *Gender* refers to women's and men's position in society, their social identity, which is shaped through history of social relations and can be changed.

The goal for gender statistics work is that:

- All statistics on individuals should be collected by sex.
- All variables and other characteristics should be analysed and presented with sex as a primary and overall classification. This, in turn, enables all analyses and presentations to be sex specific.
- All statistics should reflect gender issues.

At international level the 1995 Beijing Platform for Action gives strong support to all national statistical offices to fulfil the gender statistics goal: "Ensure that statistics related to individuals are collected, compiled, analysed and presented by sex and age, and reflect problems, issues and questions related to women and men in society." (paragraph 206 (a)). In addition, national statistical offices in the European Union get support in the Community Framework Strategy on Gender Equality 2001–2005 (see above in section 1).

The formal basis for gender statistics work in Sweden is since 1994 given in the National Plan of Action for Gender Equality and in the Ordinance on Official Statistics. The National Plan of action requires that a gender perspective should be applied to all policy areas. This means that all proposals and decisions must be analysed from a gender perspective in order to map all possible consequences for women and men at central, as well as regional and local levels. For this to be possible statistics must be disaggregated by sex. The Swedish Parliament has decided that gender statistics are to be a part of official statistics. The Ordinance on Official Statistics therefore includes an article requiring "Official statistics related to individuals should be disaggregated by sex, unless there are special reasons for not doing so." (article 14 in the section on "Accessibility"). Today Statistics Sweden is also required to give a yearly report to the government on remaining deficiencies in the official statistical system what concerns the fulfillment of article 14.

3. The gender statistics production process

The production process of gender statistics can be described through a flowchart, showing the necessary steps to be taken, from identification of problems and questions related to gender to analysis, presentation and dissemination of available gender statistics. The flowchart is attached as appendix 1.

This flowchart was developed as a result of work in Sweden and through consultations in other countries during the late 1980's and early 1990's. It is also the basis for "Engendering Statistics. A Tool for Change", by Birgitta Hedman, Francesca Perucci and Pehr Sundstrom, published by Statistics Sweden in 1996. This publication presents the fundaments of this new field of work in statistics and provides an overview of the necessary steps for the production and dissemination of gender statistics. It emphasises the important role of users in stimulating the production of adequate statistics and the need for their continuous dialogue with statisticians. It also includes a programme and training methodology for a one week workshop on gender statistics. This book is now available in English, Spanish, Russian, Chinese and Japanese and used in gender statistics training in various parts of the world.

4. Co-operation between users and producers of statistics

A close and continuous co-operation between users and producers of statistics is crucial for a successful work to integrate a gender perspective in the development of the whole official statistical system. In most countries the gender statistics work is initiated by people with knowledge of gender concerns. They are engaged in gender

equality activities in various policy areas and aware of the need for gender statistics. Hence, they contact the national statistical office and ask for statistics on the situation of women compared to men. The statisticians have the professional statistical knowledge and are responsible for production of statistics and for integration of gender aspects in the whole statistical system. To be able to do this they need subject matter knowledge in gender issues.

User-producer co-operation is needed both for relevant analysis, presentation and use of gender statistics available today and for identification of needed improvements. Statistics Sweden has over the years developed a wide network with users of gender statistics including politicians, planners, researchers, teachers, the media and NGOs. Gender statisticians at Statistics Sweden also act as lecturers at seminars and other types of training activities related to gender equality work. This is an important way to reach out with gender statistics information and at the same time discuss the relevance of available statistics and identify new needs for gender sensitive statistics.

The need for user-producer co-operation is stressed in paragraph 207 (b) in the 1995 Beijing document: "Ensure that producers and users of statistics in each country regularly review the adequacy of the official statistical system and its coverage of gender issues, and prepare a plan for needed improvements, where necessary".

The focus in gender statistics has changed over the years following the policy areas highlighted by users of statistics. Twenty years ago the focus was primarily on women and their problems, specifically related to health and education. Statistics were often presented only on women as an "of which –group" of the total. Men were seldom visible as a separate category in statistics.

Today the users mainly focus on gender concerns. They need comparisons between women and men in various subgroups over the lifecycle and for various policy areas. Besides a regular overview for all policy areas important problems areas are gender inequality in various types of work and the values society attaches to them, unequal share of power and influence in various parts of society, and gender related crime and violence.

5. User-friendly gender statistics publications

The presentation of statistics has to relate to various users' capability to read and understand statistics. It must be kept in mind that most users are not trained in statistics.

To raise consciousness among a broad audience about gender concerns and provide ideas for improvements a regular production and dissemination of gender statistics is important. This is also one of the demands in the Beijing Platform for Action 1995. Paragraph 207 (a) states: "Ensure the regular production of a statistical publication on gender that presents and interprets topical data on women and men in a form suitable for a wide range of non-technical users".

Statistics Sweden has since 1984 produced and published such a booklet giving an overview of the situation of women and men related to various policy areas. "På tal om kvinnor och män. Lathund om jämställdhet" was firstly published every third year and since 1996 every second year. From the very beginning it has been the best-seller of Statistics Sweden. English versions have been published in 1985, 1990, 1995, 1998, 2000, 2002 and 2004 under the name "Women and Men in Sweden. Facts and Figures".

To fulfil users' various demands other publications should give deeper information on gender concerns in special policy areas when needed. Over the years Statistics Sweden has produced a number of such user-friendly publications covering gender concerns related to education, work and its value, and power and decision-making. Statistics from many statistical fields have been combined for analysis in these publications.

As part of its systematic quality work Statistics Sweden develops reports on Current Best Methods, CBM, in various areas. In its roles as statistical producer and co-ordinator of the official statistical system Statistics Sweden should urge on and support integration of a gender aspect in all parts of statistics. Recently a CBM-report titled "Statistics by sex. A necessary tool for gender analysis", has been published to support development and presentation of statistical information in order to better reflect the situation of women and men in society. The publication is presented in Swedish but will also be translated into English.

6. Organisation of gender statistics work

Production and improvement of gender statistics must be visible and formally organised in the statistical office with strong commitment and active support from highest managerial level. Mainstreaming of a gender perspective in the statistical system requires that statisticians in all subject matter fields are responsible for integration of a gender perspective in their field of responsibility. Therefore these statisticians need knowledge of

gender issues as well as they need knowledge in their subject matter field, e.g. system of national accounts, agriculture, income and salaries, education, health etc.

In addition, special staff should be appointed to strengthen gender statistics programme and ensure co-ordination, monitoring and linkage to all fields of statistical work. This group should also prepare outputs that integrates statistics from various statistical fields. The UN Statistical Division has since the early 1980's had such a staff which also give support to countries to develop gender statistics.

This way of working is in accordance with paragraph 206 (d) in the 1995 Beijing Platform for Action: "Design or appoint staff to strengthen gender statistics programmes and ensure coordination, monitoring and linkage to all fields of statistical work, and prepare output that integrates statistics from the various subject areas".

At Statistics Sweden, special staff has since 1983 had these tasks. The group has over the years been organised as a function, unit or programme. However, looking around the world, it is not until today very common in national statistical offices that gender statistics is an integrated part of the organisation. Examples can be found in China, Finland, Italy, Palestine, Russia, South Africa, Sweden and Zambia.

7. International co-operation

As earlier mentioned, co-operation between countries is very important both for the national engendering statistics process and to increase international comparability of statistics on the situation of women compared to men.

From the very beginning Statistics Sweden started to co-operate with the other Nordic countries. Over the years we have shared ideas, produced joint booklets and larger gender statistics publications with comparable statistics. Further we have analysed quality problems in the national statistical systems related to gender for Nordic comparability. In the year 2002 The Nordic Institute for Women's Studies and Gender Research made an inventory of gender statistics in the five Nordic countries at national level as well as at a Nordic regional level. This report, "Statistics on gender equality in the Nordic countries – a survey of the status 2002" (TemaNord 2003:564, Nordic Council of Ministers), recognizes substantial variations in gender statistics between the countries and provides seven recommendations to improve gender statistics in the countries.

Since 1985 all Nordic countries have participated actively in the ECE gender statistics expert group, which have met every second year. During this meetings participants from national statistical offices in the ECE region have shared experiences and discussed needs for improvement in various statistical fields. The work has also resulted in development of a joint list of statistics and indicators related to gender issues in the region. Based on information from each country a database has been built up at ECE and indicators are now presented at the ECE website.

Statistics Sweden has acted as gender statistics consultants in development projects in countries in Africa, Asia, Latin America and Eastern Europe. These projects have been funded by the Swedish International Development Agency, Sida. The outputs have been both widely distributed booklets and reports on needs to improve the statistical system to better reflect gender issues. The countries are listed in appendix 2 together with information on outputs.

The UN Statistical Division and INSTRAW organised together with Statistics Finland and Statistics Sweden two gender statistics workshops at the NGO Forum in Beijing 1995. Representatives from national statistical offices from various parts of the world presented concrete results of gender statistics work at national and regional level. Further, joint needs for development activities were discussed.

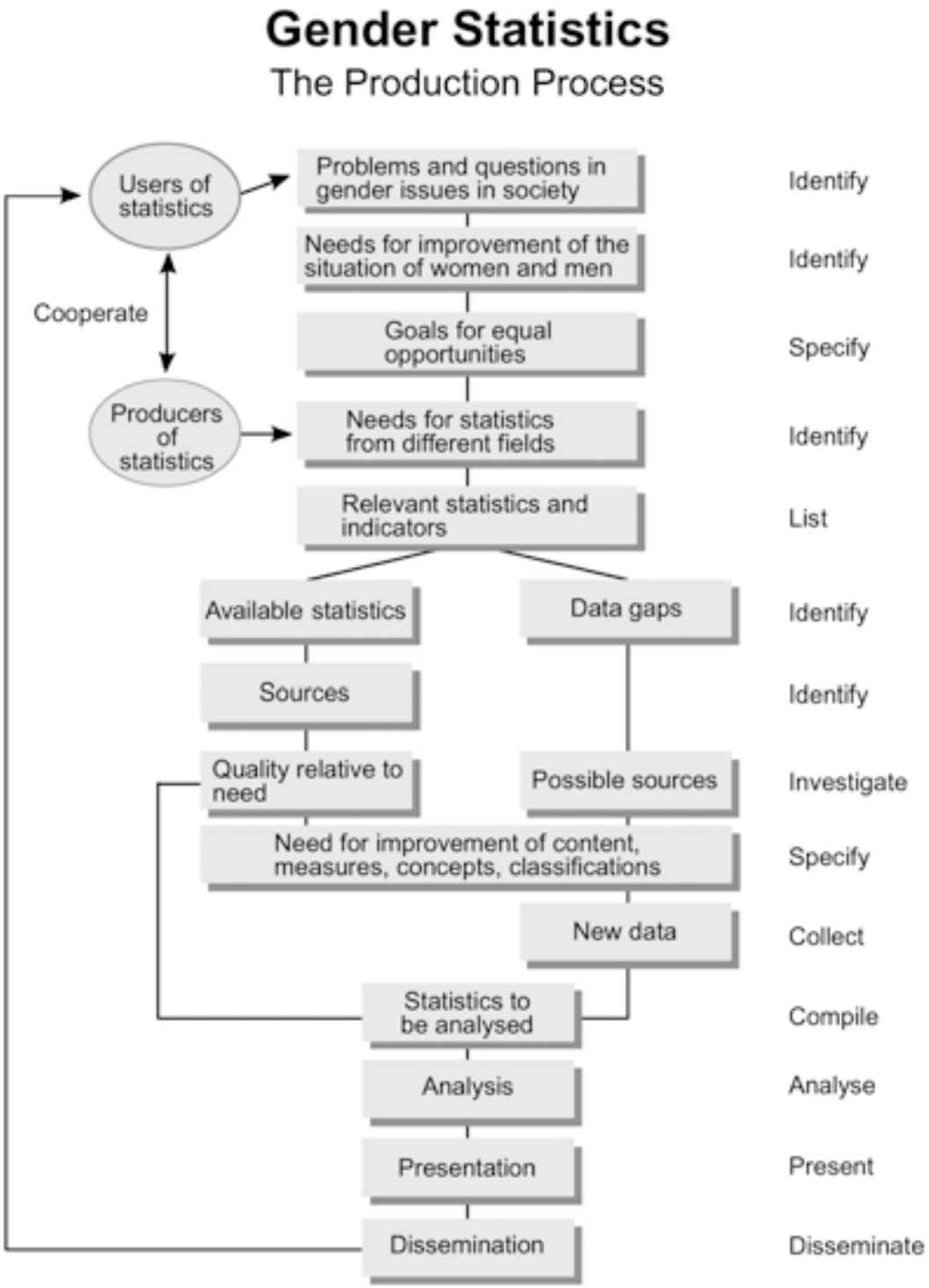
8. What remains to be done?

Today a formal basis for gender statistics development is clearly expressed in international and national documents and plans for gender equality. Firstly, the Beijing Platform for Action 1995 and the European Union Strategy for Gender Equality 2001–2005 are important frameworks. Secondly, national plans for gender equality often express need for gender statistics. Also, in many countries national laws and/or other governmental ordinances and regulations give the formal requirements for gender statistics work. Further, various manuals and guidelines for improvement of gender statistics have been developed. Numerous gender statistics workshops and seminars have been held around the world.

What more is needed in written documents to create concrete action within national statistical offices? In fact – nothing! What is required is instead a widespread awareness within each statistical office about the existence of these documents together with knowledge about gender concerns and gender equality policies and why gender statistics has to be mainstreamed in development of the whole official statistical system. A strong commitment at highest managerial level is crucial.

The most urgent activities for a statistical office to undertake are to:

- Improve organisation of gender statistics within the office.
- Ensure that all statistics related to individuals are collected, analysed and presented with sex as a primary and overriding classification.
- Improve linkage between users and producers of gender statistics.
- Make better use of existing statistics to reflect gender issues.
- Produce, present and disseminate gender statistics in a user-friendly way .
- Improve concepts, definitions and measures to better reflect gender issues.
- Fill in data gaps.



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Appendix 2

Gender Statistics Development Projects executed by Statistics Sweden with financial support from Sida 1985–2003

The popular statistical booklet "Women and Men in Sweden. Facts and Figures 1985", produced by Statistics Sweden, was presented at the UN World Conference on Women in Nairobi 1985 at seminars organised by the Council on Women, KIB, at the Swedish International Development Cooperation Agency, Sida. The booklet became recognised worldwide and contributed to increased interest in presentation and use of statistics on the situation of women and men which was easy accessible and easy to understand for non-statisticians.

Since1985, Sida has actively supported activities to develop gender statistics in various countries. Statistics Sweden has acted as gender statistics consultants in this work. Until today, projects have been undertaken in the following countries:

Africa	**Asia**	**Latin America**
Botswana [1]	China [1,3]	Bolivia
Etiopia [1]	India [1]	Chile [1]
Kenya [1]	Laos	Guatemala
Lesotho [1]	Pakistan [1]	Nicaragua
Malawi	The Philippines [1]	
Mozambique [1]	Sri Lanka [1]	**Europe**
Namibia [1]	Thailand [1]	Armenia [1,3]
South Africa [1]	Uzbekistan	Azerbaijan [1,3]
Swaziland	Vietnam [1]	Estonia [1]
Tanzania [1]		Georgia [1,3]
Tunisia		Latvia [1]
Uganda [1]		Lithuania [1]
Zambia [1]		Russia[1,2,3]
Zimbabwe [1]		Ukraine [1]

[1] Has published a booklet, "*Women and Men in X-country. Facts and figures 19..*"

[2] Has published booklets for all Russia, for Moscow City, Moscow Region, St. Petersburg City, Leningrad Region and for the Regions of Arkhangelsk, Kaliningrad, Karelia, Komi, Murmansk, Nighny Novgorod, Rostov and Vologda. Also, fact sheets named "*Women and Men in St.Petersburg"* and corresponding titles for *Kaliningrad Region* and *Murmansk Region* have been produced. Further, the project "Improving Gender Statistics in Russia" includes reports from all regions involved and for all Russia on needs to improve the official statistical system to better reflect gender concerns.

[3] The project also includes a report on needs to improve the official statistical system to better reflect gender concerns.

Twelve countries in Africa (all listed except South Africa and Tunisia), six countries in Asia (all listed except China, Laos and Uzbekistan) and the three Baltic countries have, in addition to national work, participated in regional projects with the objective to strengthen the national development of gender statistics and improve comparisons between countries.

The African project, which ended in 1996, included a regional publication, *"Women and Men in East, Central and Southern Africa. Facts and Figures 1995"* , a report on *"Needs to improve gender statistics in East, Central and Southern Africa and plan for future action 1997-1999"* , a regional Newsletter and a larger publication from Tanzania, *"Analysis of African Women and Men. The Tanzanian Case"*. This publication is a country specific version of the UN publication *"The World's Women"*.

The Asian project was half funded by UNIFEM and half by Sida. ESCAP's Statistical Division was executing agency. Included in the projects were production of national booklets, regional publications with comparable statistics on the situation of women and men in various spheres of society within the respective region and reports on how to improve national official statistics to better reflect gender concerns.

The Baltic project resulted in the first publication with comparable gender statistics for the three countries, *"Women and Men in the Baltic Countries 2000"*

All country specific and regional statistical projects have included training activities (courses, workshops, seminars). Material developed for this training, together with experiences from practical work in various countries, are the basis for a publication/ training manual. The book "*Engendering Statistics. A Tool for Change"* was published by Statistics Sweden in December 1996 and is now sold world-wide. The book was published in Japanese at the end of 1997, in Spanish in February 1999, in Chinese in September 1999 and in Russian in December 1999. The books are among other things used in training activities in various Sida-projects.

At the UN World Conference on Women in Beijing in August/September 1995 workshops and seminars for users and producers of gender statistics took place. Organisers were the UN Statistical Division and INSTRAW in co-operation with Statistics Sweden and Statistics Finland. Results and experiences from Sida's projects and suggestions for further activities were presented by statisticians from some of Sida's project countries and by Statistics Sweden.

GENDER STATISTICS: ARE THERE NEW CHALLENGES FOR EUROPE?

Angela Me, UNECE [1]

Background

Strategies to improve the production, presentation and dissemination of statistics reflecting the realities of women and men have been developed and are applied in many European countries. There is considerable variation in timing and strategies among the member countries, with countries that have pioneered the development of the field of gender statistics, differing from those that have established their gender statistics programmes only in the last 10-15 years. Furthermore, in the former transition countries gender concerns were largely been absent from the national policy-making agendas and macro economic policies on which the transition process was built did not require gender-sensitive data.

With the considerable progress that has been achieved to date, and in some countries, particularly those that experienced the transition, it is argued that data are regularly produced and disseminated by sex and that gender is not one of the main concerns. In the old tradition women had always had a prominent role in the work environment more than in the West. But although the situation may appear satisfactory, the paper argues that there is still the need to invest in gender statistics in the wide Europe. New challenges are in converting into regular programmes of data collection what is now based on ad-hoc initiatives (such as the measurement of time-use and domestic violence) and in developing instruments for gender analysis that go beyond the traditional aspects of women and men participation in the society. There is a need to scrape the surface and for example look at quality of employment and access to the labour market rather than to measure only employment and unemployment. A lot still needs to be done to further standardize indicators, establish links between official statistics and policies, and to engender the production and dissemination of statistics particularly in those areas where there is little tradition of gendered analysis such as business statistics, transport and communication statistics. A question that gender statisticians will also need to answer in the near future is how to measure gender disparities in a multi-cultural environment.

1. The Collection and Analysis of data: The achievements and the challenges of the Beijing Platform for Action

The Beijing Platform for Action[2] (PoA) in its Strategic objective H.3 "*Generate and disseminate gender-disaggregated data and information for planning and evaluation*" (see Annex 1) played an important role in increasing awareness in national, regional and international organizations of the need to develop systems of gender statistics to monitor changes in the situation of women as against that of men. The actions listed under para 206 of the PoA identified the objectives to be pursued by national statistical offices in their role to improve the availability and use of gender statistics.

[1] Chief of Social and Demographic Statistics Section, UNECE Statistical Division (angela.me@unece.org)
[2] Platform for Action and the Beijing Declaration, Chapter 4, United Nations New York 1996.

What is gender statistics

Gender statistics are statistics that adequately reflect the situation of women and men in all policy areas - they allow for a systematic study of gender differentials and gender issues.

A gender issue is any issue or concern determined by *gender*-based and/or *sex*-based differences between women and men. Gender issues are all aspects and concerns of how women and men interrelate, their differences in access to and use of resources, their activities, and how they react to changes, interventions, and policies.

Producing statistics that adequately reflect gender issues implies that all statistics are produced taking into consideration the different socio-economic realities women and men face in society. This means that all data - both those on individuals as well as those not directly related to individuals - are collected, compiled, and analysed, taking into consideration that gender-based factors influence women and men differently - this can be called the *gender mainstreaming of statistics*.

The impact on women and men needs to be considered in every step of statistical production and in all statistical fields. Concepts and methods used in data collection need to be adequately formulated to ensure that they reflect existing gender concerns and differentials. Additionally, social and cultural factors must be taken into consideration as they can result in gender-based biases in data collection, analysis, and presentation.

Source: ECE Gender Statistics Web-site (http://www.unece.org/stats/gender/web/)

Why gender statistics is important?

Gender statistics is important for at least three reasons. Firstly, it raises public awareness on the plight and prevailing conditions of women and men. It provides policy makers with sufficient baseline information to institute favourable changes to existing policies affecting women and men differently. Finally, it provides an unbiased source of information to monitor the actual and real effects of government's policies and programs on the lives of women and men.

Looking at some of these actions, what follows attempts to describe what has been achieved in Europe since 1995 and what still need to be developed or improved.

PoA Objectives:

- para (a) *Ensure that statistics related to individuals are collected, compiled, analyzed and presented by sex and age and reflect the problems, issues and questions related to women and men in society*
- para (b) *Collect, compile, analyse and present on a regular basis data disaggregated by age, sex, socio-economic and other relevant indicators, including number of dependents, for utilization in policy and programme planning and implementation*

Since 1995, there is a growing concern to collect sex-disaggregated data and gender issues are often taken into account in the collection of social and demographic statistics. However, the process of mainstreaming gender into the entire process of production, analysis and dissemination of official statistics has not yet been completed. Challenges still remain in the production of sex-disaggregated data and in the collection and analysis of issues related to women and men in society.

1.1. Are all data sex-disaggregated?

Gender issues exist in all spheres of society and are relevant to the production of statistics in all fields. They should therefore intervene at every step of the production process. In reality not all statistics where sex disaggregation would be relatively straightforward are in effect produced or analyzed with gender breakdowns. Statistics that have been traditionally developed into the economic areas such as business, transport, agriculture and services are in many countries still approached in a gender-blind manner. Business registers for example, may not include information on the sex of the owner or managers of the enterprise. Agriculture surveys and censuses do not often record the sex of the land's owner. These gaps limit the scope of studies undertaken to

monitor women and men in leading positions since they prevent a gender analysis in those areas where gender disparities could be wider.

An area that is still particularly difficult to analyze for the lack of sex-disaggregated data is Entrepreneurship. There is an increasing awareness of the importance of women entrepreneurs as an important group that may respond differently from men entrepreneurs to political and economical changes. And although it has been recognized that women's entrepreneurship is an important untapped source of economic growth[3], it is still difficult in some countries to collect sex-disaggregated data particularly for small and medium enterprises (SME). An analysis done by ECE on the status of statistics on women and men's entrepreneurship[4] revealed that the main obstacles is the lack of sex-disaggregated data on owners and managers of enterprises[5]. Many national registers such as business, tax, insurance registers and chambers of commerce where information on the "demography" of business is collected, do not record or disseminate the sex of the concerned person. Therefore, if data has become available on the sex distribution of self-employed (collected through labour force surveys), reliable data on achieved sales, employment, growth, and survival according to the sex of the entrepreneur is still missing for the majority of countries[6].

Issues related to the improvement of the availability of data on women and men entrepreneurship has been highlighted in important fora such as the 2003 ILO International Conference of Labour Statisticians and the OECD workshop on improving statistics on SMEs and entrepreneurship held in Paris from 17-19 September 2003 (as a part of the Bologna process)[7]. These two meetings have initiated a process that has brought to the attention of statisticians and policy makers the need to integrate gender into business registers and statistics. However, it was also emphasized the difficulties persist due to the reluctance of statisticians involved in business statistics to jeopardize the data collection because providing "information disaggregated by sex may lead to refusal to respond to the survey given the increased response burden"[8]. Additional complications arise when attempting the mainstreaming of gender into registrations created for administrative purposes such as tax and insurance records and chambers of commerce. These are maintained by administrations outside the national statistical offices, which do not immediately see the advantage of adding sex into the records.

1.2. The roles of women and men in society: need for improved statistics

The production of gender statistics requires more than just collecting official data disaggregated by sex. Concepts and methods used in every stage should adequately reflect any gender-based biases in social norms, attitudes and economic life, to correctly evaluate the contribution of women and men to the society. Engendering statistics therefore goes beyond the mainstreaming of sex into the normal process of data collection and dissemination. It looks into those areas where additional data collection or analysis is required in order to highlight unbalanced roles or inequalities. Some of these areas, probably the most relevant for Europe, were identified in the Beijing PoA: full contribution of women and men to the economy, more comprehensive knowledge of all forms of work and employment, poverty, and violence against women.

Time use statistics

PoA Objectives:

- (g) *Develop an international classification of activities for time-use statistics that is sensitive to the differences between women and men in remunerated and unremunerated work, and collect data disaggregated by sex*

[3] Issues related to statistics on women's entrepreneurship, Paper prepared by the Secretariat of the OECD Workshop on Firm level statistics, 26-27 November 2001 (see http://www.oecd.org/dataoecd/11/12/2668264.pdf).

[4] Giovannelli C., Gunnsteinsdottir H., Me A. (2003), *The Status of Statistics on Women and Men's Entrepreneurship in the UNECE Region,* paper presented at the OECD Workshop on Improving Statistics on SME's and Entrepreneurship, Paris 17-19 September 2003 (see http://www.oecd.org/dataoecd/2/36/9252934.pdf).

[5] According to a survey conducted by ECE on the availability of sex-disaggregated data on entrepreneurship only 13 countries (of the 39 countries that replied) had statistical data on the number and/or percentage of enterprises owned or managed by women and men.

[6] Delmar F. (2003), *Women Entrepreneurship: Assessing Data Availability and Future Needs,* paper presented at the OECD Workshop on Improving Statistics on SME's and Entrepreneurship, Paris 17-19 September 2003 (see http://www.oecd.org/dataoecd/50/48/14723090.pdf).

[7] http://www.oecd.org/document/38/0,2340,en_2649_34233_2789222_1_1_1_1,00.html

[8] *Final Report of the 17th International Conference of Labour Statisticians,* Geneva 24 November to 3 December 2003, page 9, (see http://www.ilo.org/public/english/bureau/stat/download/17thicls/final.pdf).

- (i) *Conduct regular time-use studies to measure, in quantitative terms, unremunerated work, including recording those activities that are performed simultaneously with remunerated or other unremunerated activities*
- (ii) *Measure, in quantitative terms, unremunerated work that is outside national accounts and work to improve methods to assess and accurately reflect its value in satellite or other official accounts that are separate from but consistent with core national accounts*

Since 1995 various steps have been taken to improve the quality and availability of data to measure unremunerated work in national and international organizations. In response to the Beijing PoA, the United Nations Statistics Division drafted an International Classification of Activities for Time-Use[9], Eurostat developed an activity classification to measure paid and unpaid work and some countries developed their own national classification. In parallel to these standardization efforts countries implemented an increasing number of time-use surveys.

The implementation of time-use surveys, however, is still an ad-hoc event in the majority of countries and the number of ECE countries that have recently carried out time-use surveys is limited (Annex 2 reports the time-use surveys carried out in the ECE region in the last nine years). The key role of time-use surveys in adequately measuring the participation of women and men in the economy is increasingly been recognized by policy makers but the magnitude of information provided by time-use surveys still need to be fully explored. Like income and expenditure surveys are key sources for the income-related economic statistics time-use surveys have the potential to become a major source in studying the social conditions of people. They can in fact collect information on[10]:

- Productive work, including the invisible part of the economy which needs to be integrated into a Government's decision-making (unpaid work and the amount undertaken and the extend to which this supports the economy and the general functioning of the society)
- paid employment, (the relationship between different uses of time and the factors which hinder or help people participation in the labour market and information on the categories of workers that are more difficult to measure)
- health (the amount of caring work done and the activities people perform that impact health status)
- income support (the use of time by recipients of social security benefits)
- education and training (how much has been undertaken and by whom)
- social networks

Poverty and gender statistics

PoA Objectives:

- (h) *Improve concepts and methods of data collection on the measurement of poverty among women and men, including their access to resources*

Whether monetary poverty affects women and men in a different way is still an open question in many countries. Conventional measurements of monetary poverty have been generally based on levels of income or consumption of households and the analysis of poverty from a gender perspective has always been limited by the lack of data on income/consumption at individual level. Studies on intra-household distribution and use of resources show that individuals within the household may have different preferences and may not pool their income. Moreover, assets controlled by women have in general a more positive and significant effect on expenditures for children than those controlled by men[11]. There are few and limited studies carried out to analyze if poverty (income/consumption) affects women and men differently and the main issue is the identification of indicators that could differentiate women and men within the concept of household. In some countries studies have used indicators based on the concept of head-of-household and compared for example number of poor

[9] http://millenniumindicators.un.org/unsd/methods/timeuse/tuaclass.htm
[10] *Information about the Time-Use survey of New Zealand* (http://www.stats.govt.nz/domino/external/omni/omni.nsf/outputs/Time+Use+Survey)
[11] *The World's Women 2000 Trends and Statistics,* United Nations publication Sales No. E.oo.XVII.14 page 125.

households headed by women with number of poor households headed by men. However, often the meaning of head-of-household used in surveys or census is far from the leading role that women and men actually play in the households and indicators based on this concept are not very relevant to analyze gender disparities. Indicators have been suggested[12] on the base of single person households or single-parent households (with children). These indicators are particularly relevant for countries in Europe and North America where single-person households are numerous given the high number of elderly men and women (but particularly women) living alone. Examples of other indicators that can be measured from household-income data are female spouses with no own income in poor and non-poor households and poverty magnitude with and without the income contribution of female spouses[13]. Some European countries can produce income data by sex based on tax registers, but these are only few (note: there are two main problems. One is related to the taxation systems that often allow joint tax filing of spouses and prevent the recording of individual incomes. Another problem is related to the difficulties of linking income records with other social-economic characteristics available in other registers).

In general there are very few studies that analyze poverty by gender and even if the indicators listed above can be measured using household income data (widely available in all the Western countries) they are not very popular in international, regional, and national poverty studies. It can be concluded that a lot needs to be done still to mainstream gender into poverty analysis or to include poverty into gender studies[14].

Statistics on violence against women

PoA Objectives:

- (h) *Develop improved gender-disaggregated and age-specific data on the victims and perpetrators of all forms of violence against women, such as domestic violence, sexual harassment, rape, incest and sexual abuse, and trafficking in women and girls, as well on violence by agents of the State*

"Gender-based violence or violence against women has been identified as a major public health and human rights problem throughout the world but lack of reliable data on the root causes, magnitude, and consequences of the problem has been a major obstacle in the search for solution"[15]. Violence against women (VAW) is probably the area in gender statistics where data are more scarce and quality is poorest. International organizations such as WHO and UNICRI embarked in projects to develop survey methodologies to be implemented in several countries in a standardized format to obtain estimates of the prevalence of VAW which would allow for inter-country comparison. However, these research-type of projects have often been implemented at local level and only in few countries were carried out within the framework of official statistics. New efforts should be directed toward the development of standard methodologies taking on board the work done already by the two organizations. The situation is that still very few countries can provide official estimates of VAW at national level. Countries should increase their efforts to rise awareness of the problem and the need to collect data and organizations at European level should developed standards to be implemented within the framework of official statistics to help the countries to design their own surveys or thinking if it would be possible to develop short modules to be included in on-going surveys.

Labour statistics

PoA Objectives:

- (e) *Improve data collection on the full contribution of women and men to the economy, including their participation in the informal sector(s)*
- (f) *Develop a more comprehensive knowledge of all forms of work and employment …*

In the last decade many countries in Europe have consolidated the regular collection of data on employment and nowadays labour force surveys are carried out regularly on a quarterly or annual basis and provide gender

[12] Report of the UNECE-UNDP Task Force on Gender Statistics Website for Europe and North America, September 2002 (see http://www.unece.org/stats/documents/2002/09/taskforce/inf.1.e.pdf).

[13] See the United Nations Economic Commission for Latin America and the Caribbean web-site on gender statistics: http://www.eclac.org/mujer/proyectos/perfiles/default.htm

[14] The lack of suitable indicators to measure poverty and gender was also emphasized by the UN Inter-Agency Expert Group Meeting on Millennium Development Goals indicators in the meetings in March 2004 (New York) and October 2004 (Geneva).

[15] See WHO Web-site: http://www.who.int/violence_injury_prevention/injury/definitions/def20/en/

data on employment and unemployment in a sustainable way. The traditional focus of these activities has mainly been on employment and unemployment but there is now a growing awareness that this is insufficient to look at the gender disparities in the work environment. The simple participation of women and men in the labour force measured as employment and unemployment does not tell anything about the nature and quality of employment where the inequalities may be higher. New aspects related for example to access to labour market, work conditions, type of contracts, earnings, and flexibility of working-time arrangements need to be explored.

The International Conference of Labour Statisticians has recently stressed some of the issues related to the inclusion of gender concerns into the production of labour statistics not only for promoting "gender equality but also for improving labour statistics themselves"[16]. A checklist of good practices for gender mainstreaming in labour statistics was also approved by the Conference (See Annex 3). One of the key element of the Conference's output is the recognition that "when presenting statistics it is important **to cross-classify them according to personal and family circumstances**, but also to the institutional context (e.g. fiscal regulations), as well as the work environment (e.g. working time flexibility, childcare facilities etc.)"[17].

Since 1999 ILO is also promoting the concept of decent work described as "*opportunities for women and men to obtain decent and productive work in conditions of freedom, equity, security and human dignity*"[18] which includes six dimensions: (i) opportunity for work; (ii) productive work; (iii) freedom of choice of employment; (iv) equity in work; (v) security at work; and (vi) dignity at work. These aspects are particularly relevant for gender statistics since they identified areas where gender analysis is more needed.

There is experimental work in progress to identify indicators that could monitor decent work or quality of work. ILO has proposed a set of thirty indicators[19] and work is in progress in the region to review this list and make it more relevant for developed countries[20]. ILO has commissioned a paper on quality of work indicators in the EU where existing sources of data are reviewed. Preliminary results from this paper show that the European Community Household Panel is an under-exploited source of data for an analysis of women and men's quality of work. The report also highlights the need for more data at European level on working time and the extent to which this is sufficiently flexible to enable women and men to reconcile employment with family and other responsibilities.

2. Organization of gender statistics programmes to mainstream gender into statistics

The integration of gender into the production, dissemination and analysis of statistics has come a long way in the last twenty years. Gender statistics programmes have been built into national statistical offices and other statistical departments and there is an increased awareness of the importance to provide gender analysis for policy formulation and monitoring. However, these programmes have often been confined in areas related to the collection and dissemination of social and demographic statistics making it difficult to influence the inclusion of gender into other fields of statistics. Recognizing that gender is an issue related to all fields of statistics related directly or indirectly to individuals, it is important that gender be mainstreamed in all areas of statistics to make sure that data collection and dissemination take proper consideration of gender-related issues in all fields.

A key to success of gender mainstreaming is the ***strategic positioning*** of gender statistics programmes. From specialized areas, typically social and demographic, gender statistics programmes should move to where the overall planning of statistical programmes takes place, typically in the office of the chief statistician[21]. The presence of one department whose main task is the collection and analysis of gender statistics is NOT mainstreaming. That will only occur when everyone does gender statistics as an essential part of their work and the capacity to do it exists across the whole national statistical office. Important factors for this to happen are the commitment of top managers to the cause of gender statistics and the establishment of gender adviser offices reporting directly to the chief statistician. Objectives a gender statistics adviser office should be:

[16] *Final Report of the 17th International Conference of Labour Statisticians,* Geneva 24 November to 3 December 2003, page 9, (see http://www.ilo.org/public/english/bureau/stat/download/17thicls/final.pdf).

[17] See note 13.

[18] ILO, *Decent Work: Report of the Director General, International Labour Conference,* 87th Session. Geneva 1999.

[19] Anker, R., Chernyshev, I., Egger, Ph., Mehran, F. and Ritter, J., *Measuring Decent Work with Statistical Indicators*. Policy Integration Department, Statistical Development and Analysis, Working Paper No. 2. International Labour Office, Geneva, October 2002.

[20] A joint ECE-ILO-Eurostat meeting on quality of work is planned from 2-4 February 2005 in Geneva.

[21] The advantage of having a unit to oversee the whole mainstreaming process was also emphasized at the 17th Conference of Labour Statisticians (see http://www.ilo.org/public/english/bureau/stat/download/17thicls/final.pdf page 11).

- to build good interactions with all departments irrespective of the field
- to help other subject-area specialists to develop a gender perspective with a view that any issue with a human involvement may affect women and men differently and therefore needs to be equipped with statistics by sex (see above session on sex-disaggregated data)
- to coordinate the development of standards related to the collection of gender-relevant topics
- to coordinate gender analysis

This process is consistent with the general UN definition of gender mainstreaming: " … the process of assessing the implications for women and men of any planned action, including legislation, policies or programmes, **in all areas and at all level** …"[22] . Many countries and international organizations are adopting the strategy of centralizing the gender approach into institutions. OECD for example has appointed a Gender Coordinator in the General Secretariat " … to assist in integrating a gender perspective into the substantive work of the organization …"[23]. In ECE the gender specialist also reports to the Executive Secretary.

3. Gender statistics in a multicultural society

The definition of gender roles in a society mainly depends on social norms, cultural background, religious believes, and people attitudes. Gender statistics programmes are different in different countries and focus in those areas where gender disparities are higher according to the prevailing social and domestic environment where women and men live. If in developed countries major concerns relate to issues such as the reconciliation of work and family responsibilities and the balanced representation of women and men in powerful positions, in developing countries issues are more related to basic social services, work participation, and stereotyped roles that women are expected to fulfil.

Due to the migration movements that the World is currently experiencing it is expected that in the near future people in Europe will live in a multi-cultural society. How much this will affect the role of women and men in Europe? How much this should change the way gender statistics are collected and analyzed? These are questions that are difficult to answer now, but that gender statisticians should be ready to address in the near future.

4. Improving the dialogue between users and producers of gender statistics

Gender statistics have a life only if used to monitor equal opportunities, to argue and convince policy makers of the need to change, or to advocate and inform programmers. Gender statistics is not an end by itself. Statistical data become meaningful to the extent that they are converted into usable and actionable information for policy decision[24] and therefore it is important that producers and users of gender statistics work very closely to assure the relevance of the information produced.

In the last 15 years the awareness about the need to strengthen the collaboration between users and producers of gender statistics has increased particularly when it comes to defining priorities and developing new methodologies in data collection[25] [26]. However, there is still little consideration on the need to improve users' understanding of **how** to make an optimal use of gender statistics for policy formulation and monitoring. Statisticians need to be more proactive in promoting the application of gender analysis for informed decisions. This means to improve the knowledge and understanding of how to approach users including analytically reviewing users needs, encouraging users to be more pro-active in their requests for data and appreciating the value of statistics for their projects developments and monitoring.

[22] *The Report of the Economic and Social Council for 1997,* United Nations 1997.
[23] See http://www.oecd.org/department/0,2688,en_2649_18518332_1_1_1_1_1,00.html
[24] *Integrating Unpaid work into National Policies,* UNESCAP and UNDP 2003, United Nations publication Sales No. E.03.II.F.14.
[25] See for example: *Engendering Statistics, a Tool for Change,* B. Hedman, F. Perucci, P. Sundstrom, published be Statistics Sweden ISBN 91-618-0859-8, Handbook for Promoting National Statistical Reports on Women and Men, United Nations publication Sales No. E.97.XVII.10.
[26] In the UK for example the users of gender statistics create a group that formally advise the national statistical system in the collection and dissemination of gender statistics.

Transforming statistics on gender for policy formulation and monitoring is a challenging task. Even if policy makers increasingly use statistics to support their decisions, there is still a lack of understanding of how best to use them to develop new policy programmes. This is particularly relevant in areas where statistics are becoming available only recently such as time-use data. These types of data are more often used for advocacy purposes than for formulating appropriate programmes.

Recently the United Nations Economic and Social Commission for Asia and Pacific (ESCAP) in collaboration with UNDP produced a book on Integrating Unpaid Work into National Policies [27] where a framework for integrating unpaid work into national policies was presented. This includes:

- collection and analysis of time-use data
- valuation of time-use data
- situation assessment and analysis
- policy formulation
- advocacy for policy action

5. Tools to support gender statistics in the region: ECE activities

ECE Gender Statistics Website and Database

One of the tools to integrate statistics with policies is the Website that ECE in collaboration with the UNDP Regional Support Centre in Bratislava has developed on gender statistics. The main focus is on the production, dissemination and use of gender related data. In addition to statistics, this site elaborates on some of the main gender issues relevant to the UNECE region, and provides examples of policies and other initiatives within that context. This website also links these gender issues to statistical indicators framework developed by the UNECE/UNDP gender statistics Task Force. Part of the Website is the UNECE Gender Statistics Database which was released in May 2003 to monitor the situation of women and men in all UNECE member countries, and to evaluate the effectiveness of policies. Data is available for the years 1980, 1990, 1995, and from 2000 onwards on an annual basis.

To ensure comparability, the data provided are in most cases in line with international standard definitions. However, for data not in line with international standard definitions, additional information about the data, or metadata, is provided.

The framework used in the website and the database provides the basis for the development of gender statistics in the region to allow ECE countries to play a complementary role in the development and dissemination of engendered statistics. By the same token, it allows policy-makers and other users ready access to these data enabling them to monitor progress towards national and international goals and targets.

Assessment of the status of gender statistics in the CIS and SEE countries

ECE in collaboration with the UNDP Regional Support Centre in Bratislava is carrying out an assessment of the status of gender statistics in the Commonwealth of Independent States (CIS) and South European Countries (SEE). The objectives of the assessment are:

- To assess the availability of gender statistics, and capacity of national statistical offices (NSOs) to produce and disseminate gender statistics.
- To review the assistance received by national statistical offices by national and international donors in the area of gender statistics

To reach these objectives ECE sent a questionnaire to gender focal points in national statistical offices (NSOs), requesting information about the extent to which, if at all, NSOs address gender statistics systematically, when it comes to the production and dissemination of gender statistics, including user-producer relationship. The questionnaire will help to get a picture of the main problems/issues facing NSOs and gender focal points in the production and dissemination of gender statistics, as well as the organisational approach to, and emphasis on

[27] See footnote 21.

gender statistics. The questionnaire will be complemented with three field studies in Ukraine, Serbia and Montenegro, and Azerbaijan. The data available in the ECE gender statistics database will also be evaluated and national publications will be reviewed to obtain at the extent it is possible a completed picture. It is expected that the results of the assessment will highlight the strengths of gender statistics in the two regions and the gaps that need to be addressed. It is planned to finalize the report by September 2004.

Technical cooperation

ECE continues its efforts to help countries to strengthen their capacities in producing, disseminating and analyzing gender-related data. In July 2004 a sub-regional workshop on gender statistics for Central Asian countries is planned in Turkmenistan in collaboration with the UNDP Regional Support Centre in Bratislava. The main objective of the workshop is to improve the production, presentation and use of statistics to monitor gender equality through:

An improved dialogue between users and producers of gender statistics that could contribute to:

- A better understanding of gender equality issues by staff of national statistical offices
- A better consideration of gender sensitive issues in the collection and dissemination of official statistics (going also beyond sex-disaggregated data)
- A better use of existing statistics and data sources and the development of additional statistics
- A better use of statistics for developing and monitoring gender equality policies

Work sessions on gender statistics

ECE will continue to offer to its member countries a forum where gender statistics experts can meet and discuss selected topics. Traditionally, meetings are held every two years and one is planned from 18-20 October 2004 in Geneva. Among the objectives of this meeting are:

- To strengthen the network of ECE gender statistics focal points in national statistical offices
- To strengthen the relations with users of gender statistics
- To identify selected areas where there is the need to initiate a process to identify and develop best practices or standard methodologies to be eventually approved by the Conference of European Statisticians.

Millennium Development Goals and gender indicators

In September 2000 147 heads of State and Government, and 189 nations in total, committed themselves in the United Nations Millennium Declaration to making the right to development a reality for everyone. To help track progress, the United Nations Secretariat and the specialized agencies of the UN system, defined a set of time-bound and measurable goals and targets for combating poverty, hunger, disease, illiteracy, environmental degradation and discrimination against women[28]. One of these targets is the **promotion of gender equality and empowerment of women**. International experts also selected relevant indicators to be used to assess progress over the period from 1990 to 2015, when targets are expected to be met. The Millennium Development Goals (MDG) have become an important framework for the work of the UN system toward development and the monitoring of the MDG is becoming very relevant in the field of human development indicators. Each year, the Secretary-General prepares a report on progress achieved towards implementing the MDG with the input of the UN Secretariat, specialized agencies and regional commissions including ECE. This report is based on data on 48 standard indicators, aggregated at global and regional levels. In developing countries UNDP leads the development of national MDG reports.

Within the framework of monitoring MDG, gender plays an important role, but efforts are under way to make it more prominent and more cross-sectional. Currently only four[29] of the 48 indicators are specifically related to the target on gender equality and empowerment of women. Indicators related to other targets (related for example to poverty, education, health, and unemployment) are not always gender-sensitive. A group that involves specialized agencies, the UN secretariat and regional commissions including ECE is working to improve the indicators to monitor the gender target and the other indicators related to other relevant targets. One of the issue that is under discussion is to have indicators on employment and family responsibility. The development of new standard indicators do not have only the advantage of improving the monitoring of MDG but also to guide countries into efforts to improve their gender data and analysis.

28 [See Road Map towards the Implementation of the United Nations Millennium Declaration].

29 Ratio of girls to boys in primary, secondary and tertiary education, ratio of literate women to men, 15-24 years old, share of women in wage employment in the non-agriculture sector, proportion of seats held by women in national parliament.

ANNEX 1
BEIJING PLATFORM FOR ACTION

Strategic objective H.3. Generate and disseminate gender-disaggregated data and information for planning and evaluation

Actions to be taken

209. By national, regional and international statistical services and relevant governmental and United Nations agencies, in cooperation with research and documentation organizations, in their respective areas of responsibility:

(a) Ensure that statistics related to individuals are collected, compiled, analysed and presented by sex and age and reflect problems, issues and questions related to women and men in society;

(b) Collect, compile, analyse and present on a regular basis data disaggregated by age, sex, socio-economic and other relevant indicators, including number of dependants, for utilization in policy and programme planning and implementation and to reflect problems and questions related to men and women in society;

(c) Involve centres for women's studies and research organizations in developing and testing appropriate indicators and research methodologies to strengthen gender analysis, as well as in monitoring and evaluating the implementation of the goals of the Platform for Action;

(d) Designate or appoint staff to strengthen gender-statistics programmes and ensure coordination, monitoring and linkage to all fields of statistical work, and prepare output that integrates statistics from the various subject areas;

(e) Improve data collection on the full contribution of women and men to the economy, including their participation in the informal sector(s);

(f) Develop a more comprehensive knowledge of all forms of work and employment by:

(i) Improving data collection on the unremunerated work which is already included in the United Nations System of National Accounts, such as in agriculture, particularly subsistence agriculture, and other types of non-market production activities;

(ii) Improving measurements that at present underestimate women's unemployment and underemployment in the labour market;

(iii) Developing methods, in the appropriate forums, for assessing the value, in quantitative terms, of unremunerated work that is outside national accounts, such as caring for dependants and preparing food, for possible reflection in satellite or other official accounts that may be produced separately from but are consistent with core national accounts, with a view to recognizing the economic contribution of women and making visible the unequal distribution of remunerated and unremunerated work between women and men;

(g) Develop an international classification of activities for time-use statistics that is sensitive to the differences between women and men in remunerated and unremunerated work and collect data, disaggregated by sex. At the national level, subject to national constraints:

(i) Conduct regular time-use studies to measure, in quantitative terms, unremunerated work, including recording those activities that are performed simultaneously with remunerated or other unremunerated activities;

(ii) Measure, in quantitative terms, unremunerated work that is outside national accounts and work to improve methods to accurately reflect its value in satellite or other official accounts that are separate from but consistent with core national accounts;

(h) Improve concepts and methods of data collection on the measurement of poverty among women and men, including their access to resources;

(i) Strengthen vital statistical systems and incorporate gender analysis into publications and research; give priority to gender differences in research design and in data collection and analysis in order to improve data on morbidity; and improve data collection on access to health services including access to comprehensive sexual and reproductive health services, maternal care and family planning, with special priority for adolescent mothers and for elder care;

(j) Develop improved gender-disaggregated and age-specific data on the victims and perpetrators of all forms of violence against women, such as domestic violence, sexual harassment, rape, incest and sexualabuse, and trafficking in women and girls, as well as on violence by the agents of the State;

(k) Improve concepts and methods of data collection on the participation of women and men with disabilities, including their access to resources.

210. By Governments:

(a) Ensure the regular production of a statistical publication on gender that presents and interprets topical data on women and men in a form suitable for a wide range of non-technical users;

(b) Ensure that producers and users of statistics in each country regularly review the adequacy of the official statistical system and its coverage of gender issues, and prepare a plan for needed improvements, where necessary;

(c) Develop and encourage the development of quantitative and qualitative studies by research organizations, trade unions, employers, the private sector and non-governmental organizations on the sharing of power and influence in society, including the number of women and men in senior decision-making positions in both the public and private sectors;

(d) Use more gender-sensitive data in the formulation of policy and implementation of programmes and projects.

211. By the United Nations:

(a) Promote the development of methods to find better ways to collect, collate and analyse data that may relate to the human rights of women, including violence against women for use by all relevant United Nations bodies;

(b) Promote the further development of statistical methods to improve data that relate to women in economic, social, cultural and political development;

(c) Prepare a new issue of The World's Women at regular five-year intervals and distribute it widely;

(d) Assist countries, upon request, in the development of gender policies and programmes;

(e) Ensure that the relevant reports, data and publications of the Statistical Division of the United Nations Secretariat and INSTRAW on progress at the national and international levels are transmitted to the Commission on the Status of Women on a regular and coordinated fashion.

212. By multilateral development institutions and bilateral donors:

Encourage and support the development of national capacity in developing countries and in countries with economies in transition by providing resources and technical assistance so that countries can fully measure the work done by women and men, including both remunerated and unremunerated work, and, where appropriate, use satellite or other official accounts for unremunerated work.

ANNEX 2
TIME USE SURVEYS CARRIED OUT IN THE ECE REGION IN THE PAST 9 YEARS

Country	Year
Albania	1996
Austria	1992
Belgium	1999
Bulgaria	2001-02
Canada	1998
Czechoslovakia	1990
Denmark	2001
Estonia	1999-2000
Finland	1999-2000
France	1998-99
Germany	2001-02
Greece	1997
Hungary	1999-2000
Ireland	1996
Israel	1991-92
Italy	2002-03
Latvia	1996
Lithuania	1997
Luxembourg	1996
Macedonia	1996
The Netherlands	2000
Norway	2000-01
Poland	2001
Portugal	2001-2003
Romania	2001
Russia	1999
Slovak Republic	1996
Slovenia	2000-01
Spain	2002-03
Sweden	2000-01
Switzerland	2003
Turkey	1996
United Kingdom	2001
USA	2003

Source: United Nations Statistics Division

ANNEX 3
CHECK LIST OF GOOD PRACTICES FOR GENDER MAINSTREAMING IN LABOUR STATISTICS

- Labour statistics should satisfy the requirements listed in the checklist, not only to address gender concerns, but also to understand better the real situation of the labour market.
- Political will is essential for producing statistics in general, and engendered statistics especially. It is needed at all levels, within the various data collection agencies and all agencies which do not produce statistics but which have administrative information that can be used by statistical agencies.
- It is important t specify at least a list of subject matters among the topics to be covered. These could be similar to the ones identified by the Office in the General Report with some modifications that include statistics that portray the life cycle or life course approach, lifelong learning and the arrangement of working time, including part-time work. A change of wording was proposed, to convey the idea that incorporating gender into labour statistics is at the core of all statistics that are produced.
- All measurement methodologies are valuable for producing labour statistics that are gender mainstreamed. These statistics should be produced as frequently and as timely as regular labour statistics and should be part of regular publications. Among the possible sources, time-use surveys stand out as essential, in particular for the improved measurement of informal jobs and non-SNA activities.
- When presenting the statistics, it is important to cross-classify them according to personal and family circumstances, but also according to the institutional context (e.g. fiscal regulations) as well as the work environment (e.g. working-time flexibility, childcare facilities, etc.).

Source: Final Report of the 17th Conference of Labour Statisticians

GENDER STATISTICS – 25TH CEIES SEMINAR
THE LIFE OF WOMEN AND MEN IN EUROPE - INTRODUCTION IV

by Karin Winqvist,
Eurostat

1. Introduction

In Eurostat there are several data sources to statistically describe and analyse the life of women and men in Europe. For most subject areas a methodology, that is concepts and definitions, has been worked out after discussions in task forces and working groups. Output harmonisation is accepted as a means of harmonisation that does not interfere too much with the national statistical systems. Most of the national statistics that are collected by Eurostat are in a tabular form but there are also some surveys for which micro data are provided.

Separate short publications on gender differences have been produced in many areas. This paper presents the contents of the Panorama publication The life of women and men in Europe with comments about the statistical sources. The daily life of women and men can also be described from Time Use Surveys (TUS) and Eurostat has collected national time use statistics from European countries. A Statistics in Focus was published last year and more detailed results will be published in a statistical pocketbook shortly. A few results are presented here.

Most of the figures in the paper have been published in the Panorama publication[1] or in the Commission's 2005 report on Equality between women and men[2]

2. The life of women and men in Europe

Background

The life of women and men in Europe is a publication with a life cycle approach and the main statistical sources are the Labour Force Survey (LFS) and the European Community Household Panel (ECHP). The publication covers the old MS and as far as possible, also the new MS. The new MS are well covered in the LFS but not at all in the ECHP. The paper gives an overview of the results from the three part of the publication - *the formative years*, *the working and family years* and *the retirement years* – with the emphasise on the middle part.

The formative years

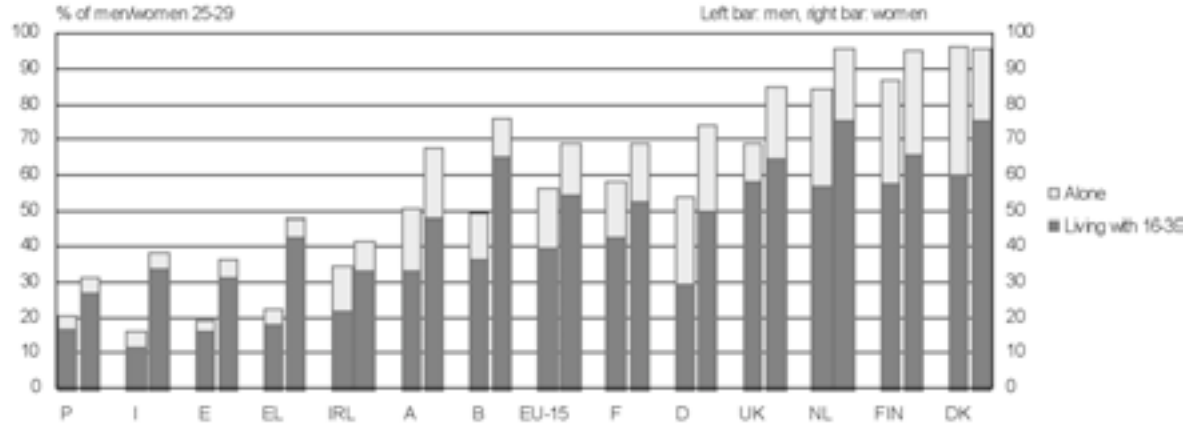
In Eurostat there are hardly any statistics from the perspective of a child. In the Panorama, the demography statistics show that infant mortality is higher for boys than for girls and that the main cause of death for boys is accident. These results are drawn from the DEMO database and from health statistics.

Education statistics show that more boys drop out of school, and that girls and boys still choose very different fields of study. Generally girls perform better at school. The UOE data collection - UNESCO, OECD and Eurostat - , LFS and OECD PISA data base have been used to produce the results.

1 Eurostat: The life of women and men in Europe, Luxembourg 2002
2 Report on equality between women and men COM (2004) 115 final

Household statistics from the ECHP show that it is more common for young women to live alone or with a young person, while young men more often live with their parents. There are large differences between countries. Women marry about 2 years younger than men (28 years for women and 30 years for men in the EU-15, in Portugal they are younger and in Sweden older). There has been an increase of 5 years in marriage age between 1980 and 1999. In new MS, the persons are younger at marriage and there are smaller changes over time. Age of mother at birth of first child has not increased as much and in several countries it is lower than marriage age.

20 Men and women aged 25-29 by household type, 1998



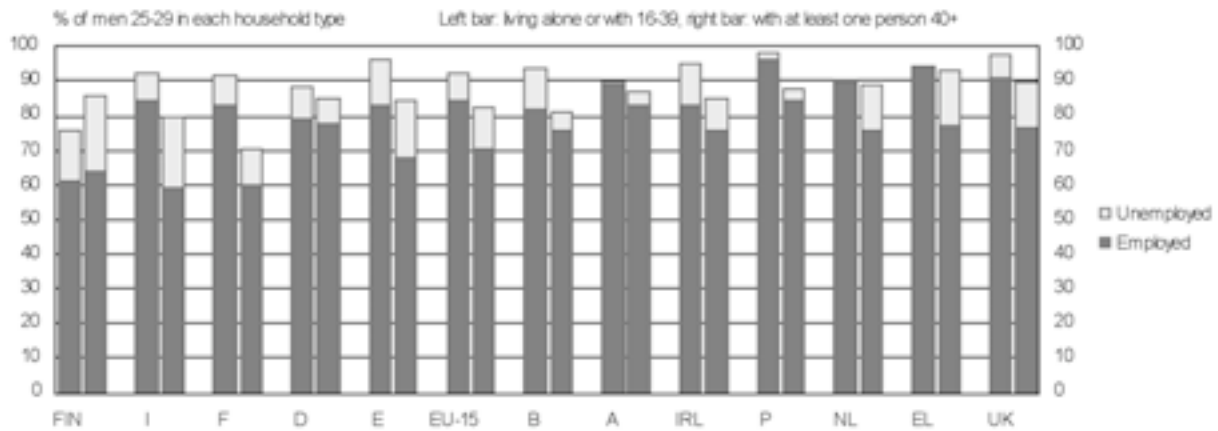
FIN: 1997; S: incomplete data; see Annex for detailed notes

Source: Eurostat, ECHP-UDB, ver. Dec. 2001

Source: Eurostat, The life of women and men in Europe

Analysing participation rates (employed and unemployed) rates by type of household for young persons reveals a clear difference between women and men. Firstly, young men show higher participation rates than young women. Secondly, the participation rate is higher for men living alone or with somebody aged 16 - 39 than for men living with a person 40+ (all countries except Finland). For women the pattern is not so clear, but in most countries the participation rate is higher for young women living with a person 40+.

23 Participation rates of men aged 25-29 by household type, 1998

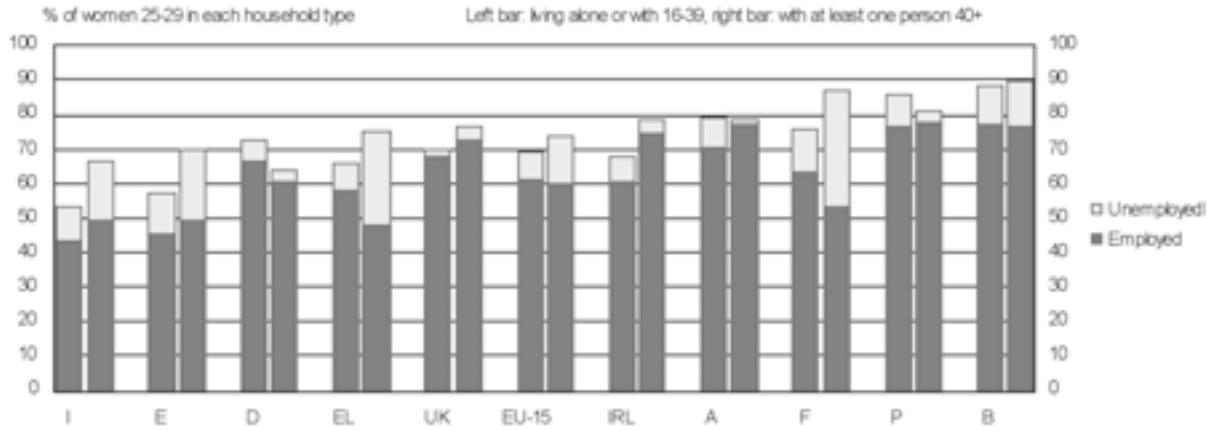


FIN: 1997; missing data denote that figures are not available or unreliable; see Annex for detailed notes

Source: Eurostat, ECHP-UDB, ver. Dec. 2001

Source: Eurostat, The life of women and men in Europe

24 Participation rates of women aged 25-29 by household type, 1998



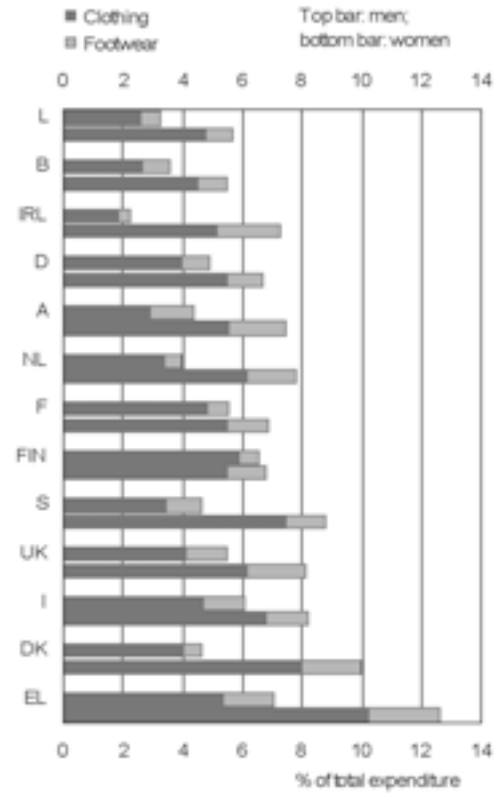
FIN: 1997; missing data denote that figures are not available or unreliable; see Annex for detailed notes

Source: Eurostat, ECHP-UDB, ver. Dec. 2001

Source: Eurostat, The life of women and men in Europe

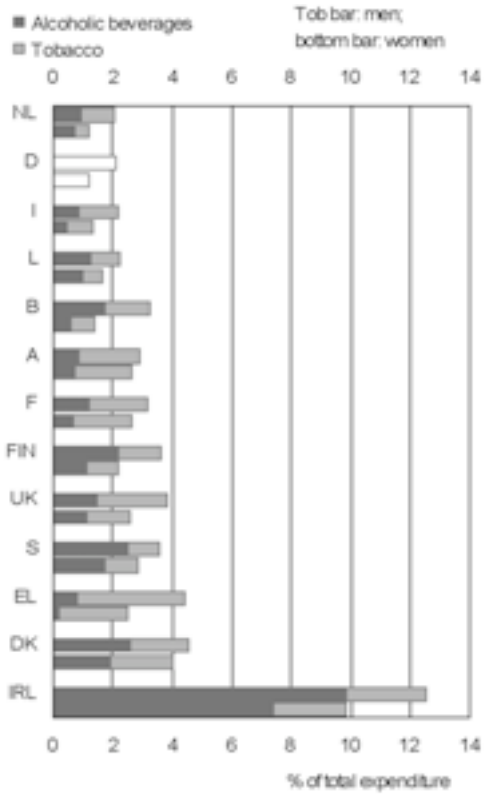
A part of the Panorama is devoted to lifestyles. Most of the statistics in this section, for example about physical activity and crime, have not been collected by Eurostat, but from the European Household Budget Survey one can analyse expenditure patterns for households. It is obvious that there are certain differences between expenditure of young women and men. Spending on clothing and footwear is an example. Girls spend a larger part of their total expenditure on these items in all countries - much larger in most countries. The reverse is true for alcohol and tobacco and for most countries also for recreation and culture

53 Spending on clothing and footwear of those under 30 living alone, 1999



E, P: insufficient observations;
F: 1994; IRL: provisional *Source: Eurostat, HBS*

54 Spending on alcohol and tobacco of those under 30 living alone, 1999



E, P: insufficient observations; F: 1994; IRL: provisional
D: no breakdown available *Source: Eurostat, HBS*

Source: Eurostat, The life of women and men in Europe

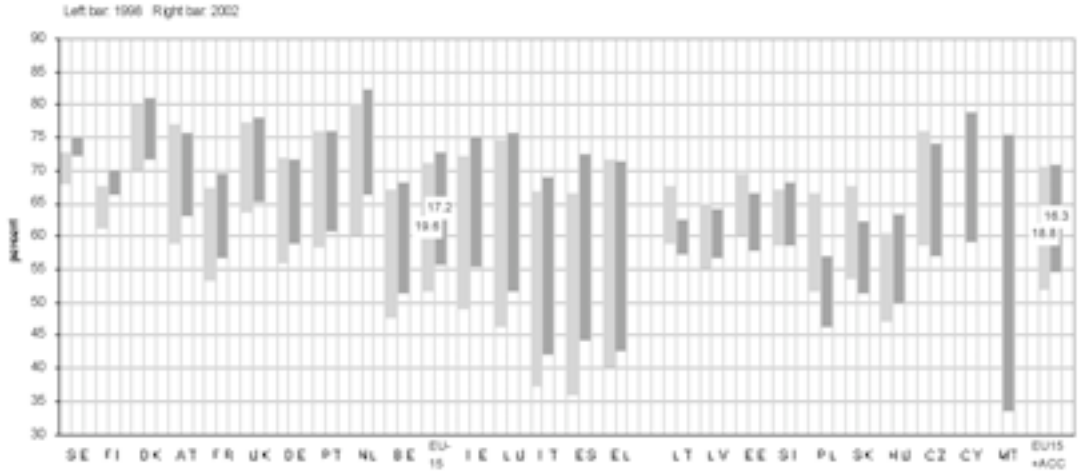
The working and family years

Reconciling work and family life

In order to analyse well the reconciliation of work and family life one needs statistics describing both household and work, i.e. the way that tasks are divided within the household and how this is linked to professional life. In the Panorama publication the main data source for the chapter on the reconciliation of work and family life is the ECHP. The reason for this is that there was a variable on care and time of care in the ECHP. Household data are available both from the ECHP and the LFS.

The most recent employment indicators published in the 2004 Annual report of equality between women and men show results from the LFS. The absolute gender gap in employment rates has decreased somewhat between 1998 and 2002 but it remains significant and there are big differences across Europe.

Absolute gender gap in employment rates (women and men aged 15-64)
in EU Member States and acceding countries - 1998 and 2002
(Difference between women's and men's employment rates)

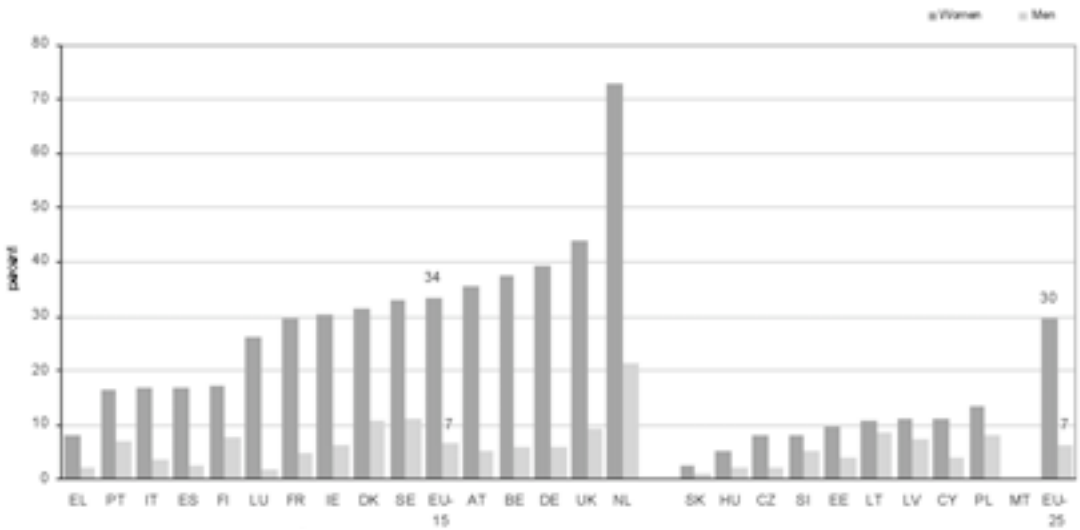


Source: Eurostat, Labour Force Survey (LFS)
Notes: Top value of a bar is men's employment rate and bottom value is women's employment rate

Source: COM (2004) 115 final

The share of part time work is still much larger among women than men particularly in some of the old member states.

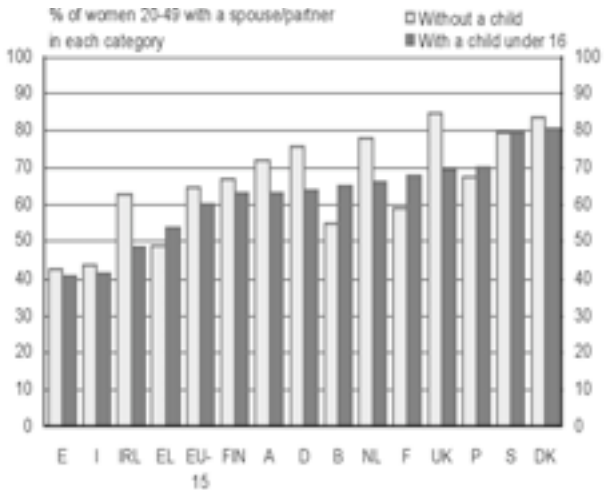
Share of part-time employees among women and men employees aged 16-74,
in EU Member States and acceding countries - 2002



Source: Eurostat, Labour Force Survey (LFS), Spring results
Source: COM (2004) 115 final

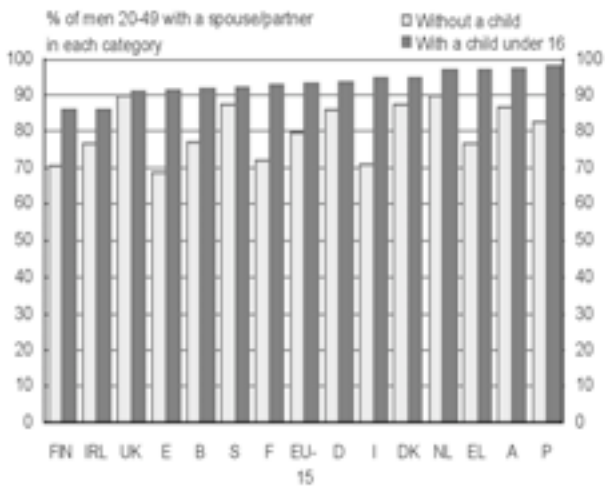
The figures below describe the employment rates of women and men with and without children - all living with a spouse. It is obvious that in all countries fathers are employed to a larger extent than other men, while the opposite is true for mothers in almost all old EU member states.

79 Employment of women aged 20-49 living with a spouse or partner, 1998



FIN: 1997 *Source: Eurostat, ECHP-UDB, ver. Dec. 2001*

80 Employment of men aged 20-49 living with a spouse or partner, 1998



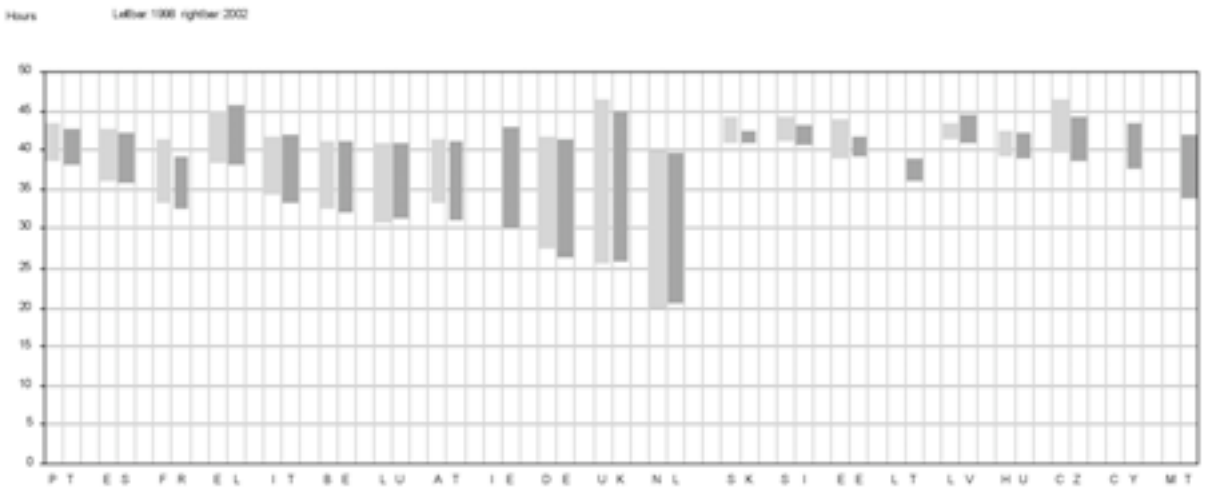
FIN: 1997 *Source: Eurostat, ECHP-UDB, ver. Dec. 2001*

Source: Eurostat, The life of women and men in Europe

At EU level, the average employment rate of women aged 20 to 49 living alone with a child under 16 was not much different in 1998 from that of women living alone without a child but there are differences between countries (not included here). For men there are insufficient observations to carry out a similar analysis.

Hours worked are better estimated in the LFS than in the ECHP and in the Equality report there is a recent comparison of hours worked by women and men with children. Household data are not available for all countries but it is evident that the difference in hours worked by women and men with children is significant and there is no general tendency of decrease between 1998 and 2002

Gaps between average hours worked per week by men and women (aged 20-49) with children in EU Member States and acceding countries - 1998 and 2002



Source: Eurostat, Labour Force Survey (LFS), Spring results

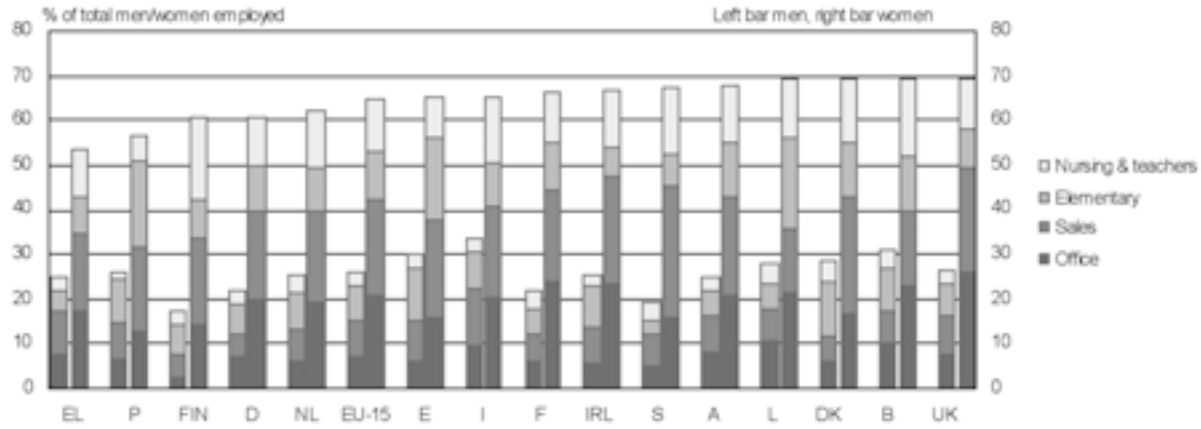
Notes: Top value of a bar is men's average hours worked and bottom value is women's average hours worked
No data is available for Denmark, Finland and Sweden. Data for 1998 is not available for Ireland, Latvia, Cyprus and Malta.

Source: COM (2004) 115 final

Employment patterns

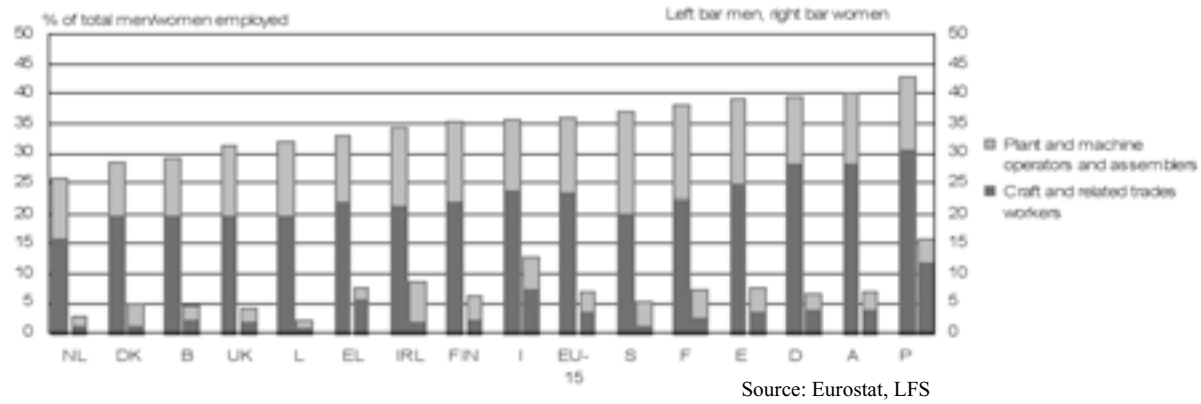
The activity and occupational patterns between women and men have also been analysed from the LFS. The figures show the four most frequent professions for women and the two most frequent professions for men.

83 Share of men and women employed as office, sales and elementary workers and as nurses and teachers, 2000



Source: Eurostat, LFS

84 Share of men and women employed in skilled and semi-skilled manual occupations outside agriculture, 2000



Source: Eurostat, LFS

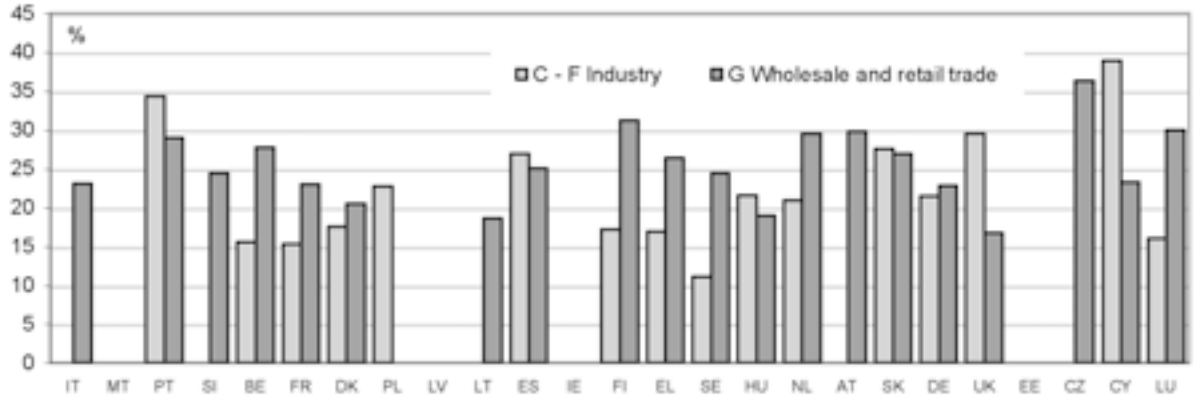
Source: Eurostat, The life of women and men in Europe

The pattern is very similar in all old MS; the classifications give much more concentration in female dominated sectors/professions than in male dominated. With the present classifications it is very difficult to analyse gender differences more in detail. A figure on NACE-activities would give a similar pattern. One should also be aware that the comparability across countries is good for NACE sector but less good for ISCO occupation. In the project Women in Science detailed statistics have been collected in order to differentiate levels of science professions in a better way. They are included in the Panorama.

Earnings and income

Gender pay gaps still persist in all countries. In the Panorama there is a presentation of gender pay gaps by age, private/public sector and level of education. The data source is the ECHP which covers the whole economy but it cannot be broken down into detailed subgroups. Pay differences also vary between different sectors of activity and different occupations. Differences in annual earnings can be estimated from the harmonised statistics on earnings. The figure shows annual pay gaps in 2001 in two sectors of activity, *Industry* and *Wholesale and retail trade; Repair of motor vehicles and personal & household goods,* for which data are available for most countries. Pay differences vary across Europe within *Industry* which is a strongly male dominated sector. They also vary within *Wholesale and retail trade etc.* which is a sector slightly dominated by women. In most countries the gaps are bigger in *Wholesale and retail trade etc.* than in *Industry.*

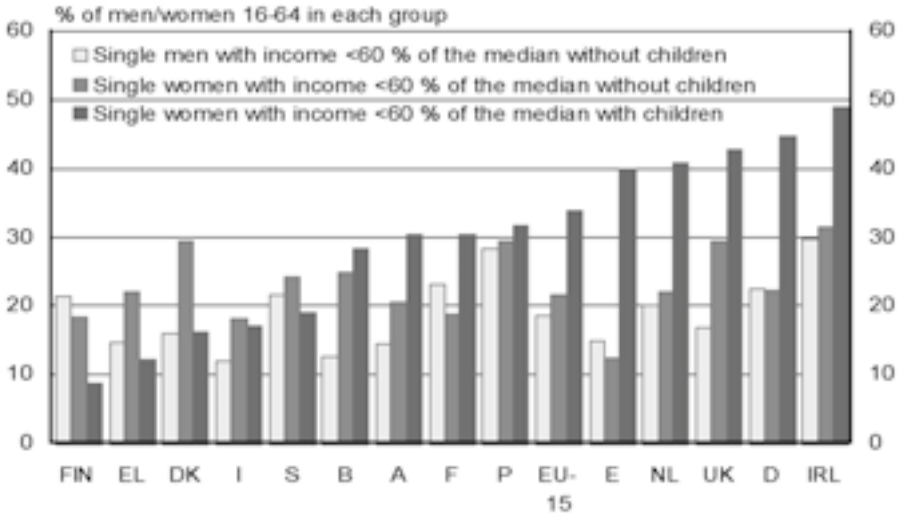
Difference between men's and women's annual average earnings as a percentage of men's annual average earnings (full-time employees in sections C-F and G (NACE Rev. 1), 2001



Notes: Reference year ES (sectors C-F): 2000 and FR, LU, PT, HU (sector G): 2000. The bars are in the order of the bars of previous graph in order make it easy to compare the two graphs.
Source: Eurostat, Harmonised statistics on earnings

Differences between women and men concerning the risk of poverty have been analysed in the Panorama. Household type and age play important roles. Data are available from the ECHP for all old MS but the possibilities to analyse detailed subgroups are limited.

119 The risk of poverty among men and women aged 16-64 living alone, 1997

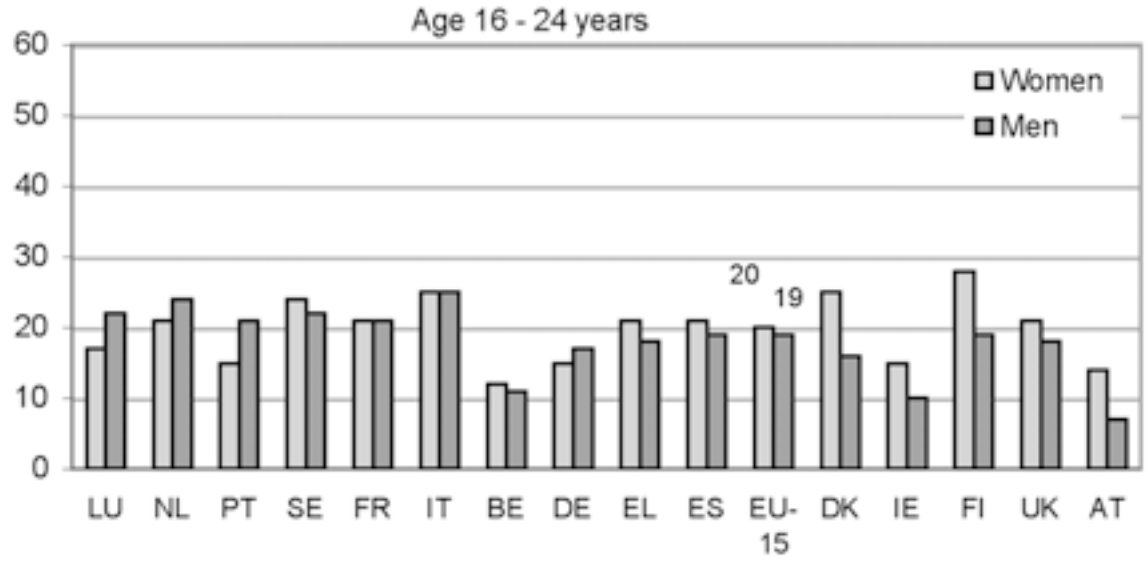


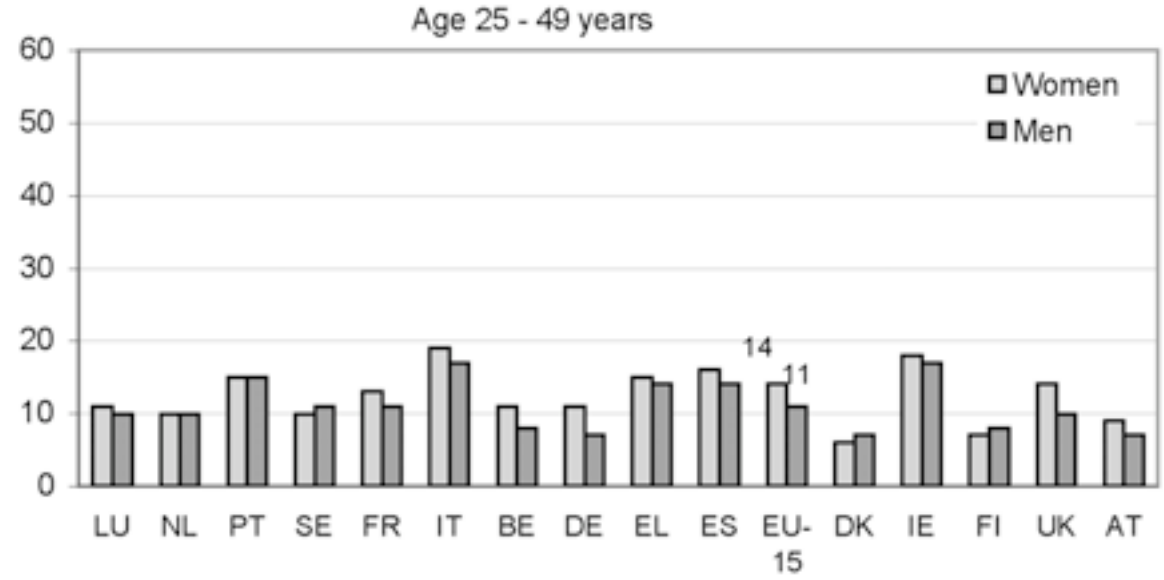
L: no data; FIN: 1996 *Source: Eurostat, ECHP-UDB, ver. Dec. 2001*

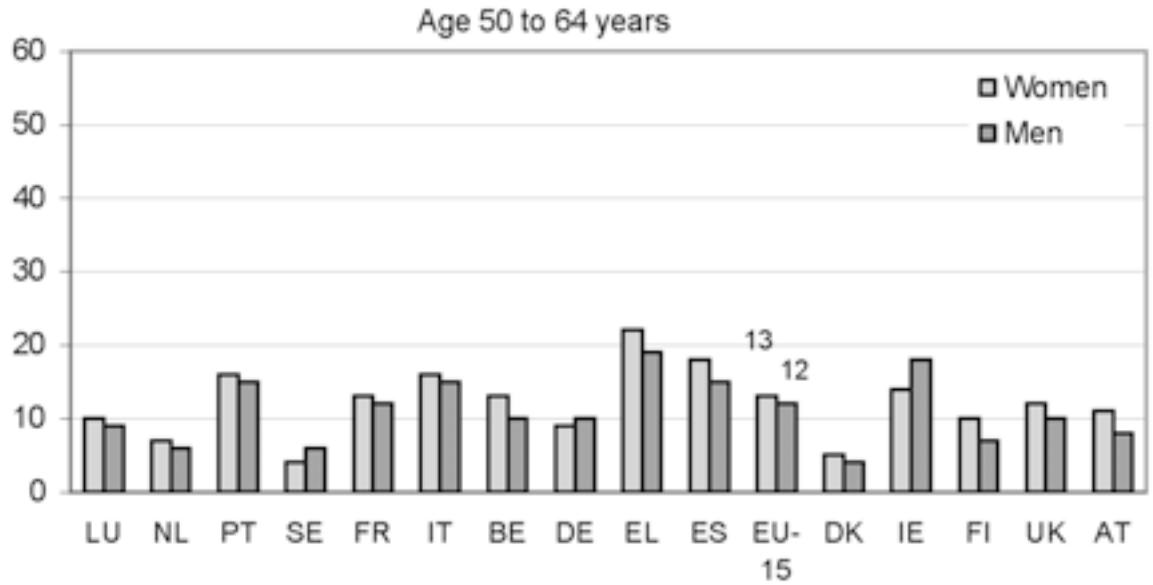
Source: Eurostat, The life of women and men in Europe

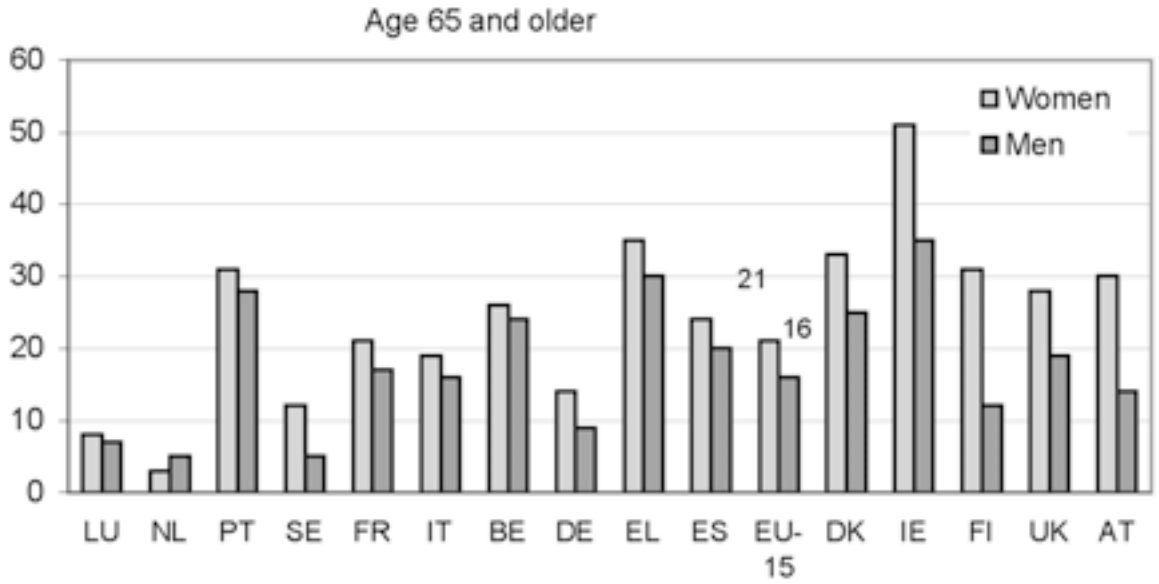
In most MS single women have a larger risk of poverty than single men and the risk increases even more if women have children. There is no data available about single men with children. Simply taking age into account, shows that younger and older persons have a larger at-risk-of-poverty rate that middle-aged. It also shows that women are more affected in all age groups in almost all MS.

At-risk-of-poverty rate for women and men aged 16 years and over by age group, 2001 (%)







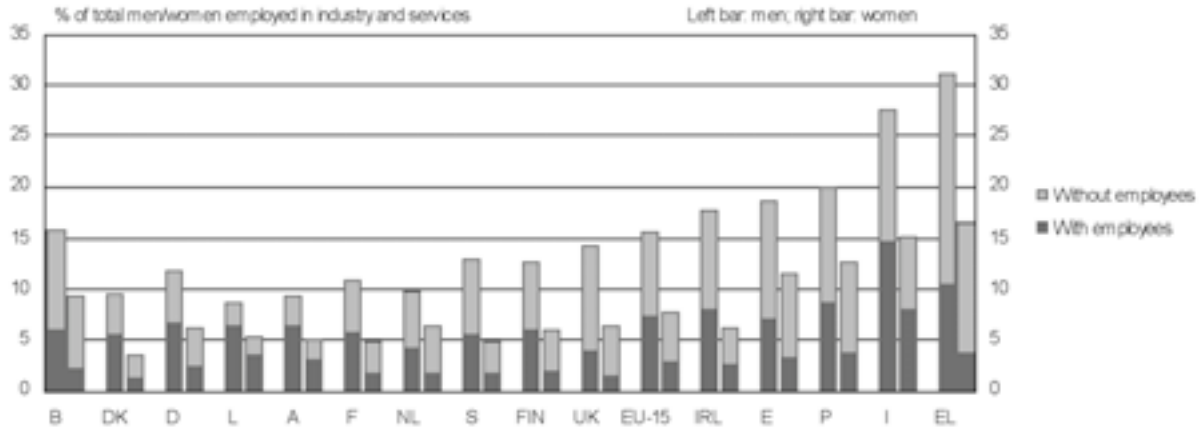


Source: Eurostat, ECHP-UDB version December 2003.
1) Gender breakdown is based on assumption of equal sharing of resources within household.
3) The EU-15 average is calculated as a population-weighted average of the available national values, with national weights equal to national populations.

Power and decision making

There are few possibilities to describe power and decision making on the labour market with the LFS and the ECHP. The variables self-employment, managerial position (ISCO 12 and 13) and supervisory position have been investigated in the Panorama. It is difficult to draw conclusions since the classifications seem to be applied differently across the MS. On the other hand one could assume that it is applied in the same way for women and men within a country, thus gender differences could still be studied.

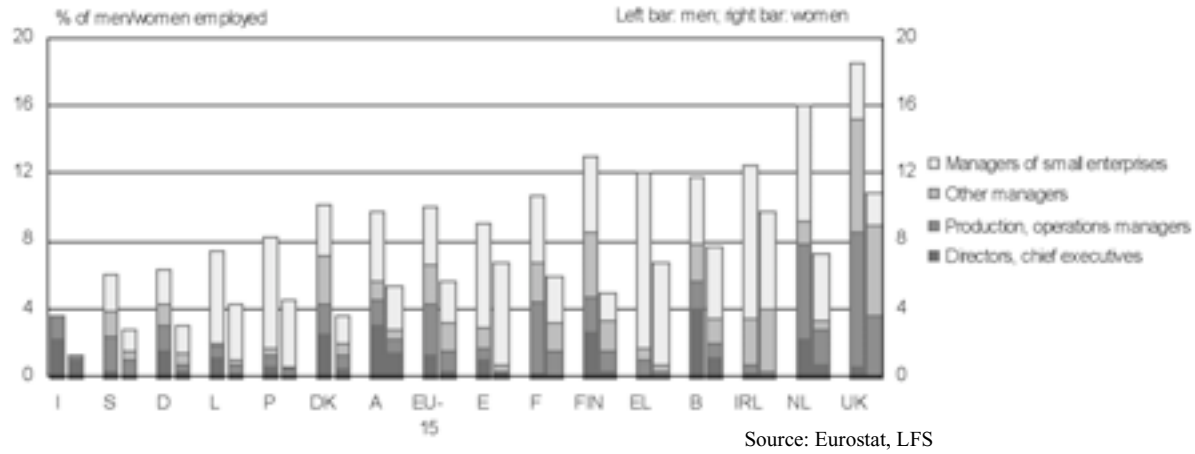
85 Men and women self-employed as a proportion of total employed in industry and services, 2000



Source: Eurostat, The life of women and men in Europe

Source: Eurostat, LFS

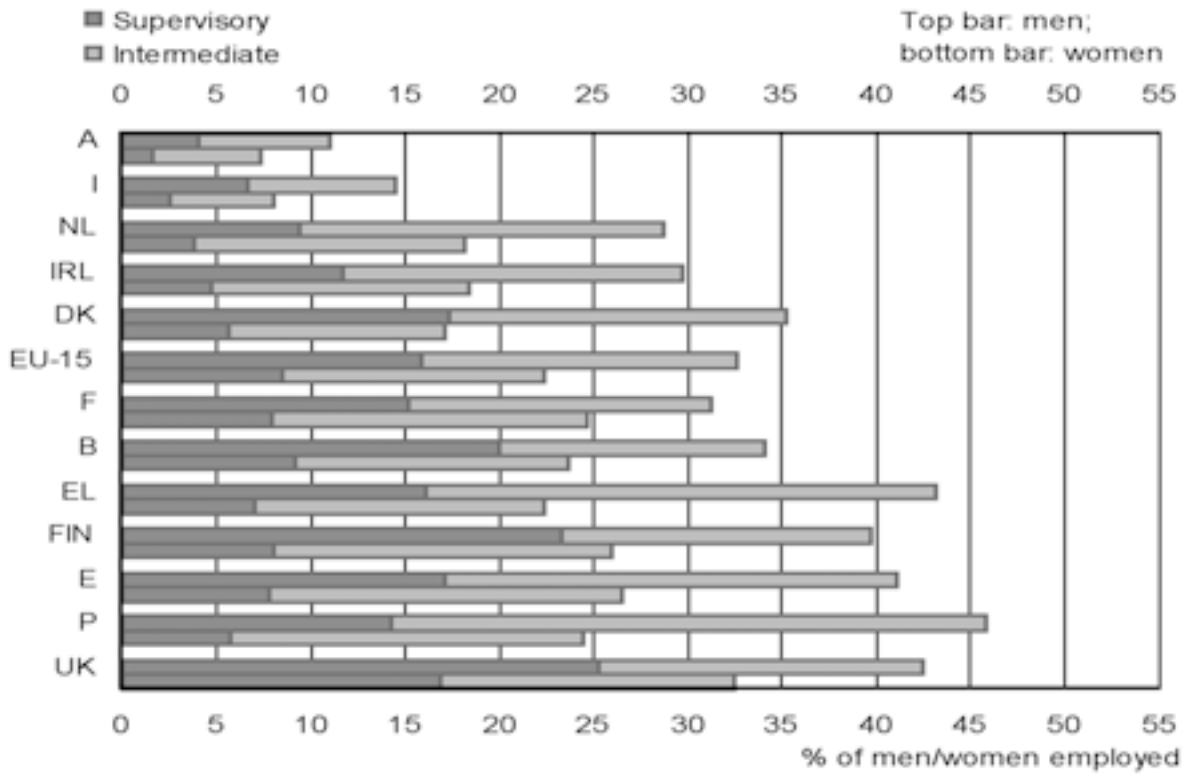
87 Men and women employed in managerial positions, 2000



Source: Eurostat, LFS

Source: Eurostat, The life of women and men in Europe

88 Men and women employed in supervisory and intermediate positions, 1998



FIN: 1997; D, L, S: no data available

Source: Eurostat, ECHP-UDB, ver. Dec.2001

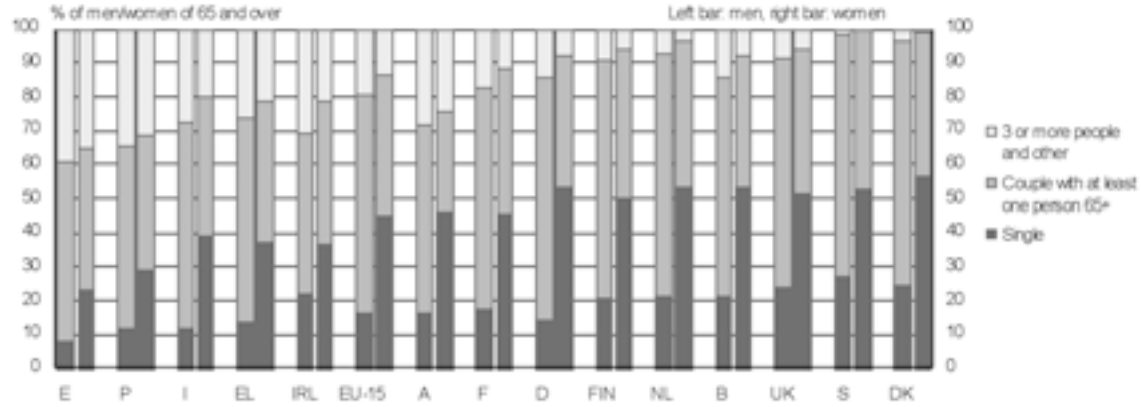
Source: Eurostat, The life of women and men in Europe

All results show that gender differences are large and that this is the situation in all countries. The variable supervisory position will be included in the LFS from 2005.

The retirement years

The last part of the Panorama treats the retirement years. Household situation is analysed from the ECHP and there is a significant difference between southern and northern European countries. In the south it is more common for elderly to live in a large family while in the north it is more common to live alone. The differences between women and men are similar in all countries, i.e. more women live alone while more men live in a couple. A limitation in the study of elderly is that the ECHP only covers private households and excludes those living in collective households (nursing homes etc.)

148 Men and women aged 65 and over by type of household, 1998

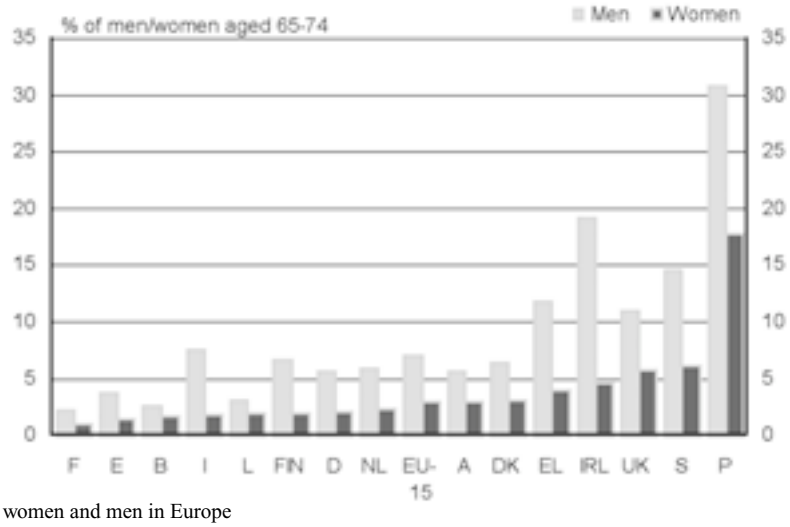


FIN: 1997 Source: Eurostat, ECHP-UDB, ver. Dec.2001

Source: Eurostat, The life of women and men in Europe

Results from the LFS show that the employment rates for elderly men are much higher than for elderly women in all countries. Part-time is more common among older persons particularly in the north of Europe. It is also much more common for them to work in agriculture.

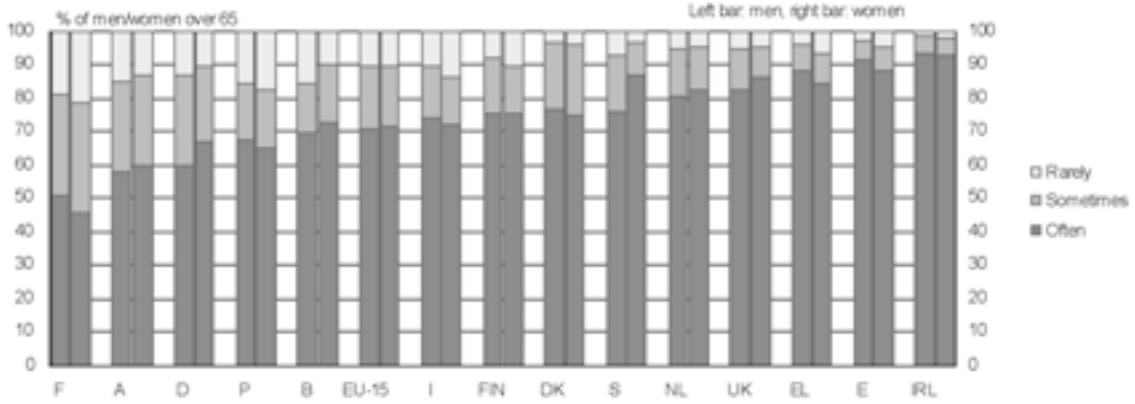
150 Employment rate of men and women aged 65-74, 2000



Source: Eurostat, The life of women and men in Europe

In the ECHP there are several variables to analyse the social participation of persons. Membership of a club, frequency with which persons talk to their neighbours and meet friends or relatives are included. There are some differences between countries but generally the differences between women and men are small.

169 Frequency with which men and women aged 65 and over meet friends or relatives, 1998



FIN: 1997 Source: Eurostat, ECHP-UDB, ver. Dec.2001

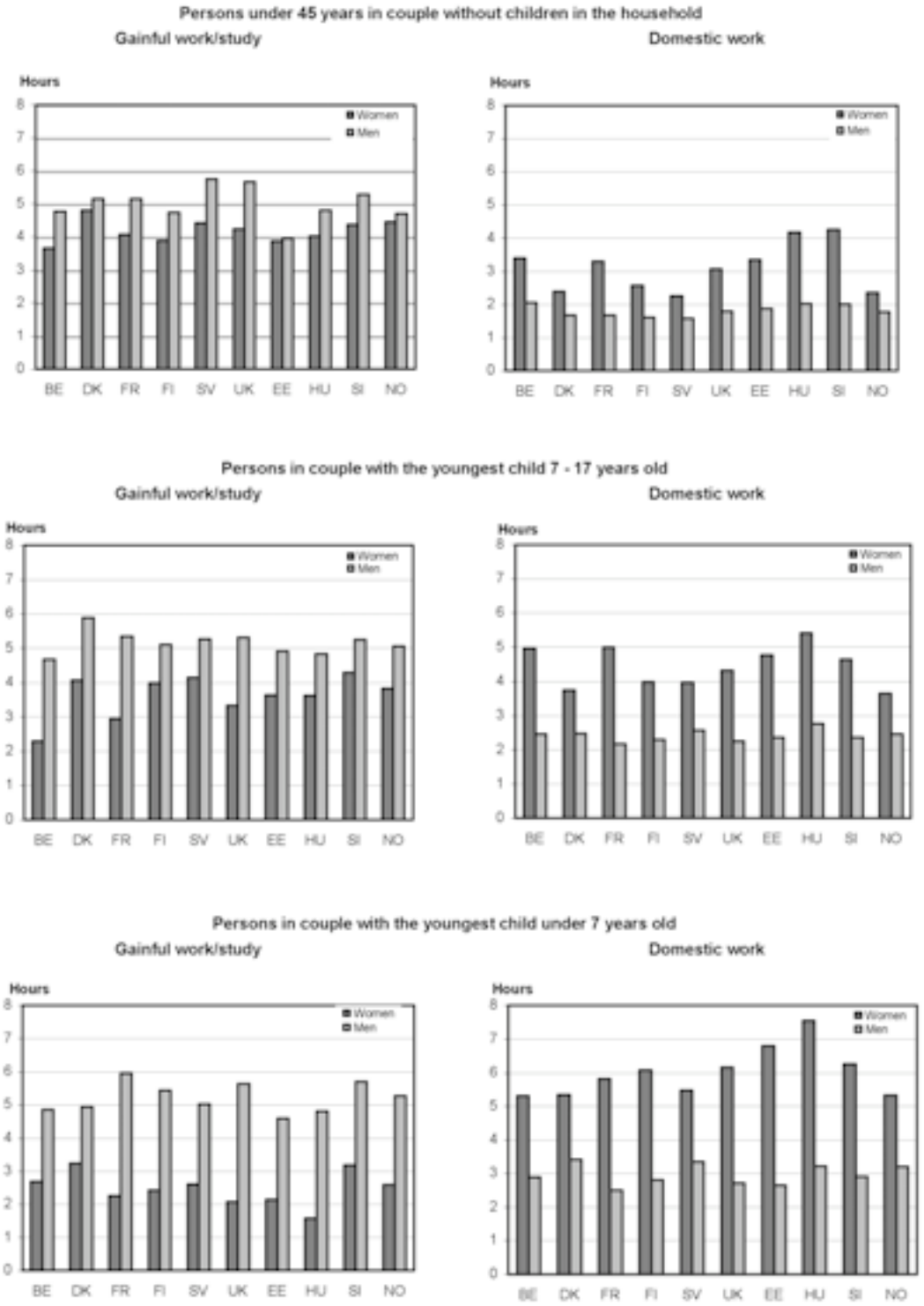
Source: Eurostat, The life of women and men in Europe

3. Time Use results

Women and men have similar ways of spending their time across Europe but there are also remarkable differences. The differences are larger in households with children and even more pronounced when the children are below 7 years. The figures show the average time spent on gainful work/study and domestic work for ten countries. Women and men of different household situations are compared.

Results from the European TUS have been published in a Statistics in Focus in 2003 and there will be another more detailed publication very soon

Figure 5: Gainful work/study and domestic work of persons in different types of households by sex



Survey period: A full year during 1998-2001. Sources: National Time use studies, see Methodological Notes

Source: Eurostat, Statistics in Focus Theme 3 – 12/2003

4. Micro data sources

This section will give very brief facts about the surveys from which micro data are available in Eurostat.

European Community Household Panel (ECHP)

ECHP is a longitudinal annual survey which started in 1994 and ended in 2001. It is a survey about living conditions, labour market and income and there are for example longitudinal labour market data. The micro data from this input harmonised European survey are available for researchers.

Statistics on Income and Living Conditions (SILC)

SILC are annual cross-sectional and longitudinal statistics using existing national surveys which are extended to meet the needs of the Commission. There is a Council framework regulation and Commission regulations for the implementation. All countries will be covered in the reference year 2005. The survey is mainly devoted to fulfil the needs for statistics about income and social inclusion and the labour market section is not as well developed as in the ECHP. There are variables describing child care. First results for all MS will be available at the beginning of 2007. Micro data will be available to researchers.

Labour Force Survey (LFS)

LFS is an output harmonised survey – continuous in most countries – with quarterly data collection. It is regulated by EU-law. In addition to variables describing persons and the labour market there is each year an ad hoc module. The topic for the 2005 module is Reconciliation of work and family life and results will be available at the end of 2006. Microdata from the LFS is available for researchers.

Structure of Earnings Survey (SES)

SES are enterprise surveys for which micro data are transmitted to Eurostat every four years, 2002, 2006 …. The regulation covers enterprise and individual variables but the 2002 survey is limited to industry and services. All MS will provide data for these sectors and some will also provide data for other sectors. According to our plans, the results will be available at the end of 2005. It is not yet clear if microdata will be accessible for researchers.

Time Use Surveys (TUS)

TUS are national surveys, conducted every five or ten years, which have been at least partly harmonised according to guidelines published by Eurostat in 1999. There is no legal act.

Contrary to “normal” data collections with retrospective questions, a diary for one weekday and one weekend day has been used. This measurement of time spent is more accurate but the classification of activities is more complicated since persons do more than one thing simultaneously. According to our plans, microdata will be collected into a European database that will possibly cover 21 countries.

ENGENDERED STATISTICS?

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Note:

The views expressed in this report are the author's and do not necessarily reflect the policy of Statistics Netherlands.

Summary

The development of gender statistics is regarded as a special type of gender mainstreaming in the context of a statistical organisation. The transition from statistics on women to gender statistics, and shifts in the main focus of attention in gender statistics, are seen in the context of general trends relating to inequality between men and women. The report looks at how statistical organisations might implement gender mainstreaming and, in particular, how they might evaluate it. Special attention is devoted to the presentation of statistical results in the form of policy indicators and publications on international gender statistics.

Key words: statistics, gender, inequality, mainstreaming

0. Management summary

Only a few statistical institutes have made substantial investments in capacity for gender statistics. Too often, neither the users nor the producers of statistics have a clear idea of what is meant by 'gender statistics'. What is the added value of gender statistics when the statistical institute always includes the characteristic 'sex' in the collection of data anyway, and when all the tables in publications (whether paper or electronic) distinguish between men and women?

Gender issues on the social and, above all, political agenda determine the substance of gender statistics. They can vary considerably over time and space and between policy areas. By applying a model showing four levels of gender inequality, it is possible to establish a hierarchy of gender issues in a wide range of fields. 1) Unequal rights lend legitimacy to discrimination and thus constitute formal impediments to participation in social processes. 2) Formal access is not sufficient to guarantee equal opportunities for participation, because other impediments affecting women's situation vis-à-vis men may lead to under-representation. 3) Where there is equal participation, various factors may nevertheless lead to a situation in which the outcomes of participation are unequal. 4) Despite equal outcomes in terms of participation in social processes, women and men encounter stereotype expectations with respect to their behaviour, and these expectations can limit their options in unequal measure. Depending on the level of inequality and the field, completely different sets of requirements are placed on statistical observation.

By devoting attention to the organisational dimension of gender statistics, it becomes apparent what implications the gender approach can have on the process of statistical production. It cannot be taken for granted that gender will be a focus of attention in data collection and analysis, or in the published results. Whether and to what extent gender will be a factor will vary from one field to another, but will be partly determined by the presence and extent of specific gender expertise in the statistical organisation.

The gender dimension in the statistical process requires choices to be made in the collection of data and presentation of results. These choices imply a need for specific methodological approach. A special case is the application of a gender-based approach to determining and presenting policy indicators, in which the relationship between statistical information and policy aims is central.

The international dimension of gender is important for statistics, partly because national statistical production is sometimes very much driven by international initiatives and international cooperation. The publication of internationally comparable gender statistics is an important part of this. Examples include the gender publications and databases of international organisations such as UNECE and Eurostat. The most efficient possible use of scarce resources is essential in order to ensure that the statistical data are of good quality and that the results are used successfully.

The programmatic and organisational positioning of gender statistics can be seen as a special case of gender mainstreaming and is examined as such. Translating a checklist for assessing the mainstreaming of policy processes into statistical production constitutes an instrument which can be used to assess the progress of gender mainstreaming in statistical organisations or parts of them.

Numerous variants are conceivable for the position of gender statistics in statistical organisations, both now and in future. By way of conclusion, four scenarios are given as examples, varying in level of 'engendering'. In the worst-case scenario, gender statistics are no more than a minimum package, being a compulsory part of the statistical programme. In the best-case scenario, high priority is given to gender mainstreaming, which is well-supported by the users and benefits from flexible expertise.

1. Introduction

A proposal to reserve a special place for gender statistics in a statistical organisation's work programme and structure is unlikely to be "nodded through". Many national statistical institutes have an official whose tasks include gender statistics, and usually someone (often the same person) who is in charge of coordinating occasional publications on men and women. Only very few statistical institutes have made substantial investments in capacity for gender statistics. I am convinced that one of the main reasons for this is that, very often, neither the users nor the producers of statistics have a clear idea either of the nature of the activities which would need to be performed under the heading 'gender statistics' or of the results of those activities.

Section 2 provides a global orientation of the gender dimension in present-day statistics. Section 3 describes the substance of gender issues, and provides a framework for interpreting the development of the statistical programme. The application of gender dimensions in statistical production is sometimes self-evidently an aspect of the validity of the statistics and sometimes a well-intended priority (section 4). It requires choices regarding the collection of data and the presentation of outcomes, choices which may entail a specific methodological approach. Examples include the "gender" angle in determining and presenting policy indicators (section 5) and the publication of internationally comparable gender statistics in gender publications and in the databases of international organisations such as UNECE and Eurostat (section 6).

The purpose of a gender mainstreaming policy is to make gender dimensions integral to all stages of statistical production. With a view to evaluating that policy in statistics, section 7 proposes a checklist. By way of conclusion, section 8 sketches various scenarios of the organisational positioning of gender statistics.

2. Gender statistics: some preliminary bearings

An important milestone is reached when the statistical institute can show that the characteristic "sex" is a consistent feature in the collection of data and that distinctions between men and women[1] are made in all tables in publications (whether paper or electronic). But that is precisely the moment when the question arises as to why yet another person should be burdened with gender statistics? What possible added value can it have?

In the recent past, when calls were loud for statistics on women in particular, the management of statistical organisations would often reply that such an activity was superfluous because their publications already broke

[1] Or rather, between women and men (Hedman et al, 1996, p. 104). An example of the confusion which exists regarding the term 'gender' is the titles of tables. Some people regard a table broken down by gender as nonsense, while others see no difference in a table broken down by gender and one broken down sex.

statistical results down by sex. The main argument then was that the position of women needed to be mapped out, because "the main problem facing women in Europe was the lack of equality" (European Commission, 1983) and that such publications "provided women with guidance for deciding what further changes were needed" (European Commission, 1980). The gender approach has brought about a change of thinking on the political strategy for fighting inequality between men and women. Rather, the emphasis has come to be placed on making the social situation of both women and men visible. That was a major change for policy makers who were used to thinking in terms of target groups.

Overview 1 – The history of gender statistics, illustrated using two European publications

	1980	2002
Title	Women in the European Community	Life of women and men in Europe: a statistical portrait
Content of publication	General policy information + statistical information	Complete statistical publication
Number of statistical pages	56	171
Number of diagrams	29	173
Number of tables	None	79
Chapters of statistical part	Demographics Employment Terms of employment Unemployment Education	Formative years Working and family years Retirement years
Notable features	Expressions such as 'women working outside the home' and 'active men'	Topics such as 'combining work and family life' and 'decision making'
and …	Absolute size of the Member State taken into account in the presentation	Relative figures per Member State + overall figure for EU-15
and also …	Dominant, complex and multi-coloured diagrams requiring explanation in the text	Numerous small, clear diagrams which are self-explanatory and which support the text
and of course	—	More policy areas, sources and countries

For statisticians, the transition to giving parallel attention to women and men comes much more naturally, because they generally tend to think in terms of variables, rather than categories. Nevertheless, the change becomes clear when one compares European statistical publications from 1980 and 2002 (see Overview 1). It also shows the much greater volume of internationally comparable statistical data which are now available.

The question of how important gender statistics are cannot be answered without first shedding some light on the term 'gender'. In their standard work, "Engendering Statistics", Hedman et al (1996) offer the following description: 'social construction and codification of differences between the sexes and social relationships between women and men'. It is important to realise how many of the persons involved have a less than clear idea of the extremely complex meaning of the key sociological concept of 'gender'. In English, the fact that the words "gender" and "sex" are all too often used as synonyms is likely to be an additional complicating factor. In other languages, the availability of a neat translation for the terms 'gender' and 'gender mainstreaming' might help to increase accessibility and acceptance of the ideas which underlie them. One might counter this by arguing that there are sufficient examples in every language where the absence of a native word has not in any way hindered acceptance of the English word.

In addition to the collection of all data broken down by sex, Hedman et al (1996) states that the production of gender statistics also implies that "concepts and methods used in data collection and presentation adequately reflect gender issues in society and take in consideration all factors that can produce gender-based bias". A few examples of statistical fields and areas of attention (see Overview 2) will serve to illustrate this.

For most countries, the examples can for the most part be seen as subject areas tasks to which the statistical organisation does not yet devote any attention, and the question is how to bring about change[2]. In some countries, where these examples have already become a focus of attention in statistical practice, and where considerable progress has been made in incorporating gender dimensions into statistics, these examples can be a prompt to look back at the process of change. In any event, the areas of attention will need to be systematised.

Overview 2 - Some examples of gender statistics

- Unpaid work, labour division in the household, relationship between paid work and care tasks
- Wage differentials between women and men (after correction for factors such as age, education, function, seniority, etc.)
- Horizontal and vertical segregation in paid work
- Who are the ones who take the economic and political decisions?
- Individualisation of income and wealth in the household
- Decision-making in the household (e.g. with regard to spending)
- Domestic violence
- Prejudices and stereotypes (e.g. relating to managerial qualities and style)
- Does the question on the combination of work and care relate to commonly held views or to one's own choice (e.g. Hakim, 2003)?
- Gender bias introduced by the question "What is your most important activity?", because women and men give different types of replies (Bell,1996)
- Checks on the consistent application of m/f in statistical results
- Specific publications over gender statistics
- Nurturing contacts with specific user groups requiring data on gender issues
- Analyses of gender issues which straddle more than one field
- Responsibility for development and presentation of indicators of gender inequalities, especially indicators of gender inequality which straddle more than one field

3. Gender issues: the substantive dimension

The development of new approaches to greater gender equality is not just a question of devising a different strategy and adopting a different modus operandi. It also entails substantive change, as a result of which other topics become relevant in the course of time, other policy issues emerge and a need for different statistical information arises.

Four levels of inequality[3] can be identified, and they can be seen as forming a hierarchy (Overview 3). Each level is characterised by its own type of inequality and has its own focuses of attention.

1. The most elementary form of inequality consists in legal inequality (e.g. situations in which women do not have the vote and only limited independent powers of social action). Eliminating unequal rights means giving women the possibility of participating in social processes from which they have hitherto been excluded and the removal of formal barriers to those processes (cf. Çagatay, 1998). The role of statistics in the observation of direct inequalities would appear limited. Statistical information on the infringement of legal constraints (women who work at night even though it is prohibited) or of opinions on such regulations can, however, be relevant.

[2] This requires some qualification: gender issues are not the same everywhere and are not topical everywhere at the same time.

[3] It might be better to replace the term 'level' by a different term, because the expression 'level of inequality' can also be interpreted as referring to the intensity of inequality. 'Dimensions' might be an alternative, but fails to capture the implicit hierarchy of levels.

Overview 3 The four levels of inequality between men and women

Problem	Target situation
Formal discrimination	Equal rights
Deprivation/under-representation	Equal opportunities
Gender gap/gender bias	Equal outcomes
Gender stereotypes	Equal role-repertoire

2. The first higher level does not concern formal exclusion from processes, but unequal access. The application of selection criteria (education, accessibility, work experience, requirements in terms of working hours, the need to be part of a team) may lead to unequal access. Statistics can be much more important in this context, because they highlight both the presence of women and their under- or over-representation.
3. The next level concerns unequal outcomes in a social process, even if there is equal access. Even in cases where, for example, a lesser degree of work experience or a preference for part-time work are no longer allowed as selection criteria, they can nevertheless lead to situations in which the results are more modest for women than for men. A willingness to adapt (one's own behaviour or one's private circumstances) or negotiating skills are also factors which can have a selective impact. Once again, statistical information can be very important as a means of determining the extent to which similar patterns of behaviour lead to equal outcomes. This does, however, place greater demands on statistical methodology: more is involved than just counting.
4. Even where a situation of equal outcomes for women and men has been reached, it is still possible for there to be forms of gender inequality. Systematic differences in image and differing role expectations can certainly be regarded as undesirable forms of inequality. At the heart of this inequality is an unnecessary and undesirable clustering of certain behavioural expectations with regard to women and men. Horizontal segregation of stereotype images is an example. They might be seen as forms of unequal opportunity and unequal outcomes, but it makes sense to examine them separately. Statistical information has a part to play here as well, but requires the measurement of subjective phenomena such as views and role expectations.

Overview 4 Examples of factors of impediment at the four levels of gender inequality

Problem:	1. formal discrimination	2.deprivation/under- or overrepresentation	3. gender gap/gender bias	4. gender stereotypes
Target situation:	equal rights	equal opportunities	equal outcomes	equal role-repertoire
Fields: Education	Limits on access/limits on women's radius of action	Preference for investing in the education of male offspring	Role expectations/gender bias in teaching materials/ women marrying younger	Subject areas (e.g. exact sciences vs. humanities)
Decision making	Suffrage	Availability of resources	Old boys network	Female vs. male management style
Paid work	Limits on access	Knowledge and skills/ part-time work	Combination with care/ wage gap	Horizontal segregation
Unpaid work	Limits on access to paid work	Unequal opportunities for paid work/norms and values	Knowledge and skills/ earned income	Stereotypes in relation to care tasks vs. odd jobs
Domestic violence	Divorce law	Income dependency	Responsibility for care tasks/ norms and values	Machismo

There is a certain logical relationship between the levels, which means that complete equality at the higher levels can only be achieved once it has been achieved at a lower level (e.g. under-representation is only possible if participation is allowed). The mutual relationship between the levels is such that the inequalities to be tackled can be arranged in chronological order. Inequalities at a higher level can also be tackled, while inequalities continue to exist at a lower level. In a situation of inequality before the law, stereotypes can also be perceived as a form of inequality, partly because they even have a legitimising effect on legal inequality (Inglehart & Norris, 2003) It would be beyond the scope of this report to examine the precise relationship between the four levels (e.g. in various countries)[4]. In this context, the model serves mainly as a means of mapping gender issues and showing how they affect gender statistics. Overview 4 gives some examples of possible gender issues in various fields.

A number of developments can be illustrated using this model. For example, calls in the past for statistics on women might be explained as an understandable strategy at a time when women's participation in various social processes following the elimination of formal inequality was a major focus of attention. The attention devoted to gender is interpretable as a strategy in which the stress is placed on comparison: in the first instance, unequal opportunities and in the second, unequal outcomes (Hedman et al, 1996).

It is apparent that, at the higher levels, the barriers exist less and less in the public sphere and increasingly in the private sphere, which means that they are becoming less and less visible for statistical and policy purposes. At the same time, a step-by-step process is under way in which barriers to equality are being pushed ever farther back at all levels, after which it is found that other barriers exist, which in turn are tackled. In this cycle, too, the process continues to move from the public to the private sphere[5].

When the model is applied to current gender issues in the EU, it becomes apparent that only a few issues remain to be tackled in the area of formal discrimination. Most formal barriers have now been dismantled in the EU Member States.

The main emphasis is on unequal opportunities and unequal outcomes. Greater equality in the participation of women and men has gradually been achieved in various fields, such as political decision-making, education, employment, mobility and forms of leisure activities. Policy in a number of fields devotes attention to reducing inequality of outcomes between women and men (in relation to their input), e.g. in the work process (equal pay, vertical segregation) and the individualisation of sources of income. Some new policy areas can be seen as a direct consequence of the attention given to unequal outcomes affecting women: examples include unpaid work and the division of care tasks, but also domestic violence.

Only limited attention has been given to gender stereotypes, although images of women and men in various fields are a major factor (management, sexual attitudes and etiquette). Another example is the interaction between gender stereotypes and unequal outcomes, which is presumed to be related with the lower levels of remuneration associated with care activities.

The ongoing shift of accent in gender issues from the public to the private sphere will increasingly raise the question of whether this is a task for official statistics: domestic violence, spending decisions, division of household care tasks, stereotype opinions, etc. The chance that the answer will be negative is further increased by the fact that the production of official statistics is increasingly based on the use of registers which lack any information on aspects such as opinions or time use.

4. Gender statistics: the organisational dimension

In many cases it is appropriate to ask what, from a statistical point of view, the difference is between incorporating gender dimensions in the statistics and improving the quality of statistics. The two are likely to be broadly similar where the validity of the statistics is concerned. Looking through the "gender-lens" often produces a substantive model which is better than a model which lacks gender dimensions. A model with gender dimensions generates more research questions than a model without those dimensions.

[4] One could imagine that tackling inequalities at a higher level in one region might influence the perception of inequality in another region, even if much greater formal discrimination persists in the latter region. An obvious example is differences between developed and developing regions.

[5] Such trends cannot be viewed separately from other social developments (e.g. greater focus on safety) with similar consequences.

It may be illustrative to look at the problem in the context of the organisation which produces the gender statistics. Let us assume that a person has been given the task of managing the production of gender statistics in the organisation. For that person, gender statistics are not just another interesting field, but are a mission. In a statistical institute, responsibility for gender statistics implies that that person is, as it were, responsible for a given market segment of the statistical organisation. We assume here that the person in question is well informed about user needs in terms of gender statistics. In order to serve the users in question effectively, the organisation has to produce output of a high quality. In this example, the gender statistician has a limited mandate and only meagre resources.

In order to perform his (or her) task, the gender statistician may decide to initiate discussions with someone within the organisation who is responsible for, say, income statistics. Because gender dimensions (not just the male/female distinction, but also attention to specific gender issues) are not regarded by the incomes statistician as obviously more important than, say, the regional dimension, the gender specialist has a mission, based on the tasks assigned to him or her: namely, to influence the order of priorities. In this respect, the organisation of statistical production reflects social developments. The gender specialist may regard him or herself as part of a form of social activism, because that is his or her task within the statistical organisation. In this respect, the gender specialist is also representing the interests of a large group of users, and the extent to which the users mobilise can lend significant weight to calls or suggestions for adjustments (we shall come to the users themselves later). Other factors, such as a national requirement to compile gender statistics, can also lend added weight.

Another important factor is whether the inclusion of gender dimensions yields benefits from other perspectives. If a breakdown of income statistics by sex is useful as a means of explaining income differentials, the incomes statistician will be more likely to want to distinguish by sex[6]. For that reason, income inequality between women and men can be given programmatic weight. Major inequalities usually have a high political priority. A link might also be conceived between validity and coalition forming. If the persuasiveness and explanatory value of the m/f dimensions are limited, the chance of programmatic priorities can be increased by coalition forming, and especially coalitions with areas where there are major inequalities. The explanatory value can be significantly increased by forming a coalition with, for example, 'ethnicity' dimensions. It is often the case that exclusive attention to male/female dimensions misses out on heterogeneity.

There is almost always a need to set priorities in the publications package. It is not possible to publish every single detail. This means that the outcome is sometimes less favourable, when the relatively modest explanatory value of gender dimensions is an argument for giving priority to other dimensions (e.g. focusing exclusively on ethnicity dimensions, because the distinction between men and women does not reveal any differences). This situation may occur more and more often as deprivations disappear or inequalities are eliminated[7]: and yet, there may be a number of reasons for showing that there are no differences: 1) it is important to show that there are no differences because "it is assumed" that there are differences; 2) it is thought important to find out if there is any drift back towards 'earlier' inequalities; 3) the breakdown is a reference breakdown for further disaggregation; 4) the data have always been published that way.

Although it may seem a major qualification, it should be pointed out that a person who is responsible for the regional approach might say the same things about regional aspects as what has been said about gender statistics. When taking on and performing the role of gender statistician, however, personal affinity with certain social trends is a factor.

5. Gender sensitivity: the methodological dimension

The gender dimension plays a major role in all phases of the statistical process. Not only the choice of subjects to be covered by the statistical work programme and subsequently the actual collection of data require attention here, but also, indeed in particular, the methodology of data collection. Both the approach of the people from whom the data have to be obtained and the instruments of data collection (e.g. questionnaires) may display a gender-specific bias, for which greater attention is required in the official statistics. Bell (1996) and the discussion between McRae (2003) and Hakim (2003) provide some examples.

[6] If so, an expert in the field would have done this at the outset.

[7] This requires the qualification "to the extent that the organisation itself can determine matters", bearing in mind its international obligations, for example.

Hedman et al (1996) are right to stress the importance of how statistics are presented in tables. Not only the consistent distinction between the sexes is important, but also how the differences are presented. Because the scarcity of space, time, capacity, etc. always influences the manner in which statistical outcomes are represented, the need for a distinction by sex in all tables will not always be considered as self-evident. The sectoral expert (and perhaps also the specialist in gender statistics) is likely to ask himself occasionally how far the principle should be taken[8].

In the case of statistical indicators, there is also the question of how far the breakdown by sex should be applied, but there is a difference compared with the publication of statistical tables because indicators have a more direct relationship with policy. The question arises as to which items of statistical data should be regarded as 'indicators'. As a counter pole to arbitrary data in a published statistical table and as a prototype indicator, we shall take a familiar quantitative policy objective by way of illustration. The structural indicators such as those formulated at the start of the Lisbon process are a good example.

The gender dimension is represented in the structural indicators in that the latter are broken down by sex, insofar as the data allow that distinction to be made. This undeniably increases the visibility of gender dimensions. On the other hand, a policy objective for women has been explicitly formulated in only one case, namely, that in 2010, female workforce participation in the EU Member States should be 60%. It would be desirable if, with respect to each of the indicators which make a distinction by sex, an explicit policy aim, again distinguished by sex, were formulated for 2010. Insofar as that is not the case, it would be reasonable to ask whether the separate publication of indicators for women and men should not be limited to those indicators which are associated with explicit policy aims. By extension, it is also relevant to ask how important it is to retain the indicator once the objective has been achieved, in order to guard against "recidivism".

When using indicators for the explicit formulation of policy goals, a range of methodological considerations are given additional weight in the compilation of indicators, not least of all because the manner in which gender inequality is expressed in the indicator can influence its propaganda value[9]. Intensive collaboration between policy officials and statisticians could have a favourable impact on the quality of the indicator.

6. Gender statistics: the international dimension

The debate about gender statistics is being held all over the world and has, under the influence of the UN World Conferences on Women (especially the 1995 Beijing Conference), acquired an important place in the attention given to gender mainstreaming in the policies of international development organisations (e.g. UNDP and the World Bank). In Europe, the most important activities in the field of gender statistics are those of the UNECE (UN Economic Commission for Europe) and the European Commission/Eurostat. The policy-making departments of both the European Commission and the UNECE devote considerable attention to gender mainstreaming[10], but their main focus is on providing statistical information in the form of gender publications. The OECD also gives attention to gender mainstreaming in statistics, but, unlike in the two other organisations, this has not given rise to specific gender publications.

Both the UNECE (2000) and Eurostat/European Commission (2002) have gender publications to their name. The UNECE has also published gender data via its gender database, which went live in 2003. It is useful to think of the UNECE database as a publication and compare it with the paper EU publication, precisely because different methods of publishing are involved. Overview 5 is an attempt to compare both types of dissemination of gender statistics.

[8] In the case of microdata, the problem hardly exists, if at all. The increasing availability of technology which, for example, allows users to compile their own tables directly from microdata, will lead to ever greater flexibility.

[9] UNESCO (undated) is highly instructive in this respect. The discussion about the compilation of gender indicators (GDI and GEM) in the Human Development Report (UNDP, various years) over the years is a good illustration: the discussion clearly shows how gender inequality and its relation with other aspects of development might be expressed in gender indicators in various ways.

[10] In addition to having a department which deals with gender issues, the European Commission devotes considerable attention to gender issues in the National Action Plans (NAPs), which are part of the open coordination of social policy between the Member States.

Overview 5. Two forms of dissemination of international gender statistics

	The life of women and men in Europe	**Gender statistics website/database**
Organisation(s)	European Commission/Eurostat	UN/ Economic Commission for Europe-Statistical division
Expertise available by way of support	Internal experts	Taskforce in which a large number of Member States took part
Data sources	Internal data sources (Eurostat) + a small number of external data providers	international databases + questionnaires answered by the Member States
Medium	Paper publications	Electronic (website)
Presentation of data	Graphs and tables	Tables only
Explanatory texts on the data	Very extensive and coherent texts	Only information in the form of technical meta-information on the indicator
Metadata	Information on sources and methodology in the annex	Meta-information available per indicator and per country
Background information on gender statistics	None	Extensive information on the website
Price	€ 30 (excl. VAT and postage)	Available free of charge
Frequency	Not known	In theory annually, but no updates so far
Which years?	The aim is 1980 and 2000, but in practice, often only 2000 or a year close to 2000	The aim is for 1980, 1990, 1995, 2000 and annually thereafter; sometimes it is achieved, but some cells are sometimes left empty
Number of countries	Usually 15, sometimes 25	37
Disaggregation	Systematic by life course and various detailed breakdowns	Little or none
Future	Not known	Minimum scenario covers only regular maintenance; a more ambitious one includes increase of indicators and information on the relationship to policy developments
Common subject areas covered by current data	demography household situation education work and family life employment decision-making earned income health	
Specific fields	Life style (smoking, drinking, crime, social relationships, recreational activities, etc.) life-long learning chance of poverty	Crime smoking HIV general indicators (e.g. population, but also GDI and GEM)
Flexibility	Availability of internal sources (partly at microlevel) offers flexibility for adjustments in the following edition	Database can be added to at any moment (new indicators, years of disaggregation, sometimes with retrospective effect)
Inflexibility	Adjustments (new data or other breakdowns, etc.) only possible in the subsequent edition	Data collection procedures in the Member States require considerable time and capacity
Other information	Not applicable	Systematic breakdown of indicators into core indicators, support indicators and background indicators

A number of points have to be borne in mind when comparing the two forms of publication. The advantages of flexibility, up-to-dateness and free availability of a database decrease considerably when a lack of resources makes it impossible to update the database regularly, as currently appears to be the case with the UNECE gender database. The comparison has to be qualified to the extent that a good evaluation requires both the availability of the missing information on the intended target groups, and, most importantly, who the actual users are. Separately from this, one can conclude that in two forms of publication, gender statistics and indicators are published which have considerable overlap. Given the scarcity of funds, it is perhaps appropriate to consider the options for combining resources, especially financial resources.

7. Gender mainstreaming: the strategic dimension

The positioning of gender statistics within a statistical organisation can be regarded as a special case of gender mainstreaming. This also makes it possible to structure the problem with the help of tools developed for the application of gender mainstreaming.

Since gender mainstreaming became known as a new strategy for changing structures of gender inequality at the 4th World Conference on Women, this approach has been widely adopted. In the EU context, the principles of gender mainstreaming are enshrined in the Treaty of Amsterdam (Thege, 2002). An important basis for implementation of gender mainstreaming in European policy is the strategic document 'Towards a Community framework strategy for gender equality'. (Commission of the European Communities, 2000). This document emphasises 'the development and dissemination of comparable statistics, broken down by sex, statistical series on women and men's situation in different policy areas….' as a type of action in the context of the programme.

Whenever an attempt is made to translate the premises of gender mainstreaming into statistical production on the basis of the widely accepted definition given by the Council of Europe (1998), the following description should apply: the (re)organisation, improvement, development and evaluation of statistical processes, in such a way that a gender equality perspective is used as an integral part of all statistics at every level and at every stage by the people who usually compile the statistics. Mainstreaming is targeted above all at existing processes and statistics. Just as the 'traditional' gender equality policy for specific, defined problem areas and for areas on which no policy yet exists is not made redundant by mainstreaming, so specific gender-related developmental efforts in the statistical field are not superfluous.

The specialised gender statistician continues to have an important role. Mainstreaming of statistics and gender specialisms (focal points) are not just two-pronged, complementary strategies, but constitute a single, twin-track strategy (cf. Council of Europe, 1998). The gender statistician has acquired special expertise on gender issues, and can use that expertise to provide sectoral experts with material, and help them with the mainstreaming of the statistical processes for which they are responsible. There are also specific actions or areas of attention which do not (as yet) have a place in the normal production of statistics, such as targeted analyses or the development of specific instruments. Some of the gender statistician's tasks are of a temporary nature, and continue only until gender dimensions have become sufficiently embedded in the organisation. Other tasks remain, such as new developments, supervision, coordination and acting as a contact for outside bodies for specific gender issues. The substance of that role depends not only on the extent to which gender mainstreaming has been embraced by the statistical organisation, but also the extent to which it has become established among users.

If the premises of gender mainstreaming are applied to the statistical production process, it is possible to evaluate the progress of gender mainstreaming in a (national of international) statistical organisation by making use of an adapted version of the model described in Part II of the Council of Europe report (1998). The adapted checklist for a statistical organisation (or part of it) might look like this:

1) To what extent are the conditions for gender mainstreaming in statistics met?

a) Is there support among management and users? The process can only be started with the active support of the management of the statistical organisation. A determining factor is sufficient external pressure. There is an especially important role here for users and actors who are able to exert a direct influence on the design of the statistical programme.

b) What support is there from gender specialists? Powers, capacity and level of knowledge influence the support which can be provided.

c) What information is available on the current situation? This concerns statistical information at metalevel: information on the availability of gender statistics.

d) Is external expertise on gender available? Mainly relations with external gender researchers or statisticians.

e) Are the people who direct the statistical process sufficiently well informed about gender dimensions?

f) Are there any particular budgetary or capacity problems affecting gender dimensions?

2) Implementation of gender mainstreaming

a) Which phase or aspects of the statistical process is it (primarily) aimed at? In each phase, completely different aspects can be central. Examples: a) the choice of interlocutors during preparation and evaluation; b) selection of topics for data collection; c) selection of subjects for presentation of the results; d) manner in which outcomes are presented.

b) Which subject areas? The units which one looks at require further specification. Attention can be focused on separate statistics, or, for example, on clusters of statistics, linked to specific policy areas. The most important thing is to show the considerations on which the priorities have been based.

c) What level of aggregation? What levels, apart from the national level, are explicitly involved in the process? Are specific disaggregations a deliberate part of the analysis plan? Is specific attention given to international comparability?

3) What techniques and instruments are used in the mainstreaming process?

a) Analytical techniques and instruments The main concern here is with meta-information on the process and the purposes of that process[11]. On the one hand, the information is required in order to identify shortcomings or unfulfilled user needs and, on the other, to determine how the process has developed. The best option is probably to focus mainly on a cycle of agreed aims and evaluation of those aims.

b) Techniques for education and training. Various methods of strengthening 'gender awareness' and knowledge transfer can be applied in the context of a statistical organisation.

c) Techniques for consultation and participation There are various ways in which sectoral experts can be given practical help with mainstreaming in the statistical process.

4) The roles of the actors

The various actors are expected to play different roles in the gender mainstreaming of statistics. As part of the evaluation, attention might be focused on how the role which the actors have played compares with what was expected of them. A distinction can be made between i) initiating and deciding; ii) implementing; iii) supporting and encouraging; iv) championing the interests of gender mainstreaming and applying pressure. The following is a list (not necessarily an exhaustive one) of the actors involved:

d) Management

e) Persons who direct the statistical process. These are often the subject specialists.

f) Experts in gender statistics These can also be experts from outside the statistical organisation.

g) Experts who provide supporting information These are the equivalent of researchers who provide support for policy makers: in this case, they provide the information at metalevel.

h) Users (mainly large users) The equivalent of interest groups in terms of their relationship with policy makers.

i) Media The role of the media in statistics is probably less relevant.

j) International institutions (both statistical and policy bodies).

[11] In this area, translating the checklist intended for gender mainstreaming in policy is difficult. As part of policy, this instrument serves to highlight policy results after mainstreaming, and statistics and similar research instruments are helpful. Describing the results of statistical production after mainstreaming requires different techniques or instruments.

The checklist is likely to be more applicable to national statistical organisations, or at least parts of them, than to international institutions, where a number of adjustments are likely to be needed.

8. Conclusion: the evolutionary dimension?

The appearance of 'Engendering Statistics' in 1996 was a milestone. That publication was presented as a handbook for both the producers and users of gender statistics, and gave a comprehensive overview of the various dimensions of gender statistics. In many statistical organisations, Engendering Statistics has had an inspiring role and has helped to strengthen gender awareness in statistics. It is still topical, partly because it is still ahead of actual developments in gender statistics. Will we look back at the CEIES seminar on gender statistics a few years from now and see it as a milestone in the development of gender statistics? Various scenarios are conceivable. Overview 6 summarises them schematically.

Scenario 1 The alibi variant Management has recognised that the distinction between men and women is made in many branches of statistics. Compared with many other countries, the organisation is not doing badly. There are sufficient grounds for minimising the effort expended on gender and giving other topics a higher priority. The result is the alibi scenario.

The attention given to gender statistics is no more than what is strictly necessary, given the low level of pressure applied by users and policy requirements. It is true that there is someone in the organisation (preferably a woman) whose tasks extend to this topic, but he or she is unable to devote much time to gender. A brochure on gender statistics appears on an occasional basis.

Overview 6. Four scenarios for gender statistics

	Scenario 1: Alibi variant	**Scenario 2: Coordination role**	**Scenario 3: Pioneer role**	**Scenario 4: Gender unit**
Attention for gender in the organisation	None, or only the absolute minimum	Regular subject of attention	Established item to which permanent attention is given	Spearhead in the statistical programme
Expertise on gender in policy	Little and haphazard	Limited number of topics	General overview	Considerable knowledge and specialisation in some subjects
Relations with users	No consult-ations with specific users	Occasional consultations with specific users	In consultation on programmatic intentions gender is always on the agenda	Intensive involvement in preparation of gender policy
Capacity	Small, often only temporary	Regular part of one person's remit	Large part of one or more persons' remit	Large part or full-time function of various persons
Representation	External consultation nominal	Occasional	Gender as a permanent focus of attention	Gender statistics as the organisation's showpiece
Publication	Quinquennial gender brochure	Periodic gender publication (between once and twice a year)	Package of regular (once or twice a year) publications and contributions to various other publications/ on website	Periodic publications/ own website/attracts extra media attention
Authorisation on statistical production	None	Suggestions and advice on coordination given on request	Spontaneous advice on production and output	Gender audits on parts of the statistical production
Analyses	None	Occasional	Occasional	Permanent line of research
Renewal	None	Takes part in statistical renewal projects on an occasional basis	Makes targeted suggestions for the statistical programme; takes part in internal R&D projects	Initiates changes and can begin projects itself
Budget	None	None	None	Has a budget (perhaps only a modest one) for its own initiatives

Scenario 2 The coordination variant Management has identified gender as a high-profile focus of attention in government policy. There are occasional signals that there is a user need for gender statistics. Combined with the international focus on gender (e.g. in indicators) these indications are sufficient grounds for not entirely ignoring gender statistics. The result is the coordination scenario.

A certain capacity is given over to the coordination of "gender"-related topics in the statistical organisation. Attention is occasionally devoted to the gender dimensions of various fields. A publication containing gender statistics appears with some degree of regularity. The organisation puts in an occasional appearance at national or international events in the field.

Scenario 3 The pioneer variant Management has concluded that gender is an important policy field and that greater attention has to be paid to gender and diversity in statistics. In the course of consultations on work programmes, major users regularly push for greater attention to gender issues as a means of meeting their information needs. Because it is clear that the experts in specific areas of statistics lack an adequate overview of the gender issues policy area, the organisation concludes that it needs to make a greater effort in this direction. The organisation opts for the pioneer scenario.

Substantial capacity is reserved for gender statistics at a key level in the organisation. There is a good overview of policy development and regular contact with the users, which is one of the factors helping to clarify information needs in terms of gender issues. Those needs can be met via targeted analyses and publications. The reinforcement of gender dimensions is also achieved by spontaneous advice to sectoral experts and via participation in development projects.

Scenario 4 The gender unit variant Management has realised that gender is a dominant topic in numerous policy areas. The view is that energy needs to be devoted to gender mainstreaming, not only in policy but also in statistics, because gender statistics play an important part, both nationally and internationally, in the design and assessment of policy. A dedicated department within the organisation is set up with a view to both broad, short-term implementation of gender mainstreaming in statistics and long-term support. This is the gender unit scenario.

The gender unit comprises a number of specialists who not only have an overview of gender issues (nationally and internationally), but who can also specialise. Policy officials regard them as important interlocutors on issues of policy design and evaluation and there is therefore solid, intensive consultations with many of the actors involved in gender policy, which fosters an appreciation of current and future information needs. Within the organisation, the gender unit is accepted as an authoritative partner in the support of gender dimensions in current statistical production. The gender unit is also able to take initiatives at any time to assess existing statistical production, initiate processes of renewal, perform or commission specific analyses or publish data. In order for it to operate effectively, the unit has its own budget, from which various initiatives elsewhere in the organisation can be financed.

The scenario for regarding the CEIES seminar as a milestone could take the form of a paper which begins with the following sentences: "A statistical organisation which does not devote special attention to gender in its statistics, statistical programme and structure, is now almost unthinkable. Nearly all national and international producers of statistics have several people whose task is to support the further gender mainstreaming of statistics."

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Occupational Segregation, Gender Equality and the (Difficult) Combination of Paid and Unpaid Work – The Case of Portugal

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1. Gender, time, value and work

Gender inequalities in the labour market and occupational segregation in particular, can only be fully understood when taking into account the societal models which regulate the way how men and women combine, in various degrees, paid work in the labour market and unpaid caring work in the private and family sphere.

Thus, the key question to be addressed at this level is the gendered use of time and the valuation of work.

Looking at this question we find four major key concepts, which I would like to discuss very briefly: gender, time, value and work.

When I talk about gender, I am trying to look beyond the biological characteristics, in principle unchangeable and universal, which are different for men and women. I am referring to the social construction of what is male and female and to the way these interact. I am referring to the social representation of the biological sex, based on the roles, tasks and functions attributed to women and men. These representations change over time and according to different cultures.

What about time? Time can be viewed as the clock or calendar time. In other words, time can be viewed as an instrument to measure or to quantify human activities. But time can also be faced as a social construction, regarding the social organisation of time. Time then becomes a powerful analytical tool leading to "new understandings about how the social relations of time relate to the social relations of work, care and welfare" (Pillinger, 2000: 329). In other words, time can also be used to qualify or to accord value to human activities.

And value is indeed a crucial dimension on this debate. Value, as a social construct, has a clear impact on the social recognition of the contribution of all sort of human activity to societies and economies. And this regards especially the social valuation of different forms of work.

This leads us to questioning the concept of work. As Maria-Ângeles Durán points out, in the dictionaries and encyclopaedias of the European languages, the concept of work is a broad one, in no way restricted to the idea of salary or payment. However, "present socio-economic and legal literature almost exclusively refers to the very narrow category of paid or salaried work" (Durán, coord., 2000: 83).

Work is therefore associated to the production of merchandise, and "for instance, in standard economic or statistical vocabulary, workers excluded from access to the labour market are labelled 'non-active', 'dependent', or 'unproductive', no matter how long their real unpaid working hours are or how necessary their work is to other citizens. (...) In this context, 'time' is almost exclusively 'working time', i.e. a commodity, exchanged for money in the market place" (*idem*: 84). On the other hand, a large part of work, in particular of women's work – unpaid caring work in the private and family sphere - is made invisible to society, statistics and national accounts and even to dominant scientific production.

It is thus not uncommon that unpaid work deserves little social or economic value or is even not recognised as work. Therefore, it must be stressed that "the first breakthrough in feminist social policy analysis was to reveal that care is work, often extremely hard work, involving long hours." (Lister, 2000: 31)

Reflecting upon the concept of work implies discussing the traditional divide between the private and public spheres. The interpenetration of paid work and family life for workers is clearly evident. The continued commitment of women to the bulk of unpaid work in the domestic sphere "can limit the time which women are able to commit to paid work and the responsibilities they are able to take on. (...) At the same time, the position of women and men in the labour market feeds back into their position in the family. The economic logic generated by unequal labour market encourages a traditional domestic division of labour. Differential economic rewards for labour market participation can translate into differential power within the family itself". (Lister, 2000: 27) Therefore, "time has to be understood as a resource in this equation" (idem) between public and private spheres.

2. Women and men in a segregated labour market – the Portuguese case

Before entering in detail into the analysis of unpaid work and its gendered distribution, it is important to give a brief statistical picture of the situation of women and men in the Portuguese labour market.

First, I must stress that Portuguese women present rather atypical patterns in terms of their participation in the labour market, especially comparing to the other Southern European countries. Female activity rate is high, having increased from 31% in 1975 to 46.2% in 2003 (INE, Estatísticas do Emprego). On the other hand, women's participation tends to occur on a full-time basis and to be continuous along the life course, thus not reflecting, as much as in other countries, the effects of marriage and child rearing.

On the other hand, in Portugal, according to recent studies in this domain[1], the majority of both men and women accord a high value to women's participation in the labour market. While, among more qualified women, paid work is considered a means for autonomy and personal fulfilment, among women with lower qualification, paid work tends to be valued especially by the benefits it creates – higher income but also greater ability to act as a protagonist and to decide namely in the couple, greater respectability, greater acknowledgment of capacities and competences, lesser social isolation. Even when paid work is hard and heavy, the desire expressed by these women is not to quit work but to get a different job (Torres, 2002).

In recent years, mainly since 1998, the Portuguese labour market has showed a globally positive behaviour. However, in 2001, this behaviour has started to change with a small deceleration on the evolution of employment (and real wages) and with a slight increase in the unemployment rate, although continuing at a low level. From 2002 onwards this trend was accentuated and Portugal is currently facing a deep economic crisis and a sharp increase in unemployment.

In this context, let us first refer to employment. In 2002, male employment rate reached 75.9% and female employment rate attained 60.8% (Eurostat, *European Community Labour Force Survey*[2]).

As to unemployment, in 2003, the unemployment rate reached 7.3% among women and 5.6% among men (INE, *Estatísticas do Emprego*). This is a trend still in progress and a further rise in unemployment is still expected.

Therefore, improving employability continues to be one of the fundamental priorities of the employment policy in Portugal, as certain groups continue to reveal particular difficulties in the access to the labour market, namely young people, women and the long-term unemployed.

On the other hand, the Portuguese labour market shows a strong gender horizontal segregation.

Women and men employees in highly feminised or masculinised sectors (%)

	% of women	% of men
Construction	4.2	95.8
Hotels and restaurants	61.1	39.0
Transports, storage and communications	20.3	79.7
Health and social work	82.1	17.9
Education	78.8	21.2
Other community, social, personal service activities	58.5	41.4

Source: INE, Estatísticas do Emprego, 2002, in CIDM, forthcoming3

[1] Such as, for instance, Torres, 2002.

Sectors such as education and health and social work are highly feminised while transports and construction are male dominated sectors.

This gender horizontal segregation is also evident in terms of occupation. The feminisation rate is higher among services staff and salespersons, administrative staff and unskilled workers. But the specialists of intellectual and scientific professions also show a significant feminisation rate, reaching 61.2%.

Women and men employees by occupation (%)

	Feminisation rate
Public administration high level staff, managers and companies high level staff	31.6
Specialists of intellectual and scientific professions	61.2
Technicians and middle level professionals	42.4
Administrative staff and similar	62.1
Services staff and salespersons	68.6
Farmers and skilled workers of agriculture and fishing	49.1
Manufacturing, craft and related trades workers	22.1
Plant and machine operators and assemblers	22.3
Unskilled workers	62.8
Armed forces	8.1

Source: INE, Estatísticas do Emprego*, 2003*

The actual situation also reflects a high gender pay gap. The national average gender pay gap, in terms of basic wages, reaches 22.4% in 2000[4]. If we consider earnings (which include other components of the salary, such as over work compensation, bonus and other benefits), the gap is even larger, reaching 26.1%, i.e. women earn 73.9% of men. (Own calculations, based on DETEFP/MTS, *Quadros de Pessoal.*)

According to this same source, the gender pay gap is larger in the higher levels of qualification: medium and especially high levels staff. The gender pay gap is also more

significant among public administration high level staff, managers and companies' high level staff, as well as among university degree holders with unknown occupation and among the specialists of intellectual and scientific professions.

3. The Portuguese *Time Use Survey 1999*

3.1. Brief methodological note

The *Inquérito à Ocupação do Tempo 1999 (Time Use Survey 1999)* is a major and crucial data source on the relation of paid and unpaid work, a field which remains relatively unexplored in Portugal. This is an official statistical source resulting from the Eurostat harmonised European Time Use Survey Guidelines and it is the only national time use survey ever conducted in Portugal by the National Institute of Statistics (in partnership with several public and private bodies).

The *Time Use Survey 1999* is a nation-wide representative survey with a sample size of 5,500 household units and 10,000 individuals. Although every individual aged 6 or over was eligible to answer the Survey, given the purposes of my analysis, data presented in this paper refer to a sub-sample of individuals aged 15 or over.

Three instruments for data collection were used in the *Time Use Survey 1999*:

i) the 'Family Questionnaire', designed to identify 'typical' practices in the household and, for certain activities, in the four weeks preceding the Survey;

[4] There is a constant delay in the dissemination of data on wages, which are based on the Quadros de Pessoal (Employment Records), which makes impossible an updated analysis of the situation.

ii) the 'Individual Questionnaire', also designed to identify individuals' 'typical' practices, for certain activities, in the four weeks preceding the Survey and, for others, the previous week;

iii) the 'Diary', in which the activities performed by the individuals are registered over 24 hours, in 10 minute periods. The information was collected through the Diary for a selected day of the week (the sample having been equally distributed by the different days of the week).[5]

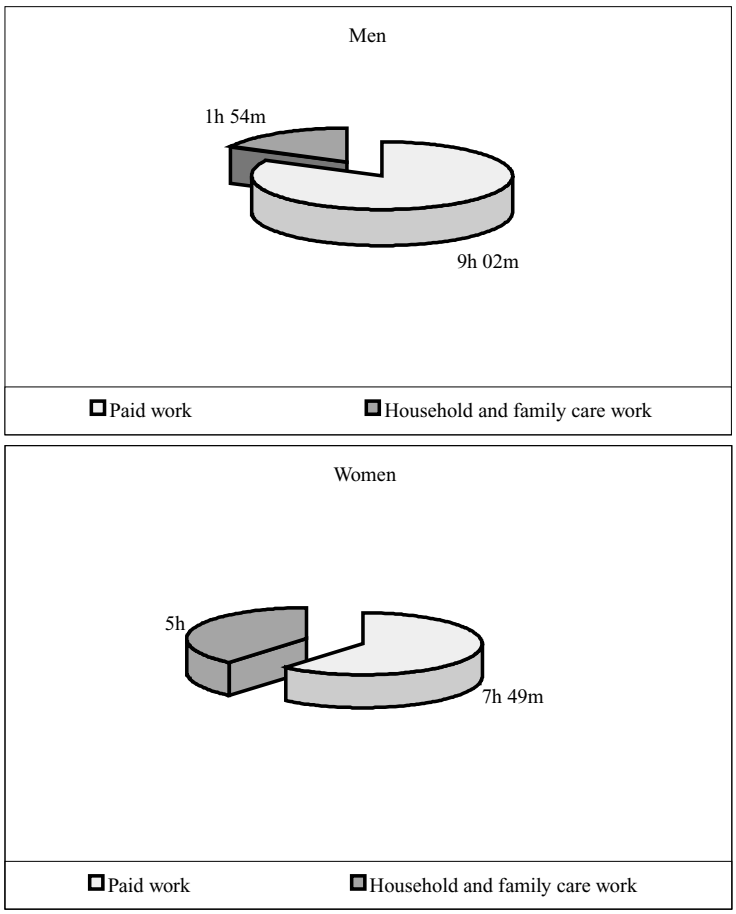
The *Time Use Survey 1999* covers the whole of the Portuguese territory – Mainland and Autonomous Regions of Azores and Madeira. It was also defined that the Survey's results should be representative at the regional level (NUT I and II) and at the level of the Metropolitan Areas of Lisbon and Porto. However, the data released by the National Institute of Statistics refer only to the average national level.

Contrary to what was expected (and desirable) when this new Survey was launched, the Time Use Survey was conducted only once, back in 1999[6].

3.2. The gender distribution of unpaid work

It is shown as empirical evidence by the *Time Use Survey 1999* that the patterns of time allocation to different types of activities, in a professional and household context, are clearly differentiated in terms of gender. This differentiation is particularly evident regarding unpaid work in the domestic sphere. Although on average men continue to invest more time in paid work, the difference between men's and women's paid working time is only about one hour per day. On the contrary, women allocate three more hours, every day, to forms of unpaid household and family care work compared to men.

Average duration of the different forms of work by sex (hh.mm)



Source: Own calculations, on the basis of INE, *Inquérito à Ocupação do Tempo 1999*

[5] One should also mention that, given the characteristics of the sampling procedures and the way in which representativeness is guaranteed by the use of individual weightings (always active since it is only possible to work with the weighted estimations for the entire population), the application of methods of multivariate analysis to the results of the *Time Use Survey 1999* is not possible; since we had no direct access to raw data, a descriptive analysis is thus the only option.

[6] The II National Plan for Equality 2003-2006 includes among its measures the "production and dissemination of statistical information on the use of time of men and women following a time use survey".

These figures refer to the average male and female population aged 15 or over. It would be extremely important to be able to go into more depth and to develop a couple based analysis but unfortunately the methodology design of the Survey does not allow for that.

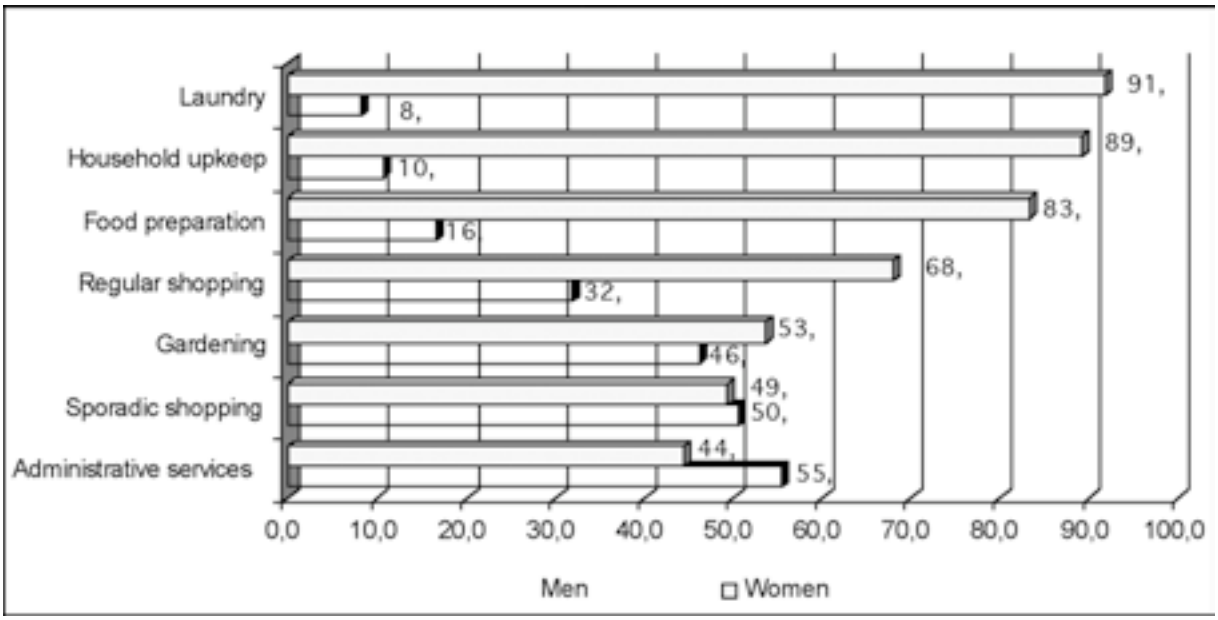
But it is not only the average duration of the activities that can be considered; when taking into account the number of people - men and women - who perform them, it becomes evident that these values reflect a female participation rate in domestic work and family care clearly higher than the male one: while 94% of women perform these kind of tasks, only 59% of men do so. It is thus possible to estimate the total number of hours effectively spent by men and women on the different tasks: for instance, in a week day, food preparation occupies less than 600,000 hours for men and over 5,000,000 hours for women.

A conclusion may be already drawn: women have a longer working day; considering paid job in a professional context and unpaid work in the domestic sphere, women have a daily working time of 12h49m, while, for men, the corresponding value is no higher than 10h56m; i.e., in each day, women work in average two more hours than men (a difference that still remains, although not so evident, when considering only employed population - in this case, the value of the female overwork is 1h22m). Or, differently said, women's total working time represents, in each year, at least 4 supplementary months of work (considering a weekly duration of work of 40 hours) in relation to men's total working time.

The *Time Use Survey 1999* also enables a separate analysis of the two major components of unpaid work: household tasks and care work.

Household tasks are a highly feminised domain: women undertake on a regular basis - *always* or *frequently* - food preparation (including setting the table and dish washing), household upkeep (vacuuming, tidying, etc.) and laundry[7].

Household tasks by sex(%)



Source: Own calculations, on the basis of INE, *Inquérito à Ocupação do Tempo 1999*

Among household tasks, there are a few well-defined activities to which men allocate more time than women: administrative services (insurance, taxes, banks, etc.), construction and repairs and, in a lesser degree, gardening and pet care. Activities and tasks thus less time demanding in a daily basis and implying a relationship with external entities or, at least, which tend to be done out of the domestic space, contrary to what happens with the most feminised household tasks, generally routine tasks restricted to the inner space of the household.

[7] The wording for 'laundry' in the categories defined in the *Time Use Survey 1999* is 'making and care of textiles (laundry, ironing, etc.)'.

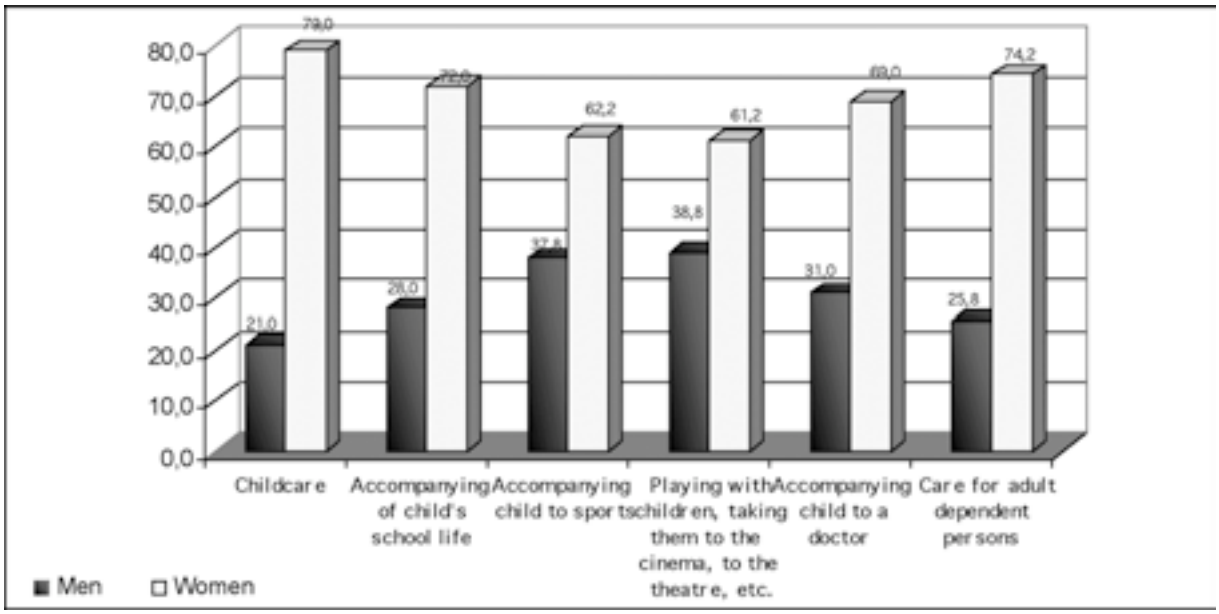
Several other interesting variables can be analysed taking the *Time Use Survey 1999*: the beneficiaries of different household tasks, i.e., for whom these are performed; the type of family to which individuals belong; the presence of children in the household; the net income level of the household; the educational level of the individuals; the age group of the individuals.

The same kind of analysis can be done regarding care work addressed to other household members.

First, it is interesting to realise the importance of female family care provided to children, both aged less than 6 years old and who do not yet attend basic education and aged between 6 and 14 years old, who already attend school, but nevertheless require care after schooling hours – in any case the most common situation is for children to stay at home, during the day, with a female adult relative – mothers, grandmothers, aunts...

Customary child-care (feeding, washing, etc.), supporting a child's school life (help with homework, meetings at school, etc.) and, to a lesser degree, accompanying children to a doctor are among the tasks more often assumed by women. Equally over feminised, but less gender differentiated, are 'leisure' tasks related to accompanying children to sports, leisure and entertainment: taking them to gymnastics or swimming lessons, playing with children, taking them to the cinema, to the theatre, to a concert, etc.

Family care, by sex (%)



Source: Own calculations on the basis of INE, *Inquérito à Ocupação do Tempo 1999*

On the other hand, it is worth mentioning that the majority of men (over three quarters), when doing child-care, do it together with their spouse/partner. This situation of common sharing of child-care tasks is experienced just over a quarter of the women who provide this kind of care.

But the needs in terms of family care do not only reflect the existence of children. The presence in the household of adult people requiring special assistance due to age, illness or disability, supposes an availability and permanence not always (in fact) easily manageable in daily life.

Again, in these cases, day care is mostly provided by relatives: by a male relative in 16% of the situations and by a female relative in 60% of cases.

On the other hand, among those people who, in response to the question '*do you usually care for adult dependent persons'*, stated that they do it *always*, 86% were women. This extremely high feminisation of the care for dependent adults is re-affirmed if one takes into account the fact that the proportion of women who

[5] It may be noted that a term public good is well established in economic literature. In statistical terminology however, we differentiate between goods and services, which taken together are commodities. In fact most of the public goods are services and therefore collective services are in this terminology collective commodities, not goods.

report *always* assuming this kind of tasks (49%) is very close to the proportion of men who *never* care for dependent adults (52%).

An essential dimension to be considered when analysing the allocation of time of the different members of a household to domestic chores and care work refers to the possibility, or not, of making use of external supports - i.e., to the possibility of externalising household work, as a whole or part of it, through processes of task delegation, either via informal, reciprocal, help networks or through purchase of support. In any case, these processes of externalisation of household work rarely involve males: they generally refer to the substitution of a woman for another woman (paid or not) in doing some tasks.

The analysis of the informal reciprocal help networks among families suggests that women are the greatest informal help providers to other households.

The help being given more often refers to food preparation, shopping and administrative services, as well as to child care. Women are overrepresented in all these forms of help, in percentages never below 70%. This relation is inverted when the forms of help relate to less customary tasks such as household maintenance, and vehicle or house repairs, which corroborates, once again, a traditional division of tasks, according to gender, in the domestic space.

However (contrary to what one could expect based on a traditional image of Portuguese society) most individuals and households are not involved in any network of reciprocal help - no more than 13% declare having received informal help in the four weeks preceding the Survey.

Now considering the use of paid domestic work, there are not many households engaging someone who, on a regular basis, provides household work in exchange for a payment – the so called cleaning lady or house maid: these represent 14% of all households. And in most cases, households using this kind of support do so for only a few hours per week.

It should also be taken into account that several market substitutes are now available which may relieve families / women from some household tasks. Nevertheless results show that the use of these market substitutes for household work is still not common in Portugal.

The externalisation of household work, in a context where low income is predominant, is thus a relatively remote possibility for most households and, in particular, for women.

A last and important dimension to be considered, from the *Time Use Survey 1999*, refers to the perception of time.

Time is a dimension to which different subjective meanings are attributed by different persons. Such differences are particularly evident in terms of gender.

The double responsibility socially imposed on women, for paid and unpaid work, indeed generates a strong time pressure in women's daily lives. A daily life that is often marked by a feeling of being in a hurry: 57% of women normally feel to be in a hurry (figure that, although not much lower, reduces to 50% among men).

Besides this global feeling of stress, it is worth analysing if this lack of time is more or less experienced at the professional life or at the private life level.

In terms of professional life, there are a lot of people - more men than women - declaring not having enough time to do everything they should: 44% and 39%, respectively, confront themselves with a lack of time every day or frequently. On the other hand, women are the ones who more often feel that time is not enough to do everything they would like to do in their private life. During weekdays, 50% of women and 44% of men experience this feeling every day or frequently. The analysis thus evidences the more acute perception, among women, of the need to combine the time commitments of personal and professional life and also different subjective valuations of the participation in both spheres.

Taking into account the predominant perception of lack of time and time pressure, it is interesting to analyse the desired forms of occupation of the available time. Special attention should be given, at this level, to the 'choice' made by 9% of women (and 4% of men) of, if possible, allocating more time to household and care work. A doubt can be raised: whether this is not the manifestation of a constrained desire (especially considering the long time actually dedicated by women to these forms of unpaid work); constrained by difficulties in combining professional life and family life, in disfavour of personal time; constrained mostly by

the responsibilities and demands socially committed to women in these different spheres and by the performances which are expected from them. Being rarely easy for women to fully correspond to such (idealised) performances, answers like these seem to denounce the existence of feelings of guilt among (at least) some women, 'divided' between demands of paid work and family responsibilities, becoming unable to, not even at the level of the expression of desire, 'dare' to revindicate a time of their own.

4. The need for new indicators on unpaid work

The growing awareness and political recognition of the close interplay between paid and unpaid work, i.e. of the way how the position in the labour market feeds back into the position in the private and family sphere and vice-versa, as well as of its highly gendered

expression, have been playing a major role in the demand for new indicators and improved gender statistics.

Gender equality is now recognised as a *fundamental criterion of democracy*[8] and the balanced participation of men and women both in private and public spheres is faced as a need and a requirement of citizenship[9].

Adequate indicators are thus indispensable to know the actual situation of men and women in all domains – especially regarding paid and unpaid work – in order to measure gender gaps, to launch and develop new policy measures, to evaluate progress, to fix targets and to establish benchmarks.

The need for new indicators in the area of unpaid work and its distribution is stressed by the Advisory Committee on Equal Opportunities for Women and Men, in its Opinion on the Review of the European Employment Strategy[10], in the framework of a demand for more detailed indicators to allow the structural analysis of gender gaps.

The adoption of the gender time use in paid and unpaid work as a common indicator for the monitoring and follow-up of the European Employment Strategy would thus represent a significant step.

And, in order to accomplish this goal, the regular and expanded application of harmonised time use surveys is urgently required. This is particularly the case in countries like Portugal, where only one time use survey is available or Greece, where this survey was never conducted. This would definitely contribute to the production of better gender statistics in areas as crucial as unpaid work.

The importance and the powerful analytical insights enabled by time use data, in measuring and addressing gender inequalities, are (I hope) clearly demonstrated by this paper (as well as some of their limitations and means for improvement). The regular production of time use data and its policy application should then be strongly encouraged namely as *a fundamental tool for gender equality*[11].

[8] 4th European Ministerial Conference on equality between women and men, Istanbul, November 1997.

[9] This approach was firmly introduced after the 1995 Beijing United Nations Conference, followed by the United Nations Special Assembly in New York known as Beijing+5. At a European Union level, this same approach was reinforced by the Council Resolution of 19th June 2000.

[10] As mentioned in the current Seminar Background Paper.

[11] In the words of Maria do Céu da Cunha Rêgo, 2002.

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GENDER ACCOUNTING: WOMEN'S GDP AND BEYOND

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1 INTRODUCTION

The importance of the share of GDP accounted for by women, or by either sex, is often referred to but seldom, if ever, supported by hard figures. This is all the more surprising given the elaborate classifications otherwise applied to contemporary National Accounts: kind of activity, institutional framework, kind of product and purpose of use, origin of income, region of residence, etc. Yet there is still no corresponding breakdown by sex, an obvious deficiency not only for political debate, but also for the legitimate interest of society at large and, of course, for scientific research in economics, sociology, legislation and other areas.

The topic at issue is "Gender Accounting", which goes beyond the conventional SNA[1], the Satellite Accounts for Households and, of course, more propagandistic rubrics such as "Women's GDP". It covers the regular work of women which contributes to the generation of GDP; their invaluable but quantifiable performance in the household context, and other, related information on aspects of the entire system of accounts. The purpose of this paper is to generate an understanding of the notion, its self-contained nature (it is largely independent of existing systems), the desirability of its implementation for various purposes, and, not least, the major features of the concept and the anticipated difficulties of compilation.

As has already been mentioned, there is not yet much theoretical work available which such an exercise could take as its starting point. The focus of related work has clearly been on the household sector as a whole (in addition to what is found in the SNA), more particularly on the production/consumption (or more generally, the *quid pro quo*) cycle (INSTRAW, 1995, 1996). INSTRAW (1996) for the first time proposes gender evaluation of "regular" GDP. A recent European report is the most authoritative reference work of its kind so far (Eurostat 2003)[2]. Other state-of-the-art publications are at best sporadic, and rather exotic in terms of reference country. For the Philippines, the share of women in the "official product" is put at 35%, but this rises to 50% when their household work is included (Virola & de Perio 1998). Similarly, contributions of 25% before extension and 41% after extension are reported for Bangladesh (Hamid, 1996)[3]. *En passant*, some authors ask similar questions to those raised in this paper (Landefeld & McCulla, 2000; Smit 2003).

The more theoretical ideas found in the above-mentioned standard publication need not be repeated here, so that basic definitions, classifications, and even the design of presentations will be omitted. By contrast, however, the features of a System of Gender Accounts must be considered in some detail. This discussion is supported by diagrams and tables, where appropriate. Notions which are immediately recognizable are not further explained in the text.

The remainder of this paper is organised as follows. First, Chapter 2 gives a brief summary of a few "theses" which would appear to represent the fundamentals of such a System (essential features, pervasive nature, statistical approach). In Chapter 3, further preliminary concepts are recapitulated insofar as they are typical of such a System, without extensive theory (accounting framework, stages of compilation, meaning of the "production core" and "aggregates" in this context). Chapter 4 discusses more practical features resulting from

[1] Subsequent references to the SNA should also be understood as references to its European counterpart (ESA) (although the latter will not be explicitly mentioned); cf. (SNA 1993), (ESA 1995).
[2] In: Varjonen, 2003
[3] Incidentally, S. Hamid also provides ample theoretical discussion.

these basics (general feasibility, genderisation-resistant complexities, variants of compilation and presentation, and extensions beyond production proper). Chapter 5 is given over to a presentation of a related Austrian study, concentrating on gender GDP (1992, but still valid in terms of theoretical conception). Finally, an outlook is given, in the form of a diagnosis rather than an outright recommendation or prognosis (Chapter 6).

2. GENDERISATION: SOME PREMISES

2.1. Principal meaning

It may sound trivial, but "genderisation" is the introduction of the "female/male" distinction to a topic (namely, the national accounts) to which, unlike topics such as population or public health statistics, genderisation is not easily applied. Its meaning in this context is a fairly broad one: not necessarily restricted to a view of women and men as physiological, social, and economical entities, but including institutions and activities of different kinds, if they are related or meaningfully linked to the gender distinction. In economics, for example, something like a "gender economy" may be the corresponding target notion[4]. Similarly, other aspects of the role of women/men in public life may be of interest, especially if they are somehow embodied in statistical records.

More specifically, the word "genderisation" is used with a view to the System of National Accounts (NA), including any affiliations which it might have with the Satellite Accounts (SA). The system itself is not designed to exhibit any particular perspective on gender. Its genderisation cannot, therefore, be achieved by exploiting certain characteristics found in the system itself, but by linking related external information to itself. Articulated in terms of transactors, transactions and accounts (see 3.1), this system requires links in a similar systematic order of reference, notwithstanding limits on their applicability (e.g. limited available information). Therefore, a system of Gender Accounts (GA) is not necessarily a 1:1 counterpart, but may be smaller or relatively defective, but nor is it automatically restricted by a notion which is internal to the system (e.g. the scope of certain SA).

2.2. Pervasiveness and other peculiarities

Household Satellite Accounts (HHSA) undoubtedly cover a large part of the gender issue and may suggest themselves as the natural preliminary definition of the scope of GA (Varjonen 2003, as a most recent authoritative example). Do they not render more specific elaborations of this kind superfluous? There are several good reasons to believe so. Firstly, in the HHSA, gender presentations as such are not found, either in the specific "extended" segment or (even less so) in the more comprehensive version which also covers the conventional SNA segment. Secondly, when interpreted in the above light, gender is a characteristic, or perspective, of applicability much more general than in the HH context, pervading virtually all areas of life, and therefore the entire national accounts system. Thirdly, the introduction of gender distinctions creates an additional level of inter-personal transactions which are hidden by the "black box" approach to households which still dominates the HHSA. Fourthly, a level hardly addressed in the HHSA systems so far would assume equal importance: income distribution and financing.

It is true that considerable additional complexity creeps in at this point. Although not easily disentangled, however, it does little to detract from the very real importance of those transactions for a rational understanding of what happens within HH, between HH and the rest of the economy, and in the economy at large, when seen from a gender perspective.

2.3 Systemic approach

Although not yet particularly well developed, GA is a genuine part of Gender Statistics, given the latter's obvious requirements in terms of completeness, systemic coherence and consistency. Something similar applies to the specific data requirements, which in turn limit evaluation, as is the case with HH internal transactions and their complexity.

It should therefore be possible to deal with this subject in an objective, professional manner, *sine ira et studio*, and guided by the systemic challenge only. There may also be many additional, more highly political, emotional

[4] Cf. Franz et al., 1998, Annex: The Household Economy: Notion, Scope and Structures

and other reasons for such an undertaking. The goal is therefore clear: to establish a systemic set of GA. Only on practical grounds might implementation of such a system be more restricted, selective, staggered, etc.

3. PRELIMINARY CONCEPTS

3.1. Basic notions

According to the considerations on genderised NA that were mentioned, before the points of reference to be "genderised" are the basic building criteria of NA: statistical units, transactions and accounts. In fact, these concepts are closely interrelated and cannot be discussed in isolation from each other.

First, the "statistical units" (SU; units of observation and classification; ESA 1995, para. 127) and the "Sectors" (aggregates of SU). In the NA, individuals do not appear as SU as such, but merge 1:1 or n:1 in a corresponding HH, as the related economic entity. Taken together, the HH represent the HH sector.[5] As individuals in a given HH are not necessarily uni-sex, each SU – HH must be broken down by the individual with a view to genderisation. On this basis, new sectoral notions can easily be formed: women (_); and men (_). Children are a problem here, but it could be solved by equal attribution to their parents, or by representing them as a sector in their own right, or by some other convention. An additional problem may be that certain transactions are almost completely resistant to attribution of this kind, so that some residual HH sector might still be maintained.[6] In relation to the HH sector (as a whole) women and men etc. would represent sub-sectors, with mutual interrelations (= transactions) which are not visible on the HH level. However, since any transaction is related to at least one SU, this concept is central to GA.

Second, the transactions need to be considered. Their genderisation derives not from their intrinsic nature but, at an elementary level, from the SU, and statistically, from the sectors involved (usually two). Thus, transactions usually show two reference points of genderisation. If both are of the same gender, there is no problem: this is the situation with the compilation of gender aggregates, for example. If they are different (which they usually, but not always, are: one by gender, one unspecified), the solution comes from the nature of the NA architecture, which provides for a complete presentation of the various sectors, each with a full sequence of accounts and transactions. If the counter-entries are shown by gender (_, _; unspecified), gender interrelations can be shown, but still without any apparent contradiction. For a given sector (vertically, along the sequence), gender is clear and primary (automatically dominating gender qualification). Across sectors differentiated by gender (horizontally), a combination is possible for their accounts on the same level, and a sort of "contradiction" would arise: numerically identical items appear on either side, but this contradiction can now be eliminated by netting (consolidation). Incidentally, this is highly characteristic of the whole idea of GA, which can be understood as a major de-consolidation of conventional sector accounts. In addition, the NA provide the convenient option of inserting intermediate accounts whenever a direct relation to another sector is difficult to establish, e.g. if it is not supported by the data basis.

Accounts are the third building principle of NA architecture, linking all components of the system by way of systematic double-entry book-keeping. As pointed out earlier, they can be established in full sequence for each sector[7], and therefore also by gender. Genderised sectors are tantamount to genderised accounts; in those accounts, the transactional interrelation with other sectors (other gender, undefined gender or no gender) is found, thus providing a basis for the evaluation of the role of a given gender in the overall economy. Only intermediate accounts (as touched on above) would be an exemption, but even they could be removed wherever the information was sufficient. (See also section 3.2 (Accounting Framework), below.)[8]

In combination with the notions of transactions and accounts, the above discussion on the SU (transactors, if aggregate) needs to be taken further. First, the increasing number of transactors who appear when their gender structures are revealed results in at least a corresponding, but more usually a disproportionate, increase in the amount of new transactions between them (grossing-up effect). A major, but totally unrealistic consequence of the black box convention of the SNA and HHSA is thus replaced by an explicit depiction of the interactions, exchanges and trade-offs of performances and values constantly taking place within the HH. It is thus not only gender that

[5] Therefore, one does not find transactions between individuals there.
[6] This might console those who are opposed on principle to any disentanglement of holistic phenomena.
[7] On the sequence of accounts, cf. SNA 1993, Fig. 2.1 and the related text.
[8] A discussion of the related topics is also found in Franz et al., 1998, Chapter III.2.

becomes visible, but its manifestation in all respects that can be grasped in terms of NA categories and concepts. Secondly, in the NA, the SU (transactors) are designed as the elementary agents of economic life, each an entire, holistic entity, with its separate identity, taking decisions, accountable, enjoying rights or assuming obligations (at least on the level of "institutional" units). These capabilities need not necessarily appear while there is still meaningful reference to an entity by gender. This, in combination with some criteria of control, opens a wide area of further genderisation, beyond the HH Sector. Gender-determined groupings of establishments, enterprises, PNPIs, etc. can be formed this way, with all their entanglements showing the real position of gender in the economy at large, and automatically weighted correctly. In the traditional HHSA this would, at best, apply only to sole proprietorships ("one-woman/one-man shows") while the true implications are much more profound. Thirdly, thanks to the double entry technique, the accounts are interlinked, either with parallel ones (on the same accounting level, but in different sectors), or with preceding or subsequent accounts (same sector, different level). In this way, a wide field of systematic investigation of gender implications is opened up (cf. 3.2, below).

To summarize, concepts as the systemic raw materials provided by NA and HHSA are perfectly suited to GA. They need to be complemented by additional distinctions, particularly at SU level, and with further, by no means Utopian, elaborations at transaction and account level. Other important options become available when gender is applied to individuals beyond their capacity as HH constituents, thus extending to other sectors of the System, where gender references have so far been absent.

3.2 Accounting framework

In the tradition of HHSA statistics, the distinction between SNA and non-SNA (INSTRAW 1995, Fig.3.1) is usually taken as a starting point. It is related to the SNA's "production boundary" (SNA 1993, I.E.1), which must be appropriately extended to obtain a complete overview of housework (notwithstanding some less significant additional elements exiled from the "core" system). Without going into details of the accounting sub-structures, etc., the overall situation can be summarised as follows (cf. Varjonen 2003, Fig 1):

Diagram 1a

This distinction is most useful for GA, too, although it does not tell the whole story (cf. 4.4, below). The appearance of an area of overlap may be mentioned first, so as to be sufficiently specific when considering the relation of the SNA to the HHSA, which is consistent but not immediately additive. If we remain within the extended production boundary by introducing the additional details of sector and market concepts, both of which are very important in the present context, we achieve a more highly differentiated presentation:

Diagram 1b

Although this gives us the required distinctions in terms of sector and activity, however, an additional step is needed to bring to light gender and non-production:

Diagram 2

This Diagram shows the overall scope of a system of GA, by economic activity ("What") and economic sector ("Who"). By covering all Sectors and Accounts, the former are explicit for the gender distinction; the latter go beyond the commodity range, to include distribution and financing. In this way, it becomes apparent that, from a systemic point of view, HHSA (let alone SNA) do not by any means cover what would be needed for a comprehensive economic view of gender. It is the entire context of the accounts which provides the big picture.

3.3 Steps in compilation

This section looks briefly at the feasibility, meaning and requirements of such an exercise, and its comprehensive, systemic nature. The latter is clearly demonstrated by the strictly symmetrical array of individual building blocks, which expresses their coherence, correspondence and interlinked nature:

Diagram 3

(Accounts are also symbolically indicated in the boxes).

Usually, the first target is a set of accounts for SNA on the one hand, and non-SNA on the other, but with both limited to the supply and use of goods & services ("commodities" in more traditional language), and together

with its underlying data basis: Section 1 of the Diagram. The overlap (see above, Diagram 1b) must be netted to avoid double counting.

In the next step, genderisation would have to be introduced, but first in terms of identification of the SU and their related transactions only (Section 2). This exercise essentially follows the tracks of the HHSA, first avoiding problems of evaluation (see below). The respective basic data may be of more or less direct application, by virtue of being presented by gender from the beginning (e.g. wage income); or they may need additional processing because they first appear in a physical dimension only (e.g. time spent, from the time use survey (TUS), a most important source). Certain elements may be recognized as gender resistant, as pointed out above. There can be no doubt that a corresponding set of TUS data would also be useful for the other elements.

Valuation will then have to be attempted for the second category of the second step: Section 3.

Lastly, and probably with a similar step structure, the compilation of GA beyond the narrower supply-use accounts may be recognized (income distribution and financing): Section 4.

3.4. "Production core": selectiveness and aggregates

While extending beyond the narrow SNA production boundary, HHSA is still essentially centred on "production" (Varjonen 2003, paras. 14, 46). There is a window on to a more far-reaching, comprehensive view, but it has been given comparatively little attention so far (Varjonen 2003, paras. 133 *et seq*). At the same time, as long as statistics of the HHSA type are not often found, there is good reason to start with the "production core" as the most important segment. In the first instance, this applies by analogy to GA, although the extent of the accounting substance beyond the production boundary (even if extended) is greater, for two reasons: the amount of transactions between agents of gender automatically increases with the increasing number of transactors. In fact, it increases disproportionately (grossing-up effect, see section 3.1, above). Then there is the additional application of genderisation which is beyond the scope of the HH sector (see section 4.4, below). Therefore, there may still be a "production core" of GA, but it should not be confused with the system itself, and is not even a proxy for it.

This much more extensive system may suggest a degree of selective concentration on certain features, which are outstanding for their central role in such a system, or for the obvious predominant interest of the users, or for ease of data utilisation. The production core has already been recognized as a topic of primary importance. Similarly, it may be worthwhile consistently implementing GA in complete symmetry with general HHSA compilations. Other, less easily anticipated, purposes may also help to select certain parts in order of priority, according to circumstances.

A particularly convenient and publicity-efficient kind of selection entails concentrating on "Aggregates" such as GDP, GNP GNI, DI/ADI, etc.[9], but by gender, and similarly, at least potentially, on their extended counterparts in HHSA. In any case, the calculation of any aggregate will tend to require a broader, more extensive preliminary calculation, so that the economies of scale of calculation are probably less than the gains in publicity. In this respect, the common use of aggregates as reference numbers may be even more important, and this will similarly apply to GA aggregates: any of them may be related to GDP. If it is extended GDP, all the better, because it might provide a more consistent basis for comparison. However, there are fine differentiations and limitations and consequential reservations, which are mainly due to the above-mentioned complexities ("genderisation resistance"), and which need to be noted in any use of the GA figures. (More on this in section 4.2.)

4. GENDERISATION RESUMED

4.1. Preliminary remarks on feasibility

A question which has to be answered first is the attribution of an economic transaction to gender, because causality may not always be an obvious or sufficient criterion. An analogy with the NA may help in most situations (although it is not dealt with at length there), depending on the precise circumstances. As a first rule, and without further proof, the appearance of a transaction in the HH Sector accounts may serve as a primary criterion, automatically covering a large proportion of GA. Further reference is needed for the situation "within the HH". A claim on, or obligation to make, an actual payment may suffice where monetary transactions are involved. Decision taking, respectively,

[9] In the Austrian study (see Chapter 5) the notion of "Extended Personal Factor Income" (EPFI) has been introduced as the genderised aggregate.

may provide guidance for situations of "payment" analogy; actual performance for situations involving the supply of services (or goods, occasionally); and receipt of an immediate benefit for consumption. The latter aspects seem to be largely supported by the conventions of TUS. The situation may be less clear for capital investment and finance, given the long-term implications and generally more complex decision-making processes.

In the area beyond the scope of HHSA, an analogy to SNA is not helpful. It may be appropriate to go back to circumstances of the respective SU: Who is the owner? Who is in control? Which gender is represented by the majority? and so on. In this way, segments of the economy (markets, industries, etc.), even if they are far removed from any "personal touch", may nevertheless lend themselves to gender analysis.

Clearly, in the latter case, there is more room for convention or *ad hoc* decisions, whereas, in the former, the rule of thumb might be: the closer to SNA principles, the better for analytical purposes.

4.2. Genderisation resistance

The subject of genderisation is particularly complex. There are three possibilities for dealing with it. First, if there is any chance of resolution, this would be the preferred option, so that at least parts of a complex situation can be extracted and treated as usual, whereas only a trace of definitely resistant elements remains. For the resistant situation, resolution could still be achieved, if somewhat artificially, by applying some kind of "key" to it, as a basis for a more or less mechanical breakdown. The alternative is to leave the complex situation as it is, which is normally tantamount to opening special distinctions of this kind in the respective classification. There may be good arguments in favour of the latter option, not only for its conservative appeal, but because of its intrinsic information value, whereas, with a key, this is the price of formal comparability. The respective remainders are either indifferent to gender, or relate to both at the same time, and are open for interpretation.

4.3 Variants

For intra-unit transactions where the monetary counterpart values are not initially known, a rule is needed for the imputation of monetary value (Varjonen 2003, Ch. 5 & 6.) Where the production analogy (supply and use of goods & services produced within the HH) applies, an Output and an Input method are commonly distinguished, the former referring to products comparable to their market equivalents, the latter to the amount of labour (and possibly other inputs) needed for the respective product(ion). While the output method is straightforward, the input method, by its very nature (even where it is clear what kind of labour is used), opens up a range of variants, first by distinguishing "generalist" or "specialist" wages (i.e. replacement costs) from opportunity cost.[10] There are arguments for each variant (low degree of specialisation in the HH situation, the need to acquire the services of a specialist; market income lost for HH work, etc.).[11] [12] In addition, further distinctions can be made with regard to wages: namely, whether actual vs. tariff wages should be used; and in each case, on a gross-gross basis (i.e. including employers' social security contributions), gross, or net of taxes? And should these different bases be related to actual or to paid working time? Again, there are arguments for each variant (24 for the latter constellation alone!) This is probably too much for full accounting presentation, and some selection may be appropriate, depending on the purpose of our exercise.

However, the fact that there are variants is interesting in itself. When they are brought into relief, either selectively or together, it appears that the "true" answer may be found within a certain range only. However, there may well be different "truths", each one correct in and of itself, but depending on one's viewpoint. Apart from the advantage of using options of different appropriateness for a given analytical approach, variants may prevent the user from pre-emptively focusing on a particular solution as the dogmatically "right" one.

In any case, the range demarcated by the variants in empirical exercises is quite broad, thus suggesting a selection which centres on minimum and maximum boundaries. Taking as the basis, on the one hand, net minimum wages,

[10] In the replacement case, the former are of the "housekeeper" type ("domestic staff" in SNA language), while the latter are specialized in the corresponding branch producing comparable market products.

[11] Opportunity costs may be interesting from a more theoretical point of view ("at the margin") but are less realistic for HH members not in any way engaged in gainful market activity, or for more substantial HH activity, because of limits on the arbitrary extension of the market alternative. Therefore, this concept is not further pursued in this paper.

[12] As HH activities are largely characterised by working complexities, the breakdown into specialist services is open to question. As domestic servants (though not a common feature of households) are the market equivalent of a kind of universal housekeeping, this would ultimately match the specialist variant; if the performance of those housekeepers is taken as an entire package, it coincides with the Output approach. (Franz 2002, Section 4.2)

for hours actually worked and, on the other, male specialist wages, gross-gross, for hours paid may be a still realistic concept.(cf. 5.2, below). Due to the large evaluation- insensitive segment of GA within the scope of the SNA proper, the variants issue is less important at this overall level than it is for the segment covered by the HHSA core alone ("production"; see section 3.4, above), but still quite dramatic.

4.4 Non-product flows

Beyond the "core", which is basically product-related, other layers of accounts can be envisaged for GA (cf. 3.2, above) Particularly interesting is the content of the respective income account(s) for the part not covered by the SNA (non-SNA). Most of the distributive transactions which are precisely described there in formal terms (Class "D")[13] are not the problem, but only those which typically happen as income generated or (re-)distributed within HH. These are, in the first instance, rewards for HH-internal production, but with consequences for accounting. A few examples will serve to illustrate this: (a) Wife prepares and husband "buys" the meal; ingredients, energy etc. are deducted, a sort of compensation to the wife is "paid" from the funds of the enlarged HH production account (HHSA), etc. But overall, cash housekeeping allowances paid by the husband may not cover the total of his HH internal purchases: a transfer takes place from wife to husband to the extent of the deficit, numerically compensating for the missing amount. (b) Mother supports her child with cash, in addition to pocket money: both payments represent an HH-internal transfer, but from gender to non-genderised compartment. (c) Father sends his son a monthly cheque to cover school fees and living expenses. This amount may have to be divided, according to general attribution principles (see 3.1, 4.1, above): school fees = either the purchase of a service by the father, or an equivalent transfer from father to son (and corresponding purchase of a service by the son); living allowance = transfer from father to son, who disposes of the money on his own account. Thus, categories not explicitly shown in the SNA come into play here: they are partly actual cash, partly imputed amounts; they derive from the logic of gender deconsolidation and need clear rules of attribution; and they show the need, or at least usefulness, of a non-genderised complement. However, even if no ready terminology and even less a formal classification exists as yet, the respective flows and balancing items are not negligible.

5 "WOMEN'S GDP": AN EXAMPLE FROM AUSTRIA

5.1 Basic concepts

As its title suggests, the Austrian exercise intended neither a full set of GA, nor an exhaustive account of all the methodological implications to which attention has been drawn elsewhere (Franz 1998(a) & 1996(a), (b)). An approach specifically targeted at this new, still slightly ambiguous topic was advisable. No corresponding HHSA was available, so that the overall conception and methodology had to be developed from scratch. Gender GDP was therefore the focus, limited to the much broader methodological and data basis required.[14] However, GDP served as the reference aggregate rather than as a notion of additive, genderised, net product, which is more restricted in scope due to its clear personal link. In the Austrian study, the *ad hoc* definitions of Personal Factor Income (PFI) and Enlarged PFI (EPFI) have been found most appropriate for this purpose. Therefore, property income, corporate savings, state capital income and net income from abroad have been excluded, whereas mixed income (MI), operating surplus (OS) in the housing sector and compensation of employees (CE) remain components for which genderisation is basically possible. The Austrian exercise showed that, technically, genderisation is possible both within the context of HHSA and on the level of the SNA, and it achieved some spectacular results.

Methodology: The year 1992 was chosen as the reference period, then supported by a comprehensive TUS, which served as the major pillar of all quantitative evaluations outside the SNA core. For monetary evaluation, a variety of official data could be used as well as other, occasional sources (e.g. for minimum wages). The calculations were done separately for SNA and non-SNA areas. The usual gender-neutral monetary NA data were available for the reference flows of the production and distribution of income account (ACSO 1996). Their genderisation was based on a variety of sources, mainly social statistics (permanent Micro Census), but also administrative sources (social security). The non-SNA area required ample valuation. Minimum wage data were available from the Federal Minimum Wage Agreement Agency. No investigation on the level of income accounts was undertaken, nor has this exercise been re-attempted since (1995/96). For further details, see

[13] SNA 1993, Annex 5, p. 586e

[14] At the time, attention was being given to popularising the idea of "gender statistics" in a range of contexts. GDP is the notion of sufficient publicity.

ACSO 1996. On the whole, the 1992 study is likely to still be a useful reference for demonstrating the essential features of such a system and showing the likely orders of magnitude, sensitivity etc.

With regard to presentation, two particular features should be mentioned:

- Variants were calculated, with a couple of "central" ones, according to their basis of valuation, as follows:

  1 minimum wages & salaries (the "conservative" variant) - gross, without any time conversion
  - gross-gross
  - " - " , + holidays 1/6 [15]

  2 average wages & salaries (the "progressive" variant)
  - Ø income of women, per paid hour
  - Ø " " men & women, per paid hour
  - Ø " " men, per paid hour.

This selection was suggested by national criteria, but still yields striking exemplary results.

- The tabulations provided for the variants are designed in strict symmetry of TUS and related monetary equivalents. A further distinction was made between SNA and non-SNA, each of which was monetarised, and "other", which represents time uses without monetary equivalents ("unproductive"). Thus, the total time resource and total productive income are immediately comprehensible[16].

5.2 Outcome

Only a very short analysis is presented here, in order to give an idea of the nature and potential of such data, and their sensitivity to variations in the basic premises.[17]

The minimum variant (1.1) shows women accounting for about 45% of EPFI, the non-SNA area alone contributing 70%.[18] With higher variants, the share steadily increases (although only for the total).

	SNA	Non-SNA	Total
	% share of women		
1.1	32	70	45
1.2	32	70	47
1.3	32	70	49

This effect is due to the application of the same minimum for both men and women; in absolute figures, the volume of both would expand proportionately, due to the higher basis of valuation (gross rather than net). So much for the outcome of a more "conservative" basis of valuation.

In the more "progressive" version, the shares change as follows:

	SNA	Non-SNA	Total
	% share of women		
2.1	32	68	53
2.2	32	70	54
2.3	32	70	55

In each progressive variant, women's share is more than one-half of the total, which is significantly different to the "conservative" variant. For further increases, the valuation basis has only a minor effect.

The shares can also be broken down into SNA and non-SNA. However, this is not followed up here, nor are absolute figures presented, as they are somewhat out of date (see Tabulation in the Annex). In the tabulation, indications of time use are also found, thus opening up an additional dimension of empirical analysis.

[15] A feature of wages and salaries in Austria. It is intended to cover additional expenditure on vacations and at Christmas, and is practically tax-free.
[16] Cf. Franz, 1998 (b).
[17] A similar graduation by minimum vs. average, and before vs. after tax, is found in Birks, 1999.
[18] Note that, for SNA, identical shares are shown throughout, as there is no variation in the figures.

6 OUTLOOK

In the light of the above, what follows is an attempt at a brief diagnosis (rather than a recommendation, so as to avoid frustration).

The desirability of a system of GA and its essential feasibility can hardly be questioned. In the former respect, it is merely the capstone of the present systemic applications of NA, in terms of increasingly flourishing satellite exercises, and probably provides the only answer to urgent questions which are frequently addressed, either directly or indirectly. In the latter respect, however, there are difficulties of various kinds: related concepts are not yet readily available from existing standards. In part, entirely new concepts are needed for a closer examination of the economic side of what is going on inside the HH.

Since, to some extent, conventions would be needed, the output might be felt merely to reflect such input. This could also be said about the NA in general, albeit with less justification. The best way to counter such criticism is probably to accept its essential core, and use the alternatives (variants) provided, as is often the case in disciplines at an early development stage. If such variants are not random, but based on firm conceptual definitions, they will be all the more welcomed by the experts who understand their various meanings.

There are other ways of starting on a more modest scale, such as concentrating on certain aggregates, or omitting the more complex/difficult accounts initially. Countries with HHSA enjoy a built-in advantage, as do those which have already responded to the general demand for genderised statistics. The only surprise is that, to date, so few initiatives have been taken to compile GA.

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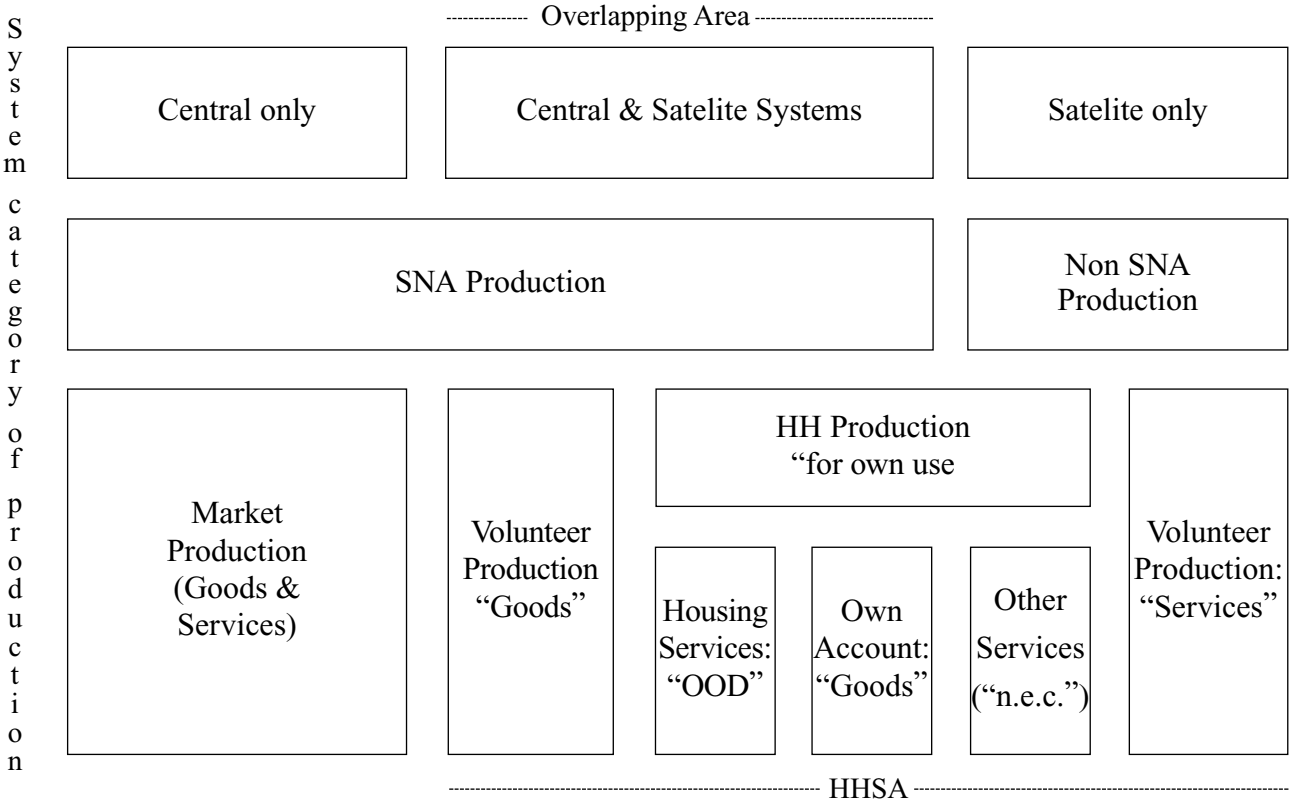
ANNEX: GENDER ACCOUNTS: AUSTRIA 1992
(VARIANTS 1.1 – .3 & 2.1 -3)

Vari-ants	Gender	Activities				Σ Time Ressources
		Production			Other	
		SNA	Non-SNA	Σ		
		Time unit (10_9 h p.a.)				
	♀	2.80	7.74	10.53	20.92	31.45
	♂	5.28	3.29	8.57	20.24	28.81
	Σ	8.08	11.03	19.11	41.15	60.26
		Money Unit (10_9 ATS p.a.)				
1.1	♀	445	480	925	…	…
	♂	929	204	1133	…	…
	Σ	1374	684	258	…	…
1.2	♀	445	581	1o26	…	…
	♂	929	246	1175	…	…
	Σ	1374	827	2201	…	…
1.3	♀	445	797	1242	…	…
	♂	929	339	1266	…	…
	Σ	1374	1136	2510	…	…
2.1	♀	445	1230	1675	…	…
	♂	929	580	1509	…	…
	Σ	1374	1610	3184	…	…
2.2	♀	445	1316	1761	…	…
	♂	929	559	1488	…	…
	Σ	1374	1875	3249	…	…
2.3	♀	445	1362	1807	…	…
	♂	929	579	1508	…	…
	Σ	1374	1941	3315	…	…

GENDER ACCOUNTING: "WOMEN'S GDP AND BEYOND"
A REALITY LACKING ITS STATISTICAL COUNTERPART

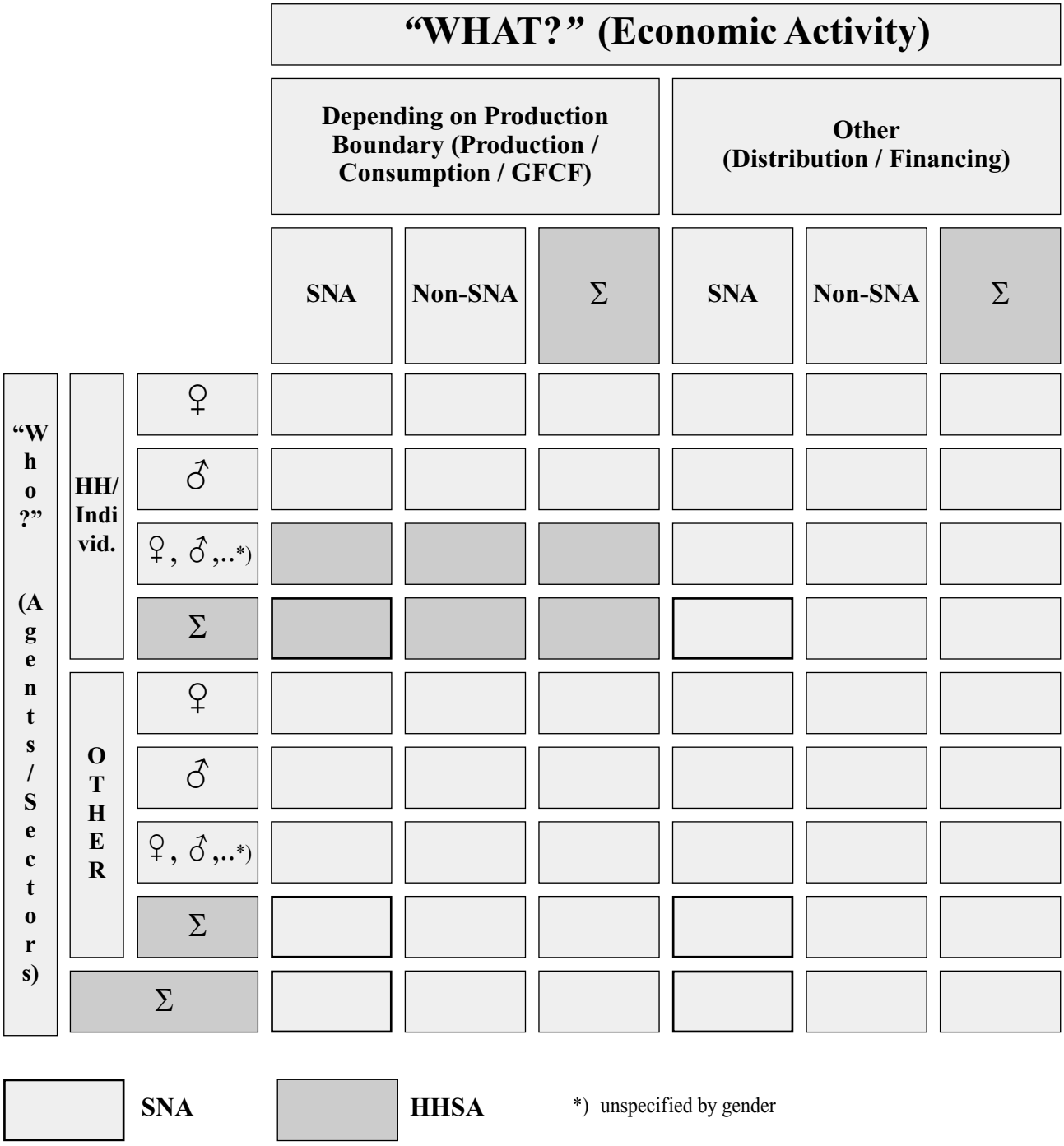
1a Scope of the System for Portrayal of "Production"



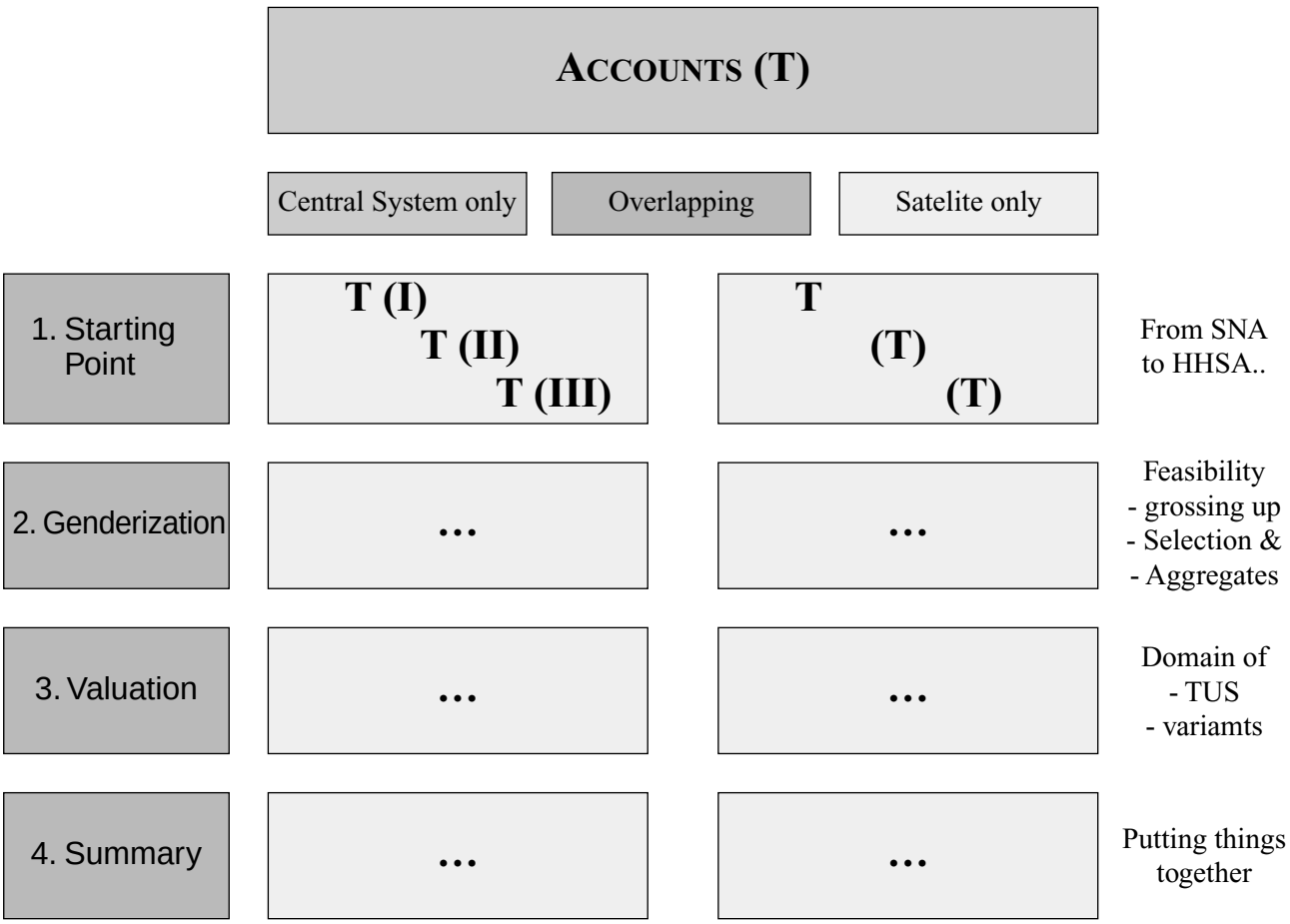
1b Production by Sector & "Marketability"

		Non-HH-Sector Corporate Gov'mt NPISH	**HH-Sector (HHSA)**
SNA Activities	Market	Goods & Services Produced for sale in the market	Goods & Services Produced for sale in the market
	Non-Market	Goods & Services Produced for own use (incl fixed assets)	Goods & Services Produced for own use
		Services supplied free (or at prices not significant)	
Beyond SNA..			HH Maintenance; Caring; Pers. Development; Voluntary..
			Personal maintenance and Recreation

2 OVERALL SCOPE OF GA



3 GA: COMPILATION STEPS (TOWARRDS OVERAL SYSTEM)



STATISTICS FOR UNPAID HOUSEHOLD PRODUCTION

Johanna Varjonen
National Consumer Research Centre

Various roles of households and families

The discussion on the future of the European welfare state has increasingly highlighted the role of households. There is concern over the ageing of the population, and the dependency ratio which is deteriorating. Who will pay the pensions, and who will look after the old people? At the same time, there have been increasing demands for a lowering of the tax level in order to promote competitiveness, and for reducing the size of the public sector. Also typical of the current atmosphere is that the problems are seen to be economic and that economic means are being used in the attempt to resolve them.

Households and families have, indeed, been burdened by different duties and expectations. To an increasing extent, they are expected to take responsibility for the care of their old people. Parents' responsibility for the care and upbringing of their children is being emphasised. At the same time that young women are urged to give birth to more children in order to maintain the vigour of the nation, both parents are expected to participate as long and as fully as possible in working life. As consumers they are urged to buy more goods and services, so that the wheels of the economy continue to turn. But at the same time they ought to keep their budgets in balance, think of sustainable development, avoid producing waste and save energy.

Men and women are expected to be active both in their working lives and outside work. It is here that they encounter the problems of reconciling family and work. Consumers, those engaged in voluntary work, citizens and family members are simply the same people wearing different hats; they structure their lives from the basic level of their own household, where they make the decisions regarding their social, cultural and economic life. And in fact the question is often raised as to whether households can satisfy all these hopes and expectations.

It is easy to see households as the adaptable variable among the various economic players. If the world of work needs employees, households will reduce unofficial work; and in times of unemployment and economic scarcity, households will try to make savings by doing things themselves. The household sector adapts and shows flexibility, since it has no alternative.

Outsourcing of unpaid household production is offered as a partial solution

Outsourcing domestic work has been seen as one solution which would make everyday life easier. In this scenario, households would purchase in the market services which they have traditionally produced themselves. In terms of the national economy this solution is the optimum one, since it is believed that transferring unpaid work to the market will promote the employment of people with a low level of education, while the fact that households replace their own work by purchased goods and services will promote economic growth.

It is easy enough to express these ideas as long as we do not actually know very much about how people manage their households, how the unpaid household production is divided up, what structure it has, and what is the nature of the services produced.

Up to now relatively little research has been devoted to the outsourcing of domestic work. However, such study is now getting under way in several countries. Results to date indicate that the question is more complex than an exclusively economic view would suggest, and the attitudes taken by households to this matter also vary according to the service concerned (Bittman et al. 1988, 2003, Spitze 1999, Ours 1991). At the moment it seems

that households prefer to resort to self-provisioning and the help of relatives rather than purchased services. Even the help of friends is more difficult to accept, since people feel that this requires some sort of reciprocity – which it is not always possible to give. It also seems that people prefer to acquire and to use household machinery, which is becoming ever more intelligent. It is true that the purchase of devices does not always mean an actual reduction in work, rather perhaps an improvement in the quality or an increase in the quantity of self-provided services. Barbara Ehrenreich and Hochschild (2003) describe in their book how the home is felt to be a private place even when hired help is brought in. For this reason, the relationship towards an employee hired for the home is always of a special nature, nor is it by any means always problem-free. It is also normal for the persons hired as cleaners and household helps to be women from developing countries, who then have to neglect the care of their own families.

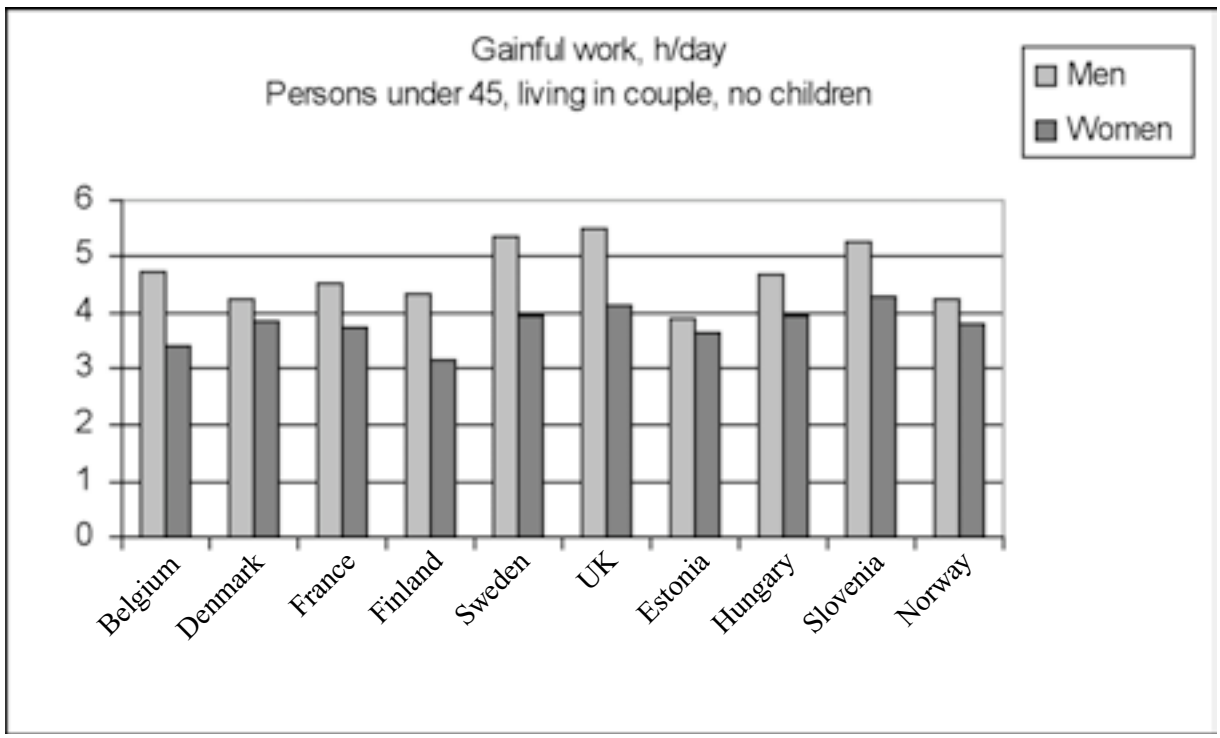
Systematic statistical data are required in order for us to better understand how the household production and market production of domestic services complement one another and how changes in both take place. We have statistical data on market production, its structure and development. On the other hand, only indirect and fragmentary data exist on the quantity and structure of, and changes in, household production.

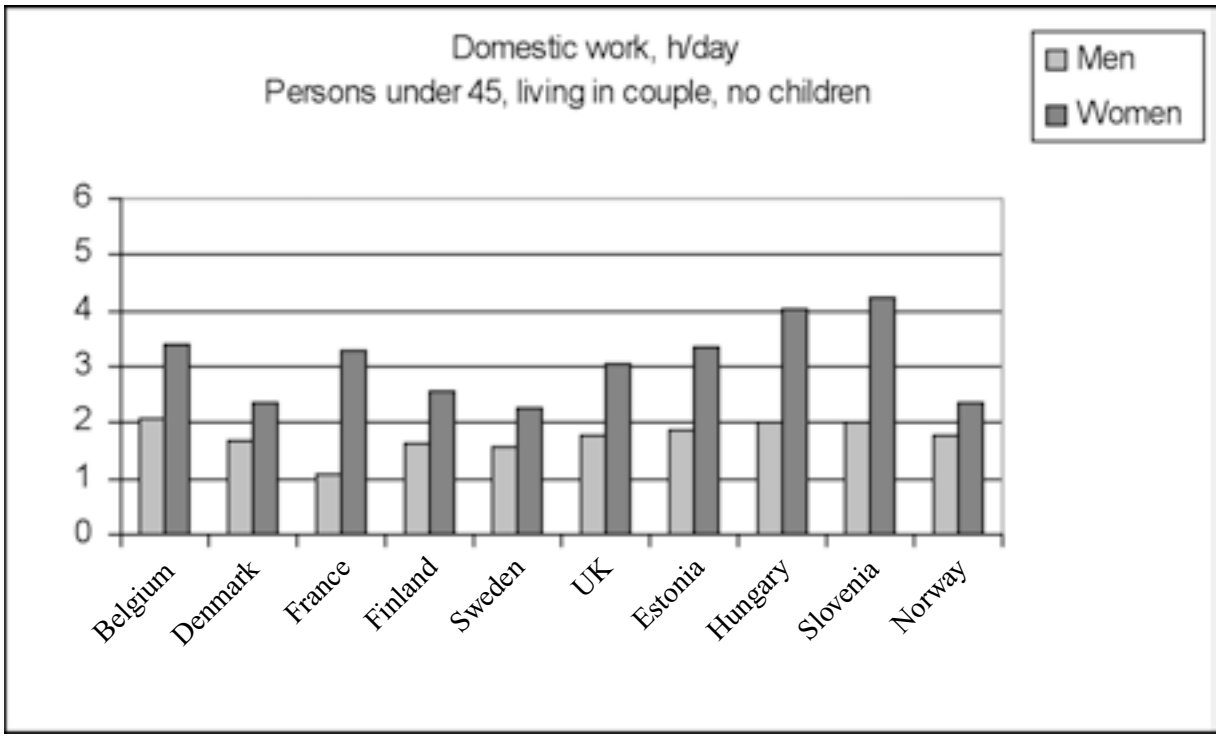
Society (and its production of statistics) reveals its valuation of persons solely engaged in unpaid household work by calling them "economically inactive" persons, who ought to be rendered "active" in the job market. This inaccurate and misleading label may partly stem from the fact that economic statistics concentrate mainly on functions in which money is a means of exchange. At the same time unpaid production does not feature in the body of concepts by which the economic world is analysed. Even so, household production is economically productive. Even though unpaid household production does not create wealth for society in the same way as market production, it does however create well-being for people.

What do we know about unpaid household production?

The results of the European harmonised time-use study indicate that the decision to have children has a significant impact on the quantity of unpaid work. It also has an impact within the family. Men participate more in paid work, and women more in unpaid work in families with small children. The diagrams below show the situation in certain European countries (Time use…2003).

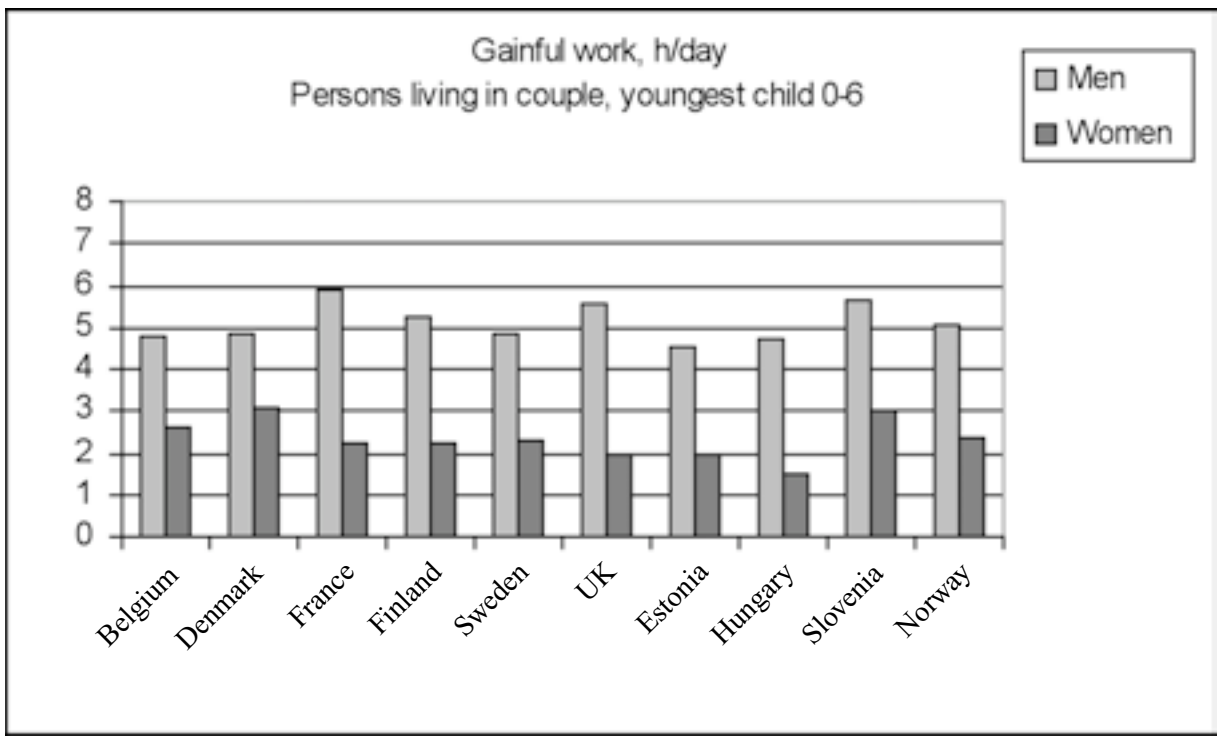
Diagram 1. Time used for paid and unpaid work in couples with no children.

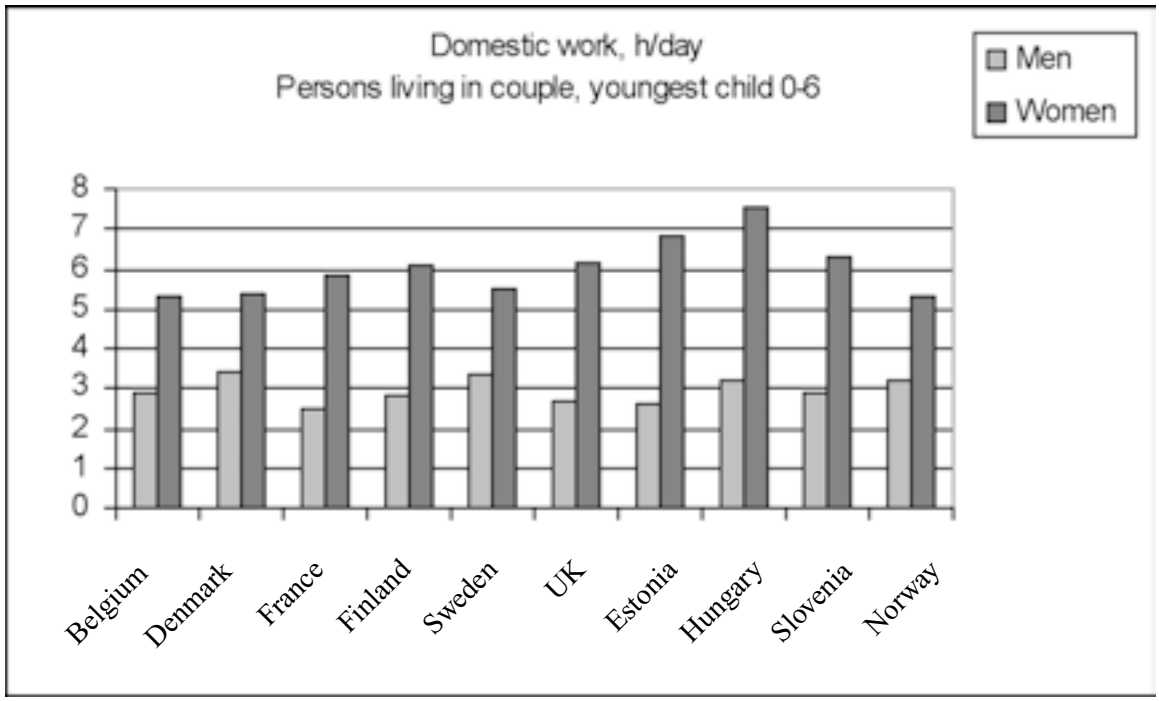




In families consisting of persons aged under 45 and without children, less domestic work is carried out than paid work. Men to some extent do less domestic work than women, and likewise slightly more paid work. However the division of work, with certain exceptions, seems fairly even. The situation changes when we examine couples with small children. In these, the division of work is clearly split: women do unpaid work while men do paid work.

Diagram 2. Time used for paid and unpaid work by men and women in families with small children.





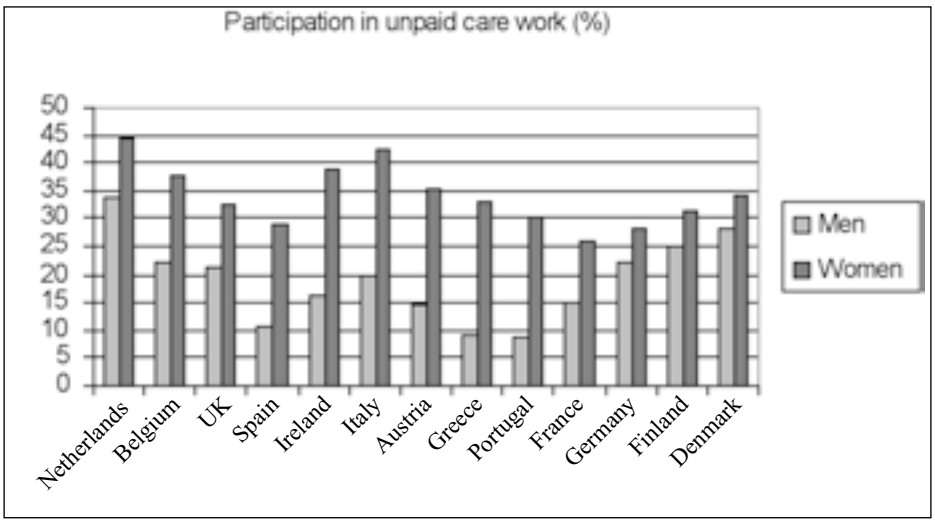
From the aspect of balancing work and family, it seems that time pressures fall mainly on families with children. From the aspect of population renewal, however, it is essential that in future there continues to be an adequate number of children and of families with children.

The time use studies also depict the structure of unpaid work. Women's work consists mainly of tasks relating to meal preparation, laundry, and cleaning. Men's work includes house maintenance and repair jobs, plus the care of vehicles. The differences in men's and women's tasks have remained clear from one decade to another, even though some slight convergence has taken place. In several countries women have reduced the time they spend on domestic work, and in particular on meal preparation, and this has not been compensated by an increased use of time by men. This tells us that meal preparation has in some way been outsourced. This may be due to the eating out more often, the purchase of ready or semi-prepared meals to take home, or the use of machinery which facilitates meal preparation. According to the study by Bittman (2003), no clear trend can be distinguished, as households solve the matter each in their own way.

Care of children and of adults who require assistance is very much in the hands of women, but there are significant differences between various countries. The table below depicts the share of men and women taking part in care work.

Diagram 3. Participation in unpaid care work (%) in 2000

(Source: European Community Household Panel, ECHP)



All told, it seems that the data of unpaid household production are scattered and fragmentary. The studies have different objectives and backgrounds, and use different methods. For this reason, comparable data from different countries and an overall picture of the trend in unpaid production is difficult to obtain.

What sort of information will the satellite account of household production provide?

In order to obtain an overall picture of unpaid production, a model of the household production satellite account (HHSA) is being developed. In this context, "household production" means the production of goods and services for one's own use. Examples of this are when meals are prepared and eaten for the requirements of one's own family, the home is cleaned for one's own benefit, the children and adults of the family are transported when necessary to various events, etc. It should be noted that household production meets the general criteria of economic production, even though it is not included in the framework of national accounting:

> Productive activities are "activities carried out under the control and responsibility of an institutional unit that uses inputs of labour, capital and goods and services to produce outputs of goods and services". (SNA 6.15)

The purpose of the household satellite account is to bring together information on the quantities of goods and services produced by households for their own use, the structure of their production, and their monetary value. The main data sources used in the drawing up of the account are time-use study data, and national accounting data on household consumption and own account production of goods. The method used should enable a comparison of domestic production and market production. The objective of the satellite account is to produce information which would be comparable between different points of time and, ideally, also between different countries.

The method of drawing up the household production satellite account has been actively developed over the last decade. In Germany the first satellite account was drawn up in 1992 and an extension to it has been obtained recently (Schäfer 2004). Two method reports have been generated at the initiative of, and financed by, Eurostat. In the first an overall presentation has been drafted for the household production satellite account using a method based on inputs (input approach) (Varjonen et al. 1999). The second is the Eurostat task force[1] report (Household production … 2003) where the scope of the study was extended to include a method based on outputs (output approach). The task force's report does not give any final recommendations, since it was concluded that additional study and practical experience of the compilation of accounts were necessary.

There follows a brief description of the principles of account compilation.

Scope of account

The account covers all production of households which is intended for their own use. A small part of this production is however already included in the national accounting framework. The satellite account includes both this (SNA) production[2] and production not included in the national accounts (NON-SNA production). This breakdown is essential in order to avoid double counting in the event that accounts are combined in order to depict overall production. The scope of the account is described in Annex 1.

Definition of production

A great many different activities are carried out in households, some of which are productive and some of which relate to leisure time and are recreational pursuits. Productive activities are distinguished from leisure or personal activities via the "third party" criterion. If the tasks can be given to someone else to carry out without the intended result being changed, then productive activity is involved. For example, transporting children to care is productive activity, since "someone else" can take the children to care. Eating or listening to music is not productive activity, since "someone else" cannot eat or listen to music on your behalf. The EU harmonised time-use study classification has been developed with this distinction in mind. All activities belonging to the domestic work class are productive activities.

[1] Representatives of statistics authorities from Finland, Germany, Britain, Hungary and Holland, plus experts from Austria and France.

[2] SNA production consists of the following: housing services for own use, the construction and renovation of dwellings, agricultural and horticultural products for own use, hunting, fishing, berry-picking.

Valuation method

Since household production is not sold in the market, no market price is generated for it. A notional monetary value needs to be obtained for such production, via calculation. The two possible methods are a method based on production costs (input) and a method which proceeds from the quantity and quality of outputs (output). The difference in principle between these is that in the input method the value is obtained by adding up the costs of production: work, raw materials and the expense incurred by use of machinery. The output method for its part proceeds from the goods which are produced; the value of these is defined according to the prices of similar goods and services which can be purchased on the market. The formulae for these methods are presented below:

Input approach

Value of labour (units of time valued at suitable wages/time)
+ other taxes on production
– other subsidies on production
+ consumption of capital
= gross value added
+ intermediate consumption
= value of production (sum of costs)

Output approach

Value of production (quantity x price of similar product on market)
– intermediate consumption
= gross value added
– consumption of capital
– other taxes on production
+ other subsidies on production
= mixed income (residual, includes compensation of labour and capital)

Of these methods, the input method has been in use for a longer period, and generally accepted practices have already taken shape around it. Criticism of this method centres around the fact that the value of production is largely dependent on the wages by which the working time is valued. Nor does the method take account of productivity, or of developments in this factor. The output method complies with the usage of the national accounts, and is therefore preferable. Britain's Office of National Statistics has used this method and drawn up accounts for the years 1995-2000 (Francis and Tiwana 2004). The input and output methods do not produce the same value for production, since the output method includes the employee's gross salary with all indirect costs to the employer, plus entrepreneur's profit. In the input method the value is determined solely on the basis of costs, one of which - the worker's wages - is a computational figure. The result depends largely on the wage rate which is chosen as the basis for valuation: for example, whether gross or net salary is used as the basis for the calculation.

The Eurostat task force found that the best and most interesting results are obtained by combining both methods, since they examine household production from different directions. In this way it is also possible to estimate the efficiency of households in the production of services, in relation to market production. This is important when conclusions are being drawn on the future of outsourcing of domestic work. Households tend to act in a way which makes economic sense, even though other factors also influence decisions.

It is essential that not only the quantity and value of the labour used for domestic work is examined, but also the other elements required in the production of other services. As already mentioned, these are intermediate consumption goods purchased from the market (primarily raw materials) and the consumption of household durable goods. These elements are needed to show the interrelatedness between market and household production. A more detailed description is this is given in Annex 2.

Other accounts

If desired, economic analyses can be continued to describe the economic significance of household production for households by working out the "overall consumption" (extended final consumption of households) and

"overall income" (extended disposable income of households)[3]. Basically what happens is that the goods produced in households increase the consumption of households; likewise, households "save" by self-provision instead of purchasing services from the market. The estimates in question can be calculated by complying with the calculation rules of the national accounts as a whole.

Illustration of household production. Grouping of domestic services

The satellite account should effectively describe those component areas of production in which transfers take place between market production and household production. The picture must not however be too fragmentary. For this reason, the many household tasks and activities are grouped in this presentation into five categories. These categories and tasks pertaining to them are depicted in Table 1. The monitoring of transfers of services from households to the market and vice versa requires that the satellite account be drafted either on an annual basis or on the basis of some other consecutive periods.

Table 1. Main outputs of household production

	Housing	**Nutrition**	**Clothing**	**Care**	**Volunteer work**
	Accommodation services, furnishing	Preparation of meals and snacks	Producing garments	Child care	Informal help to other households
	Cleaning, maintenance, gardening	Baking, preserving	Washing laundry, ironing	Adult care	Unpaid organizational work
	Renovation, repairs	Growing vegetables and fruits, picking berries, mushrooms	Mending, care of shoes	Pet care	
Shopping	Shopping for dwelling: furnishing, maintenance, cleaning, etc.	Shopping for groceries, facilities for cooking, etc.	Shopping for shoes and clothing, material and facilities, etc.	Shopping for goods for children and adult care	
Transport / travel	Transport and travel related to renovation, maintaining, etc.	Transport and travel related to nutrition	Transport and travel related to clothing	Transport and travel related to child care and adult care	Transport and travel related to volunteer work
Planning and management	Related to all outputs				

Experience with household satellite accounts

Satellite accounts have already been compiled on an experimental basis in a number of countries. Below we present some results from the satellite accounts of Britain, Germany and Hungary.

Britain has made the furthest progress in the production of time series, since Britain's Office of National Statistics (ONS) has published data from the years 1995-2000 regarding the development of household production in different components: housing, transport, nutrition, clothing, laundry, childcare, adult care, voluntary work. (Francis and Tiwana 2004). The accounts have been compiled by the output method, whereby the services produced in households are valued at the prices of the corresponding market goods. During the six

[3] This terminology is not established internationally.

years which were monitored "unpaid household production in the UK, valued at current prices, increased by 40 per cent from £629 billion in 1995 to £877 billion in 2000. This increase stems from a combination of both price and volume changes. Housing, transport, nutrition and childcare are the biggest components of household production."

The greatest growth in value of production was in childcare, 80%. This stemmed from the rise in childcare market prices during this period. There was also growth in the value of the production of services related to housing and transport, over 30% in both cases. The value of volunteer work fell by over a quarter, which was due to a reduction in time spent on voluntary work. When examining the quantities of services produced, the changes are very small in percentage terms, with the exception of voluntary work, the amount of which has been reduced, and transport services, which have clearly increased. The quantity of housing services has also increased. When the change in value of production is compared to the development of market production, we can see that market production has, by a few percentage points, grown more rapidly than household production. The added value of household production during 2000 corresponded to about 75% of the UK's GDP. (Francis and Tiwana 2004).

In Germany satellite accounts have been compiled for 1992 and 2002. In both instances the input method has been used, whereby the value is obtained by adding the value of the work, the consumption of capital (machinery, equipment) and intermediate products (raw materials). The monetary value of unpaid work is obtained by multiplying the time used for work by some suitable pay rate. In Germany different types of pay rate have been tried out, both the salary of a performer of household work (generalist) and salaries of specialised workers (cook, childminder, renovator etc.). In the following comparison the net salary of a generalist has been used, which is based on the fact that a household pays neither taxes nor employer's indirect costs on its notional labour cost.

From 1992 to 2001 the value of production grew by 22 percent. During the period under review, the time used per day by women for domestic work had fallen by 28 minutes per day while the corresponding time in the case of men had remained the same. The value of labour had however increased by 13%, from 604 billion euros to 684 billion euros, due to a rise in wages. The total wages paid by households to helpers had similarly increased from two to three billion euros. The share represented by this is therefore still quite small, about half a percentage unit of the total value of labour, even though it is growing.

When we examine the structure of household production as a whole, the share of production represented by labour has fallen by about 5 percentage units, and likewise the share represented by household machinery and market goods has grown by about three percentage units. This indicates that households are striving to replace their work input by goods and household machinery; but the change has not been particularly dramatic. All told, the share of the value of production represented by labour during 2001 was over 60%, while the share of capital was 6% and that of intermediate products 26%. The gross added value of household production (the quantity corresponding to this in national accounting is GDP) corresponds to 40% of GDP, if we include only effective working time, and 48% if the net wages include holiday and sick pay.

In Hungary the first household production satellite account has been compiled for 2000. In the valuation, the input method has been used as in Germany. The results shown here omit the production which is included in the national accounts, which in practice means that the figures for housing omit building for one's own use and for nutrition the growing of foodstuffs such as potatoes and vegetables for one's own consumption.

The structure of household production by component can be seen from the following:

Value of production by component area	*%*
Housing	28.6
Nutrition	55.2
Clothing	7.0
Child and adult care	9.1
Volunteer work	0.2

The largest component in Hungary is nutrition. The share represented by care is noticeably small in comparison to its corresponding share in Britain. The difference stems at least in part from the fact that in Hungary care comprises only active care measures and not (for example) keeping an eye on children. In Britain, care comprises all the time that children are the responsibility of a parent. The share of transport in Hungary is included in various components in accordance with the purpose of the journey: for example journeys relating to childcare are included under childcare, journeys relating to nutrition under nutrition, etc. Journeys relating to free time are not included in household production, unlike the practice in Britain. The share of total production represented by labour is about 54%; by consumption of capital, about 4.7%; and by intermediate products, 42%. The share represented by labour is smaller than (for example) in Germany. This is probably mainly due to the differences in wage and price levels in these countries.

Discussion

The share of the value of production represented by intermediate products is about half in both housing and nutrition; elsewhere it is significantly less. The share represented by work is highest in child and adult care and in volunteer work. All told, the share represented by volunteer work is very small when compared to other household production. This phenomenon is the same in the UK, in Germany and in Hungary.

The quantity of household production also varies in different types of households. On the basis of the time-use study we know that more domestic work is done in families with children than in other types of households, but no results exist as yet to indicate whether the share of intermediate products and the use of household machinery will grow in the same proportion. In the household production satellite account under preparation in Finland the aim is to draft separate accounts for single person households, childless couples and families with children.

Conclusions

The household production satellite account may be an important means of producing new data which will depict the behaviour of households. It will help us to understand, better than at present, the role of households as economic players alongside the market sector and public sector. The fact that more and more women go to labour market requires either that unpaid work in the home be organised in new ways or that the need for work be reduced, e.g. by a further reduction in family size. The purchase of services on the market, or the division of unpaid work within the family more equally than at present, are alternatives which are often brought forward for the reorganisation of tasks. The household production satellite account enables different developments to be monitored.

Experience obtained indicates that the account structure presented here is suitable for describing the structure of production (the shares represented by work, capital goods and intermediate products). The breakdown of groups of services relating to housing, nutrition, clothing, care and volunteer work helps to depict the interaction of market sector, public sector and household production, and in what areas transfers from one sector to another particularly take place. This naturally requires that accounts be compiled on a regular basis.

The results of the experimental satellite accounts shown here reveal differences between the countries. This is at least in part due to procedural and reporting differences; however the countries themselves also differ in terms of their domestic work cultures. For this reason, it is important to ensure that comparable results are produced at least at the level of basic data. In addition to this, the countries could draw up their own applications to meet their own requirements. For example, the drawing up of accounts for different types of family will increase the practical usefulness of results, particularly in the field of social and family policy.

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ANNEX 1.

Scope of the household satellite account

	Satellite account of household production				
SNA production				Non-SNA production	
Market production	Volunteer production (goods)	Household production for own use			Volunteer production (services)
		Housing services produced by owner occupiers	Own account production of goods, (own- account construction of dwellings, in particularly)	Other services produced for own use	

ANNEX 2.

Compiling production and generation of income account using the input approach

Value of work: Working time is obtained from the time use study material. Working time is valued by the wages of an employee engaged in work similar to the domestic work, gross (and possibly net). In previous studies the wages of a generalist housekeeper have been used as these wages, but wages could also be class ISCO 51 "Personal and protective service workers", which also includes male professionals. It is also possible to do calculations using specialist workers, e.g. the wages of a cook in the case of nutrition, with the wages of a cleaner, renovator, childminder etc.

Intermediate consumption: "Intermediate consumption" means goods and services which households use in their production. The quantity of these is obtained from the consumption study material and from the national accounting data concerning household consumption. The material is classified according to COICOP, which describes private final consumption[4]. For the purposes of the satellite account, consumption goods are divided into three groups: 1) those that are used as intermediate products in household production; 2) those that go directly to final consumption; and 3) those that are investment goods in household production (durable consumer goods).

Gross formation and consumption of capital: Those durable consumer goods under the COICOP classification which are used in household production are defined as "investment goods". Capital consumption is calculated using the PIM method[5].

Taxes: The share of taxes is quite insignificant, but some taxes relating to production can apply in part or in whole to household production. These include charges for the use of cars and residential property tax.

Subsidies: Subsidies relating to production include home care allowance and carers' allowance, and to some extent also housing allowance.

Compiling production account using the output approach

(Holloway et al. 2002)

Value of production

[4] COICOP: Classification of Individual Consumption by Purpose.
[5] PIM: Perpetual Inventory Method

The compilation of accounts starts with the specification of outputs. In the work of Britain's Office of National Statistics, the services produced by households are defined as follows: housing, transport, nutrition, clothing, laundry, childcare, adult care, voluntary activity. The quantity of services produced is obtained by calculating e.g. the number of meals produced in a year, the number of children looked after, the number of rooms used for accommodation etc. Quantitative data are compiled using the available separate studies and statistics. These materials vary from country to country.

The defined services are valued at the (market) prices of similar goods available on the market.

Use of intermediate products and consumption of capital

are defined on the same principles as in the input method. Gross formation of capital and consumption of capital, taxes and subsidies are determined in the same way as in the input method.

SEGREGATION AND INEQUALITY

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The importance of occupational gender segregation is well established and needs no explanation. However, there remains considerable confusion on the precise meaning of the term, and how segregation should be measured. In the first place it is necessary to distinguish segregation from the related but logically distinct concepts of concentration and exposure. Then the actual measurement should not be contaminated by other aspects of the labour market or the occupational classification used. Finally, and most importantly from a theoretical perspective, we need to distinguish how far the segregation entails gender inequality and how far it is simply a matter of different but equal patterns of employment for women and men. In considering these issues we shall draw on data from economically developed countries, mainly but not exclusively located in Europe. These are countries which tend to have relatively high levels of gender segregation.

Defining Segregation

Frequently *segregation* has been used in a broad sense to include *concentration* (eg. Anker 1998, Lewis 1985, Armstrong and Armstrong 1978) as well as segregation in the narrower, more precise sense in which we use it. While this broad sense may be useful in identifying the general area of the two related concepts, it introduces confusion in more precise analyses as the concepts refer to different sorts of patterning by gender, as made clear in the important article by James and Taeuber (1985). Less often *exposure* has been treated as an aspect of segregation, but they are really quite distinct ideas. It is useful, therefore to set out the precise meaning of each concept.

Exposure refers to the extent to which one sex comes into contact with the other in the work environment. It is not gender symmetrical, and varies with the gender composition of the labour force. The more men outnumber women in the labour market, the lower their exposure to women and the higher women's exposure to men.

Concentration is a measure of the gender composition of the workforce in a single occupation or a set of occupations, typically expressed as the percentage of women in the occupation(s) under consideration. An important aspect of concentration is that, logically, it cannot be gender symetrical, except in the limiting case of 50% women and 50% men in an occupation.

Segregation concerns the tendency for women and men to be employed in different occupations from each other across the entire spectrum of occupations under analysis. Unlike concentration it is gender symmetrical: so far as men are separated from women in employment, so are women equally separate from men. Whereas concentration refers to the representation of one sex *within occupations*, segregation refers to the separation of the two sexes *across occupations* (Siltanen, Jarman and Blackburn 1995:4-5).

Both segregation and concentration are concerned with the distribution of men and women in occupations. Indeed segregation may be seen as the resultant outcome, in the labour market concerned, of all the separate levels of concentration in individual occupations. There is a tendency for occupations to polarise into ones with high female or high male concentrations (Jarman et al. 1999, Boyd, Mulvihill and Myles 1991), and segregation measures the extent of this polarisation. As we shall see, the treatment of the concepts in analysis has to be different; we focus on segregation with procedures that are only possible with the precise measure of segregation.

Later on we shall need to distinguish vertical and horizontal component dimensions of segregation. *Vertical* segregation refers to the element of gender inequality in segregation, while *horizontal* segregation refers to difference without inequality. To avoid confusion, the resultant of these components will be called *overall* segregation, but where the context makes the meaning clear we shall also use the traditional single word 'segregation'(Blackburn and Jarman 1997).

Measuring segregation

Almost all measures of segregation, whether relating to gender, ethnicity or plants, use a simple dichotomy. For gender the dichotomy is between 'male' and 'female' occupations, as well as the obvious dichotomy between men and women. The classification of occupations is based on the proportions of workers who are men or women: female occupations are those where the proportion of women is greater than the proportion in the labour force, and correspondingly, male occupations contain more than the expected proportion of men. This set of segregation measures can best be understood as aspects of the *Basic Segregation Table* - the 2 x 2 table shown in Figure 1. The most effective have a range from 0 to1, where 0 indicates no tendency for men and women to work in different occupations, while 1 represents total segregation with each occupation staffed solely by men or solely by women. Some other segregation measures have an essential component with this 0 to 1 range, but are then weighted by some function of the marginal totals of the table. Such weighting is clearly undesirable as it brings in non-segregation components and creates an unbounded range.

Figure 1 The Basic Segregation Table:
Women and Men in 'Female' and 'Male' Occupations

	Men	Women	
'Female' Occupations	F_f	M_f	N_f
'Male' Occupations	F_m	M_m	N_m
	F	M	N

Where

N is the total labour force

N_f is the total number of workers in `female' occupations

F is the number of women in the labour force

F_f is the number of women in `female' occupations,
and so on.

Then the Index of Dissimilarity, the most widely used measure - especially in the USA where it was sometimes described as *the* measure of segregation - , is the difference of column proportions. That is:

$$ID = F_f/F - M_f/M$$

The Sex Ratio is, $SR = N/F[F_f/N_f - F_m/N_m]$ and if standardised to lie between 0 and 1
we have $SR^* = F_f/N_f - F_m/N_m$, which is the other difference of proportions.

Other segregation measures may similarly be related to the simple Basic Segregation Table. Prior to the introduction of this Table, it was the practice to define segregation measures with long formulae. For instance, the Index of Dissimilarity has as many terms as occupational categories, which can be several hundred. The simple difference of proportions makes it much easier to recognise its properties and limitations, as well as easier to calculate. However, although it is many years since it was introduced (Blackburn, Siltanen and Jarman 1990) and it has been described in several publications (eg, Blackburn, Jarman and Siltanen 1993, Blackburn,

Jarman and Siltanen 1995, Siltanen, Jarman and Blackburn 1995, Blackburn and Jarman 1997), there appear to be many who still prefer the complicated traditional approach.

Unfortunately all the segregation measures related to the Basic Segregation Table are influenced by the relative size of the marginal totals. To overcome this problem the Marginal matching measure MM was introduced. This uses a different definition of male and female occupations. The female occupations are defined as those with the highest proportion of female workers for which the total number of workers equals the number of women in the labour force, and similarly the number of workers in male occupations equals the total number of men. This produces a symmetrical Matched Segregation Table, where $N_f = F$ and $N_m = M$. It is worth noting that in a situation of total segregation (ID = 1) the Basic Segregation Table becomes this symmetrical table.

Several statistics of association now coincide, including both differences of proportions (the equivalents of ID and SR*) and Tau_b. This in itself may be regarded as desirable, but the real benefit is the control of effects from the marginals. Changes in the numbers of men and women in the labour force affect the marginal totals of the basic segregation table, and so have unwanted effects on the values of statistics such as ID. Marginal matching ensures that the ratios of the marginal totals are always equal, and so overcomes the problem.[1]

Although the measures discussed so far use just a simple dichotomy between 'male' and 'female' occupations, they are actually very effective for measuring overall segregation. They are measures internal to the data; that is, the criterion categorising occupations for one variable is the other variable - gender. Thus the strength of relation in the segregation table directly measures the degree of segregation[2]. The more men are concentrated in male occupations and women are in female occupations, the larger are the diagonal cells of the table and the larger is the measure of segregation. MM is therefore an ideal measure, while ID and SR* generally give fairly similar results and are also useful.

Standardisation

There remains, nevertheless, a fundamental problem in the comparative use of segregation measures. All available measures are influenced by the number of occupational categories in the data. We can see this clearly at the extremes; if there were only one category there would be zero segregation, while if there were a unique occupation for every worker there would be total segregation. Between these extremes measured segregation increases with the number of occupations. Across 32 countries of varying size and economic development, including those of Table 1, MM is significantly correlated 0.55 with the number of occupations (Blackburn, Jarman and Brooks 2000). It is, therefore, necessary to standardise measurement, which we do on a notional 200 occupations, and the correlation with the number of occupations virtually disappears (0.018). With only a small number of occupations the error component may be relatively large, so we recommend at least 20 occupations and preferably more. As the number approaches 200 the error problem is greatly reduced, and increasing the number of occupations has a declining effect. Thus 200 occupations is a good basis for standardisation. The standardised MM is denoted as MM_{200} [3] , and presently we shall have reason to introduce other standardised measures, O_{200}, V_{200} and H_{200},.

Table 1 illustrates the effect of standardisation on the measurement of segregation in 16 industrially developed countries. While most of these countries are European, not all the economically successful countries are included, depending on availability of reliable data. We might expect the effect of standardisation would be to bring measured segregation levels closer together for countries with different occupational sample sizes; however, we see that the range of values is actually increased. Most notably, Sweden replaces Finland as the most segregated country, changing from fifth place to first with a notably high value.

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[1] For a full discussion of these various segregation measures and the segregation tables see Blackburn, Jarman and Siltanen (1993),Siltanen, Jarman and Blackburn (1995) and Blackburn, Siltanen and Jarman (1995).

[2] MM may also be expressed in a summation over all occupations i in a formula similar to that for ID.

$$MM = {}^{1}/_{2}\left[\sum_{1}^{p}(Fi/F - Mi/M) + \sum_{P+1}^{n}(Mi/M - Fi/F)\right]$$

where the value of p is determined by $\sum_{1}^{P} Ni = F$ (Blackburn, Jarman and Siltanen 1994)

[3] $MM_{200} = MM_{200E} \times MM_n/MM_{nE}$ where MM_n is the observed value for n occupations and MM_{nE} is the corresponding expected value, given by $MM_{nE} = 1 - 1/1 + 0.6\ (\log_{10} n)^{0.93}$. Thus $MM_{200E} = 0.56567$.

Table 1 Standardised MM_{200} and Unstandardised MM

Country	#Occupations	MM_{200}	MM
Sweden	52	.683	.601
Finland	478	.623	.661
Canada	41	.604	.516
Norway	490	.601	.638
UK	526	.595	.635
Australia	283	.587	.602
Hungary	126	.583	.561
Austria	77	.566	.520
Switzerland	541	.557	.595
France	454	.552	.584
USA	488	.548	.583
Spain	82	.538	.498
New Zealand	305	.512	.528
Poland	373	.500	.522
Japan	294	.443	.455
Italy	249	.424	.431

Source: UN 1996 and occupational data supplied by the ILO.

Countries listed by MM_{200} (descending values).

Segregation and Inequality

While occupational gender segregation is of interest in itself, a major element of the interest concerns the inequality entailed in the gendered occupational distribution. To a large extent it has been assumed that segregation in a measure of gender inequality, or at least that it is a strong indicator of such inequality (Yamagata et al. 1997, Walby 1997, Reskin and Roos 1990, Bradley 1989). However, a consideration of the levels of segregation in the industrially developed countries casts serious doubt on such assumptions (Blackburn, Jarman and Brooks 2000).

When we compare the position of women in the 16 industrially developed countries of Table 1, we find a pattern which is the opposite of what might be expected on conventional views of segregation. For instance, the correlation between the level of segregation, measured by MM_{200}, and adult literacy among women is 0.46[4]. Contrary to what might have been expected, the greater the degree of segregation, the more women are advantaged in terms of the level of literacy. This is part of a general trend as we may see by considering the Gender Related Development Index (GDI) and the Gender Empowerment Measure (GEM) which is actually a women's empowerment measure. Table 1 displays the relationships.

[4] The correlation coefficients here and in table 2 are Spearman's rho because of the distribution of values, though results using Pearson's product-moment correlation would be essentially the same.

Table 2 Association Between Segregation, MM_{200}, and Measures of Gender Equality for Industrialised Countries

	GDI	GEM
MM_{200}	0.618	0.603
Significance	0.005	0.007
N	16	16

Source: United Nations, *Human Development Report 1996*

There are very clear positive relationships, which are highly significant statistically, despite the small number of countries. Instead of the conventional view that segregation works to the disadvantage of women, we find exactly the opposite. The greater the level of segregation, the greater the empowerment and general social advantage of women.

Before we jump to the conclusion that, after all, it is men who are disadvantaged by occupational segregation we need to take account of one further piece of information. In none of the 16 countries, nor indeed in any of the countries covered by the UN Report, do the values of the GDI and GEM reach unity. They are measures of the extent to which the situation in each country approaches equality in the public sphere, with equality represented by the value 1. The approach towards equality may be greater in the more segregated countries, but everywhere inequality and segregation exist.

Nevertheless, there is a puzzle to be explained. How can it be that higher segregation tends to go with less inequality. To answer this we must now turn to the vertical and horizontal dimensions of overall segregation.

The Dimensions of Segregation

In order to measure gender inequality in segregation we need to isolate the vertical component. A second component of overall segregation is located on a horizontal dimension. Figure 1 shows the mathematical relations of the components of segregation and how they are measured. In the

Figure 1 The Mathematical Relationships of Segregation Components

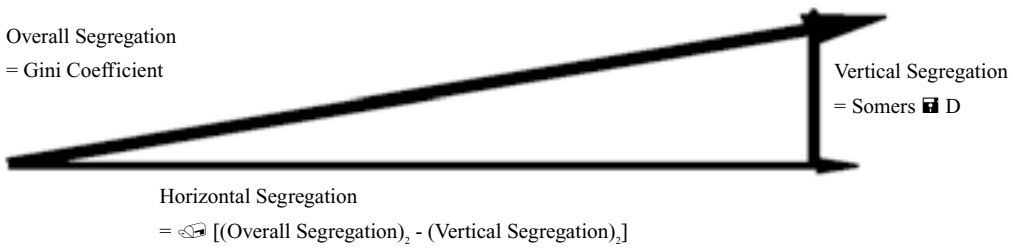

figure the vertical component is shown as positive, which we take to represent the familiar situation of male advantage. However, we shall see that it is possible for the vertical component to entail female advantage, which we represent with a negative value (which would be represented with the vertical arrow pointing down below the horizontal)(Blackburn, Brooks and Jarman 2001, Blackburn, Jarman and Brooks 2000).

In order to measure the components of segregation we can no longer work with a dichotomous measure of overall segregation, as this would entail an important loss of information. Since the vertical dimension requires an external measure of inequality, collapsing it into a dichotomy would suppress most of the information. For the vertical measure we need to order occupations according to their attractiveness/desirability and measure this ordering in relation to gender. For overall segregation we need to order the occupations by the proportion of workers who are women (or alternatively men) and measure the relation with gender. In other words we create 2 x n tables (where n is the number of occupations) and measure the strength of relationship using a statistic of association. It is, of course, essential for comparability to use the same statistics for each measurement. The Gini

coefficient has been used for overall segregation by some analysts (eg. Silber1989,1992, Lampard 1994), and this does seem to be a good choice. Fortunately we were able to establish that the Gini coefficient is a limiting case of Somers' D, maximising the value of D for a given set of occupations and the gender distribution across them (Blackburn, Jarman and Siltanen 1994: 415, Blackburn, Brooks and Jarman 2001: Appendix). Thus Somers' D is the appropriate measure for the vertical dimension. The highest possible degree of inequality on the vertical dimension occurs when the ordering is the same as for overall segregation, and the horizontal component is zero; otherwise overall segregation has components as illustrated. We are not aware of a way of directly measuring the horizontal component, but this does not present a problem as it can be deduced using Pythagoras' theorem.

There are a number of possible measures of inequality which might be used for the vertical dimension. However, there are two measures which are particularly appropriate. One is the standard economic measure of income. There is no doubt that income is a key consideration determining the attractiveness and desirability of occupations. It is, nevertheless, only one aspect of occupational quality. Therefore we also use CAMSIS[5], the measure of *general* social and economic advantage associated with occupations. Although income inequality provides a ratio scale the use of Somers' D converts it to an ordinal measure. The actual distribution of occupational income is highly skewed, with a few extremely high levels which are almost entirely occupied by men. Thus the conversion to an ordinal scale reduces the gender difference, but is a fair reflection of income differences for the majority of the population. Also, conversion to an ordinal scale makes income directly comparable with CAMSIS.

As with MM, it is necessary to standardise the segregation measures , including the dimensions. Thus overall segregation is measured with O_{200} and the vertical and horizontal dimensions with V_{200} and H_{200}[6].

It is important to recognise that the name 'horizontal segregation' has often been used with a meaning quite different from that employed here. The name has been applied to what we term 'overall segregation'. It appears that Hakim (1979) introduced this usage to distinguish overall segregation from vertical segregation, without any further assumptions. However, this use of 'horizontal' has been quite widely adopted (eg. Moore 1985, Crompton and Sanderson 1990, Cousins 1999, ETAN Expert Working Group 2000, Palomba 2002) with confusing results. Not only does this 'horizontal' include a true vertical component (being the resultant of the orthogonal vertical and horizontal components in our conventional mathematical sense) but it is treated as a measure of inequality.

Vertical and Horizontal Segregation

We can now return to our puzzle, where higher levels of overall segregation tend to be associated with greater gender equality. In general we would expect the components of segregation to vary with the level of overall segregation: the higher the level of overall segregation, the higher its vertical and horizontal components, and vice versa. Indeed this is more or less logically necessary. We have seen that in all countries there is a degree of gender inequality in the public sphere. However, there is little scope for a vertical dimension in those countries where gender segregation is very low (eg MM_{200} for Ethiopia = 0.113, Rwanda = 0.118)[7]. We would certainly expect a higher vertical component in the more highly segregated countries. In so far as the vertical component varies with overall segregation this does not explain our puzzle.

However, there is another possible pattern. Vertical segregation may vary inversely with horizontal segregation, and so with overall segregation to some extent. In so far as this is the dominant pattern we will get the result we deduced from the analysis of women's empowerment and gender related development. Among the economically developed countries we considered, the level of overall segregation is consistently high enough for this to type of relationship to dominate. The same two trends may be expected to operate within countries

[5] The measure was originally developed for the British occupational structure and known as the Cambridge Scale, but there are now versions of CAMSIS for many countries. It is a better measure of social or economic inequality than conventional measures of class or status.

[6] The formulae are: $O_{200} = O_{200E} \times O_n/O_{nE}$ where O_n is the observed value for n occupations and O_{nE} is the corresponding expected value, given by $O_{nE} = 1 - 1/[1 + 2(\log_{10}n)^{0.73}]$; thus $O_{200E} = 0.78609$.

$V_{200} = V_n[1 - V_n(O_n - O_{200})/O_n^{\,2}]$ where n is again the observed number of occupations.

$H_{200} = (O_{200}^{\,2} - V_{200}^{\,2})^{1/2}$

[7] Data from United Nations (1996), but as it is based on only 7 occupations there is considerable scope for error. However, the basic point remains valid.

over time. On the one hand, moves to a more egalitarian, gender neutral society may be expected to reduce all forms of segregation. At the same time, changes in themselves may be expected to affect vertical and horizontal segregation in opposite directions.

The question remains, why should high horizontal segregation, and so high overall segregation, be accompanied by less gender inequality? The answer lies in the effect of segregation in an unequal society. If men gain the senior positions where men and women compete together, then women will get senior positions more often where there is no competition. In so far as a career structure is dominated by one sex, then that sex will tend to fill the senior positions. Where women do not have to compete with men there can be no discrimination on the basis of gender; women can occupy the top positions. Furthermore, if the most advantaged men in terms of career prospects (by class background, education and social connections) are concentrated in male dominated occupations, the competition from men in other occupations is less strong. Looking at it in another way, in a more gender-equal society it may appear to both sexes that their prospects are better in occupations dominated by their own sex. Indeed, in so far as those making appointments exercise any gender bias in favour of their own sex, prospects are better for those who follow conventionally gendered occupations. High horizontal segregation seriously limits occupational choice for both women and men but also tends to restrict vertical segregation.

A consideration of some actual data will help to clarify the position further. We do not have measures for a sufficient number of countries to present an actual test of our argument. Nevertheless the available measures allow an encouraging exploratory analysis. We have income data for Britain, Canada and the USA, and CAMSIS for Britain and the USA. Table 3 presents the comparison of the three countries when vertical segregation is measured by income. For Britain and Canada the data compares 1991 and 1996 while for the US the data are for census years 1990 and 2000.

Table 3: Dimensions of Segregation Canada, Britain and the USA
Vertical Dimension measured by Pay

	Canada		**Britain**		**USA**	
Segregation	1991	1996	1991	1996	1990	2000
Overall (O_{200})	.689	.692	.771	.761	.686	.668
Vertical (V_{200})	.309	.268	.276	.289	.309	.253
Horizontal (H_{200})	.616	.638	.720	.704	.612	.618
N of Occupations	512	514	371	371	504	509

Source Data: Canadian Census, supplied by Statistics Canada; British Labour Force Survey and New Earnings Survey; and IPUMS US Census data. For the USA and Canada income estimates are based on the pay of men and women; for Britain estimates are based on the more detailed male earnings.

The first thing to note is that the changes over time all follow the predicted pattern. In Canada and the USA horizontal segregation increased while vertical segregation declined. In Britain the pattern was reversed; as the horizontal component declined while vertical segregation increased. In Canada and Britain overall segregation changed in the same direction as horizontal segregation, while in the USA the decline in vertical segregation was accompanied by a decline in overall segregation. The changes are all quite small but this is not surprising in view of the short time period. When we look at earlier periods we see the same sort of pattern. In Canada the contrast between vertical and horizontal components is greater if we go back to 1981. While horizontal segregation increased 6.2% from 0.601 in 1981 the vertical component saw a massive 41% decline from 0.454, and this large decline caused a decline on overall segregation from 1981 to 1991 (Brooks, Jarman and Blackburn 2003:205). In Britain the changes from 1991 to 1996 reverse an earlier trend. Although comparison with the earlier data is less reliable, it appears that from 1971 to 1991 the vertical component decreased substantially, by about 42%, while the horizontal component increased about 10%, with a combined effect of reducing overall segregation by roughly 4%. Generally there have been moves towards equality which have slightly reduced overall segregation at the expense of increased horizontal segregation.

When we make comparisons between countries the results are not so clear cut. In 1990/91 Britain has higher horizontal and overall segregation and lower vertical segregation than the other two countries, while there is virtually no difference between Canada and the USA. This is consistent with expectations. However, in

1996/200 there is no such pattern, though if we were to interpolate an estimate for the USA in 1996 the comparison with Canada would fit the pattern.

An important point to note about these measures is that the horizontal component is appreciably greater than the vertical one. This makes clear the danger of assuming that overall segregation can serve as a measure of gender inequality, and helps to explain why so doing can give contradictory results. When we turn to the vertical dimension measured by CAMSIS the point becomes even clearer.

Table 4: Segregation in Britain, 1971 -1996, and USA 1990
Vertical Dimension Measured by CAMSIS

	Britain				USA
Segregation	**1971**	**1981**	**1991**	**1996**	**1990**
Overall (G_{200})	-.809	-.801	-.778	-.768	-.686
Vertical (V_{200})	-.123	-.082	-.124	-.118	-.140
Horizontal (H_{200})	.800	.798	.768	.759	.671
N of occupations	223	547	371	371	504

Source: British census except 1996 which is adjusted from the Labour Force Survey to maintain the ratio with the 1991 Labour Force Survey; IPUMS for US census data, and CAMSIS website at Cardiff University.

Overall segregation is shown as negative as it lies below the horizontal in Figure 1like the vertical segregation which is negative. Horizontal segregation is a scalar quantity, showing no advantage to either sex, and so can only be positive.

Table 4 shows the pattern of segregation using CAMSIS, the general measure of occupational inequality, for the USA in 1990 and for Britain from 1971 to 1996. The most comparable years for Britain are 1991 and 1996 as they use the same occupational classification scheme. The scheme used for the 1981 census was very different so values for this year should be treated with considerable caution.

The most striking thing to note is the complete set of negative values, indicating that occupational advantage lies with women. Fox and Suschnigg (1989) and England (1979) found similar results using prestige scales for Canada and the USA. Reluctance to accept such a result led Fox (1989: 358) to say of prestige scales, 'We believe (with England, 1979) ... that the concept should be removed from its central role in research on stratification'. Our findings indicate that this pattern of inequality is real and needs to be taken seriously[8].

The vertical components are all quite small, but even if we ignore the sign and regard them as estimates of a zero dimension, they are still considerably lower than the vertical component based on income. In the British data CAMSIS and income are correlated about 0.7, indicating roughly half their variance is common. If this relation with income were controlled, the non-income occupational advantages included in CAMSIS would show a clear advantage for women. To understand this we must note that men may dominate the best jobs but also are more likely to be in the unattractive manual jobs. Women tend to be concentrated towards the middle of the range in lower level non-manual work, while a substantial proportion occupy professional positions which pay less than the male dominated business jobs but compare well on status and general attractiveness. It is worth adding that neither income nor CAMSIS are direct measures of power, which would be hard to operationalize but very probably tends to be held more by men (Wright, Baxter and Birkelund 1995).

What are we to make of the relation between the vertical and horizontal dimensions? With negative values the interpretation is ambiguous. We might interpret the relation as before except that the advantage lies with women, so that essentially we ignore the sign and concentrate on the numerical value. This would give us the predicted pattern comparing the US with any of the British years; the USA has numerically lower horizontal and overall segregation coupled with numerically greater vertical segregation. On the other hand, since we know that in general the advantage lies with men, as seen in the UN data, we might expect opposite trends in

[8] It should be noted that England and Fox and Suschnigg were not actually measuring a vertical dimension of segregation; like several other commentators they were simply comparing gender scores on a prestige scale.

horizontal and vertical segregation to mean that higher horizontal segregation is accompanied by more negative vertical segregation, that is vertical segregation takes account of sign so that larger negative values are taken as lower values. This is roughly what we see in the British trend, where the horizontal component declines steadily while the vertical component increases slightly. The only firm conclusion from the CAMSIS data is that overall segregation is not a measure of gender inequality and differences in vertical segregation do not necessarily follow the same pattern as differences in overall segregation.

Conclusion

One thing that emerges clearly from this discussion is the importance of precise and clear conceptualisation of segregation. Without a firm distinction between concentration and segregation none of the analysis presented here would have been possible. Then it became essential to recognise that overall segregation is not a measure of gender inequality, or even an approximation to inequality. Only vertical segregation measures inequality. In keeping with mathematics and common sense, the horizontal dimension of segregation must be at right angles to the vertical, thus representing difference without inequality. Any other conception of a horizontal dimension is a sure recipe for confusion. While women are disadvantaged in the public sphere in all countries, the horizontal differences are greater than the vertical inequality, even in respect of pay. With respect to the social advantages of occupations, women are not disadvantaged and may even be slightly advantaged, at least is some industrially developed countries. The relation between overall segregation and its vertical component is complex. On the one hand there is an obvious positive association - as vertical segregation increases it must tend to increase the resultant overall segregation and vice versa; or looking at it the other way round, as overall segregation changes it will tend to change vertical and horizontal segregation in the same direction. At the same time there is an inverse relation between horizontal and vertical segregation, so that as vertical segregation increases or decreases, then horizontal segregation - and sometimes overall segregation - changes in the opposite direction. We suggest this is because higher horizontal segregation increases the tendency for men and women to have distinct but equal career prospects. Further research is needed to determine how and why the balance between these opposing tendencies in the relation between overall and vertical segregation is determined.

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GENDER, DISCONTINUED CAREERS AND LOW ACTIVITY RATES THE DATA "MISSING LINKS" FOR AN EFFICIENT LABOUR MARKET AND WELFARE COVERAGE

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The paper tries to highlight some gaps or shortcomings in available Eurostat data - from a user's perspective – that emerged in the course of drafting a policy-oriented book, published in 2002, by the International Social Security Association on the implications of labour market and welfare reforms in the OECD region[1], and a just completed article for the quarterly review of the University of Laval (Québec)[2]. The paper focuses on some of the issues at stake and comments on the perceived gaps or shortcomings of existing data. It also suggests possible improvements, which are seen as important for policy-makers and the social partners in the process of labour market and welfare reforms.

Why are gender statistics relevant ?

The common starting point of the two afore mentioned publications was the current double dilemma confronting advanced economies, and in particular the EU, namely, how to sustain the welfare systems and social cohesion associated with the European Social Model, in the context of demographic ageing, strict limits on public expenditure and debt, and cost constraints on the private sector stemming from economic globalization.

Both issues have the gender dimension as a crucial factor, which all too often is considered as the "adjustment variable" ("variable d'ajustement"), rather than the dynamic agent of change.

But why is the gender dimension so important ? This is because the problems raised by demographic ageing are compounded by the declining workforce in Europe – due to late entry into, and early exit from the labour market, low activity and employment rates and declining fertility. These trends result in the growing dependency ratio of the population that undermines the sustainability of the welfare systems, in particular old-age pensions and health care, which are by far the biggest components of social expenditure and they are bound to rise in the coming decades. While addressing this problem requires a broad policy mix, one of the major components of any solution appears to reside in more effectively functioning labour markets – characterized by high activity and employment rates of all age groups in the population, particularly women. Arguably, female activity and employment rates have dramatically increased over the past three decades across the EU, but in a number of countries they are still relatively low, lagging behind the EU average and the targets fixed by the EU Council of Ministers in Lisbon and Stockholm in 2000 and 2001. This concerns in particular prime-aged and middle-aged women. Women therefore constitute an important potential for reversing the decline in the workforce, and this could probably be achieved more smoothly than the alternative of massive immigration, which involves a number of difficult political, cultural and social problems in both host countries and countries of origin. Moreover, it would also contribute towards greater social inclusion and cohesion, another EU priority, underlined by the current European Employment Strategy (EES) and an integral part of the 'acquis communautaire'(CEC 2004:3).

[1] Hedva Sarfati and Giuliano Bonoli (Eds.). 2002. ***Labour Market and Social Protection Reforms in International Perspective: Parallel or converging track?*** Abingdon: Ashgate, 518 pages. Pour la version française: Hedva Sarfati et Giuliano Bonoli (Sous la direction de). 2003. ***Mutations du marché du travail et protection sociale dans une perspective internationale: voies parallèles ou convergentes?*** Berne. Peter Lang. 622pp.

[2] Hedva Sarfati, , 'Gender, discontinued careers and low activity rates in a long life society', ***Industrial Relations/Relations industrielles*** (Québec), Vol.59, No. 2, 2004 (forthcomiong).

To give an idea of the magnitude of the burden of pensions, the European Commission recently estimated that public spending on pensions would rise between 3 and 4 percentage points of GDP in most European Union (EU) countries between 2000 and 2050, although there is a wide variation among countries, ranging from around 5% to over 20%. To cope with this growing burden, the EU Commission focused its three-pronged strategy for the sustainability of future pensions on raising the employment rates of all population groups, particularly women (CEC 2003a). In a nutshell this is due to the following four reasons:

- First, at prime age, women have relatively low activity rates in a number of European countries;
- Second, women have a higher risk exposure to poverty than men, particularly those who constitute one-person-households (24% vs. 19% for men), a risk almost doubled when they head a single-parent family (close to 40%);
- Third, women represent the majority of older people (nearly 60% of people over 65 and close to two thirds of those over 75);
- Fourth, the average level of women's pension remains significantly lower in many countries to men's pensions due to differing employment histories.

Raising female employment rates is thus seen across Europe as an important instrument for sustaining the future of pensions, besides achieving greater social cohesion and equality of opportunity. However, as the Commission warns, the pace of current labour market and welfare reforms undertaken in member States falls short of the necessary adjustments that will be necessary for achieving, by 2010, the three benchmark targets fixed by the Lisbon and Stockholm ministerial Summits for employment rates, respectively 70% of total working age population (15-64), more than 60% for female employment and 50% for the employment of older workers aged 55-64. (CEC 2003b).

But when women do have access to the labour market, this is frequently in so-called "atypical" or "non-standard" jobs, which often mean low-skilled, low-paid and precarious jobs that do not offer a meaningful career paths or opportunities for personal development nor a capacity to save for old-age or to enroll in occupational pensions.

(a) rapid growth of "non-standard jobs"

Indeed, in the recent past, there has been a rapid growth of "non-standard jobs"– part-time, temporary, independent or quasi-independent jobs. While it concerns about a third of the active population, its incidence is particularly high among women. On average, around three-fourth of all part-time jobs are occupied by women, and their share in part-time work is higher than 60% across the OECD region (OECD 2002:68-69). Part-time (less than 30 hours per week) constituted a substantial contribution to job growth in the past decade, again, particularly for women, youth and to a lesser extent older workers. In some countries it offset declining full-time employment, while in others it contributed half the total job growth (OECD 2003:49).

Looking at the shares of different forms of non-standard jobs in total employment in the EU over the past decade (1992-2002), there was a decline of total ***self-employment*** from 16.2% to 14.6%, and from 12.7% to 10.7% of female employment. By contrast, ***part-time employment*** increased by four percentage points on average for all workers from 14.2% to 18.1%, but close to five percentage points for women (from 28.8% to 33.5%). The share of ***fixed term*** or temporary contracts in total employment increased by about 2 percentage points from 11.1% to 13.0% (after having peaked at 13.6% in 2000); the share of female fixed term employment remained 2 percentage points higher than males', rising from 12.5% to 14.2% over the decade.

These figures show that, across the EU, women are not only more likely than men to be employed in part-time jobs but also in temporary ones, though the latter tended to increase slightly more for men in recent years. The incidence of temporary work is much higher in Spain (a third of both women and men), and relatively higher in Portugal and Finland (15-20%). Moreover, in Finland, Belgium and the Netherlands, well over half of all temporary workers were women. Temporary working is more prevalent among the younger age cohorts and is often combined with education. Thus, in 2000, just fewer than 54% of women and almost 58% of men in fixed-term jobs were under 30. Among employees aged 30 and over, however, the proportion of women with temporary jobs exceeded that of men throughout the EU, and the gap was particularly large in Belgium, the Netherlands and the Nordic countries. While temporary jobs can be seen as an option out of unemployment,

many of these jobs are vulnerable to spells of unemployment and are an involuntarily chosen route by a third of men and women due to lack of opportunities for permanent jobs (CEC 2003c:209) However, in most EU countries, more women than men were in temporary jobs out of choice (Eurostat, 2002a). But non-standard jobs correspond to very different definitions and realities in EU member States and must be better monitored for their quality, according to the 10 indicators selected by the EU Commission (CEC2003d:23-31)

Atypical (or non-standard) jobs are often associated with low pay, limited career opportunities and access to training and less social and employment protection than full time jobs. They obviously involve less contributions to the welfare system and reduced pension entitlements, particularly for the self-employed, persons with discontinued careers, temporary jobs or ***short part-time jobs with less than 10 hours per week.*** The incidence of short part-time jobs is far from negligible, constituting no less than about 10% of total employment in the Netherlands, and around 6% in Australia, Canada, Denmark, Norway, Switzerland and the UK, and about 4% in Finland, Germany and the US (Fitoussi & Passet, 2000:64).

- ***The developments of non-standard jobs are an important component for policies aiming at social cohesion, reduction of poverty and gender mainstreaming. Dissemination tools should therefore include a breakdown of data on part-time - less than 10 hours per week; between 10 and 20 hours per week; and above 20 hours/week – if possible by age cohort and family status. Likewise – data on temporary jobs should distinguish between fixed term contracts (CDD) and short-term temporary contracts (including those handled by temporary help agencies), and casual-seasonal jobs. An indication of their maximum duration and their possible renewal and recurrence (e.g. where legally limited in time or number of renewals, sometimes they are renewed after passage through unemployment).***

While for youth and middle-aged men atypical jobs often constitute a stepping stone – to standard jobs for the former, to retirement for the latter –, for women, these very often constitute the only opportunity for jobs with little career perspectives or a guarantee of a decent living standard and social coverage, particularly for pensions. Arguably, some part-time jobs, notably for women, are not necessarily precarious as they can also be of long tenure. Thus, for example, in the EU in 1998, while only 10% of men with a full-time job had a temporary contract, this proportion rose to over 30% of male part-timers. By contrast only 15% of female part-timers had a temporary contract, indicating that part-time is a more "regular" form of work for women (Auer & Cazes, 2003:45). On the other hand, the European Foundations' most recent survey of working conditions (2002) indicates a high prevalence of long tenures of ten years or more for both men and women not only in full-time (45% of men vs. 40% of women), but also in part-time jobs (36% vs. 33%, respectively). However, the incidence of precarious status of part-timers of either sex is seen in the greater likelihood that they hold a temporary contract than full-timers (16% of women part-timers and 21% of men part-timers hold a fixed term contract or are temporary agency workers compared to 11% of women and 9% of men full-timers) (European Foundation 2002:17,26). As regards the tenure of temporary workers, data for 2000 shows that a third of both men and women have contracts of less than 6 months duration, and about another third had contracts of between 6 and 12 months. Longer contracts of over 3 years were limited to fewer than 16% of men and just over 10% of women temporary workers (Eurostat 2002a).

- ***More regular monitoring of the extent of mobility between different employment and non-employment (inactivity, disability, retirement) statuses and their development over time as well as their motivation would be important, as indicated in the progress report on the improvement of quality in work (CEC 2003d:2). The European Foundation's survey covers the year 2000 – so there is some urgency to update the information covering the recent economic downturn***

(b) Changing family structures

The rapid growth of non-standard jobs has been clearly heavily influenced, not only by the rise and persistence of unemployment, but also by the significant change in the composition of families, which is characterized by the drastic increase in single parent and single-person households, many of whom are women who raise their children alone. They are often obliged to accept low-paid, low-skilled and precarious jobs if not to remain outside the labour force altogether and depend on welfare.

Lone parenthood limits mothers' capacity to enter and remain in gainful employment and to contribute to, and benefit from, social protection coverage. Indeed, across the EU, single households are more likely than couple households to be ***workless***, and the incidence of such worklessness is twice to three times as high among single households (in 2000 it was 20 to 30% for single households vs. 10% for couple households). Though in couple

households, the employment status of one partner is closely and related to that of the other – whether in employment or outside (unemployment, inactivity or pre-retirement) (Eurostat 2002d).

- ***The relatively high incidence of worklessness both for single and couple households is a key feature of exclusion and poverty, especially among women. The data collected and analysed by Eurostat is particularly pertinent, highlighting "traps" or "vicious" as well as "virtuous" circles in this area (e.g. positive correlations in work and inactivity for couples and the vital role of educational attainment for labour market attachment of women with children – single or married). However, the source of the data published in 2002 is mostly 1997 (occasionally 1999) – that is in a period of economic and job growth. It would be important to see how worklessness evolved during the downturn of the business cycle during the past three years to be able to draw the necessary policy implications.***

Among the ***single-person households***, many are older people living alone and having few resources. Their situation will worsen as the population ages, since already now more than a third of persons aged 65-79 are living alone, and their percentage reaches 45% for those aged 80+ (Oxley *et al.*2000). The trend towards one-person households is indeed on the rise across the EU and is expected to continue in the forthcoming decades, rising from 14 million in 1961 to 42 million by 1995 and reaching between 51 and 71 million by 2025 (Eurostat 2003a). Among them, the very old age group (80+) is forecast to increase by eight millions between 2010 and 2030 – a 44% growth. The majority of these very old people will be women, many of whom living in poverty and requiring assistance and care, both formal and informal. The EU Commission points out that in future, the smaller size of households and families may make them less able to shoulder the growing care tasks, which will increase the importance of formal and informal care on the demand side (CEC 2003e:14, 91-95. 98-111)- However, this development will also create job opportunities on the supply side. Indeed, more than 2 million jobs or 18% of the total job-creation in the EU between 1995 and 2001 took place in the health and social work sector, which now account for about 10% of total employment (*Ibid*:22). This indicates the urgency of tackling poverty and exclusion at an early stage and of addressing the provision of care issue, including the development of good quality employment in caring services (Eurostat 2003c:97-113).

- ***Some of the most pertinent topics of Eurostat Statistics in Focus are based on relatively old data and often do not show how it evolved over several years and fluctuating business cycles. For policy makers such trends are important. (thus for instance, Eurostat is now completing a leaflet on 'Household formation in the EU - Lone parents' but the data will only cover the year 2001 – a longer time perspective and more up-to-date figures are necessary to show the impact of the recent downturn. It would also be useful to include in such feature labour market status and welfare dependence, as well as the incidence of lone parents with small children (0-3 year old, 4-7 year old).***

- ***The Eurostat paper (2003a) forecasting the composition of households trends by 2025 could be usefully combined with trends in formal and informal long-term care provision for children, for adults and for older people. The feasibility studies on care for these categories have highlighted data scarcities and gasp (Eurostat 2002c, 2003d). The combined number of dependant adults requiring care amounts to 7 million people, the majority of whom are over 60 (Eurostat 2003d:110). Care for the latter already now involves 6% of Europeans, and the pressure for such care is bound to increase (CEC 2003e: 16). It also has an impact on capacity of care-givers to work and to work full-time. Given the magnitude of the population involved – care giving and care receiving - , the dearth of data needs to be addressed, because caring might have an important adverse effect on employment of women, in general, and of older women in particular, two target groups of EU social and employment policies .***

(c) Child care and care for dependant adults

Arguably, at present, the main obstacle to greater female labour force participation is undoubtedly the caring responsibility – particularly for children at small age, but increasingly care for adult dependants. This implies the lack of access to affordable caring services and inadequate employment and career opportunities that permit a work-family balance. This is one of the main sources of labour market rigidities in the EU. By contrast, the combination of widespread accessible caring services, broad access to good quality education and opportunities for part-time jobs in the services sector – both public and private – have been at the root of the Nordic "success stories" (Andersen, Madsen 2002). Though other factors are at play – women's educational attainment, as much as social norms about prior access to scarce jobs and about how unpaid home/care work

is shared are important for attracting or repelling women from the labour market. On the sharing of care and household chores, Eurostat finds that "there is little evidence of household working time arrangements that are compatible with a more equal sharing of paid and unpaid work." On the other hand, somewhat surprisingly, it indicates that children have limited effect on working time in most countries, as "the most common form of dual [labour market] participant household (…) is one where both [partners] work full-time." (Eurostat 2002f:3,5).

- ***Eurostat has pointed out to the difficulty of obtaining reliable harmonized data on childcare, but has identified a few comparable indicators and produced an inventory of available data sources on demand and supply of child care from early childhood (0-3,3-6) through compulsory primary education (6-12) outside school hours. Given the vital importance of the availability and affordability of such services for mothers who wish to enter or re-enter the labour market, monitoring developments in this area and disseminating results, including shortfalls in respect of unsatisfied demand, would be useful for policy-makers and the social partners. The latest Eurostat working paper dates back to 2002, which contains a report completed in 2001, so the data is at best valid for 2000 (Eurostat 2002c).***

Lots of data (LFS, ECHP) and reports do document the main obstacles to promoting women's labour market participation, job quality and career opportunities. Most of these obstacles have been identified decades ago, but have only marginally been addressed in spite of mobilization by EU Commission and commitments on behalf of member States (CEC 2004). Anti-discrimination measures and efforts at mainstreaming have probably contributed to improve the situation, but much remains to be done – and benchmarking and monitoring trends via formulating and reviewing implementation of NAPs by Member States have certainly a part to play. With this idea in mind, the next section will briefly review some of the major issues at stake and the related needs in data collection and dissemination that may be helpful to address them.

What can be done to enhance female activity rates?

As noted earlier, despite the general progress of women's participation and employment rates, inactivity rates (other than unemployment) among women constitutes two-thirds of all non-employment of the working age population (OECD 2003a:81-82). The policy concern for inactivity stems from its close correlation with persistent poverty and exclusion. It affects in particular lone parents, especially mothers, and their children. Indeed, children growing up in poor and workless households are more likely to drop out of school and have less chances to find a regular job with decent pay, leading to higher incidence of crime and drug addiction.

The chances for non-employed to enter or return to the labour market also depends on their "closeness" to the labour market. Those who were previously employed (even on short time), or who are in training or education, and even those who are unemployed, are more likely to find a job than those who had no earlier work experience. The OECD recently highlighted the dynamics of this approach over a multi-year basis, looking at the probability of moving between different "main activity statuses". Thus for example, the matrix for a two-year period (1997-98) in Table 1 below shows the high persistence in activity statuses, in particular for those holding a job of 15 hours or more per week (93%), and among housewives ("homemakers") (85%) and retirees (93%).

Also, a significant proportion among the unemployed in 1997 (36%) found a job in the following year, compared to 15-20% among discouraged workers or persons in education or training, and much lower rates for groups outside the labour force. Over a five-year period (not shown in the table), more than twice as many working age persons in Europe have been non employed at least once during that period as those who were continuously non employed. The dynamic aspect of high incidence of non-employment and mobility into jobs indicates a more efficiently working labour markets and low unemployment – as is the case in Denmark, the Netherlands and the UK. This indicates the potential for active labour market policies and institutions for raising overall employment rates in the other EU countries where such mobility is low and the incidence of non-employment traps higher (OECD 2003: 90-93).

An overwhelming majority of inactive persons, both men and women, aged 15-54 that are either middle-skilled or high skilled would like to work as shown in Table 2. Understandably therefore, policy focus in many countries is not only to improve incomes of such families through transfer payments, but also identifying the barriers that prevent the non-employed from entering or re-entering the labour market and improving their earning capacity.

Arguably, cultural, social, economic and institutional factors influence women's activity rates, as do the quantity and quality of jobs offered. This is reflected in the very different labour market outcomes across countries, which are also influenced by government policies that may stimulate or deter supply and demand of female work. As already stated, major determinants include available and affordable childcare and elderly care, access to education and training, decent levels of remuneration, flexibility and choice in work schedules, availability of part-time, adequate welfare coverage particularly pensions, as well as equality of opportunity at work. Government policies play a role in these areas as much as labour-management practices and collective bargaining.

Table 1: Big differences in how easily non-employed groups move into employment
Movements between main activity statuses for working-age persons in Europe, 1997-1998
One-year transitions probability (percentages)a

	Main status in 1998								
	Employed (at least 15 hours per week)	Employed (less than 15 hours per week)	Unemployed	Discouraged workers	In education or training	Military or community service	Homemaker	Retired	Other inactive
Main status in 1997									
Employed (at least 15 hours per week)	**92.8**	1.6	2.7	0.1	0.3	0.1	0.9	1.2	0.3
Employed (less than 15 hours per week)	31.7	**43.8**	4.7	0.1	6.2	1.0	8.1	3.7	0.8
Unemployed	32.1	3.8	**46.3**	3.2	3.7	0.5	6.6	3.1	0.7
Discouraged workers	13.9	1.6	32.2	**20.4**	2.8	0.2	24.0	2.1	2.8
In education or training	14.2	5.6	8.8	0.2	**68.4**	1.5	0.7	0.0	0.6
Military/community service	45.8	6.9	25.5	1.0	11.8	**8.8**	0.1	0.0	0.2
Homemaker	4.7	2.8	3.2	0.9	0.2	0.0	**84.7**	2.1	1.3
Retired	0.6	1.8	0.6	0.1	0.0	0.0	2.4	**93.1**	1.3
Other inactive	6.9	2.6	4.8	1.1	1.6	0.6	13.2	8.0	**61.1**
Total sample	63.2	3.8	6.4	0.5	5.6	0.3	11.8	7.1	1.3

a) Population-weighted averages for 12 European countries (Austria and the 11 EU countries reported in Chart 2.11.).
Source: OECD Employment Outlook 2003 Table 2.2

To enhance ***labour supply***, assistance in childcare and care provided to dependant family members is crucial, as is clearly evidenced by the Nordic countries (Andersen 2002; Overbye, 1998; Esping-Andersen, 2000). As already mentioned, activity rates of prime-aged women are very high in these countries, around or above 80% - that is even higher than in the US and other Anglo-Saxon countries - often mentioned as good performers in this respect -, whereas the Southern European countries have very low female activity rates at or much below 50%. Several closely related factors explain this shortfall, which are described below.

The ***inadequacy and the high cost of childcare services***, as stated earlier, are the main obstacle to female employment. Esping-Andersen considers this factor as much more central to the lacklustre employment situation in Europe than the oft referred to labour market rigidities. He considers that it discourages employment of women to a much greater extent than either the employment protection legislation or high minimum wages – which, according to a number of liberal economists are the main features of these labour market rigidities (Esping-Andersen, 2000:104).

The ***availability of paid parental leave*** also plays an important role in enabling women to maintain their occupational status and progress in their careers. Thus, for example, women in the Nordic countries have access not only to high quality subsidised childcare facilities, but also to good quality education and training. As a result, they actually tend to leave part-time jobs and take up full-time employment (Andersen 2002; CEC 2003c). But unpaid parental leave may not be affordable to low-income households, many companies may renege on implementing the existing legislation – as a recent Irish survey showed (*IHT* 17.03.04; *Irish Examiner* 2.03.2004) , and… fathers may not be enthusiastic about taking parental leave, even in Sweden, which introduced it several decades ago (*The Economist* 8.01.2004). But various types of leave and working

Table 2. Inactive persons of working age who would like to work (now or at some time in the future), 1997

	Share of inactive persons who would like to work[a] Persons aged 15 to 64 years (percentages)									Share of inactive persons having previously worked, who would like to return to work, by reason why they stopped working			
	All	Women	Men	15-24 years	25-54 years	55-64 years	Low skilled	Middle skilled	High skilled	Retirement	Health problems	End of contract[b]	Family responsabilities
Canada	77.8	76.4	79.8	98.4	87.1	35.6	69.9	77.1	82.2	48.5	38.2	91.0	95.8
Czech Republic	57.4	56.5	59.4	93.8	81.1	27.1	50.0	71.1	86.7	26.4	68.3	80.0	96.2
Denmark	50.5	54.0	44.8	100.0	70.5	15.4	31.0	71.6	67.1	26.6	51.3	60.2	-
France	61.1	71.3	36.4	98.1	86.5	14.6	32.9	66.5	68.9	17.2	-	83.7	63.5
Germany, Western Länder	63.0	65.3	57.9	94.3	80.4	23.9	53.0	91.5	80.0	10.5	50.0	85.7	74.0
Germany, Eastern Länder	69.3	62.2	80.0	100.0	87.5	38.2	63.8	-	-	26.7	81.3	-	-
Hungary	30.6	31.0	29.8	95.9	43.4	13.8	26.3	45.7	43.1	15.4	15.8	79.9	69.2
Italy	74.0	73.3	76.1	98.3	82.1	45.3	68.9	80.3	81.1	40.8	-	88.2	66.5
Japan	61.0	57.0	73.2	86.7	68.7	27.5	57.6	55.6	72.6	45.8	66.7	-	53.6
Netherlands	55.1	55.7	53.6	96.4	64.0	16.4	52.4	50.0	67.7	1.6	58.7	80.4	62.1
New Zealand	73.7	75.6	67.6	100.0	85.1	46.2	67.4	65.8	80.6	39.3	84.6	88.9	85.1
Norway	72.6	71.4	75.0	95.7	84.5	34.1	62.5	88.9	80.4	53.8	57.1	80.0	82.1
Poland	65.8	61.0	74.4	95.9	76.0	37.7	57.6	74.3	93.1	39.3	70.8	70.4	79.9
Portugal	63.7	67.1	55.3	92.9	75.2	41.1	61.8	96.7	78.4	25.0	52.2	72.4	63.4
Spain	65.5	67.4	60.4	94.6	72.5	32.5	59.8	77.3	84.5	19.5	48.5	78.9	63.4
Sweden	77.5	75.6	79.2	91.7	94.3	20.6	..	..	..	21.1	48.3	96.4	92.8
Switzerland	62.8	64.9	53.7	95.1	77.5	22.0	65.8	60.8	68.8	16.8	45.5	74.7	77.0
United Kingdom	65.6	65.5	65.7	100.0	82.0	20.7	60.0	81.1	70.9	15.7	70.0	88.1	76.6
OECD average[c]	**64.4**	**64.3**	**64.6**	**94.5**	**77.3**	**28.3**	**56.1**	**71.8**	**76.4**	**29.2**	**59.4**	**83.3**	**68.6**
For comparison: European averages[d]													
- Source ISSP	64.5	65.9	60.6	96.8	79.1	27.7	53.4	72.3	72.1	..	..	..	..
- Source EULFS[e]	11.8	11.7	12.2	11.5	18.3	5.4	10.9	14.0	14.0	..	..	..	..

.. Data not available.
- Values not reported because of the small number of observations.
a) Question V66 : «Would you like to have a paid job, now or in the future ?» *b)* Includes job displacement, dismissal and end of job contract. *c)* Population-weighted average for countries shown.
d) Population-weighted average calculated for countries with data for both surveys: Denmark, France, Germany, Hungary, Italy, Netherlands, Poland, Portugal, Spain, Sweden, Switzerland and UK.
e) Among non-active persons who are not seeking employment, share of those who would nevertheless like to have work (now). Data for 2001.
Source: OECD Employment Outlook 2003 Table 2.A.1.1.The International Social Survey Programme (ISSP), 1997; European Union Labour Force Survey (EULFS), 2001.

time arrangements have been developed, ranging from sabbaticals and job rotation in the Nordic countries to job-sharing, part-time work and teleworking across the EU. Moreover, a growing number of both men and women do work on weekends, including women with children (Eurostat 2002b) .

The inadequacies in child care, parental leave and working time arrangements hit much harder ***single mothers***, whose dependency on social transfers was estimated in the late 90s at 8% across the OECD region, but over 12% in Austria, Belgium and the UK (OECD, 1998). The level of provision and costs of child care, the age at which children start school and the availability of pre-school care influence the outcomes of programmes to make work pay (OECD 2003a:117; OECD 2002b , 2003c).

The UK experience shows the difficulties in tackling ***high inactivity rates and poverty***. A recent report by the Trades Union Congress (TUC) on inactivity thus points out that although the country has one of the best records in the EU on unemployment, it has the worst record in terms of labour market exclusion, measured by the share of inactive working age people who say they want to work (22% compared to 9.9% EU average in 2002), and the reasons for inactivity are mainly bad health and family and caring responsibilities, both having a much higher incidence than in other EU countries. While family responsibilities explain 26% of all inactivity in the UK, the figure rises to 51% for lone parents, compared to 13% in Sweden and 23 % in Denmark. The report assumes a close linkage between caring responsibilities, poverty and low health status (TUC 2004a). Another TUC paper points out that in Spring 2003, there were 2,141,000 economically inactive people of working age in the UK who wanted jobs – that is significantly more than the 1.5 million unemployed. Among them, the long term sick and disabled constituted the single biggest group (35.1%), followed by persons looking after a family or home (30.3%). Government policy to promote their employment rates seemed to meet some success, notably for lone parents, whose employment rate rose from 45.6% in 1997 to 53.4% in 2003, but this is still far below the 70% target mentioned by government and below the rates in a number of EU countries (TUC 2004b). On the other hand, recent data also shows some success – as more than half (52.8%) of over 434 000 individuals who participated in New Deal for Lone Parents programmes between October 1998 and end September 2003, found jobs, and more than half of whom were women (51.7%) (TUC 2004b). At the same time, in spite of huge government effort and investment, there are still not enough childcare places and their high cost (nearly a quarter of average household) prevents mothers in low-income families from returning to work (TUC 2004c; *The Guardian,* 26 Jan 2004*)*.

Levels of education and skills obviously also play an important role in labour market attachment. Lack of qualifications limits employment rates. Employment rates are generally strongly and positively correlated to higher educational attainment, and the gap in employment rates of groups with different educational levels is substantial. This applies in particular more to women than to men (but also to older workers). Thus, in 1996, close to two-thirds of women who were not in the labour force had no educational qualifications beyond basic schooling, compared to 35% of those who held jobs. By 2001, employment rates of low-skilled women remained at the significantly low level of 37%. The latest finding of the EU show that although the share of low-skilled in the working age population has sharply decreased since the mid-90s, it still amounts to 40% overall, and concerns a fifth of the 25-30 age cohort for both men and women (Sarfati 2002; CEC 2000 & 2002).

Educational attainment and employment rates are closely linked and explain in most EU countries high employment rates for women with tertiary education compared to those with lower level education, and a much lower gender gap in employment as illustrated in Table 3 below. In 2002, the employment rates at EU level was 83% for the high-skilled (those who completed tertiary education), just above 70% for medium skilled (completed upper secondary schooling), but under 50% for the low-skilled (below upper secondary education). Moreover, among the low-skilled, unemployment rates were more than double those for the high-skilled (10.8% vs. 4.6%, respectively) (CEC 2003c: 35).[3] A major effort thus needs to be done in investing and improving human capital, which can contribute, to better pay and career development and enhance productivity. In spite of these obvious arguments, as noted by Gazier, the least efficient activation measures are those providing training to the unemployed and job subsidies. The most successful activation measures are placement, personal monitoring and highly focused professional training (Madsen, Pennings 2002; Gazier, 2003). So there needs to be more rethinking of a better adapted education and training systems, both at the initial and later stages.

[3] CEC 2003c Table 9 provides data on the share of the working population (15-64) by educational attainment in 2002 and by gender, while Table 10 covers employment , unemployment and activity rates by educational levels for the same ages and year, unfortunately without a gender breakdown (pp. 34-35). Likewise, Table 6 (p.31) giving the employment rate by gender and age classes in 2002 does not give a breakdown by gender for youth and older workers. Such additional data would be needed to better understand the problems to be addressed.

Also, with the shift towards the post-industrial society, education plays an important role. Indeed, the higher the ***level of educational attainment***, the higher the likelihood to be employed in ***the services sector***, particularly for women at all skill levels (the reverse is true for employment share of both men and women in agriculture and manufacturing!). Arguably the service sector offers both highly skilled and low-skilled jobs, but, as the OECD secretariat point out, once "trapped" in low-skilled and low-paying jobs, there is very little chance for upward mobility, particularly for women, who are more likely to move from such jobs into inactivity (OECD 2003a:95). Across the OECD region (with the exception of Japan and South Korea), employment rates are much higher and the gender gap much lower among women with a tertiary education than among low educated women (OECD 2002a:71).

On the other hand, many qualified women have to accept jobs below the level of their educational attainment, they often suffer wage inequalities and have to cope with the "glass ceiling" when they reach the top jobs, particularly in the private sector. Although the wage gap between men and women has tended to shrink, it is still important throughout the industrialised countries (about 25 to 30 percentage points) in both low-skilled and high-skilled jobs, despite the adoption of non-discrimination legislation. It is often due to different work statuses associated with part-time and discontinued careers. These factors constitute disincentives to job entry.

Table 3: Women's employment rates and the gender employment gap by educational attainment, 2000
Persons aged 25 to 54 years

	Total		Less than upper secondary education		University/tertiary education	
	Employment rate	Gender gap[a]	Employment rate	Gender gap[a]	Employment rate	Gender gap[a]
Australia	66.8	20.0	58.1	21.5	79.9	11.5
Austria	73.5	16.2	61.6	17.6	86.5	9.2
Belgium	67.8	20.1	47.4	32.3	86.7	8.6
Canada	74.0	11.8	52.0	20.8	79.8	9.2
Czech Republic	73.7	15.6	60.5	5.4	82.8	13.3
Denmark	80.5	7.7	68.2	9.2	88.7	4.5
Finland	77.6	7.0	69.5	8.3	84.8	8.0
France	69.6	17.7	56.5	23.6	83.1	8.5
Germany	71.1	16.3	55.4	20.9	83.4	10.5
Greece	52.6	35.9	42.1	45.5	78.4	12.4
Hungary	61.7	16.0	41.3	14.9	78.9	14.7
Iceland	87.4	8.6	86.0	10.5	95.2	3.7
Ireland	53.1	29.0	33.7	39.5	79.9	13.3
Italy	50.7	33.9	35.8	46.8	78.7	12.4
Japan (1999)	62.7	31.6	62.6	25.7	62.7	33.5
Korea	56.3	31.8	64.8	20.3	55.0	34.9
Luxembourg	63.0	29.8	55.4	33.6	79.4	14.0
Netherlands	70.9	21.4	53.4	32.8	86.6	8.8
New Zealand (2001)	70.6	17.0	54.8	21.2	78.7	10.7
Norway	81.5	7.1	63.8	14.6	87.3	4.9
Poland	72.0	9.6	53.6	13.4	92.0	1.5
Portugal	73.9	16.4	71.5	19.7	93.0	2.6
Slovak Republic	64.8	13.7	40.9	5.3	82.5	11.1
Spain	50.6	34.8	38.1	45.1	74.0	14.8
Sweden	81.7	4.1	65.4	14.5	87.8	4.3
Switzerland (2001)	76.8	18.5	70.3	19.8	85.6	12.0
United Kingdom	73.1	14.4	49.7	17.3	86.4	8.0
United States (1999)	74.1	14.8	49.7	26.5	81.9	11.6
OECD unweighted average[b]	**69.0**	**18.6**	**55.8**	**22.4**	**82.1**	**11.2**

a) Percentage point difference between the employment rates for men and for women.
b) For above countries only.
Source: OECD Employment Outlook 2002 Table 2.2

The emphasis on qualifications and tertiary education, while it can open up routes to better paid and more interesting jobs, it may not be the only response to better jobs. Arguably, as already pointed out, future employment growth will no doubt be concentrated in the service providing sector - notably health, caring and personal services – especially in the context of demographic ageing.

The importance of lifelong learning is highlighted in the EU Employment Guidelines, which is seen as the major tool for adapting workers and firms to change and helping the unemployed and inactive persons back to work. A specific target is the reduction in the gap of participation in training between low-skilled and high-skilled workers (CEC 2003f).Yet, there seems to be little progress in developing appropriate curricula and training of adequate duration, as well as enlarging access of both the low-skilled and middle-aged workers to

meaningful life-long learning that would result in greater retention of middle-aged workers and give them some career perspective. This is particularly important for women who re-enter the workforce after parental leave or those wishing to move from part-time and/or temporary work to full-time work. Working time devoted to continuing vocational training amounts to 40-42 hours per participant per year (1999 data; Eurostat 2003d).

On the demand side, the availability of part-time jobs is of course important for women wishing to enter or return to the labour market. This depends much on the extent of the development of the services sector – both public and private -, which, as already noted, is highly positively correlated with female employment. These include of course a variety of services catering for the household and on which women particularly depend (the supply side) (Sarfati, Cressey, Ughetto 2002). Esping-Andersen argues that restrictive macroeconomic policies reduce real private consumption expenditures and hence demand for services, they thus depress job growth potential in the services sector where women are predominantly employed. He therefore sees the solution to EU unemployment in reducing the obstacles to labour market entry of housewives (Esping-Andersen, 2000: 102, 103, 107-108).

Support to this argument can be found in the latest EU data which shows that the dynamism of job creation in the services sector was most pronounced in services where demand tends to grow with income – notably in education and health services, home health care services, social and personal services and recreation. These obviously are linked to the increase in female employment but also to job creation in the public sector. However, at present, there is a rather limited scope for developing public services due to the budget constraints under the European Monetary Union and the Growth and Stability Pact. But the perspective of the massive withdrawal of the "baby-boomers" will soon open up many job openings in the public sector, notably in education, social services and health care.

- ***In spite of the difficulty of comparing data on the services sector, it would be useful to monitor employment trends by gender, age cohort and job status over a long period by different sub-sectors, as Eurostat has done for hotels and catering, but adding the job status (part-time, fixed term or temporary (Eurostat 2003e)***

But innovative approaches to working life flexibility go beyond the issue of women's ability to take on part-time work. They depend on corporate concerns with work organization, working patterns and location, transportation, opening hours of public services and shops, the provision of caring and other community services. These must translate into a societal reality the political commitment to equal opportunities, besides offering more job opportunities. Such broader approach has been adopted in a pioneering way in the Nordic countries and in Northern Italy and emulated in the UK, France and Germany (Anxo, Boulin, Gershuny 2003). It certainly is part and parcel of the quality of work concept now promoted in the EU.

On the quality of the job offered also depends the provision of decent living standards at work and in retirement. As already noticed, many part-timers work for short hours for lack of better alternatives, and are therefore excluded from employment and social protection coverage. But part-time jobs are not necessarily precarious in terms of tenure. Many women part-timers enjoy more stable jobs – with 10 years' tenure or more -, than women in full-time jobs. The pay gaps between men and women are explained by occupational and sectoral job segregation, by the often lower number of hours worked (for both full-timers and part-timers) and by the discontinuity of job history. Most of these also explain why women are by-passed for promotion and for training opportunities on which promotion also depends – a clear trap or vicious circle (Cf. inter alia CEC 2003g). .

While **good quality jobs** include opportunities for skill upgrading and career development and hence provide more chances to remain in employment, people in low quality jobs face greater risks of unemployment and exclusion from the labour market. And there is a consensus on the fact that women are more vulnerable to such risks.

The problem of poverty associated with discontinued careers and employment in "non-standard jobs" emerges once again during labour market withdrawal and more seriously during retirement, when income replacement rates are low as a result not only of inadequate contributions, but also of their lower capacity to participate in occupational pensions scheme which tend to complement, sometimes significantly, income from public pay-as-you go schemes (first pillar). This exclusion of women equates with poverty in countries where public schemes are at a low-level flat rate, as is the case in the UK or Switzerland, for example (Ginn, 2002).

In the UK, low paid and undervalued part-time women workers suffer from financial hardship throughout their working lives and are not eligible for, or cannot afford to contribute to, their own occupational pensions. Women's retirement income from all sources is only 53% of men's and only 30% of women receive a private pension in their own right (TUC 2004e). Women part-timers earn less than 60% of the hourly rate of full-time male workers. According to the UK Equal Opportunities Commission, only 37% of women working part-time

have access to any kind of pension scheme, and 44% of women employees work part-time! Even where access to an occupational pension scheme is possible, women are not likely to join if there is no employer contribution, and many women cannot build up entitlement to an occupational pension because of discontinued work history with unpaid caring responsibilities. Currently 51% of women do not receive a basic state pension in their own right and they are penalized by the sex-based annuity rates of the pensions industry. Some ethnic groups are particularly adversely affected. Thus, for example, only 3% of Bangladeshi women who have worked in the UK now have an occupational pension. Eligibility rules must therefore be reformed. Such reform should include restoring of the link between pension entitlement and average earnings, increasing substantially the basic state pension, introducing compulsory employer contributions to pension schemes and prohibiting sex-based annuity rates. Other related measures would be needed to reduce poverty among women, such as raising of national minimum wage, ending gender pay gap for both full-timers and part-timers, providing more affordable child-care and higher childcare tax credit, paid parental and carer's leave and more earnings-related maternity pay (TUC 2003b : 2, 4).

More generally, in spite of the gradual adaptation of national pension systems across the EU to facilitate reconciliation between family and work responsibilities of both parents, the EU Commission acknowledges that the significant coverage discrepancy in pension entitlements, particularly under second pillar schemes of women atypical workers, will persist for a long time to come (CEC, 2003a).

- ***The great detail about the UK situation in this paper is meant to highlight the importance of longitudinal data and correlations that need to be looked at for gender mainstreaming and inclusion across Europe, particularly where there are low employment rates, high unemployment or inactivity rates and poverty among women. Eurostat has published a note on women and men beyond retirement – focusing mainly on family status, employment status and incidence of low income and poverty(Eurostat 2002e). It would be useful for policy purposes to also include more systematically data on the effect of partial careers on poverty in old age and in pension entitlements, both pay-as-you-go schemes and funded schemes, and how they take into account periods outside employment in socially useful activities such as education, continued training and caring. The OECD has a working party on this topic and Eurostat is probably participating in it..***

By way of conclusion

Within the European Union, both the strategy to ensure the adequacy and sustainability of pensions in the context of demographic ageing and the Employment Strategy emphasize the need for promoting women's employment rates. They also underline – together with the Strategy on Gender Equality -, the importance of cooperation with social partners. So the concluding remarks will highlight the needs for monitoring, first, the employment potential of the services sector, second, the impact of labour market and welfare reforms, and lastly, the role of social dialogue – mentioned in all EU policy documents, including in the Gender Strategy for gender equality (CEC 2000:16). The paper concludes with some further suggestions related to data collection and dissemination needs, in particular in relation to existing Eurostat publications.

1. Monitoring developments of the services sector

As outlined above, the development of the services sector is of prime importance because of its job creation potential, particularly for women. Virtually all net employment growth in the EU countries (and the rest of the OECD area) in recent years took place in the services sector. In one of the best employment performing countries, Denmark, employment in services in 2001 constituted 74.1% of total employment (62.9% for men, 86.5% for women), up from 69.7% in 1990. Similar results are found in other Nordic countries, but major gaps exist with other countries, particularly in Southern Europe. There is a strong positive correlation between female employment rates and the development of services. According to one estimate, closing the gap between the EU and the US in the level of employment in services would mean some extra 30 million jobs in Europe (Larsson, 1999). That is more than twice the number of the currently unemployed !

The determinants of differing national performance include:

- slower productivity growth in some services which may contribute to job creation (for example in hotel and catering, personal and domestic services, retailing);
- higher productivity growth in business services, by contrast, can promote high quality employment;

- the rise in incomes can produce shifts in demand for services (notably due to the continued growth of women's labour participation rates);
- the expansion of the welfare state and related social and health services opens up many opportunities for female employment;
- the level of income tax and consumption taxes can positively or negatively affect the demand for personal services; and
- cultural factors may affect service consumption patterns (Gadrey et al., 1999).

• ***As Eurostat monitors some of these trends – it may perhaps be possible to include a synthesis of the different determinants of services job-creation potential (e.g. productivity growth in services, growth in service employment, changes in income tax and VAT) .***

2. Monitoring labour market reforms that provide choice

Labour market and welfare systems are being reformed to take into account the changing characteristics of the labour force and of life-cycle activities that no longer corresponds to the three-tiered sequence of education, followed by employment and culminating with retirement, on which post-war welfare systems were based. Periods devoted to training and caring activities have become longer as those in employment shrank, and this is now gradually being taken into account in calculating pension entitlements. However, much still remains to be done to harmonize cross country entitlements, to take due account of caring of adult dependants, and for providing adequate pensions for discontinued careers or low-paying jobs.

Employment promotion should therefore target a "socially sustainable employment", which gives people greater choices in and outside work, in the family and in society, as well as the capability and flexibility to move between them during their life course. This can include consideration of working time no longer on a daily, weekly or monthly basis but throughout working life. This would help reconcile not only work and family responsibilities but also work and training or other non-paid activities, as well as early retirement through the institution of "time savings accounts" or "social drawing rights" (Boulin & Hoffmann, 1999; Supiot 1999). Greater flexibility in working time envisaged over the life cycle does not necessarily result in additional cost for employers if it can be adapted to fluctuations in labour demand within the company. Thus, rather than a trade-off, there is a potential for a win-win outcome.

The "Transitional Labour Markets" approach, in line with such proposals, was recommended by Schmid and Gazier to facilitate transitions between different employment and social statuses. It aims in particular to provide more autonomy and choice during different stages in life and relies on more solidarity, which could be achieved by a policy-mix that addresses unemployment, ageing, gender discrimination and exclusion (Gazier & Schmid, 2002; Gazier, 2003). The Nordic countries have shown that such approach is feasible and that there is no necessary incompatibility between high level of social protection and economic performance.

More generally, the changes in the labour market and the policy of increasing the population's employment rates require a broader approach to the constitution of social protection rights beyond the strictly salaried "subordinated" employment relationship. There are already a number of examples in Europe where such link is blurred, for example paid vocational training outside the workplace or time off for trade union or staff representation, remunerated by the employer (Freyssinet, 2002).

• ***Some EU countries have engaged for some time now in time-saving accounts or other social drawing rights – mainly through collective agreements. Eurostat and the European Foundation could perhaps monitor such experiments and their outcomes in terms of end-use – training, leisure, sabbaticals, early-retirement – as well as assessing the extent they respond to existing demands .***

On the other hand, public pensions schemes grants "pension credits" for periods not worked but which are acknowledged as serving a useful social purpose – such as education, unemployment, child raring, care for the elderly, sickness and disability (and… military service). While the extent of coverage and areas giving rise to such entitlements for pension purposes vary widely among countries, the "caring credits" are particularly relevant for the gender dimension, being more family-friendly and contributing to reduce or avoid poverty among retired women. The problem arises in particular in countries where occupational pensions constitute an important proportion of the retirees income. And since there is increasing pressure worldwide to transfer more of the pension coverage to individuals and to the private sector – this aspect needs to be considered.

As Ginn points out "Comparison of EU countries shows that social and employment policies, exemplified in the Nordic welfare states, can do much to help reconcile women's dual roles in reproducing society and in paid employment. If a trade-off between women's social reproduction and economic production can be avoided, or at least minimised, the affordability of state pension schemes is improved by their social insurance contributions and taxes." (Ginn 2003:96). This also constitutes a win-win solution for society and the individual.

- ***These are areas on which an effort of synthesis and comparability is necessary in data analysis and dissemination, for example by highlighting trends of the cumulative effect of poverty and labour market exclusion, using Eurostat's Structural Indicators of Social Cohesion (e.g. ineauality in income distribution, the risk of poverty before and after social transfers, regional imbalances in employment/unemployment, school drop outs, long-term unemployment, worklessness and child poverty).***

3. Monitoring progress through social dialogue

Gender mainstreaming as well as labour market and pension reforms encounter tough and very vocal opposition from many quarters, particularly from the core labour force with vested interests in the status quo, as well as from business circles who feel that the proposed reforms do not go far enough to liberalize the labour market and the welfare state. There therefore appears to be some urgency to raise awareness, particularly among existing institutions for social dialogue, of the different societal issues and the socio-economic implications of different policy choices. There is need for a greater gender solidarity, between different age cohorts and generations, and among labour market "insiders" and the more peripheral "non-standard workers" as well as the "outsiders". The existence of representative social institutions which have a negotiating capacity at enterprise, local, sectoral and national levels is a prerequisite for achieving consensus on acceptable outcomes for all population groups, as has been amply demonstrated by the Nordic countries, in Austria and the Netherlands, but also more selectively on some specific reform issues in traditionally more adversarial industrial relations contexts like those prevailing in Italy, Ireland, Spain or the UK (Sarfati, 1999, 2003). But it also requires the commitment and involvement of national Governments, EU institutions and social partners to such dialogue and consensus building.

- ***Rather than focusing on "naming and shaming" discriminating practices, some positive feedback on best practice associated with better economic performance should be disseminated on successful social dialogue at national and sectoral levels and of collective bargaining at sectoral and enterprise level dealing with diverse aspects of "inclusion" – whether by reducing the gender gaps in employment, career path, training or pay, or on better balancing work and family responsibilities. The European Foundation's EIRO includes entries on collective bargaining related to innovative work practices that reconcile work and family responsibilities and that attempt to reduce gender pay gaps. More regular thematic coverage may be helpful in this area, including assessment of practical and concrete outcomes.***

Final comments on specific issues

- ***The availability of time series and less dated statistics would be a major improvement.***
- ***More comprehensive coverage of non-standard employment (mentioned above).***
- ***Monitoring educational attainment of atypical workers and their participation in continuing training. Here it is important to review progress over time in provision, quality, access and outcomes in terms of labour market re-entry (especially for prime-aged women), job retention and career progression.***
- ***Monitoring the extent of overlap of fixed term and part-time by gender, age cohort and the direction of mobility between part-time/temporary jobs and full-time jobs, as well as the likelihood of moving out of the workforce altogether. A French paper from INSEE (Bourreau-Dubois et al. 2001) shows the diversity of determinants of part-time work among women and their situation in the labour market. They use the European Community Household Panel, looking at the reasons for opting for part-time, such as the spouse's income, the number of dependant children, age (child bearing or 55+) and the existence of disability, the level of hourly pay (the higher, the less likely is the probability of working part-time). Involuntary part-time is seen as positively correlated with precariousness and going through a period of unemployment increases the risks of involuntary part-time. By contrast, there is a high incidence of mobility into full-time jobs among women who chose to work part-time and then wanted to move on to full-time. The paper suggests that the ECHP should be used for cross country analysis to highlight the activity trajectories of women part-timers, looking for common features and differences which can help policy-makers in better targeting incentives.***

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MEASURING VERTICAL AND HORIZONTAL GENDER SEGREGATION AMONG SCIENTISTS AND RESEARCHERS IN EUROPE – THE EXPERIENCE OF THE WOMEN AND SCIENCE UNIT

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Introduction

Firstly I would like to say how delighted I am to be here to listen to the expertise on the subject of occupational segregation, which is a topic where the concepts, terms and methodologies are still quite disparate. As the first CEIES seminar to focus on gender statistics, this is therefore an important event in that it is bringing the key European experts together. The Women and Science Unit has some experiences in this area that it would like to share as both users and providers of statistics. The Lisbon objective of "creating the most competitive and dynamic knowledge-based economy in the world by 2010 capable of sustainable economic growth with more and better jobs and greater social cohesion" gives the measurement of occupational gender segregation greater importance because it obliges us to reconsider the changing dynamics between productivity and social equilibrium. The slow but steady increase in women throughout science, especially the emergence of powerful new leadership and management styles among women scientists, demands investigation of the business case for recruiting women in knowledge-based occupations and implementation of measures to retain their expertise.

As a policy Unit, the Women and Science Unit has always valued the importance of statistics for promoting evidence-based policy-making and the Women and Science statistical programme has now been running for four years. Action 25 of the European Commission's Science and Society Action Plan (European Commission, 2002) focuses on "*Monitoring progress towards gender equality in science*". It states "*A set of gender indicators will be produced in cooperation with the Statistical Correspondents of the Helsinki Group on Women and Science to measure progress towards gender equality in European research*". As a result, a system of indicators has been constructed and is published in the "*She Figures 2003*" (European Commission, 2003). Furthermore, data updates are published regularly[1] in order to ensure that progress is continuous.

The measurement and significance of occupational segregation is therefore at the core of the Women and Science Unit's statistical work as it provides both evidence of gender inequality and explanatory factors for interpreting pay gap and other indicators. Our own efforts in this field have resulted in 'proxy' indicators since the small population size of women scientists does not give us the same scope for statistical analysis as labour market analysts. I will describe the practical steps that have been taken by the Women and Science Unit to measure gender segregation in European science, and present the reasons why we do not calculate segregation *per se*, but have preferred to use 'alternative' measures, which provide similar information in a more manageable and understandable way.

Today I am going to talk about how the Women and Science Unit has responded to the political need for statistical information on vertical and horizontal segregation within the possibilities of data availability and quality. I will also briefly present results from the main measures of vertical and horizontal segregation that we produce.

[1] See also European Commission (2004b)

Horizontal Segregation

Horizontal and vertical segregation are two of five[2] policy themes that are the bedrock of the Women and Science statistical work. Gender equality is a fundamental element of democracy, but it takes many forms and not all the descriptive statistics are necessarily good indicators of inequality. Professor Blackburn has shown that vertical segregation is the only dimension which indicates pure inequality. Overall or occupational segregation contains elements of vertical segregation which are often difficult to distinguish from horizontal segregation. In fact, in the statistics that are produced by the Unit, we refer loosely to 'horizontal segregation' when we are talking about differences in the gender distributions across fields of science, but these distributions are also highly influenced in practice by hierarchical factors and the results are, strictly speaking, 'occupational segregation'. Real horizontal segregation can only be elicited by netting vertical segregation out of occupational segregation using Pythagoras.

Because of this complication, and the lack of a suitable methodology, we have used alternative ways to present gender differences across scientific fields. We look at the different distributions of women and men graduates, in particular PhDs (ISCED 6) as well as the proportion (concentration) of graduates who are women within each field. In addition, the sex breakdown has been mainstreamed into Eurostat's R&D survey, which has enabled us to calculate the same indicators for researchers by sex and main field of science. It is also possible to calculate these indicators for academic staff by level of seniority. In order to get a better approximation of horizontal segregation, we apply the Index of Dissimilarity to these distributions. The latest results can be found in European Commission (2003) and European Commission (2004) and fresh results for the academic staff, as well as for research funding applicants and beneficiaries and members of scientific boards will be published shortly on the Women and Science Unit's web pages[3].

Vertical Segregation

One of the first national studies of vertical segregation among women scientists was performed by Nanny Wermuth (Wermuth, 1992) where she focussed on the different grades of Professors in Germany. In Chapter 2 of the high-level expert group report "*Science Policies in the European Union, Promoting Excellence through mainstreaming gender equality*". Mary Osborn (see Osborn et al., 2002) also used academic staff grades – but this time for six countries - to highlight the sharp and consistent decline in the proportion of women in senior positions. So, the Women and Science Unit started to collect these data directly from countries[4] in March 2001 but when preliminary results were published in November 2001 (see European Commission, 2001b) it became obvious that using the titles of grades such as 'Professor'[5] is a poor guideline for comparability since the concept of what a Professor is varies from country to country. We therefore undertook a consultation with the countries and asked what the distinguishing characteristics of seniority were at various levels of the academic career. The most overwhelming response was the distinction regarding the PhD-type qualification, but number of years of experience, and acquisition of Habilitation-type status were also a consideration at higher levels.

We then organised a one-day workshop entitled "Measuring Vertical Segregation" in September 2002. It was attended by leading methodological experts[6], data users and data providers and reached several broad conclusions:

- Particular care must be taken not to confuse segregation – which refers to gender differences throughout an entire distribution – with concentration – which refers to the differences at a single point in a distribution
- There was some debate about the optimal number of ranks for a measure of vertical segregation. Although up to 200 are recommended, this would not be feasible in countries with small scientific populations and low

[2] The three other themes are "How many (women)?"; "Pay gap" and "Fairness and success rates"

[3] See http://europa.eu.int/comm/research/science-society/women/wssi/index_en.html

[4] Via the statistical correspondents of the Helsinki Group on Women and Science

[5] In this case, the titles of Full, Associate & Assistant Professor were used

[6] Including Laudeline Auriol from the Economic Analysis and Statistics Unit at the OECD; Professor Robert Blackburn from the Social Science Research Group at Cambridge University, UK; Louisa Blackwell from the Office for National Statistics, UK; Martine Carisey from the Observatoire de Sciences et Technologies, France; Dr Judith Glover from the University of Surrey Roehampton, UK; Eivind Hoffmann, responsible for the International Standard Classification of Occupations (ISCO) at the International Labour Office (ILO); Rossella Palomba from the Instituto di Richerche Sulla Popolazione e le Politiche Sociali, CNR, Italy; Eeva-Sisko Veikkola from Statistics Finland; Nanny Wermuth from University of Mainz, Germany as well as statistical correspondents from Germany, Portugal, Sweden, Estonia, Slovakia and experts from the Commission services.

proportions of women. Professor Blackburn recommended that seven be taken as a minimum. Somers' D statistic was put forward as the recommended measure. With the available data it would also be difficult to calculate both 'pure' vertical segregation and occupational segregation in a comparable but distinct way.

- Furthermore, even though there are several surveys with largely common characteristics of (scientific) survey populations[7], not one of the existing manuals or classifications[8] provides a framework that would be suitable for measuring vertical gender segregation among European scientists or researchers. The Women and Science Unit therefore proposed a simple four-tier system for categorising levels in academia and corresponding definitions, based on the feedback from the consultation exercise. This system would focus on the two core questions – who goes into academia & who gets to the top?

As a result of the workshop, the definitions have been fine-tuned and data have been published for the most senior Grade A and for the aggregate of Grades B, C and D[9]. In-depth quality assessments are being performed to check that data are coherent with those reported to Eurostat and that the definitions are being applied correctly. More meta-data are also being collected on the variations in the coverage of the surveys from which these data are drawn. Confidence in the results is now good enough for all 32 countries to have validated data for 2002 which are about to be published for each of the Grades in four-tier system[10].

However, we must not forget that academic staff form only *part* of the scientific systems – efforts are already underway to review what can be implemented to find out more about vertical segregation in a group of professions where women are overall well-represented – medical sciences. Results from this work will take about two or three years to reach a publishable standard.

Alternatives

As with the occupational/horizontal segregation, we are obliged to produce 'proxy' indicators in order to obtain a standardised measure of vertical gender differences in these occupations. Again, we apply the Index of Dissimilarity and it is interesting to note that there is no obvious relationship between critical mass and vertical segregation measured in this way. This means that there is no guarantee that women are more likely to rise to the top *en masse* in the areas where they form a greater part of the employees. Because the Index of Dissimilarity is a standard measure, we can compare the results for all academic staff with those of only the most senior level, to see whether occupational segregation evens out at the top of the academic hierarchy. Another indicator that we are about to publish for the first time is simply the Odds Ratio – that is, how many times more likely men are than women to reach the top echelon of the academic career.

In the course of a special study looking at the situations of women scientists in the seven Central and Eastern European countries and the three Baltic countries, we realised that women and men also have very different behaviours *vis à vis* their distributions in the low and high expenditure areas of R&D. This gave us the opportunity to develop the "Honeypot Indicator" which is basically a standardised measure of the loss experienced by women *en masse* because they are more like to be more heavily distributed in the low expenditure fields and sectors. The first results of this work have been published in a report entitled "*Waste of talents: turning private struggles into a public issue - Women and science in the Enwise countries*" (Blagojevic et al., 2004) for these countries and subsequently in European Commission (2004) for the EU-25, candidate and EEA countries.

The Gender Equity Measure could also be applied to science, where participation in scientific boards could be taken as a proxy for political participation & decision-making; recipients of research funds as a proxy for economic participation & decision-making; and pay differentials for identified scientific occupations or the Honeypot indicator as a proxy for power over economic resources. We are currently examining the feasibility of this approach in line with an assessment of the quality of the data on scientific boards and research funding applicants and recipients.

[7] In particular surveys of Higher Education staff and R&D surveys
[8] For example, the ISCO, the Frascati Manual, the CAMSIS etc…
[9] See European Commission (2003)
[10] See h for a more complete set of results

Vertical segregation acerbates gender bias

Finally, it is important to note that the 'traditional' measures of scientific productivity may tell us more about vertical segregation than about productivity itself. A US study (Long, 2001) has shown that senior team members are often in a better position to claim credit for work achieved by junior staff. Because of the gender bias in seniority, the resulting indicators give the impression that women are less productive. However, such a study still remains to be undertaken on a broad scale in Europe.

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STATISTICS ON (PROVISIONS FOR THE) RECONCILIATION OF WORK AND CARE TASKS: A CHALLENGE

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1 Introduction

The availability of facilities for reconciling work and care tasks in the home is of great importance for the labour market participation of women in particular. Since women devote much more time and energy to care tasks than men, a lack of facilities enabling them to combine family life with employment impedes their employment prospects in general and their careers in particular. This general statement applies for participation across the different segments of the labour market. If there are differences between occupational groups or between sectors of the labour market with regard to the accessibility of facilities for combining work and care, this will have an influence on occupational segregation.

Although reconciliation of work and family life is an important part of the EU's employment policy, and although European countries have in varying degrees implemented policies on this issue, many questions remain unanswered. What should be the role of the state in this area? What should be the role of employer and employee representatives, of individual companies or (individual) employees? What is the impact of these policies on labour market participation in general and occupational segregation in particular? Which policies are most effective, and why? Despite the fact that a fair amount of research has been carried out in this field, these questions remain difficult to answer.

There are of course many factors that explain this lack of knowledge, both theoretical and methodological. In my paper I will focus on the availability of comparative information both on policies and on the take-up of provisions to facilitate the reconciliation of work and family life. I will try to cover different European countries, although often I will only be able to present information about the situation in the Netherlands.

There are of course many different kinds of facilities for the reconciliation of work and care tasks, varying from more structural provisions such as the right to work part-time, to provisions aimed at specific (more or less incidental) circumstances, such as maternity leave, parental leave and care leave. In this paper I have chosen two relatively new provisions: care leave and working time accounts. Care leave can enable workers to take leave when they are suddenly confronted with a sick or terminally ill relative. Working time accounts enable people to save up time or money in order to take a period of paid leave at a later stage, for instance in order to take care of a sick child or parent.

2 Policies and the institutional context

Provisions for the reconciliation of work and family life can be organised at different levels. At the supranational level the European Commission can enact directives, while at national level governments develop and implement statutory regulations for their own countries. But regulations can also be developed and implemented at sector or industry level (through collective bargaining applied to a range of companies or sectors), at individual plant or company level (through localised collective agreements) and also at the individual level (through the employment contract between an employer and an employee). There is considerable variation in the way different countries implement their policies on work and the reconciliation of labour and care. Sometimes both the national government and the two sides of industry play a key role (e.g. in Sweden, Germany and the

Netherlands), while in other countries (such as the UK) these schemes (if they exist) are mainly organised at individual company level.

The method of organisation has a major impact on the situation of employees. Where everything is organised at the national level, all workers are governed by the same rules and provisions. Where collective agreements (at sectoral or local level) are the main instrument, however, this can create wide differences between workers in terms of the availability of provisions. This in turn can contribute to occupational segregation in the labour market – the theme of this seminar.

In order to analyse the effect of the institutional context in which employees are placed, all levels of organisation should ideally be taken into account. This is not easy, however. In section 2.1 and 2.2 I present some results from a study on the organisation of working time (Anxo et al, to be published). In this project we attempted among other things to describe the institutional framework in six countries (Sweden, Germany, Netherlands, France, Spain and United Kingdom) with regard to a number of working time options. I will first describe the institutional framework for care leave and working time accounts in the six countries mentioned. After that I will point out some difficulties in gathering statistical information on the institutional context in different countries.

2.1 Care leave

All six countries studied have some statutory schemes for care leave, usually to enable parents to take care of their sick children. Facilities for dependants other than children are not always present.

- In Sweden the law enables parents to take leave to care for sick children (60 days per year and per child, up to the child's 12th birthday or, where the child is disabled, up to 16 years old). Employees are also entitled to leave of absence (or reduction of working time) to take care of a relative (spouse, parents, siblings, children) who is seriously ill (60 days). The loss of income is compensated for in accordance with the replacement rate for sickness benefit. Under another law (since 1998), employees have the right to take unpaid leave on the grounds of 'pressing family reasons' (sickness or accident of a relative).
- In Germany both parents can take up to ten days leave per year to take care of sick children. If they have more than one child, they are entitled to 25 days. The periods for single parents are double. During the period of leave, sickness benefit is paid (70% of earned income). For elderly relatives there is no statutory right to leave, but financial compensation is paid by the public insurance scheme for home care (paid to the person requiring the care). There is no limit to the duration of this financial compensation.
- Employees in the Netherlands are entitled to annual paid care leave equivalent to twice the number of their weekly working hours. Thus an employee who works full-time can take up to ten days' leave. This leave can be used to care for children, partner or parents. The level of payment is at least 70% of the wage (paid by the employer). In addition to this 'short-term care leave' there is a facility for longer-term leave, which can be taken for care but also for study. This is not a right, however, but a financial provision. An employee may be eligible for a cash payment of up to EUR 490 per month if the employer agrees to the employee taking leave for at least two months (six months maximum). There are however several conditions that have to be met (e.g. the employer has to take on someone who is unemployed to replace the employee).
- Spain operates a system of short-duration, paid care leave. In the case of serious illness of a child or relative, employees have a right to two days' leave, paid in full by the employer, and four days if they have to travel to another town. Employees are also entitled to one year's unpaid leave to take care of a relative.
- Care leave in France is unpaid. Employees have a right to three days' unpaid leave per year in the event of illness or accident of their child (five days if the child is under one year of age or if the employee has at least three children under 16). In addition, an employee may take leave or work part-time for a period of four months in the case of a serious disease of their child (this leave can be extended twice, up to a total period of one year) or in the case of a terminally ill dependent parent.
- The scheme in the UK is the most meagre but is also rather vague. Employees are entitled to take a 'reasonable amount' of unpaid leave to deal with an emergency or unexpected situation involving a dependant.

In principle, employer and employee representative bodies can add to the schemes, but how often this really happens is not known for most countries. For the UK, a survey by the Charted Institute of Personnel

Development shows that the proportion of member companies offering some form of leave to care for elderly relatives rose from 15% in 1999 to 27% in 2002. In the Netherlands, the Labour Inspectorate (*Arbeidsinspectie*) presents an overview of the content of collective labour agreements with regard to provisions for reconciling work and care tasks. The most recent overview relates to the situation in the year 2000 (Schaeps et al 2002). This is however no longer very relevant as far as care leave is concerned, because in December 2001 a new law was implemented containing the aforementioned provision for paid short-term care leave. In general, however, this research project from the Labour Inspectorate is very useful, since it monitors progress (or the lack of it) in collective labour agreements. As far as I am aware, no other European country has a comparable data source.

Comparable information about care leave schemes at individual company level in different countries is even more scarce. Only occasional reports are published, which often focus on just one or a few countries.

2.2 Working time accounts

A second example is working time accounts. Before describing the situation in the six countries, it is necessary to define what we mean by 'working time accounts' and how this term relates to other notions such as 'annualised hours' and 'time banks', which also refer to a system of flexible working time over a certain period. If we look only at schemes explicitly referred to as 'working time accounts', we come to the conclusion that the phenomenon is not widespread in most countries, with the exception of Germany. In a report for the European Foundation (European Foundation 2003b: 10), Fagan mentions only a few sectoral agreements on 'time accounts' in Italy and Sweden in addition to the German working time accounts. What is becoming quite common in many countries is the annualisation of working hours. Strictly speaking, 'annualised hours' or 'annualisation' are terms used to describe schemes where employees' working time (and pay) is calculated and scheduled over a period of a year (or less) rather than on the basis of a week, as in more traditional working time schemes (see for an overview: EIROnline 2003). The epithet 'working time account' is more neutral than 'annualisation' in terms of time, since it contains no mention of a reference period. Time banking is also a neutral term in this respect, but is used less often than working time accounts. I will use the term 'working time account' and define this as *a system that enables a flexible distribution of working hours over a defined period that is longer than the traditional working week*.

The quality of this provision for the reconciliation of work and care tasks depends on how much time (or salary) can be saved up for future leave and what the overall period for balancing the working time is. The more time (or salary) and the longer the overall period, the more flexibility is offered in adapting working time to different periods in the employee's life course. Another important issue is the degree to which workers can influence the amount of working time and its distribution over time, because only if employees have some 'time sovereignty' can they use a flexible working time scheme to structure their life course according to their needs. The potential impact also depends on the possibility or impossibility of transferring a 'time account' when changing employers and on the certainty that a time account is protected in the event of bankruptcy of the employer. If conditions such as these are not well covered, employees may not be willing to take the risk of using a working time account.

At present three of the six countries studied (Germany, Netherlands and France) have some statutory policy on working time accounts; in Sweden there still is discussion about this issue.

- Germany has a law on flexi-time which regulates social security protection in cases of discontinuous working time distribution. This is generally without collective financial compensation, but in the case of an accumulation of time in a working time account, the employee him or herself finances the leave. Many collective and company agreements regulate the conditions for the accumulation and withdrawal of time from the working time account.
- In the Netherlands employees are entitled to save up 10% of their salary or working time per year for taking up leave at a later stage in life. This is in fact couched in a legal framework: employees may only benefit from this provision if their employer operates a *verlofspaarregeling* (lit.: 'leave saving scheme'). The working time account may be used for study, care or holidays, but not for early retirement.
- A vigorous debate is currently under way among employee and employer representatives and the government on the 'life course scheme'. Among other things, this scheme is intended to be used by employees to facilitate for early or flexible retirement. Once this scheme has been implemented (the government is proposing: 1 January 2006), the present fiscal facilities for early retirement will be restricted.

- Provisions for working time accounts can also be found in collective labour agreements in the Netherlands. Research by the Dutch Labour Inspectorate shows that 53% of these agreements contain some provision for this (Schaeps, Feenstra and Klaassen 2002). The purposes for which the account can be used are sometimes extended (e.g. to include early retirement).
- France has a law stating that industry or company agreements may implement a time account (CET), which may be filled with annual paid leave (up to a maximum of ten days) or money (various bonuses and allowances, part of individual wage increases, overtime payments, possibly employer contributions) or days off, which are linked to a working time reduction. This CET may be used either in the form of time off or in money. It can be used for part-time parental leave or care leave or for educational leave, but it must be used within five years of the creation of the account.

2.3 Reflection on the quality of the information

These examples make it clear that there are fairly considerable difficulties regarding the availability of information on policies and the wider institutional context in different countries with regard to facilities for combining work and care tasks. To mention some of the most important:

- There is no general database containing information on the content of the institutional framework for the reconciliation of work and family life. Information about the policies of national governments is currently the easiest to trace, mostly through websites (e.g. that of the European Foundation for the Improvement of Living and Working Conditions). But even eliciting this information requires quite a lot of work, the information is not always very precise and it is often not clear whether it is really up to date.
- There are wide differences between countries in what is meant by a certain provision. Sometimes, for instance, care leave is intended to be used only for taking care of sick children, but sometimes also includes caring for sick parents, or perhaps even sick close friends. Another difference relates to who is entitled to the facilities. Often only employees are entitled, but in addition schemes sometimes apply only for large firms or only for people with at least one year's service.
- There are also considerable differences in the quality of the schemes. For example, the payment of care leave and the consequences of this for social security and pension entitlements varies greatly between countries.
- Countries also differ in terms of who is the dominant actor in the regulation and implementation of policies. Systematically gathered information on the role of different actors and on the situation in different countries is however very scarce.
- The schemes and provisions change over time, so it is very important that the information is updated on a regular basis.

It might be argued that it is not the task of statistical offices to collect and provide these kind of data. But: whose task is it, then? The European Commission has stated that monitoring is of great importance in order to assess the progress of equal opportunities in practice (*Framework strategy on gender equality*, 2000). It is not only important here to look at the outcome in terms of actual behaviour, but also at the progress countries make with regard to equal opportunity policies. This information is relevant for policymakers at both EU and national level to help them assess the advancement of policies on this field. Moreover, information about policies and other regulations is necessary to study the impact of policies on a country's labour market participation. In my opinion the EU should play a more active role in reviewing and monitoring different provisions for the reconciliation of work and care tasks in the different member states. If this is not considered a task for statistical offices and Eurostat, it would perhaps be a useful extension of MISSOC (see: http://europa.eu.int/-comm/employment_social/missoc).

3 Information on the take-up of facilities for the reconciliation of work and care tasks

The second part of this paper focuses on the availability of statistical information on the take-up of provisions for combining of work and care tasks. Traditionally, statistical offices gather lots of information about people's behaviour, for example their labour market participation. The take-up of provisions is also frequently monitored, for example the take-up of cash benefits, medical care and public transport. As regards the take-up of provisions for the reconciliation of work and care tasks, however, the amount of information is very

disappointing. Although some statistical offices have information about parental leave and child care, there is a dearth of transnational monitoring and research. Sometimes universities and other research institutes carry out international comparative research, but this is mostly on an ad hoc basis (see e.g. the report on parental leave edited by Peter Moss and Fred Deven (1999)). Considering the importance the EU and national governments attach to provisions for the reconciliation of work and family life for the increase in female labour market participation, it is incomprehensible that more progress has not been made on the development of statistical information in this field. Parental leave and child care can probably be considered the most important, and form a good starting point. However, in my view it is important to look at the 'total policy package', because different provisions fulfil different roles in reconciling work and family life. I realise that this is no easy task, but since researchers enjoy challenges this should not be a barrier.

Looking at care leave and working time accounts again, I will give some information on the use of these provisions. Primarily because of the lack of data (or my ignorance of it), I will restrict myself to the situation in the Netherlands. I will present some results from a recent project, carried out by Heleen van Luijn and myself, and in doing so I will reflect on the difficulties in gathering this type of information. Perhaps this research project can serve as an example – whether good or bad I shall leave it to others to decide – but in any event our experience may be instructive for future research.

3.1 Take-up of care leave

In order to analyse the take-up of care leave, we drew a distinction between leave taken to care for someone with a short-term illness and leave to care for someone with a long-term or terminal illness. As stated earlier, there is a statutory provision for the former (the right to up to ten days' paid leave in the case of a sick child, partner or parent). For the latter there is no legal right to leave, but sometimes collective labour agreements contain a scheme for long-term care leave. In addition there is the cash benefit in the event of a career break (for at least two months), but I will not go into the take-up of this provision in this paper.

Although in principle it is possible to measure the take-up of care leave of all employees, we also wanted to establish the take-up rate among employees who were actually confronted with a situation in which they were entitled to care leave. For this reason, people were asked if they had been confronted with the need to care for a sick person (no longer than two weeks for short-term care and longer than two weeks for long-term care) within the two years prior to the study[1]. *Entitlement* in our survey was therefore defined as being in a situation to which a particular scheme applies. This is a fairly broad definition, since the legislation stipulates all kinds of conditions that an employee must meet in order to qualify for the scheme (such as length of service). For practical reasons it was however not possible to take such conditions into account in the study.

The 'entitled' were further divided into those *with* and *without a need* for the care leave scheme. Those with a need are both entitled persons who used the scheme in the situation in question and those who did not, despite saying that they needed to. Those without a need are people who cared for sick relatives, but neither used care leave nor felt a need for it.

The *users,* finally, are those who actually took leave. Initially, we did not take into account what kind of leave people actually took. We first asked whether they had taken any kind of leave, and only after that did we ask them to specify the kind of leave. Was it the type of leave provided for this situation in the legislation, or did they take some other kind of leave?

The results of this investigation are presented in table 1. During a period of two years, one in seven employees was confronted with having to look after a sick person (child, parent, partner, family member, friend or other) for a short period. Women stated this more often than men, which can be attributed to the fact that women have larger social networks and more often feel the need or responsibility to care for others. The majority of the entitled employees took some kind of leave (73% of all those in this situation), but only a small part of the leave taken was actually the official care leave. Mostly people just took one or two days off (out of their regular holidays) – see table 2.

[1] This was done because otherwise the sample size would have needed to be much bigger than we could afford.

Table 1 Overview of entitled employees, need for and take-up of care leave, all employees aged 20-61, 2001 and 2002 (%)

	care leave for short-term illness			care leave for long-term illness		
	men	women	total	men	women	total
entitled employees	14	17	15	5	10	7
entitled employees, divided into:						
- no need for leave	1	2	2	1	3	2
- need, but no take-up of leave	2	3	2	1	2	2
- take-up (in broad sense) [a]	10	12	11	2	4	3
use of a scheme that is specifically meant for this situation, as proportion of total take-up of any kind of leave [b]			9			[c]

a This refers to some form of leave, irrespective of which type.
b This refers not to the proportion of users among all employees, but to the share of the leave specifically intended for this purpose in the total take-up of some form of leave for these situations.
c Since there is no statutory scheme for long-term care, people were not asked about the take-up of 'long-term care leave'.
Source: SCP (Work and Care Schemes 2002)

One in fourteen employees was confronted with having to care for a sick or terminally ill person for a period of more than two weeks. Again we see that women report (much) more often than men that they have been in such a situation. In these cases only 43% of the carers actually took some form of leave. Since an official leave scheme for long-term illness does not exist, many different kinds of leave are taken: holidays, special leave, unpaid leave and also some people report sick. Holiday entitlements are again often used, but less frequently than in the case of short-term leave. Special leave is almost as important (see also table 2).

Table 2 Overview of the type of leave taken to care for someone with a short-term, long-term or terminal illness, 2001 and 2002 (%)

type of leave	short-term illness (s=537) [a]	long-term or terminal illness (s=125)
short-term care leave	9	10
holiday	56	26
ADV (leave built up in lieu of pay)	11	9
special leave	5	22
unpaid leave	5	7
reported sick, no leave taken	5	14
other	7	10
don't know	2	2
total	100	100

a s = number of situations.
Source: SCP (Work and Care Schemes 2002)

3.2 Use of working time accounts

As stated in section 2.2, employees in the Netherlands can save up 10% of their salary or working time per year towards leave taken at a later stage in life. This scheme is facilitated by the tax laws: people put their time / money into a specific 'account' and tax is not paid until the money is withdrawn. This scheme is however only a legal framework, not a legal right. Employees are only entitled to this tax facility if their employer operates a 'leave saving scheme' (*verlofspaarregeling*). There is another provision in addition to this scheme, however. By law, all employees are allowed to save up a proportion of their holidays (except for a certain minimum that must be taken) over a period of five years. The employer has to give his consent to this. Thus there are currently two different systems in place for saving up time for later use as leave - one general scheme and one facility that is

only available to some employees. This means that, in principle, not all employees are entitled to some sort of working time account, and that some have better provisions for this than others.

In our study we asked people if they had wanted to save up time or money to be used for later (paid) leave in the period of two years prior to the study, and also whether they had actually done so. Table 3 shows the results.

Table 3 Overview of employees entitled to working time accounts, the need for and use of this provision, all employees aged 20-61, 2001 and 2002 (%)

	working time account		
	men	women	total
entitled employees	100	100	100
entitled employees, divided into:			
- no need for leave	83	83	83
- need, but no take-up of leave	10	12	11
- take-up (in broad sense) [a]	7	6	6
use of the specific 'verlofspaarregeling', as proportion of total use of any kind of leave	35	50	40

a This refers to some form of saving up time or salary, irrespective of how this was done.
Source: SCP (Work and Care Schemes 2002)

It can be seen that this provision is not particularly popular: 83% of all employees had felt no need for it. Furthermore, it appears that women more often feel a need for a working time account, but men more often use it. On the other hand, if women use it, they more often take advantage of the tax break.

It is interesting that although this scheme was brought in to facilitate the combination of work and care tasks, the people who are actually using it or are interested in using it mainly do so in order to take a longer holiday at a later stage in their life. So although some 'recovery' may be necessary after a period of combining work and care tasks, it seems that people do not anticipate to time pressure by saving up time or money to enable them to take leave during the busiest phase of their life.

3.3 Quality of information about users

Any statements about the *quality* of information on the take-up of provisions for combining work and family life must be preceded by an even more urgent conclusion, namely that the information itself is often lacking. As stated earlier, this type of provision receives very little attention from statistical offices. This can perhaps be attributed to a certain 'male bias' in statistics, since provisions are not themselves excluded as a theme in research programmes. On the other hand, perhaps this absence of information should be attributed to the fact that these provisions are often relatively new, which would imply that there is hope for the future.

Surveys of employees can certainly provide information about the take-up of these provisions. But of course there are several problems.

- Many provisions are only relevant for certain groups, so this means it would require quite a large sample to be able to give an accurate estimate of the take-up of a provision by the population.
- Although it can be interesting to know the take-up rate of leave provisions among all employees, it is also important to focus on those entitled to leave. In international comparisons allowance must for instance be made in some way for the structure of the population. If there are relatively few children in a particular country, or a relatively large elderly population, this will influence the occurrence of situations in which employees need to care for a relative and hence the take-up rate of leave facilities. We therefore need to know to what extent people are actually confronted with situations in which they need to care for others.
- Another issue concerns the fact that people often use different methods to solve problems in combining work and care tasks. As we saw in this survey, many employees take some of their holiday entitlements for this. Others content themselves with less leisure time, while some report sick. To gain a good insight into how people reconcile work and care tasks, it is important to ask what type of solutions employees use.

The survey from which I have reported some results was focused specifically on the issue of the need for and take-up of leave arrangements. And although it would of course be very interesting to conduct the same survey in other countries, this would be very costly. However, perhaps the experiences gained in this survey can serve as an inspiration for the development of a separate module for the Labour Force Surveys.

4 Concluding remarks

For the development of equal opportunity policies it is important that different kinds of information are available. In this paper I did not so much elaborate on the relationship between provisions for the reconciliation of work and care task and occupational segregation, but on the availability of data on these provisions in countries and their use. In my opinion serious gaps exist.

- In the first place information about the institutional context in different countries and the content of provisions for reconciling work and care tasks is needed. I discussed this topic in the first part of my presentation. In my view this should be organized by the European Commission. And perhaps MISSOC would be a good place for this.
- Secondly, statistics need to be built up about the need for and take-up of these provisions. This is not an easy task, because the provisions in different countries differ. But even questions at a general level would be very informative. Combined with the database on provisions in the European countries, it would then be possible to interpret the outcomes. In my view the Labour Force Survey could be a good place to accommodate a module focusing on the need for and take-up of facilities for combining work and care tasks.
- Next to this of course, more general data are needed on the labour participation rates of men and women and their distribution over the labour market. Although these data are quite well developed in European countries, some additions to the Labour Force Surveys would be very useful. In particular, information on how many hours people actually want to work and how this relates to caring duties is of importance.

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THE CAUSES OF OCCUPATIONAL SEGREGATION: NEW DATA NEEDS

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(1) Occupational segregation in its current form is a relatively new development, and is variable, hence has a degree of malleability:

- occupational segregation in agrarian societies is relatively undeveloped. In its current form, it was instituted in the late 19th century in industrial societies
- the long-term trend is for occupational segregation to decline very slowly from high levels at the start of the 20th century
- recent cross-national comparative research now shows that there is no causal link between occupational segregation and the pay gap; any link is coincidental rather than causal
- economic theory (human capital theory) explains occupational segregation as due essentially to variable investments in education and careers; sociological theory explains it as due to a combination of sex discrimination and women's family roles

(2) Structural, macro-level causes of occupational segregation:

- the ILO's seminal comparative study of occupational segregation demonstrates that the development process produces increased levels of occupational segregation, and an increasing pay gap as well, it appears. It is not true, as previously assumed, that social and economic development are universally higher in developing countries. Within the OECD group, occupational segregation is highest in the Scandinavian countries, which have active gender equality policies.

(3) Micro-level causes: life goals, work orientations, family work:

- There is contradictory evidence on the importance of work attitudes, lifestyle preferences, life goals, values, etc as a correlate of occupational segregation for women (but not for men). Some studies (Europe, Australia) find a link between work attitudes and lifestyle preferences and the type of occupation (male-dominated, female-dominated or mixed) a woman holds, other studies (Britain) do not find any association at all.
- case studies of mixed occupations (such as pharmacists) show that the pay gap can be above-average here, partly because women's adoption of the secondary earner identity leads them to choose family-friendly jobs within the mixed occupation. Other case studies (such as translators, civil service executive officers) find no pay gap, but working wives still classify their earnings as secondary income in their household, while male colleagues treat their earnings as a main breadwinner income, and this affects continuity of employment, active pursuit of promotion, etc.
- jobs vary more than occupations in being family-friendly or not; some occupations include both types of job.
- labour turnover analyses show that workforce dropouts are higher among women, and higher in female-dominated occupations. (This research relies on information on last jobs of people not currently in the labour force.) So there is no evidence to support the idea that women are more likely to drop out of male-dominated or mixed occupations because they fail to provide family-friendly job options.

(4) Research shows that women's secondary earner identity seems to be universal and unchanging for the majority of women.

- secondary earner identity is not determined by income, job grade or educational level among men, hence there is no causal link
- secondary earner identity is observed among graduate wives, as well as those with lower education and job grades
- women's secondary earner identity does not depend on having care responsibilities, but it is closely associated with being married (strongly) or cohabiting (less strongly)
- wives' secondary earner identity has been validated in at least one British sex discrimination/equal opportunities court case.
- wives' secondary earner identity is maintained by the continuing practice of women preferring husbands who are older, better educated, higher-earning, in higher-grade jobs, etc, and hence are already, or are likely to become, `good providers'.

The above conclusions are based on research evidence summarised and presented in Hakim (1997, 1998, 2000, 2003, 2004).

(5) The implications for data collection, data analysis and further research are:

- The Eurobarometer surveys should resume the question on main income-earner in the household that was used repeatedly in the 1980s
- the European Social Survey and the European Community Household Panel should include questions on lifestyle preferences, life goals, and principal/secondary earner status.
- the Labour Force Survey cannot collect data on attitudes/life goals due to 30%+ levels of proxy information; the population census also has proxy data problems
- research should focus on mixed occupations and the graduate labour market, as these provide strategic tests of all theories; more data is needed on these groups.

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CARE RESPONSIBILITIES, OCCUPATIONAL DIFFERENCES, AND THE IMPACT OF PROMOTION ASPIRATIONS

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Introduction

As feminists have long argued (eg Lewis 2002, Glucksmann 1995, Sevenhuisjen 2002), caring is a universal necessity in the absence of which human beings could not survive, and caring is work. Caring work has been identified as a peculiarly 'feminine' *metier*, but this is not the case. Centuries of ideological renditions of 'the feminine', to say nothing of gender socialisation and normative expectations, render it extremely likely that in any given population, women will carry out more care work than men. Nevertheless, men can care as well as women, and it is important to recognise that although caring may be gender *coded*, it is not 'gendered' in any essentialist sense (Fraser 1994). Indeed, as Fraser argues, gender equity is only likely to be achieved if the gendered division of labour is 'deconstructed' – that is, if men become more 'like women', combining the work of both employment *and* caregiving in their day to day lives.

Nevertheless, the gendered attribution of caring responsibilities still makes a major contribution to 'agency inequality', that is, the *capability* of individuals to achieve their full 'functionings' (Korpi 2000, Lewis 2002, Nussbaum 2000. Capability to achieve functionings might be described as an untrammelled equality of opportunity). The capability to achieve functionings makes an important contribution to individual well-being, and requires not simply an absence of formal (institutional) barriers, but also of normative constraints (Nussbaum 2000). However, as Lewis (2002 348) argues, the normative assignment of caring work to women means that '…too often women experience little *genuine* choice to care' (emphasis in original). Market, rather than caring, work retains the higher value in contemporary societies. For as long as this remains the case, then gender inequality is likely to persist unless caring work is equally shared between men and women.

Although in general, women undertake a larger share of domestic work, both its extent, as well as its consequences for occupational segregation, will be mediated by a number of factors. In this paper, we will first examine the impact of national policy differences. Second, we will briefly examine occupational differences, extending this discussion in the third section by examining the question of promotion aspirations. Fourth, we will examine the intertwining of occupational class and gendered employment patterns in Britain, and the consequences for inequality. Finally, I will make some suggestions as to the implications of my discussion for gender statistics.

Country differences

Both state welfare and labour market policies have an impact on the rate and nature of women's employment, particularly that of mothers (Esping-Andersen 1990, 1999, 2002). *General family supports*, directed at the (nuclear) family, may encourage the reproduction of a relatively traditional division of domestic labour, particularly if they are aimed directly at women. Even if they are ostensibly gender neutral, they are still more likely to be taken up by women rather than men (eg parental leave). General family supports include cash child allowances (including 'cash-for-care' arrangements, see Leira 2002 chap 5), family tax benefits to children and non-employed spouses, and care provision for older children (Korpi 2000). *Dual-earner supports* are more likely to encourage women's employment than general family supports, via attempts to shift care work from unpaid to paid work (ie public sector provision) as well as within the family. Korpi (2000) includes as measures of dual-earner supports public day care for young children (0-2), paid maternity and paternity leaves, and public home help for the elderly. In contrast, *market-oriented* state policies are characterised by the relative absence of either general family or dual earner supports.

Different welfare state regimes are also distinguished according to the contribution they make to gender and class inequality. Esping-Andersen 1990 has distinguished between universalist or social democratic models where benefits are available to all citizens, (described by Korpi 2000 as 'encompassing', in practice Scandinavian social democracies), conservative or corporatist, where benefits are linked to state-administered social insurance, and liberal or 'market oriented' regimes providing only targeted supports or a basic 'safety net'. Korpi found that levels of gender inequality are lowest in 'encompassing' welfare states providing high levels of dual-earner supports (the Nordic states). These states are also characterised by high levels of women's employment. Conservative/corporatist welfare regimes providing general family supports tend to be associated with relatively high levels of gender inequality, and low levels of women's employment (given that social and employment protections are directed at the male breadwinner/provider in such regimes. See Esping-Andersen 2002). Basic security or 'liberal' regimes tend to be associated with moderate levels of gender inequality, and relatively high levels of women's employment, (although high levels of class inequality), given that there are relatively few barriers to women's employment in the labour markets of such regimes.

However, although the extent of gender inequality is low in the 'encompassing' Nordic welfare states, these countries have high rates of occupational segregation. The provision of state services is not only supportive of women's employment, but has also served to create 'women's' jobs in the burgeoning sector of public employment. It has been persuasively argued that segregation indices are not adequate as measures of gender inequality (Blackburn et al 2000), and that gender pay equality may best be achieved via the implementation of policies that would reduce wage differentials in society as a whole (Blau and Kahn 2003, Blau in Persson and Jonung 1998). The Scandinavian example, where the gender wage gap is low but indices of segregation are high, provides an empirical demonstration of this argument. Similarly, the reduction of wage differentials in other countries would effectively upgrade the returns to marketised caring work which, in many countries, has been culturally downgraded as 'feminine' employment.[1]

A major point relating to gender statistics that may be drawn from this discussion is that indices of occupational segregation are not necessarily adequate indicators of gender inequality. This raises the question as to whether the most fruitful way forward is to focus on the creation of improved strategies of measurement of segregation *per se.* Rather, it may be preferable to attempt to think creatively about new measures and classifications of both market and caring work that better capture the underlying processes leading to gender inequality in employment.

Occupational differences

The clustering of men and women into different areas of employment has a number of different sources. Historically, women have been formally excluded from a range of higher-level occupations and professions. Formal and institutional exclusionary practices were frequently accompanied by normative and cultural assumptions as to the 'proper' kind of employment for women, in which jobs associated with caring and nurture loomed large.[2] Occupational segregation is also a consequence of (masculine) exclusionary practices within organisations, particularly in respect of promotion opportunities (eg Crompton and Jones 1984). Since the 1960s and 70s, women in 'western' countries have largely gained formal equality in the sphere of employment, and direct exclusionary practices have been removed (Bradley 1998, Halford et al 1997). Nevertheless, occupational segregation persists, largely due to the major source of agency inequality on which I focus in this paper – women's continuing responsibilities for unpaid caring and domestic work. As Halford et al (1997) argue, although direct discrimination on the grounds of sex has virtually disappeared, in contemporary organisations a new distinction has opened up between 'encumbered' and 'unencumbered' workers. None of the women managers interviewed in Halford et als' study had children, and all thought it would be impossible to be a manager and have children (ibid 202). Similarly, Wacjman's (1998) research on higher level managers showed that whereas most of the men had children, most of the women did not, and that even 'successful' women's career identities (unlike men's) were crucially shaped by their family roles (see also Wacjman and Martin 2002).

Many women, therefore, have gravitated towards jobs that are 'family-friendly', which usually means working hours that can be combined with family obligations (as in, for example, the educational sector), or jobs with

[1] A good example here would be childcare work. In Sweden, paid childcare is known as 'pedagogy' and a high proportion of childcare workers are qualified to degree level. In Britain, paid childcare is a low-level occupation requiring only low levels of qualification, and is frequently undertaken by the unqualified.

[2] The cultural 'gendering' of particular occupations varies between different countries. See, for example, Rubery et al's (1995) discussion of the hospitality industry.

part-time and/or flexible employment opportunities (as in, for example, retail). This will contribute to the perpetuation of occupational segregation by sex (although it should be remembered that men who seek 'family-friendly' working arrangements are also likely to be found in such jobs. See Crompton 2001). Occupational classifications have tended to have a focus on the kinds of individual levels of reward and 'life-chances' associated with particular occupational groupings, as in occupational class schemes. As more women enter employment, however, it may be suggested that a classification of occupations in relation to their 'caregiving compatibility' might be one aspect of improved gender statistics.

Individuals in occupations requiring specific job-related qualifications may work part-time without occupational 'downgrading', and women are increasingly improving their 'human capital' via their acquisition of professional qualifications. Much professional employment, as in teaching, nursing, medicine and the law, offers opportunities for part-time work. Part-time professionals, however, will not usually be in 'career track' professional jobs. Nevertheless, the possession of job-specific skills does mean that many professionals can take 'time out' from career development without experiencing occupational demotion.

A recent qualitative cross-nationally comparative study (of medical doctors and bank managers) established that the doctors (mainly women, but some men) had to a considerable extent been able to shape their career paths around their family lives (Crompton ed 1999 Crompton 2001). One consequence of this strategising was extensive gender segregation *within* the medical profession (Crompton et al 1999). Nevertheless, the flexibility of employment (and self-employment) opportunities within medicine had had a measurable impact on family formation, in that female doctors had (statistically significantly) more children than female bankers. Although aggregate level data on occupational fertility levels is sparse, it does tend to confirm these findings (Strand et al 1996).

In contrast, career track managerial jobs, as noted above, are particularly difficult to combine with caring and/or family responsibilities, and managers work longer hours than other professionals (Moen ed 2003). Case study evidence suggests that as a consequence, many women managers remain childless, or limit their childbearing capacities (Wajcman 1998, Halford et al 1997, Crompton 1996, Crompton and Birkelund 2000).

Individual differences: managers and aspirations for promotion

In this section, I will first present evidence from a recent case study of a major bank that had, as a 'leading edge' equal opportunities employer, introduced a wide range of 'family friendly' policies (Crompton et al 2003). However, we found that the demands of the managerial role made it impossible for women to take advantage of these policies. In the bank, women are now offered extended maternity leave, opportunities to return to part-time work, opportunities for job sharing, etc. However, despite these opportunities, they were not seen as being able to be used by managerial employees. For example, Flora was a relatively senior manager who had returned to a job share after the birth of her children. However, she had just taken voluntary redundancy as the last wave of re-organisation would have meant a move to a full-time job: 'There were ten of us, and with the reorganisation three of us had to go. Realistically, to do the whole (new) job on 28 hours a week (her current hours) would be just an absolute nightmare. …I would have to have done it full-time. They hadn't said that, but I know how big my job is now. And with twice the patch, twice the size, I just couldn't have done it and I wasn't prepared to go full-time'. Flora continues:

> As much as the bank encourages job share and the home/work life balance, realistically it doesn't work. The higher up you go, the responsibility you've got …the higher up in the bank you go, it just gets harder for the bank to be family friendly. They've still got the same policies there and I can still take advantage of the same policies that everyone else has, but it's harder for me to do that. … So there is a cut-off point where it becomes more difficult to be family friendly.

Flora's dilemma was widely recognised within the bank. As Hannah put it: 'I like my job and I want to work. I couldn't sit at home but I wouldn't let it affect my family life to be a manager. The higher up women go, they tend not to have kids'. And Abigail, who was working 20 hours a week with two young children, said that: 'I admit I could have gone further, but I'm high up here anyway (she was G3). But it's because I can't come back full-time. If I came back full-time then I could go a lot further, but I haven't got the child care facilities to do that'.

In this study, we found that two different aspects of the banks' employment policies were effectively working against each other. On the one hand, the bank was developing a range of policies to improve the 'work-life balance' of its employees (for example, it had recently introduced paid carers' days). On the other hand, however, the bank was developing and applying 'high commitment' policies that included target setting and

work intensification, as well as engaging in business re-engineering that was 'delayering' organisational hierarchies and reducing the number of employees. Thus employees were often not able to take advantage of 'family-friendly' policies because of the increasing demands of their jobs.

As far as occupational segregation is concerned, these kinds of trends mean that although formal barriers to women's promotion opportunities have been removed, those who wish to be promoted are likely to face demands for even greater levels of work intensity. This will make the combination of employment with caring responsibilities more problematic. Not surprisingly, therefore, women tend to express less interest in promotion than men, and women who are interested in moving up the job ladder express higher levels of work-life stress. I will briefly illustrate these points with evidence from a recent British survey (BSA/ISSP) that included over 1000 male and female employees.[3]

Over a half of the male respondents (53%), but only a third of the women, felt it was important for them to move up the career ladder at work. A work-life stress scale[4] was constructed using four items from the BSA/ISSP survey (respondents were asked to indicate for each item whether this occurred several times a week, several times a month, once or twice, or never. Higher scores indicate higher work-life stress)

I have come home from work too tired to do the chores which need to be done.

It has been difficult for me to fulfil my family responsibilities because of the amount of time I spent on my job

I have arrived at work too tired to function well because of the household work I had done

I have found it difficult to concentrate at work because of my family responsibilities

Scores on the scale indicate that levels of work-life stress are higher for women (mean 7.9522) than men (mean = 7.5419; t = -2.416; df = 801; sig. (p)<.05), and higher for managerial and professional (mean = 8.0339) than routine and manual (mean = 7.3151; t = 3.739; df = 634 sig (p) <.001) employees. This occupational class variation, however, would appear to be largely a consequence of the average weekly hours worked within different occupational classes. A third of full-time managerial and professional employees reported working over fifty hours a week, as compared with 15% of routine and manual full-time employees ((2 = 46.305; df = 3; sig (p) <.001). Thus a multiple regression analysis on work-life stress suggests that for the whole sample, occupational class differences are not significantly predictive of work-life stress. The regression did, however, demonstrate that whereas the presence of children in the household had a significant impact on levels of work-life stress for women, the impact on men was not significant.

When we explored the impact of promotion aspirations on work-life stress on groups differentiated by occupational class and sex, an interesting pattern of variation emerged (here I focus on managerial and professional employees only).[5]

Table 1: occupational class, sex, and the impact of promotion aspirations on work-life stress.

Work-life stress scores:	Managerial and professional men	Managerial and professional women
	Mean (SD)	Mean (SD)
'very' or 'fairly' important to move up the job ladder	7.74 (2.11)	8.78 (2.4)
'not very' or 'not' important to move up the job ladder	7.59 (2.2)	8.03 (2.31)
t-value	.511	2.095*
Df	217	170

* p<.05

[3] This analysis draws on the 2002 British Social Attitudes (BSA) survey. A module of questions focusing on 'employment and the family' were asked of the same two waves of respondents (version B and version C) included in the ISSP (International Social Survey Programme) Family 2002 (Family and changing gender roles) questionnaire. The ISSP Family 2002 questionnaire included a series of questions on family, gender roles and work-life stress. Data was gathered both face-to-face and by self-completion questionnaires (Park et al 2003 283). The 'employment and the family' questions were asked of employees only, and self-employed persons were excluded. The ISSP Family 2002 modules were administered to all participants in the BSA survey. Versions B and C of the BSA generated 2312 cases, 1094 of who were in employment.

[4] Cronbach alpha .73, eigenvalue 2.2, 56% of variance

[5] Questions relating to promotion aspirations were asked of the British sample only, so it is not possible to carry out a cross-country comparative analysis of the impact of promotion aspirations.

Aspirations for promotion, it would seem, *do* have an impact on stress levels for professional and managerial women, but the trend for professional and managerial men is much less marked and the difference between means is not significant. Neither weekly hours of work, nor the presence of children in the household, varied significantly as between 'aspirant' and 'non-aspirant' professional and managerial women. However, as we have seen, for the sample as a whole, the presence of child(ren) in the household has an impact on work-life stress for women, but not for men. If we make the assumption that the presence of children may be taken as an indicator of domestic responsibilities, then the major difference between aspirant professional and managerial women and similar men would seem to lie in the impact of these responsibilities. Women still carry out a disproportionate amount of domestic work (Sullivan 2000), and we would suggest that it is this factor that contributes to the significantly higher levels of work-life stress amongst professional and managerial women who aspire to move up the job ladder.[6]

In summary, therefore, organisational changes (particularly the impact of equal opportunities policies) have led to the reduction of discrimination in employment against women *per se*. Nevertheless, as women retain the major responsibility for domestic work, many do not pursue promotion opportunities to the same extent as men. Thus occupational segregation at higher levels of employment persists despite the removal of formal barriers to promotion, particularly in respect of managerial positions. Women with job-specific qualifications (as in medicine, pharmacy, teaching, or law) may work flexibly without loss of occupational status, but it is unlikely that they will progress very far within their professional and/or occupational hierarchies. Nevertheless, the professional 'rate for the job' will maintain a reasonable rate of pay.

Our discussion so far has focussed largely on women in professional and managerial occupations. Women at the lower levels of the occupational structure, with no or only low levels of qualification are (a) more likely to withdraw from employment, or reduce their working hours, than better-educated women, and (b) the part-time and flexible employment available to them is likely to be low paid. Thus as many have argued (eg Blossfeld and Drobnic 2001), the increase in the level of women's employment may lead to a deepening of class inequalities.

Class differences

Gendered occupational variations are cross-cut by occupational class differences. The level of women's employment is rising across all class groupings, but more educated women are more likely to be in employment (particularly full-time employment, see OECD 2001, Rake et al 2000), and are liable to be in partnerships with men in professional and managerial occupations. Women in lower level occupations are more likely to be in part-time employment, which represents a major strategy whereby unpaid caring responsibilities may be combined with paid work. The quality of part-time employment (in relation to employment protections, eligibility for national insurance, holiday entitlements, etc) varies cross-nationally, and within the EU, European legislation has somewhat 'upgraded' the status of part-time work (particularly in countries such as Britain). As a general rule, however, part-time employment will not generate sufficient resources to maintain an independent household. Women predominate amongst part-time employees, and in Britain and other countries where levels of part-time employment are high, a 'one and a half' breadwinner arrangement is common. Opportunities for part-time work are concentrated in lower-level service work, and women are over-represented in such sectors of employment. Unskilled service employment is not well paid, and promotion to higher levels of service employment usually requires full-time working (Crompton et al 2003, Grimshaw et al 2002).

An analysis of the British Household Panel Survey (BHPS) indicated that whereas for 52% of 'professional and managerial' respondents, both partners were in full-time employment, amongst 'partly skilled' respondents the figure was 35% and for the 'unskilled' 23%. In the BSA/ISSP survey, there were similar, statistically significant, class differences in household employment patterns. Amongst professional and managerial respondents, 47% of couples were both employed full-time, as compared to 32% of routine and manual respondents ((2 30.73, df 4, $p < .001$). As we have seen, professional and managerial employees worked longer hours than routine and manual employees, and long hours working correlates highly with work-life stress (White et al 2003). We found that levels of work-life stress were higher for managerial and professional than routine and manual employees, although class differences in stress were not significant when hours were controlled for.

[6] An analysis using a scale (DDL) indicating the degree of traditionalism in the domestic division of labour (women carry out more domestic tasks = more traditional DDL) showed that aspirant managerial and professional men are (highly significantly) more likely to report a traditional DDL than aspirant managerial and professional women. This suggests that the partners of such women do carry out more domestic work than average, but also that aspirant men benefit from a traditional allocation of domestic work.

Nevertheless, shorter (employment) working hours in 'lower' occupational class households will tend to reduce levels of work-life stress. However, it is vital to remember that although levels of work-family stress might be lower amongst routine and manual workers, this is achieved at some economic cost as far as individuals and families are concerned. In the 2002 BSA survey, 61 per cent of employees in managerial and professional occupations reported an annual household income of £32,000 and above, compared with 22 per cent of those in routine and manual occupations. Fifty three per cent of managerial and professional respondents reported that they were living 'comfortably' on their household income, as compared to a third of routine and manual respondents.

It might be argued that the lower levels of both working hours and full-time working amongst routine and manual employees as compared to managerial and professional employees indicates that routine and manual employees are more 'family centred' than professionals and managers. The BSA/ISSP survey did suggest that routine and manual respondents held more conventional gender role attitudes, and were more 'familial', than managerial and professional respondents.

Table 2: Attitudes to gender roles, women's paid work and the family, by social class (BSA/ISSP 2002), percentages[7]

	Professional and managerial	Routine and manual	Total (including Intermediate)
(a) 'a man's job is to earn money, a women's job is to look after the home and family'	10	27	18
(b) 'it is not good if the man stays at home and cares for the children and the woman goes out to work'	12	21	16
(c) 'a job is all right, but what most women really want is a home and children'	15	32	24
(d) 'watching children grow up is life's greatest joy'	76	86	81
(e) 'if a person cannot manage their family responsibilities they should stop trying to hold down a paid job'	25	40	33
Base *	692	759	1844

* indicative figures, actual base numbers vary by response rates to different questions.

A 'familial' emphasis was particularly marked amongst routine and manual women. For example, whereas fewer than one in ten of young (aged between 18 and 34) professional and managerial women thought that 'what a woman really wanted was a home and children', a quarter of routine and manual women in the same age group held this view. It might be argued that such 'preferences' are as much the outcome of class-associated restrictions of circumstance and differential socialisation as they are of unrestricted 'choice' and 'preference' (McRae 2003, Hakim 2000). However, to what extent are these class-differentiated 'preferences' realised?

In order to explore this topic further, a further analysis was carried out on the attitude statement 'watching children grow up is life's greatest joy'. Seventy nine per cent of managerial and professional women, and 89% of routine and manual, 'agreed' with this statement. Amongst managerial and professional women, 60% of those who 'agreed' with the statement had worked when their child(ren) were under school age, as compared to 74% of those who were 'neutral' or 'disagreed'. That is, fewer of the 'child centred' women had worked when their children were young. This comparison suggests that 'preferences' are having some kind of impact on whether managerial and professional women take up employment. Amongst routine and manual women, however, 'agreeing' or being neutral or disagreeing made no difference at all to whether or not a woman worked or not when her child was under school age (just over 40% of women in both attitudinal categories worked). It would seem, therefore, that middle class women are in a better position to realise their 'preferences'.

[7] Although consistent (and statistically significant) class variations are demonstrated in table 5, the response rates are also shaped by sex and age. Older people are in general more 'conservative' than younger people on all topics. Only 31% of professional and managerial respondents are aged over 55, as compared to 50% of routine and manual respondents (however, class differences are still significant when controls for age are introduced). Women's attitudes to gender roles are less conservative than those of men. For example 15% of women agreed with question (a), 12% with question (b), and 22% with question (c). However, women were more likely than men to agree with questions (d) and (e) (83% question (d), 39% question (e)).

In summary: women's (and therefore household's) employment patterns vary by occupational class. The shorter hours worked in routine and manual households make the major contribution to the lower levels of work-life stress amongst this grouping. It might be argued that routine and manual employees are more 'familial' than professional and managerial employees, but this interpretation needs to be evaluated in the light of the opportunities available to routine and manual respondents, particularly women. Less well-educated women have fewer 'choices' in employment. Nevertheless, to the extent that attitudes have an observed impact on behaviour, it would seem that professional and managerial women are more likely to be able to act in accordance with them.[8]

Patterns of part-time working not only contribute to the maintenance of occupational segregation, but also to the deepening of material (class) inequalities between households. In Britain, part-time work has been widely canvassed as a major strategy whereby work-life 'balance' may be achieved (DTI 2000, 2003). However, part-time and/or flexible employment, which is concentrated amongst women, is not usually associated with individual success in the labour market (Dex and McCulloch 1997). As Purcell et al (1999) have argued, the '... uneasy reconciliation of work and family life in Britain has largely been achieved by means of a gender-segmented labour market and the part-time work of women'. Perrons' (1999) cross-national European study of part-time working in the retail industry demonstrated that in all of the countries studied (Britain, Sweden, France, Germany, Spain and Greece) it was women who worked flexibly, and took the major responsibility for caring work as well. Well-educated women with job-specific qualifications will be enabled to work flexibly without occupational downgrading and at reasonable rates of pay. However, flexible working amongst women professionals will result in intra-occupational segregation (Crompton et al 1999).

Discussion

What are the implications of these findings for gender statistics? Given that the major focus of this seminar is on occupational segregation, my first conclusion might seem a rather contrary one. This is that indices of occupational segregation are not necessarily adequate (or even particularly useful) guides as to the extent of gender inequality. This does not mean that I would suggest that we cease to gather data on occupational segregation, but rather, that a focus on improving our measurements *per se* may not bring returns in proportion to the effort invested. Rather, we should direct our attention to an examination of the processes contributing to the persistence of occupational segregation, and how we might gather data that will contribute to a better understanding of these processes. In this paper, we have focused on the role of family responsibilities in contributing to the persistence of occupational segregation by sex, particularly their impact on promotion and promotion aspirations. Four possible areas of data collection may be identified: a) the caring responsibilities of employees; b) a consideration of the possibility of the classification of occupations in relation to their compatibility with caring responsibilities; and c) data on the provision and availability of non-family care (of all kinds).

a) the caring responsibilities of employees

In Europe, the mode of articulation of employment and family life is in a process of transition. The 'male breadwinner' mode of articulation allocated market work primarily to men, and unpaid domestic and caring work to women. Existing data sources tend to reflect these gendered arrangements. For example, occupational class schemes reflect in broad outline the returns to market work, and the caring compatibility of different occupations is not seen as a relevant issue. With women's (particularly mothers') entry into employment, more employees (women and men) will find themselves combining market work with caring responsibilities. Our knowledge relating to the nature and extent of caring responsibilities amongst different national labour forces is limited. We have information on household composition, and time spent in household work (eg OECD 2001), but employee-based data is lacking. In particular, we lack organisational or workplace-derived information relating to the caring responsibilities of employees. Given that an increasing number of employees will be undertaking these dual responsibilities, it may be suggested that instruments such as the Labour Force Survey

[8] Himmelweit's analysis of the British Household Panel Survey (BHPS) suggests that in respect of mother's employment, attitudinal change is more likely to follow upon behavioural change, rather than the other way round. The BHPS regularly includes an attitude statement relating to the impact of mothers' employment on children: 'a pre-school child is likely to suffer if his or her mother works' (this statement is also included in the BSA survey). Over time, Himmelweit compared (for mothers of pre-school children) responses to this statement with the employment status of the mothers interviewed. Her analysis showed that mothers who were in the contradictory position of being in paid work but believing that pre-school children suffered as a result of their mothers employment were more likely to change their attitude than their behaviour. Forty six per cent of such mothers had changed their attitude within two years, a proportion greater than the 29% who gave up employment. As Himmelweit argues, neither identities nor behaviours are fixed, but adapt to each other in a process of positive feedback (Himmelweit and Sigala 2003 23).

might be extended so as to gather information on the extent and nature of unpaid, as well as paid, work.[9] However, one problem with this strategy is that employees may not wish their employers to be fully aware of their family responsibilities, fearing that heavy family responsibilities may be seen as indicating lack of capacity as an employee (Lewis 1997, Crompton 2001). This may be avoided by the use of an instrument such as the European Community Household Panel or the ESS, but information on employers would be less comprehensive.

b) rethinking occupational classifications

More generally, we need better statistics on family/employment articulation, perhaps with a view to a classification of occupations according to their 'family compatibility'. It may be suggested that we already have a proxy measure of 'family compatible' employment, in that the occupations in which women are over-represented are more likely to be family compatible. Nevertheless, we need more information on the extent of family compatibility (and incompatibility) as between different occupations. Korpi's examination of class and gender welfare state 'outcomes' demonstrates that these do not necessarily vary in tandem with each other. In a similar vein, it has been suggested that the 'family outcomes' of particular occupational locations are not the same as their 'class outcomes'. Managerial and professional occupations may be included in the same broad class grouping, but they have rather different potentials for 'family-friendly' employment. This has had a substantial impact on women in these occupations, particularly in relation to childbearing. An investigation of fertility rates for women (and men) by occupation would provide an interesting insight into these issues.

c) the provision and availability of non-family care

The need for better childcare statistics has already been recognised within the EU (Pinelli et al 2001). However, better data is also required on other aspects of non-family care, particularly elder care. Policy in respect of elder care varies considerably within the EU. Much data collection and research has focused on older people as a 'client group', to my knowledge we have only recently begun to raise questions as to the impact of elder care responsibilities on employees.

More generally, (and this suggestion is more of a topic for research rather than relating to the gathering of statistics as such) we need to explore the area of the nature and distribution of individual aspirations, and their interaction with caring responsibilities. Increasingly, contemporary career paths are 'individualised', and rest upon the assumption that the 'aspirant worker' is able to make a total commitment to their employer.[10] This trend will serve to reproduce occupational segregation for as long as women retain the major responsibility for the delivery of care. Finally, I have argued in this presentation that in considering the impact of family and caring responsibilities on occupational segregation, we should be sensitive to the interaction of gender and class. Class variations in household caring strategies are likely to be more pronounced in societies lacking in universal care provision, and will contribute further to widening inequalities in these societies.

[9] It may be objected that this would place unnecessary burdens on the employers who provide LFS data. However, it may be countered that changes in the nature of work/family articulation require an increasing awareness on the part of employers as to their employees' unpaid responsibilities.

[10] Lest this be thought to be a peculiarly 'British' trend, given the deregulated labour market and long hours of work that characterise employment in Britain, it should be noted that Hojgaard's (1997) research in Nordic organisations suggested a similar state of affairs in respect of promotion aspirations. See also Crompton and Birkelund 2000.

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PAID WORK IN CERTAIN PERIODS OF FAMILY LIFE-CYCLE IN HUNGARY - FACTS AND ATTITUDES

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1. Trends in female economic activity in Hungary

Table 1 Proportion of employed women in working age population (15-54)

1949	1960	1970	1975	1980	1990	1996	2000*
34.6	49.9	63.7	67.7	62.3	75.5	54.1	49.7

*aged 15-64

Source: 1970. évi Népszámlálás 23. Demográfiai adatok I. KSH 1973. (Census 1970, Vol. 23. Demographic data);
1970. évi Népszámlálás 24. Foglalkoztatási adatok I. (Census 1970, Vol. 24. Labour-force data) Budapest, 1973.
Frey, 2002

During the last decades a very high labour force activity characterized the women in Hungary. Up till the end of the 1980s majority of women were actually working. Not only the demands of economy but the ideology of the socialist regime played an important role in the high level of female activity rate. Most female, just like their male counterparts were working in full time. In the last decades the proportion of persons employed in part time was about 5 percent. The important feature of Hungarian labour market was that he, who entered once into the paid work, left it only when she or he retired. For young mothers the maternity leave what was introduced in 1969 could be a temporary leave from paid work. The maternity leave can be used for the first 3 years of the child. However not every young mothers were entitled to the maternity leave at the early years of it. For instance mothers who were employed at the agriculture or mothers who were not employed before at all had no right to the maternity leave in the 1970s. Today not only the mothers but also fathers or grandparents are entitled to the maternity leave in special circumstances.

The proportion of employment rate of women reached its peak in 1990. After 1990 employment rate of women (and men) drastically declined due to the political and economic transition. A lot of women left the labour market; they became unemployed, or chosen an early retirement or a withdrawal to household. As Frey states: 'Among women between the age 15-54 the proportion of that living on social welfare benefits or on other family member's earnings has been almost doubled (between 1990-96, it increased from 24.5% to 45.9%). (Frey, 1999). During the years of socialist regime a network of child care institutions supported the paid work of mothers. A lot of criticism was drawing up concerning the crèches and kindergartens but in fact they were cheap and available for everybody.

It has been disputed whether the high-level labour force activity of women met the real demands of them or it was a pressure from 'above'. Undoubtedly involvement of paid work for a lot of women happened by an economic and ideological force. The traditional share of household work and the underdeveloped service sector also caused the overburdened of women. On the other hand, increasing labour market participation of women has improved their situation; they had the opportunity to feel the importance of their income in the well being of their family. However a strong nostalgia has formed in mind of some women and men towards a traditional family, where husband is the breadwinner and the wife is just a housewife.

In this presentation I compare the macro labour force data to some data from ISSP 2002 Family module[1]. Besides it I present the changes of attitudes concerning women's paid work in different phases of family life cycle.

2. Comparison the macro employment data and the memory of respondents concerning the mothers' paid work

How do macro-statistical labour force data fit to the memory of respondents? In ISSP Family module we had a question concerning the paid work of the respondent's mother in the respondent's childhood («Did your mother ever work for pay for as long as one year, after you were born and before you were 14?»). In order to make as correct comparison, we listed the respondents into different age groups. After it we could identify the childhood period of different age groups and make the comparison between the respondents' answers and the employment data of the same period. Of course this comparison has can be limited as the two data are coming from two different methodological types of measurement. The employment data are coming from the Census or from a large-scale labour force data collection (in 1996) and these data refers to the whole working age women (15-54 years old women). The ISSP data are coming from a representative but relative small sample (N=1023) and reflect the subjective memory of respondents thinking back on a relative long period (0-14 years). However this comparison can be interesting as it tests the coincidence of retrospective data and official statistical data. In Table 2 we present the childhood period of age groups, the proportion of employed women in the same period and the proportion of working mothers. Full time and part employment is merged in the table, as it was showed before, in Hungary proportion of persons working in part time was below 5 percent.

Table 2 Proportion of mothers who were working for pay in the respondents' childhood by age groups and the proportion of employed women

Age	Period when they were 14 years old	Proportion of mothers working for pay (in the ratio of age group) ISSP	Proportion of employed women in working age population (15-54)
18-26	1990-1998	**83.4**	54.1 (1996)
27-36	1980-1989	**81.3**	75.5 (1990)
37-46	1970-1979	**63.6**	62.3 (1980)
47-56	1960-1969	**61.2**	63.7 (1970)
57-66	1950-1959	**48.1**	49.9 (1960)
67-	-1949	**34.0**	34.6 (1949)

Comparing macro data and ISSP data, we find in almost every age group a higher level of employment in the circle of ISSP respondents than in macro employment data. The most striking difference is in case of the two youngest age groups (18-26 and 27-36 years old). The childhood of the youngest age group was just at the years of Transition. During this period a sharp decline happened in female employment. However 18-26 old respondents stated on a highest level that their mothers were working for pay. The 27-36 years old respondents also remembered that their mothers were working on a very high rate. Their childhood was in the 1980s when the employment rate of women was about 62 percent. The data of 37-48 years old persons coincide with the macro labour force data but in the case of 47-56 years old and the 57-66 years old respondents the employment rate of mothers was again higher than the macro data. In the memory of ISSP respondents have a picture about an employed mother in their childhood. The younger is the respondent, the stronger is this memory.

3. Comparison the macro employment data and the memory of respondents concerning the their own paid work (in case of female respondents) and the paid work of the spouse (in case of the male respondents)

In ISSP Family module we had a questions concerning the paid work of the respondents and the respondent's spouse. (Did you/your spouse, partner worked outside the home full-time, part-time or not at all a/ After marrying and before you had children?; b/ And what about when a child was under school age? c/ After the

[1] N=1023, reprezentatív sample. Data colletced by Central Statistical Office, 2002

youngest child started school? d/ And how about after the children left home?) It is obvious that respondents in diverse age groups went through these life-course events on a different rate. Some persons have personal experiences about the whole family-cycle; others have experiences just about some ones. Table 3a and 3b show the proportion of respondents who went through the certain periods of family-cycle. These data could be useful comparing macro demographic data (marriage, fertility etc.) and ISSP data too. Here we compare the employment data of female respondents and employment data of spouses of male respondents to the macro data. Paid work of male respondents was left from this analysis, as the employment rate of male population reached the possible maximum level during the decades of socialist regime. And from the 1990s the drastic decrease of employment rate of male population was influenced by economic changes and not by family-cycle. We find very few fathers who have fitted their form of employment to the phases of childcare.

Table 3a Proportion of female respondents who experienced certain phases of family-cycle (in the percent of respondents in the age group)

Age	Phases of family-cycle			
	After marrying and before she has child	Family with pre-school age child/ren	Family with school age child/ren	Family after children left home
18-26 years	36.5	32.9	.	.
27-36 years	84.4	81.1	54.7	.
37-46 years	98.7	98.7	93.7	36.7
47-56 years	90.1	90.1	90.1	81.3
57-66 years	96.3	96.3	96.3	96.3
67+ years	89.6	89.6	89.6	89.6

Table 3b Proportion of male respondents who experienced certain phases of family-cycle (in the percent of respondents in the age group)

Age	Phases of family-cycle			
	After marrying and before she has child	Family with pre-school age child/ren	Family with school age child/ren	Family after children left home
18-26 years	11.4	10.1	.	.
27-36 years	66.0	66.0	54.7	.
37-46 years	83.1	83.1	80.6	30.8
47-56 years	79.1	79.1	79.1	59.4
57-66 years	86.5	86.5	86.5	86.5
67+ years	90.6	90.6	90.6	90.6

Hungarian society was characterized by the early entry into marriage in the past. In 1970s the average age of entry into first marriage was 21.3 for women and 23.7 for men. By the end of 1990s, this age has shifted into 24.2 in case of women and into 26.8 in case of men. (Tóth 2003) Only 16-20 % of women in birth cohorts born before 1965 remained unmarried by their age of 24. By the age of 26 95-96 % of women got married. (Tóth, 1994) Within one year after getting marriage the first child typically was born what means that the period after getting married and living without child was very short. The number of children in families typically was one or two. It means that the period when a pre-school age child is in the family was relatively short and it ended by the age of early thirties of mothers. Adult children got their marriages at an early age again but they were not able to leave the parental home because of financial reasons.

From the mid-1980s a significant change started in demographic behaviour of Hungarian population. The mean age of entry into marriage and giving birth to first child increased, cohabitation became wide-spread, the decreasing of fertility rate proceeded. Therefore the majority of 18-26 years old and 27-36 years old age groups did not go through the childcare periods yet. Especially few male respondents have no personal experience about it.

Table 4 The time when female in diverse age groups went through the periods of family-cycle

Age in 2002	Birth year	Marriage without child (up to age of 26)	Family with pre-school age child (27 + 6 years, up to age of 33)	Family with school age child/ren (33 + 12 years, up to age of 45)	After child/ren left home (46+)
18-26 years	1976-1984	Today (if at all)			
27-36 years	1966-1975	1992-2001	Today (if at all)	Today (if at all)	.
37-46 years	1956-1965	1982-1991	1989-1998	Today	Today (if at all)
47-56 years	1946-1955	1972-1981	1979-1988	1991-2000	Today
57-66 years	1936-1945	1962-1971	1969-1978	1981-1990	1980s and 1990s
67+ years	-1935	-1961	-1968	-1980	1980s and 1990s

After we identified the historical time of life course transitions for age groups, we can look at if the female respondents were working for pay in these periods. We also can compare their data to the macro labour force data in the same period. Most of the macro data are coming from Census in the suitably or in the closest year. If it was possible we used employment rate of the same or closest age group.

Table 5 Proportion of female respondents who has work for pay in the periods of family-cycle (in the ratio of persons in the age group who have gone through the event) and macro employment data

After marrying and before she has child

Age groups (2002)	Proportion of those who were working (in the ratio of persons who went through this period)	Ratio of active earner women in the same time and in the closest age group
18-26 years	78 %	47.8 (1999 - 20-24 years old women)*
27-36 years	90.1 %	54.1 (1996)
37-46 years	94.9 %	62.9 (1990 - 25-29 years old women)
47-56 years	91.4 %	65.6 (1980 - 20-29 years old women)
57-66 years	88.5 %	65.7 (1970 - 20-29 years old women)
67+ years	79.1 %	51.9 (1960 - 20-29 years old women)

When a child was under school age

Age groups (2002)	Proportion of those who were working (in the ratio of persons who went through this period)	Ratio of active earner women in the same time and in the closest age group
18-26 years	33.3 %	47.8 (1999 - 20-24 years old women)*
27-36 years	57.1 %	61.9 (1999 - 25-39 years old women)*
37-46 years	62.8 %	62.9 (1990 - 25-29 years old women) 81.5 (1990 - 30-39 years old women)
47-56 years	73.2 %	69.9 % (1980 - 30-39 years old women) 81.5 (1990 - 30-39 years old women)
57-66 years	67.9 %	65.3 (1970 - 25-29 years old women) 69.9 % (1970 - 30-39 years old women)
67+years	67.2 %	51.9 % (1960 - 30-39 years old women)

After the youngest child started school

Age groups (2002)	Proportion of those who were working (in the ratio of persons who went through this period)	Ratio of active earner women in the same time and in the closest age group
18-26 years	.	.
27-36 years	71.1 %	61.9 (1999 - 25-39 years old women)*
37-46 years	79.7 %	54.1 % (1996) 73.5 (1999 - 40-49 years old women)*
47-56 years	93.9 %	84.6 (1990 - 40-49 years old women) 54.1 % (1996)
57-66 years	84.5 %	66.6 (1980 - 40-49 years old women) 84.6 (1990 - 40-49 years old women)
67+ years	78 %	67.7 % (1975) 62.3 % (1980)

After children left home (became adults)

Age groups (2002)	Proportion of those who were working (in the ratio of persons who went through this period)	Ratio of active earner women in the same time and in the closest age group
18-26 years	.	.
27-36 years	.	.
37-46 years	82.7 %	49.7 % (2000) 73.5 (1999 - 40-49 years old women)*
47-56 years	91.9 %	54.1 % (1996) 39.7 (1999 - 50-59 years old women)*
57-66 years	91 %	67.8 % (1990- 50-54 years old women)
67+ years	86.1 %	56.6 (1980 - 50-54 years old women) 75.5 % (1990 - 50-54 years old women)

*Source of these data: Central Statistical Office, 2000
Employment rates are counted for the mentioned age groups.
Sources of the other macro data: Census, 1970; 1980; 1990

Comparing the two types of data we again meet the same phenomenon just like in case of mothers' paid work. Female respondents in always every family-cycle and age groups mentioned a higher level of employment than it appears in macro employment data. The only exception is found only in case of pre-school children's mother in the youngest age groups. The two youngest age groups were afflicted by the growing unemployment of women and the latent discrimination against young women especially young mothers on the labour market. Especially mothers with lower educational level have little opportunity to get a job.

In ISSP questionnaire male respondents were asked whether their spouses/partners had been working for pay during the periods of family-cycle. As female and male respondents were not the members of the same family, the direct comparison of their answers can be limited. However to compare the tendencies of their data can be interesting. In most categories we have found a similarity between the answers of female and male respondents. The only exception is in the oldest age group. The ratio of spouses of males in employment was lower in this age group than the ratio of females in employment in the same age groups and family-cycle.

4. Should women work for pay in the phases of family-cycle?

Data of 1994 ISSP Family module showed that Hungarian respondents had very conservative attitudes towards paid work of women. Attitudes proved to be more traditional than they had been in 1988 ISSP data set and in most of the other countries too. Let us present the attitudes towards paid work of women in the above-mentioned phases of family-cycle in 1994 and 2002.

Table 6 Should women work for pay in the phases of family-cycle? ISSP data by the gender and work experience of respondent/spouse, 1994 and 2002. (The sum of the lines does not give a 100% because of the 'do not know' answers.)

After marrying and before she has child

	Should work full time		Should work part time		Not at all	
Male respondents whose spouse was working during this period	1994	**2002**	1994	**2002**	1994	**2002**
full time.	77	**90**	16	**4**	7	**3**
part time.	50	**60**	38	**20**	-	**20**
did not work.	63	**78**	11	**19**	23	**4**
had no spouse	72	**92**	20	**4**	7	**3**
	Should work full time		Should work part time		Not at all	
Female respondents who were working	1994	**2002**	1994	**2002**	1994	**2002**
full time.	88	**96**	8	**2**	4	**2**
part time.	83	**67**	6	**11**	-	**-**
did not work.	68	**89**	14	**10**	13	**2**
Had no spouse.	81	**93**	13	**7**	4	**-**

When she has a child under school age

	Should work full time		Should work part time		Not at all	
Male respondents whose spouse was working during this period	1994	**2002**	1994	**2002**	1994	**2002**
full time.	5	**7**	32	**47**	63	**45**
part time.	-	**-**	36	**38**	61	**62**
did not work.	1	**2**	20	**32**	79	66
had no spouse or children	4	**8**	34	**50**	61	**40**
	Should work full time		Should work part time		Not at all	
Female respondents who were working	1994	**2002**	1994	**2002**	1994	**2002**
full time.	7	**8**	43	**55**	50	**36**
part time.	3	**6**	33	**56**	64	**36**
did not work.	4	**4**	21	**41**	73	**56**
Had no spouse or children.	8	**10**	34	**42**	59	**48**

After her youngest child started school

	Should work full time		Should work part time		Not at all	
Male respondents whose spouse was working during this period	1994	2002	1994	2002	1994	2002
full time.	18	29	47	53	34	15
Part time.	-	20	58	80	33	-
did not work.	10	28	30	47	60	25
had no spouse or school age children.	22	40	55	51	21	6
	Should work full time		Should work part time		Not at all	
Female respondents who were working	1994	2002	1994	2002	1994	2002
full time.	21	30	51	56	27	13
Part time.	8	6	70	71	22	18
did not work.	10	17	39	54	46	29
Had no spouse or school age children.	25	38	54	51	19	10

After her children left home (became adults)

	Should work full time		Should work part time		Not at all	
Male respondents whose spouse was working during this period	1994	2002	1994	2002	1994	2002
full time.	66	90	16	5	14	3
Part time.	50	100	30	-	10	-
did not work.	54	83	17	14	29	3
had no spouse or adult children.	68	88	20	6	9	2
	Should work full time		Should work part time		Not at all	
Female respondents who were working	1994	2002	1994	2002	1994	2002
full time.	73	88	14	9	10	3
Part time.	40	80	53	20	7	-
did not work.	50	71	22	13	15	8
Had no spouse or adult children.	77	89	17	6	5	-

From 1994 to 2002 occurred a significant change in the attitudes of respondents towards paid work of women. In every phases of family-cycle decreased the number of persons who support withdrawal of women from the paid work. Paid work is widely accepted before the birth of the first child and after the children became adult and left home. In 1994 a significant group of Hungarian society, especially males whose spouse did not work in the past, idealized for women not to work at any stages of life. In 2002 most of Hungarian ISSP respondents support a two-cycle female employment. After marrying and before child majority of respondents agree the full time work of women however every fifth husbands whose spouse was working part time during this period support this form of employment.

A strong consensus has formed concerning the paid work of women during the period when her child is under school age. Both males and females irrespective of personal working experiences refuse full time work during these years. This data confirm our assumption the paid work was a force in the life of a significant group of Hungarian women. However it is important to mention that every second women who had work experience during this life course period supports part time work. Those young women who had not a pre-school age child (yet) makes very different sub-groups. Some of them find work and career important in life and they support full time work even for the mothers of young children (every tenth person in the group). Some others

experienced temporary or maybe final drop from the labour market and this event might form their total refusal towards young mothers' work.

Concerning the work of mothers with school age children we can observe an increasing of the number of respondents who support full time work. However majority of persons agree with part time work even during this period too. It is also important to mention that more females would like to see mothers of school age children at home and not at work.

For those women who have adult child, majority of Hungarians support full time employment. Comparing the 1994 and 2002 data this change is a very apparent change. It is also interesting to mention that opinion of male respondents have a strong connection to the work experience of their spouses.

Concerning this attitude question we have opportunity to make a comparison between ISSP data and data of a large-scale labour force data collection[2] (Frey, 2002). It was the third occasion when attitude questions about paid work of women were asked in the mentioned type of data collection. In 1986 81 % of respondents agreed on the paid work of women, but 78 % of them would have preferred part time job. In 1995 73 % of respondents agreed on the paid work. By 1999 a further decline was found: only 67 % of persons supported paid work of women, 28 % of them think women should stay at home and 5 % of them had no opinion. Popularity of part time work was extremely high in 1999 (78 %). Comparing these data to ISSP data we find in this large-scale data collection a more refusal attitude towards paid work of women. Especially women on maternity leave and blue-collar workers refuse paid work of women. However we suppose that ISSP data give a more complex picture as in ISSP questionnaire the question was asked for diverge periods of family-cycle.

5. Summary

- During the 1980s decade Hungarian society was characterized withy a high level of female economic activity rate. By today the number of active wage earning women has significantly declined and the number of non-employed (non-active, dependant, unemployed) has increased. The activity rate amongst women in workable population (15-64 years old) is lower than the average of EU countries.
- About 95 percent of employed women are working in full time. In the past decades the proportion of wage earners employed in full time was the same.
- Comparing to macro labour force data to the memory of respondents of ISSP, we have found significant differences. The activity rate of the respondents' mothers was higher in every age group than it would have been expected by the labour force data. Similarly more female respondents and more spouses of male respondents were working in every age group by the memory of respondents, than we would calculate by official labour force data. If we accept that the ISSP sample was representative and therefore these differences do not come from the distortion of the sample, we must suppose a special distortion of the respondents' memory. In the collective memory of the Hungarian society in the close and distant past 'every' women have been working in a paid job. Paid job of women is appears as the basic attribution of the past socialist regime.
- Not only the present ISSP data but the earlier waves of ISSP and other researches also prove that a significant part of Hungarian society oppose the paid work of women, especially in case of mothers with pres-school and school age children. As a consequence of the previous thesis, the argument of refusing the paid work of women are not gender, family or labour force but first of all ideological features. A lot of people oppose paid work of women as they associate it to the past socialist regime.
- The data of 1994 ISSP Family module showed strikingly conservative attitudes concerning women's paid work. By 2002 the attitudes are more complex. Hungarian society prefers a two-cycle female labour force activity in 2002. Before the birth of the first child and after the kids left home people accept the full time paid work of women. In the case of mothers of pre-school children female respondents attitudes are influenced by their own labour force behaviour in different family cycles. A sub-group of young women who have no children yet and mothers who were working full time in this family cycle can accept part time work of mothers of small children. Those who were not working at all when they had a pre-school age child and those

[2] In 1999 a large scale labour force data collection was done by Central Statistical Office. A special additional questionnaire was filled by female respondents. N=19917, all between 15-54. 56.1 % of them were active earners, 4.1 % were unemployed and 39.8 % were inactive earners.

who are unemployed prefer withdrawal from paid work of mothers of small children. In case of mothers of school age children female respondents who did not work prefer the same behaviour or part time job, others can accept full time or part time job.

- Attitudes of male respondents are significantly differ from the attitudes of female respondent concerning paid work of mothers with pre-school age children. Male respondent refuse even the part time job of these mothers they approve of staying at home of mother. Concerning women in other family-cycles the attitudes of male respondents are in strong connection with the behaviour of their spouse (if they have). If the wife was working, male respondent can accept women's work, if she stayed at home he prefer the staying at home of women on the levels of attitudes too.
- In ISSP questionnaire if women should work for pay was asked for diverse periods of family-cycle. In a large-scale labour force data collection respondents were asked about the same topic without age or life course restrictions. The comparison of the two data proved that it is more useful to make difference between the periods of family-cycles, as people opinion is not unified for the whole life cycle.

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A Contribution from the Time Use Statistics: Reconciling work and private life

Some gender-related similarities and dissimilarities in the organisation of everyday life[1]

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Introduction

There are 24 hours in a day, a fact which applies to everyone. It is within this framework that we must find time to work, sleep, eat, take care of our children, shop, cook, clean and do everything else that has to be done just to keep up. If something which has not been done has to be done, something else will have to give way. Everyday tasks all compete for time. In different ways, gainful employment imposes limits on private life. In turn, private life imposes limits on gainful employment. Major demands on private life will impose limits on gainful employment. There will be limits on the ability of a person not only to take employment in the first place but also on the type of gainful employment he or she can do and the workplace that he or she can work at. Examples include restrictions on working hours (full-/part-time) and the scheduling of those working hours (shiftwork/daytime/evenings/weekdays/weekends/flexibility, etc.), the possibility of unplanned absence from work, the ability of staff to cover for each other, the possibility of working from home, etc. Without analysing this issue in more detail, it would seem reasonable to assume that there are considerable variations in the labour market as regards the demands that are made on the workforce. The same applies to the ability and scope for people to meet these demands. The combination of these factors could contribute to segregation in the labour market, among other things.

This mechanism has an important place in the Commission's guidelines on employment policies[2] under the heading 'Reconciliation of work and private life'. It is an explicit aim to increase employment and reduce the salary gap between women and men by eliminating the underlying causes. Special consideration must be given to helping people to reconcile work and private life. This must above all take place through the provision of childcare and care for other dependents and through the promotion of shared responsibility for the family and family maintenance through work (professional responsibilities)[3]. The objective of promoting shared responsibility will probably prove to be impossible unless women and men share both unpaid household work and gainful employment more or less equally.

A number of questions then arise: what is private life, what happens and when, what significance does what does happen have for family provision – for society and households – and how is it distributed between women and men and over the lifecycle? What and how much needs to be redistributed or carried out in other organisational forms to enable work and private life to be reconciled? Do the everyday lives of women and men differ in a way which is likely to affect their ability to combine work and family?

[1] This paper largely consists of extracts from *Tid för vardagsliv, Kvinnors och mäns tidsanvändning* (Time for everyday life. Women's and men's time use 1990/91 and 2000/01). Report 99 in the series *Levnadsförhållanden* ('Living Conditions'), SCB 2003

[2] Council Decision of 22 July 2003 on guidelines for the employment policies of the Member States (2003/578/EC)

[3] The overall objective of Swedish gender equality policy is for men and women to have the same opportunities, rights and obligations within every area of life. This means among other things:
- the same opportunities for financial independence
- shared responsibility for the home and children

Statistics concerning paid and unpaid work

In every Member State, statistics provide us with a comprehensive picture of employment: the number of people in work, the distribution of the total number of working hours, per profession, industry and sector, as well as a lot of other information, all subdivided according to sex, age, family situation, etc. In various ways, the economic statistics measure the results of this work.

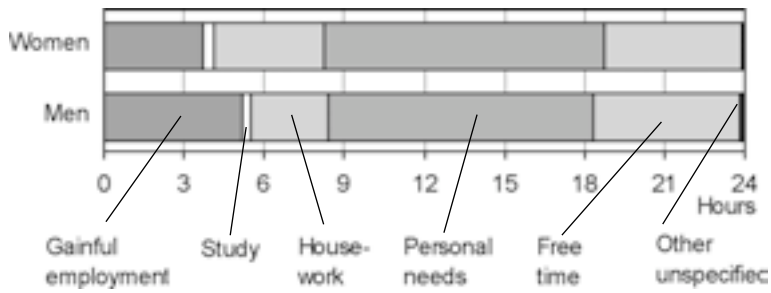
In many but not all countries, statistics also give a picture – albeit an incomplete one – of life outside work, i.e. the activities of individuals in their private life. The most important source is time use surveys, which were carried out in many Member States around the turn of the millennium. With a few exceptions, these surveys were based on common Guidelines[4] issued by Eurostat with the explicit aim of enabling comparable[5] time use statistics to be produced.

The time use statistics are based on data collected through a randomly selected group of people keeping a time diary on randomly selected days which, together, make up one year. The data represent a chronological mapping of the activities which take place. The diary allows parallel activities to be recorded, together with details of any household members or other people who were present during the course of the days being recorded. This means that the main activity, any secondary activity and the presence of other people and the start and end of each period are recorded period by period. The background information is comprehensive. Altogether, the database is very rich in information. This paper is based on the Swedish Time Use Statistics for 2000/01.

The structure of everyday life

At the most general level, the Time Use Statistics give the following picture of how women and men on average distribute the hours in the day between the main distinct groups of activities.

Figure 1. Average time spent on activities during 2000/01 according to sex. Swedish population 20–64 years. Hours per day. All days.



The most obvious difference between women and men of working age concerns work in the broad sense. Women spend an average of three hours and forty minutes in *gainful employment* each day while the corresponding figure for men is approximately five hours and twenty minutes (see also Table 1 below). These figures have been calculated as an average for all women and men, regardless of whether or not they are in gainful employment. The calculation also includes all seven days of the week. Note that 58% of men and 45% of women are actually in gainful employment on an average day (Table 1). This means that the average working day[6] for men is almost eight and a half hours whilst the corresponding figure for women is seven hours and three quarters. Figures for *housework*, or *unpaid work*[7], also differ considerably between the sexes, with almost four hours and ten minutes for women and approximately two hours and fifty minutes for men. Most people, i.e. 99% of women and 92% of men, undertake some form of housework on a normal day. The *total work,* i.e. the sum of paid and unpaid

[4] Guidelines on Harmonised European Time Use Surveys, Eurostat.

[5] Only very schematic summaries of European time use statistics collected in accordance with Eurostat's guidelines have so far been published, i.e. How women and men spend their time. Statistics in focus, Population and social conditions, Theme 3-12/2003, Eurostat, and Time use at different stages of life.
Population and social conditions, working papers, Eurostat 2003
In the summer of 2004, Eurostat will publish a pocket book entitled How Europeans spend their time - Everyday life of women and men.

[6] Gross working hours, including travel relating to employment, etc.

[7] Household work, maintenance, care of children and others, shopping and services, travel related to housework

work[8], amounts to almost eight and a half hours per day and is the same for both women and men. In other words, the time spent on productive activity[9] does not differ between women and men and takes up one third of the 168 hours in the week in total. The distribution between unpaid and paid work does differ, however. The women's share is made up of approximately equal periods of paid and unpaid work, whilst approximately 60% of the men's share is taken up by paid work. There is little difference between the sexes as regards the time spent on the other two main groups of activities, i.e. *personal needs* and *free time* (Table B:1 in the appendix shows the activities which are included in each of these main groups). Together, they take up two thirds of the time available; the main part, about 10 hours, represents time for personal needs, leaving five to six hours for free time. As there is no obvious difference between women and men, there is little reason to look for obstacles to gainful employment in these activity categories.

Table 1. Average time spent on activities, proportion undertaking an activity and average time spent by those undertaking activities during 2000/01 according to sex. Hours and minutes and percentage respectively. Swedish population 20–64 years. All days.

	Average		Proportion undertaking the activity		Average	
	Women	Men	Women	Men	Women	Men
Gainful employment	3:41±0:10	5:12±0:12	45±2	58±2	7:44±0:12	8:27±0:13
Housework	4:08±0:06	2:52±0:06	99±0	92±1	4:11±0:06	3:07±0:06
Personal needs	10:30±0:05	9:59±0:06	100±0	100±0	10:30±0:05	9:59±0:06
Study	0:26±0:04	0:18±0:04	10±1	7±1	4:11±0:24	4:23±0:35
Free time	5:08±0:07	5:31±0:08	99±0	99±1	5:10±0:07	5:36±0:08
Other, unspecified	0:07±0:02	0:07±0:01	16±1	15±2	0:43±0:09	0:46±0:08
Total	24:00	24:00	100	100		

The uncertainty is given as ± half the confidence interval at the 95% level.

There may however be reason to look more closely at the content, scope and distribution of unpaid work. Are there differences between the everyday lives of women and men, particularly as regards housework, which could be considered as affecting a person's ability to take on gainful employment and possibly impose limits on the type of job which can be taken on with regard to the demands that it makes, i.e. overtime, flexibility as regards working hours, etc.?

Unpaid work

Let us first look in more detail at the activities which unpaid work – here also denoted housework – consists of, how they are distributed between the sexes and how they relate to the work input in gainful employment in terms of time. Figures 2a and 2b show the time input in unpaid work next to the time input in gainful employment, subdivided per industrial sector.

The figures given are in millions of hours per week. Housework (Figure 2a) is dominated by household work, i.e. cleaning, food preparation, dish washing, laundry. The majority of this work, two thirds or two hours per day, is undertaken by women (Table B:1). Four of the activities take approximately the same amount of time, almost an hour per day or 15 to 17 million hours per week. These are maintenance, care of children, shopping and services and travel related to housework.

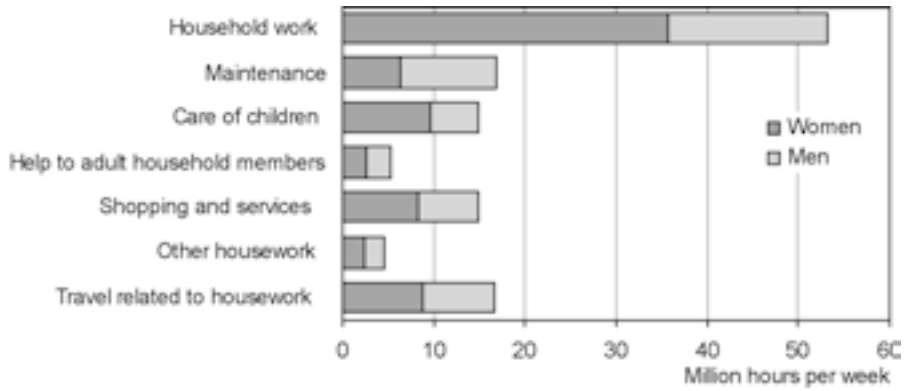
The estimation of care of children is special in two ways. The average, 50 minutes per day, applies to everyone aged 20–64, regardless of whether or not they have children. Furthermore, it only concerns time which the people responding to the survey stated that they have devoted to actively caring for children. The estimate of how much

[8] Includes time for study

[9] In accordance with the third party criterion, according to which an activity is productive if it can be transferred to someone else in return for payment.

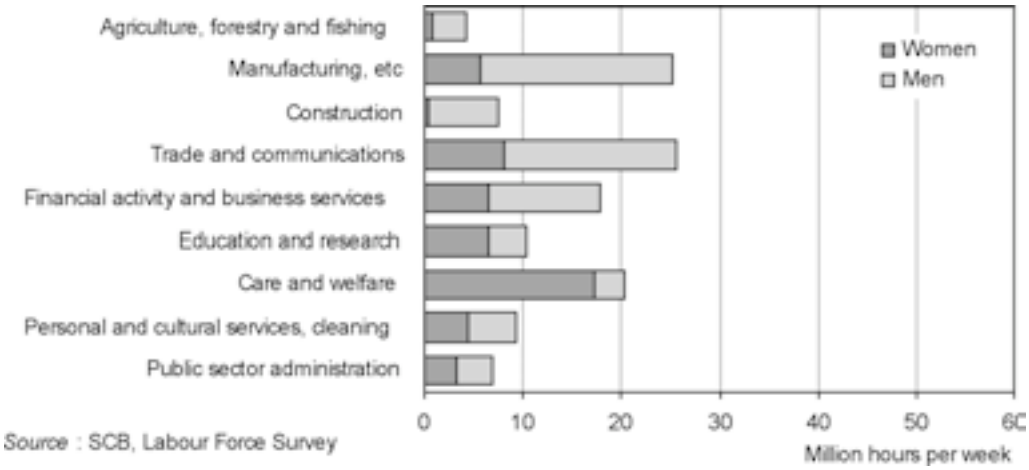
time overall is spent by parents on and with their children is much greater and depends on what one considers to be caring for children, the age of the children, the composition of the household and the parent's sex[10]. Travel related to housework is undertaken by women and men to the same extent. Men undertake the majority of maintenance. Care of children is undertaken mostly by women, and the same applies to shopping, although the difference here is smaller. Help to others is distributed evenly, but this estimate is probably a poor indication of the actual extent of the occurrence. Much help to others is probably hidden in other activity categories.

Figure 2a. Hours per week undertaking unpaid work 2000/01 according to sex. Swedish population, 20–64 years



Source : SCB, Time Use Survey

Figure 2b. Hours worked according to industry sector in 2000 according to sex. Swedish population 20–64 years



Source : SCB, Labour Force Survey

Work in households and on the labour market

A comparison of Figures 2a and 2b gives an interesting perspective on the extent of unpaid work. The time spent by the population (in the 20-64 age group) on housework is as great as that spent in the labour market, i.e. approximately 125 million hours per week. Women and men of a working age in Sweden allocate more than twice as much time to cleaning, laundry, food preparation, and dish washing, i.e. to household work as they allocate in total to the entire Swedish manufacturing industry.

There is no doubt that women take primary responsibility for the unpaid work. They do undertake the majority of it. The considerable amount of unpaid work already makes it more difficult for women than for men to reconcile family and gainful employment.

[10] Time for everyday life (see footnote 1), p.96

It should be emphasised that unpaid work is productive and contributes, like paid work does, to the maintenance of individuals and families, albeit in a different way. To some extent, paid and unpaid work are interchangeable, as much of what is produced by households can also be purchased on the market. Households are often forced to choose between producing something themselves and purchasing the equivalent product. This choice becomes clear in respect of food. Here, there is a choice between purchasing a ready-cooked chicken and an uncooked, deep-frozen one, which costs less but requires a certain amount of work, knowledge and equipment before it can be served for a meal. For others, the choice may perhaps be between having their meal at a restaurant and preparing it at home. Or cleaning their home themselves or paying someone else to do the cleaning for them, washing the car themselves by hand or going to a car wash, etc. If the household decides to purchase the goods (e.g. the ready-cooked chicken) or service (e.g. hiring a cleaner at home), someone will undertake the work, directly or indirectly, in the form of gainful employment. If the household itself takes care of the grilling of the chicken and the cleaning, this work is undertaken in the form of household work. The result is the same: a grilled chicken to place on the dinner table and a clean house. In one case the input is the person's own money; in the second case it is the person's own time. Naturally, there are also differences; the work might perhaps be undertaken using different methods and the result might not taste quite the same.

Could redistribution help?

If we assume for a moment that the time devoted by men to household work is compatible with the time they actually spend in gainful employment and that we reduce the amount of household work undertaken by women to that undertaken by men, the women's share of household work would – initially – have to be halved. This means that around 20 million hours per week would need to be eliminated, possibly through rationalisation, although probably only a small percentage could be eliminated in this way. If men took over a larger proportion of the household work it would make the situation easier for women, although it would also make it more difficult for men to maintain their level of gainful employment, which in itself would not be incompatible with the objective of the gender equality policy. Transferring it to the labour market would mean a three-fold increase in the industrial sector of Personal and cultural services, cleaning (if that is the industrial sector which would take over this activity and subject to the not entirely reasonable assumption of unchanged productivity), transforming it from one of the smallest industry sectors into the largest!

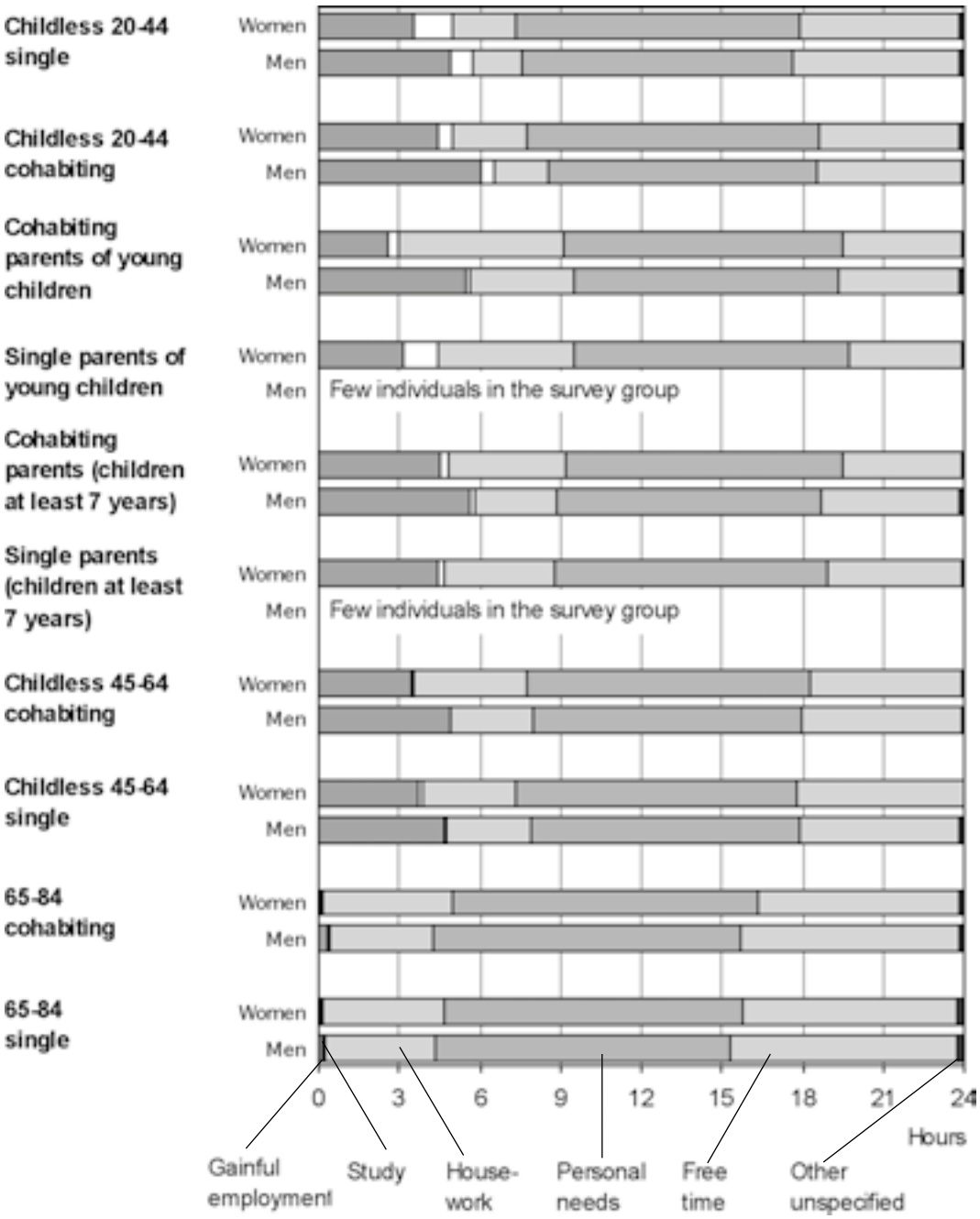
The above figures apply to Sweden. Childcare is not a particularly restrictive sector and hardly represents an obstacle to any parent wishing to take up at least part-time gainful employment. Children between the ages of one and twelve are entitled to a childcare place for a standard rate which would hardly prevent places from being taken up for financial reasons.

When calculating averages of the type presented above, only a very small proportion of the information collected in the harmonised time use surveys is actually used. Additional information could be used to identify and describe at a more detailed level similarities and differences in the everyday lives of women and men as regards factors which could affect their ability to reconcile work and family.

Variation over the lifecycle

For most people of working age, work consists of a combination of paid and unpaid work. The total time spent undertaking work and the composition of the work itself varies over a person's lifecycle. Figure 3 shows how the workload describes a curve from relatively little time for total work in the case of young, childless, single people via a maximum in the case of parent groups, followed by a falling number of hours in the case of pensioner groups at the bottom of the chart.

Figure 3. Average time spent undertaking activities for 2000/01 by sex and family cycle. Swedish population 20-84 years. Hours per day. All days.



The maximum of total work[11] undertaken on average by everyone in the group over all days of the week amounts to almost ten hours per day. This is balanced by the amount of free time, which is least for those with most work in total, as the time for personal needs does not vary greatly.

One should perhaps also note that the difference in total time spent undertaking work is greater between the family cycle groups than between women and men within these groups.

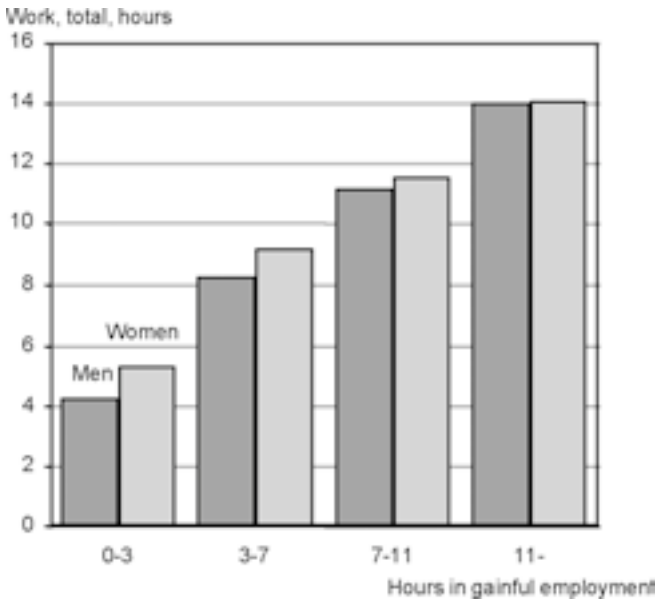
However, this relative similarity between women and men as regards time for total work does conceal major differences.

The gainful employment undertaken by women varies considerably between the family or lifecycle groups. One interpretation is that women have adapted their gainful employment to their life situation and its demands on

[11] Includes time for studies

housework more than men. With young children to care for, an activity which is defined in the survey as part of housework, gainful employment must move to second place. When the children are older, these restrictions decrease. The result clearly indicates that women take on most of the responsibility for housework and that one way for them to limit the total amount of work they undertake could be to reduce their gainful employment, at least temporarily. Men do not seem to experience the same demands on themselves to adapt their gainful employment. Gainful employment does not therefore seem to have quite the same status for women and men. Two distinct tendencies could be assumed. These tendencies perhaps do not exist in a pure form, but rather as combinations with stronger or weaker elements of one or other tendency. For men, gainful employment is accepted as being the highest priority alternative. When there are no obstacles in the way, they have time for housework. For women – at least when they have young children – there is a tendency in the opposite direction. Housework comes first and gainful employment has to make way. If there is a tendency in this direction, one would expect women to take on more responsibility than men for housework. Gainful employment does not 'release' women from housework to the same extent as it does men. As a consequence, one would expect that, with a given number of hours of gainful employment, the total work undertaken by women would be greater than that for men. The correlation between the number of hours of gainful employment and the number of hours of total work is shown in Figure 4. The result is clear: if the number of hours spent in gainful employment is the same, the average working day of women is longer than that of men. The difference is reduced as the length of the gainful working day increases.

Figure 4. Correlation between time in gainful employment and total work according to sex. Swedish population aged 20–84 who were in gainful employment on the day on which the survey was carried out. All days.



The difference represents what in other contexts is termed 'the second shift of women'. In terms of magnitude, this difference amounts to approximately half an hour per day for those working 'normal length' days in gainful employment, i.e. eight to ten hours per day.

Parents with young children are no exception. Even in this group, a woman's working day is longer than a man's if they each work the same number of hours in gainful employment.

Women and men have different weekly and daily patterns

Hours spent in gainful employment are largely restricted to contracted working hours. Shiftwork, weekend, evening and night work undoubtedly do occur, but the majority is undertaken during the daytime and on weekdays. Great parts of the housework is not governed by a contract but by a need, regardless of when it arises. This need does not take into account whether it is a weekday or a weekend, day or evening. This is particularly true for people with young children at home.

It therefore seems reasonable to assume that a high proportion of gainful employment and a low proportion of housework would cause the work to be concentrated on weekdays and the daytime. On the other hand, a high proportion of housework could be assumed as resulting in the work being more evenly distributed throughout

the week and during the day. If these assumptions are correct, one would expect the work undertaken by men to be more concentrated not just on weekdays but also in the daytime and the work undertaken by women to be more evenly spread over the day and the week.

Figure 5. Average time spent undertaking activities on weekdays and weekends during 2000/01 according to sex. Swedish population 20–64 years. Hours per day.

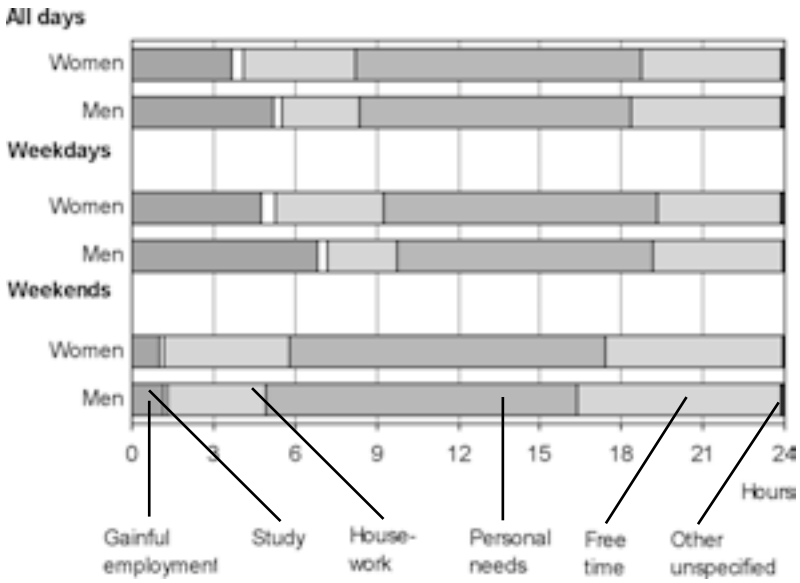


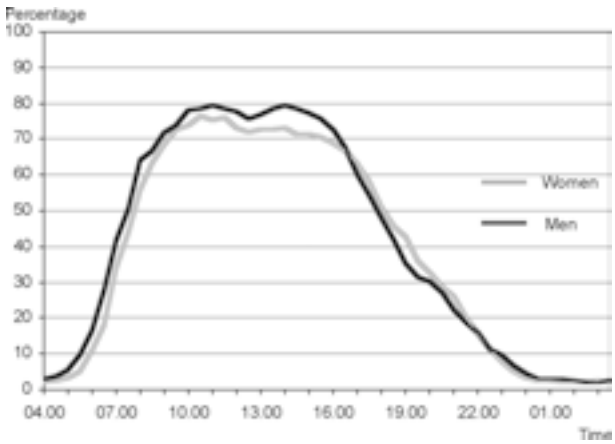
Figure 5 shows that the equal distribution of total work between the sexes, which was previously recorded and which was calculated over all weekdays, no longer applies when weekdays and weekends are separated. The (total) work undertaken by men is concentrated more on weekdays, when it exceeds that undertaken by women. The difference is approximately half an hour per day. There is no difference as regards free time.

During the weekend, the distribution is the opposite. On average, women spend about three quarters of an hour more on work in total compared with men. As a result, men have considerably more free time than women during the weekend. On average the difference amounts to almost an hour a day.

The same type of result can be seen when comparing time use during different parts of the day. On average, men schedule their work during the daytime and afternoon to a greater extent than women, and during the evening they have less work and more free time than women.

Figure 6 shows the proportion of the population undertaking work (unpaid or paid) at different times of the day. On average, men start work slightly earlier than women. During the afternoon, around 2pm, there are approximately 8% more men at work than women. During the early evening, around 7pm, there are approximately 8% more women than men undertaking work.

Figure 6. Proportion undertaking work (paid or unpaid work) at different times of the day on an average weekday during 2000/01. Swedish population 20–64 years.



Variation in the length of the working day

The differences in the scheduling of work are even more evident in the distributions of the total number of hours per day that women and men devote to work and leisure activities. The lines in Figures 7–10 describe the cumulative frequencies. The number of hours is plotted on the horizontal axis, whilst the proportions are plotted on the vertical axis. Figure 7 shows, for example, that on weekdays half of women aged 20–84 have a working day of approximately eight hours or less (see the vertical dashed lines). The working day of the other half is approximately eight hours or more, i.e. the median value for women is approximately eight hours per weekday. The median value for men is a total of nine hours. 40% of women have a working day of equal or longer duration.

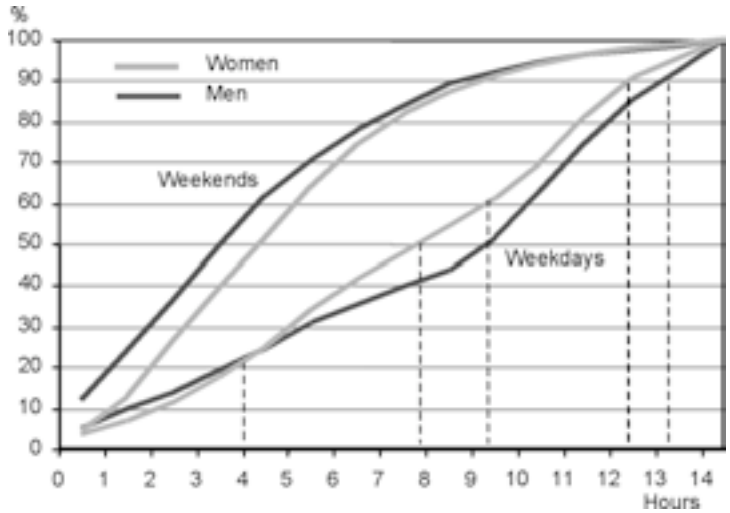
The upper part of the distribution shows that 10% of women have a working day which lasts approximately 12_ hours or more. 10% of men have a working day of 13 hours or more. The lower part of the distribution shows that 20% of both women and men have a working day which lasts four hours or less.

The greater the separation between the lines describing the distributions of women and men, the greater the difference between the groups. The overall picture given by the figures shows the same results as the structure graph above (Figure 5). Men work more than women on weekdays, whilst women work more than men at weekends. This applies not only to the entire Swedish population in the 20-84 age group, but also to sub-groups, e.g. cohabiting parents with children at home under the age of 18 (Figure 9).

As regards the number of hours of free time per day, Figure 8 shows that men have more free time than women during weekends. On weekdays, the difference between women and men is less. The proportion of men with a significant amount of free time on weekdays is slightly greater than the corresponding proportion of women. The same pattern can be seen if the material is broken down into sub-groups, see for example Figure 10.

The conclusion is that, compared with women, men not only concentrate their work more on weekdays and the daytime, but they also concentrate their free time on weekends and evenings. They have slightly more pronounced daily and weekly patterns with a clearer distinction between the daytime and evenings, weekdays and weekends and between work and free time.

Figure 7. Length of working day during 2000/01 according to sex. Cumulative distribution[12] of the total work time. Swedish population 20–84 years. Hours per day. Weekdays and weekends respectively.



[12] The vertical dashed lines in the figure indicate the examples referred to in the text.

Figure 8. Free time during 2000/01 according to sex. Cumulative distribution of time spent on leisure activities. Swedish population 20–84 years. Hours per day. Weekdays and weekends respectively.

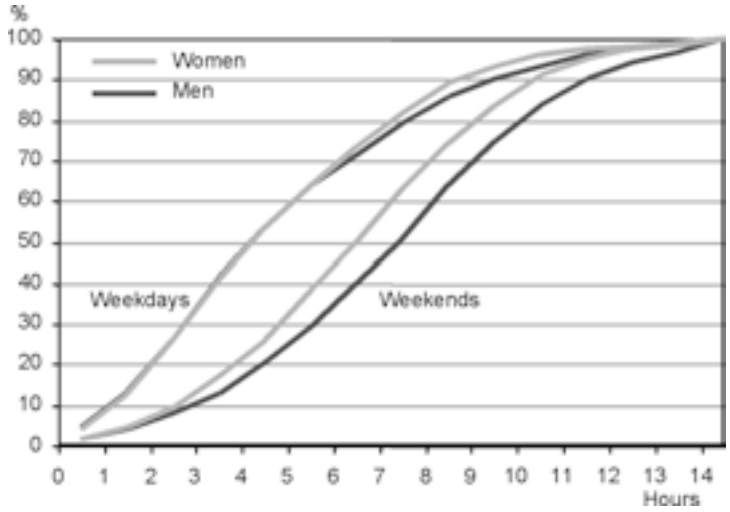


Figure 9. Length of working day during 2000/01 according to sex. Cumulative distribution of time for total work. Cohabiting parents with children at home under the age of 18. Hours per day. Weekdays and weekends respectively.

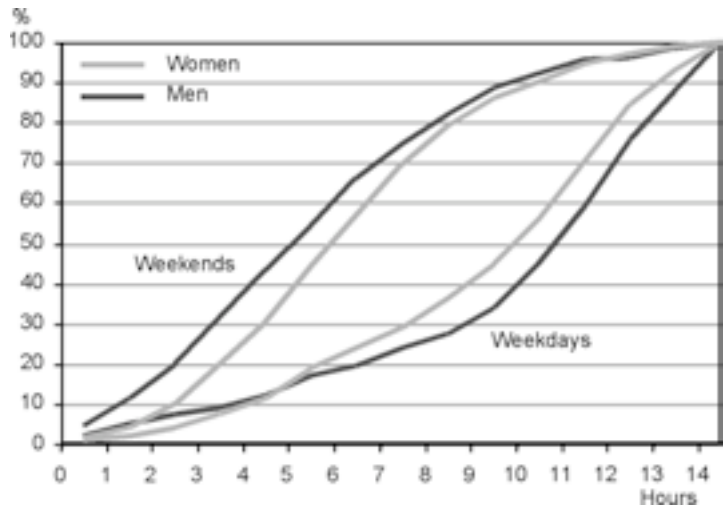
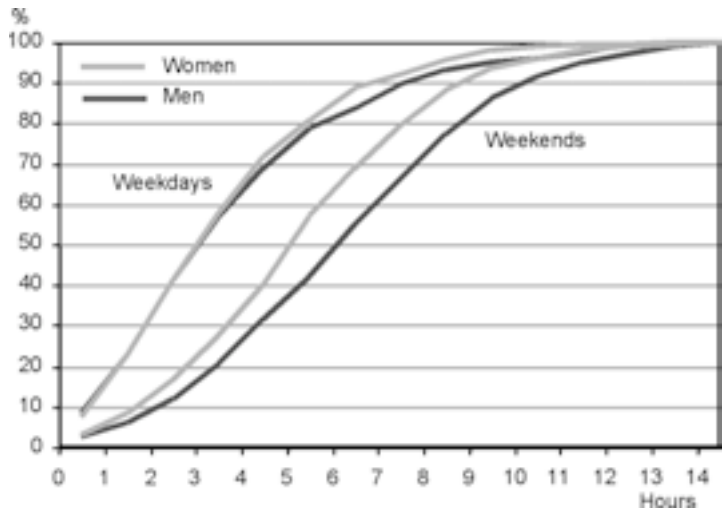


Figure 10. Free time during 2000/01 according to sex. Cumulative distribution of time spent on leisure activities. Cohabiting parents with children at home under the age of 18. Hours per day. Weekdays and weekends respectively.



The extent of housework is underestimated

In time use surveys, unpaid and paid work are measured differently. Paid work is measured as gross time, which means that activities which are closely linked to work but do not in themselves actually constitute work are included in the working hours. Examples include coffee breaks, visits to the toilet, private telephone calls, conversations with colleagues, which do not concern work, etc. Gainful employment is measured in this way because the task of recording information would be much more onerous if people had to distinguish in their diaries between productive work and other activities which occur during working hours. This approach is therefore not adopted except in time use surveys aimed at specific occupational groups.

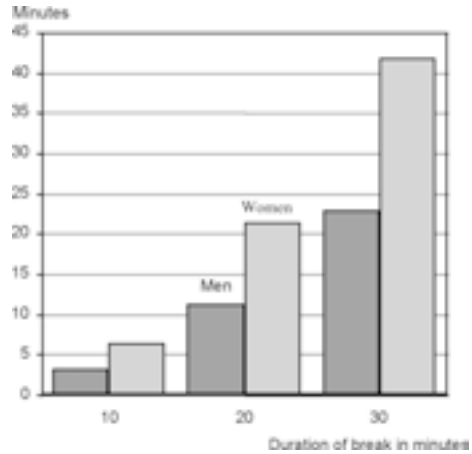
Unpaid work, or housework, is measured as net time. A coffee break in between household work would be classified as a coffee break. If such a coffee break is taken during gainful employment, it would be classified as gainful employment.

This means that, in comparisons of time spent undertaking paid and unpaid work, net time will be compared with gross time.

The comparison becomes particularly problematic if there are systematic differences between survey groups, e.g. sex, as regards the number of breaks, i.e. non-work activities included in the working hours. Because men devote more time than women to paid work on average, their total work will include more time for breaks and other activities which in themselves are not work. The total work undertaken by women consists to a greater degree of housework, which does not contain any breaks. To give a more accurate comparison, both types of work must therefore be measured either as net time or as gross time. The data does not permit the calculation of net time in gainful employment. Some form of gross housework must therefore be defined. However, there is no obvious way of doing this. One way could be to redefine as housework short periods which are not actually housework but which occur in between periods of housework. This would be based on the assumption that these short periods are closely linked to, and in many cases are necessitated by the nature of housework. This could be the need to wait for something to happen, e.g. the washing machine to finish so that the washing can be hung out to dry. This wait could perhaps be spent with a cup of coffee and a magazine.

Figure 11 shows the results of such a redefinition of short periods which occur between periods of housework. Breaks of three different maximum durations are permitted, 10, 20 and 30 minutes respectively. The increase in the time devoted to housework as a result of the breaks is shown on the vertical axis. The figure shows that housework undertaken by women increases approximately twice as much as that undertaken by men. The differences are significant. There is no difference between weekdays and weekends. The effect is that the total work undertaken by women increases more than it does for men; by how much, however, depends on the maximum permissible duration of breaks. With the break durations on which Figure 11 is based, the total work undertaken by women on average will not increase to the extent that there is a statistically significant change in the distribution of the total work. The conclusion that, on average and over all days of the week, women and men devote an equal amount of time to work in total remains valid with this approach[13]. There is one change, however. Previously, it was concluded that in total men work more than women on weekdays and less at weekends. An acceptance of the redefinition of 30-minute breaks as household work means that in total (including time for studies) women and men work an equal amount of time on weekdays.

Figure 11. Increase in time spent on housework according to sex if breaks of different duration are reclassified as housework. Swedish population 20–84 years. Minutes. All days.



[13] This conclusion is based on a two-sided tests, with 30-minute breaks there is a slight difference between men and women, so that the total work undertaken by women (including studies) exceeds that undertaken by men by ten minutes per day.

When housework increases as a result of the redefinition of housework, other activities will be reduced correspondingly. These are the activities which take place during what has been defined as a break. One third of this time is devoted to activities which come under the category of free time and two thirds are devoted to personal needs, e.g. meals, coffee drinking and personal hygiene.

Free time: more or less free

In contrast to gainful employment, the nature of housework is such that it is not undertaken during controlled or agreed times or at workplaces. It is part of everyday life alongside gainful employment. Its base is the home and it consists of periods which are interwoven with blocks of other activities. These activities are rarely gainful employment but leisure activities and activities which come under the category of personal needs. Periods of housework, leisure activities and personal needs alternate in sequences and patterns. An example is the breaks discussed above, in which short periods of leisure activities and other activities occur between periods of housework. By identifying the type of sequence or pattern, a statistical picture of the scope and organisation of household work can be built up.

There is a corresponding problem area as regards free time. When calculating average free time, all periods of leisure activities are included, regardless of whether they are long or short[14]. It is the activities and nothing else which are decisive.

Short periods alternate with considerably longer periods. This means that short periods of reading for example, which perhaps should almost be considered as the 'infilling' of breaks or pauses which occur in connection with other activities, will also be attributed to the category of free time. Let us assume for example that the activity 'reading the newspaper' takes place when the potatoes have just been put on the stove, the table has been laid, the pork chops have to be grilled in a quarter of an hour and the washing has to be hung out when the washing machine has finished in ten minutes. This gives perhaps ten minutes' reading time, which in the survey is defined under the category of free time and is therefore considered to be equivalent to reading a 'good book' without any risk of interruption or without anything needing to be done in the immediate future.

This would perhaps not be a major problem if the groups whose time use is being compared had a similar composition in terms of free time in this regard. However, if one compares the time use of women and men, this assumption is not valid.

Figure 12. Periods of free time during 2000/2001 according to sex. Average duration, minutes. Swedish population 20–84 years. All days.

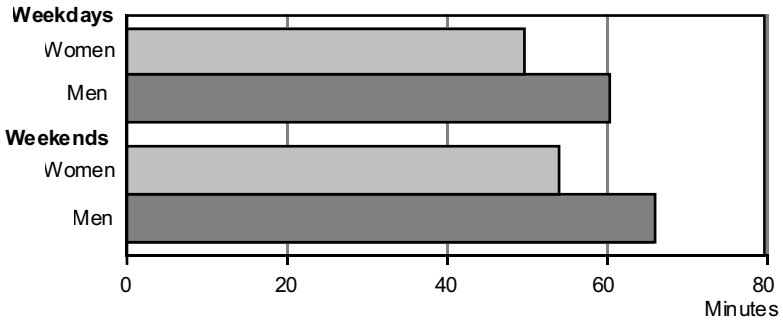


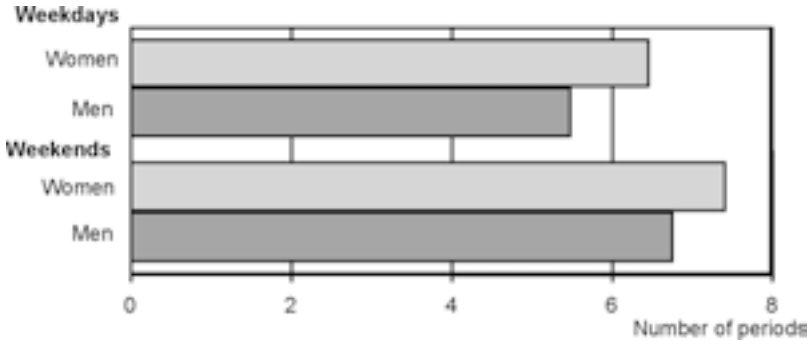
Figure 12 shows the average duration of free time periods. Note that the estimated duration of the periods depends on how the term 'free time period' is defined and how the code system for leisure activities is built up[15]. The fact that the layout of the time diary means that the shortest possible duration a period can have is ten minutes is of course also of importance. The consequence of this is that the absolute period length can hardly be given any meaningful interpretation. The same does not apply to the relative period length, which shows an

[14] The average amount of free time used for the comparisons made is in principle calculated as follows. The time for all periods of what is designated in the survey as leisure activities was first added up over all diary days. This total was then divided by the number of diary days. All periods of leisure activities contribute, regardless of their duration.

[15] A code system with many activity categories results in more periods than a system with few categories.

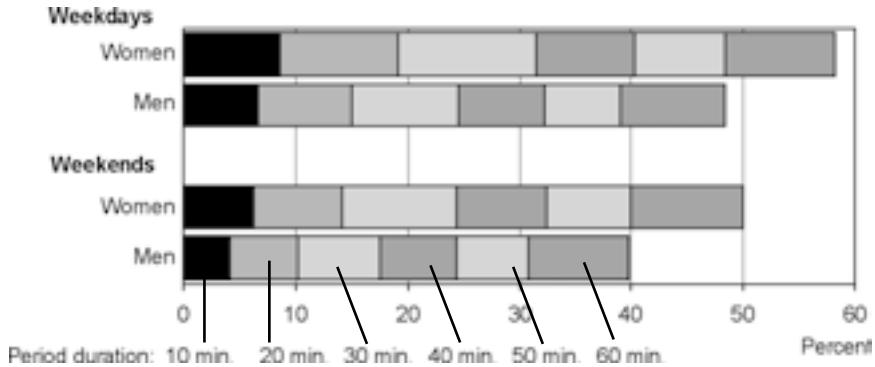
unambiguous result, i.e. that women's free time on average consists of shorter but more numerous (Figure 13) periods than men's. This conclusion does not change if the data is subdivided by family cycle.

Figure 13. Periods of free time during 2000/2001 according to sex. Average number per day. Swedish population 20–84 years. All days.



In order to give an indication of the difference in the distribution of the duration of the free time periods of women and men, the proportions of the total free time, which are taken in periods of various durations, have been calculated. Figure 14 shows that on weekdays almost 20% of women's free time consists of periods lasting no more than 20 minutes. The corresponding proportion for men is approximately 15%. A greater proportion of women's free time is therefore distributed between short periods than is the case for men. There is also a difference between weekdays and weekends. During weekends, free time is taken as longer periods. This applies to both women and men, but with no change in the difference between the sexes. There is a striking similarity between the distribution of women during weekends and that of men on weekdays, see Figure 14.

Figure 14. Distribution of free time between periods of varying duration during 2000/01 according to sex. Swedish population 20–84 years. Percentage.



Another aspect which gives an indication of the nature of free time is the type of sequences in which the free time periods take place, i.e. with what other types of period are they interwoven. Responsibility for housework could be assumed to result in free time and housework periods alternating in repeated sequences. With women's greater responsibility for and contribution to housework, one would expect women's free time periods to be terminated or interrupted so that housework can be commenced more often than is the case for men's free time. As gainful employment can be assumed to have its own, more undisturbed and separate time to a greater extent, one would not expect periods of gainful employment to be interwoven with periods of free time to any great extent.

On both weekdays and weekends it is most common for a terminated free time period to be followed by a period of some other type of free time activity (Figures 15a and 15b). Between 40 and 50% of the changeovers are of this type, a figure which is slightly higher for men than for women. For women, the next most frequent changeover is from free time to housework, something which is also considerably more frequent for women than for men. Switches to personal needs, excluding meals, is approximately equal for both sexes. However,

ending a free time period to switch directly to a meal is more common for men than for women. Changeovers from free time periods to gainful employment are less frequent, but are more common on weekdays than on weekends and for men than for women.

Figure 15a. Activities which follow free time periods according to sex. Swedish population 20-84 years. Percentage. Weekdays.

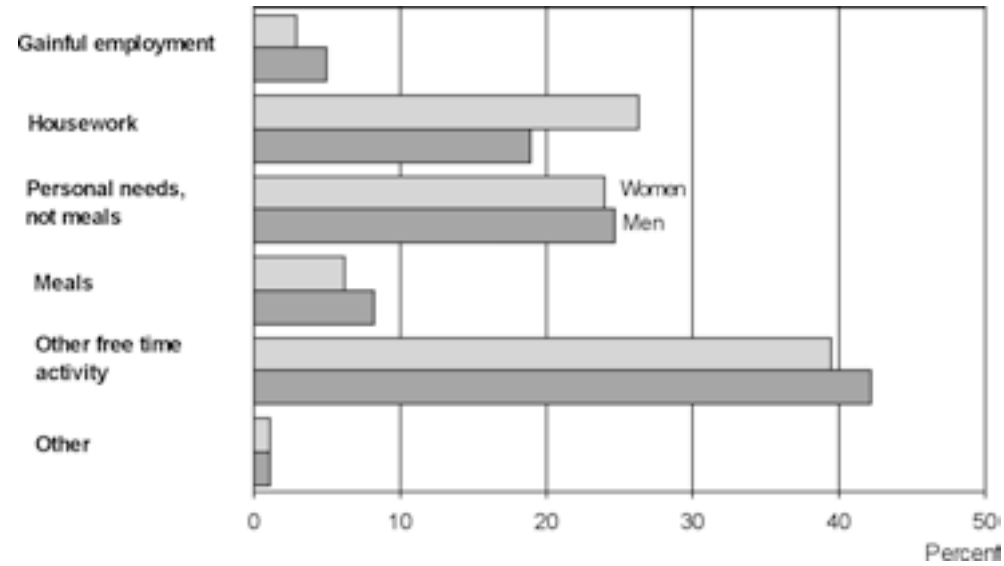
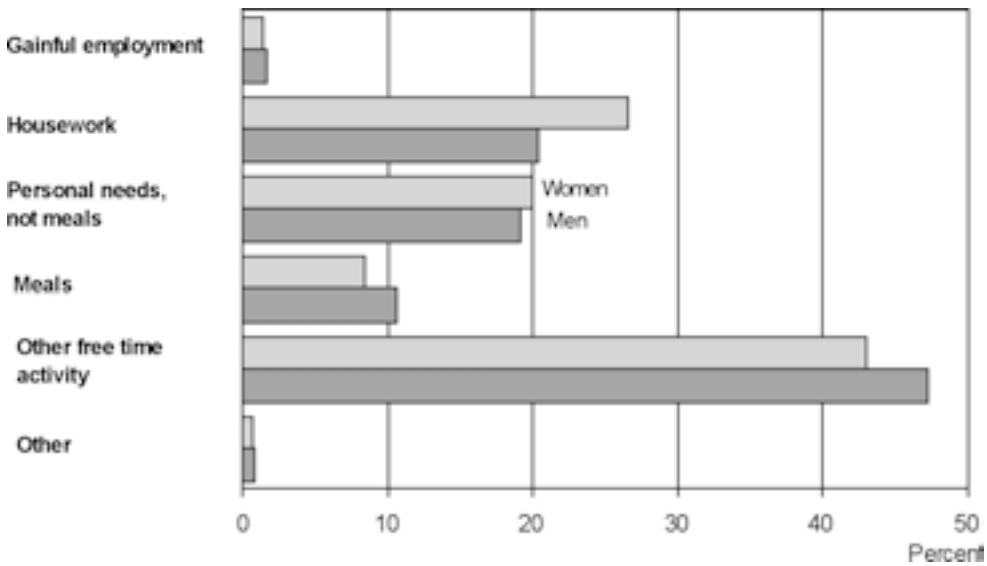


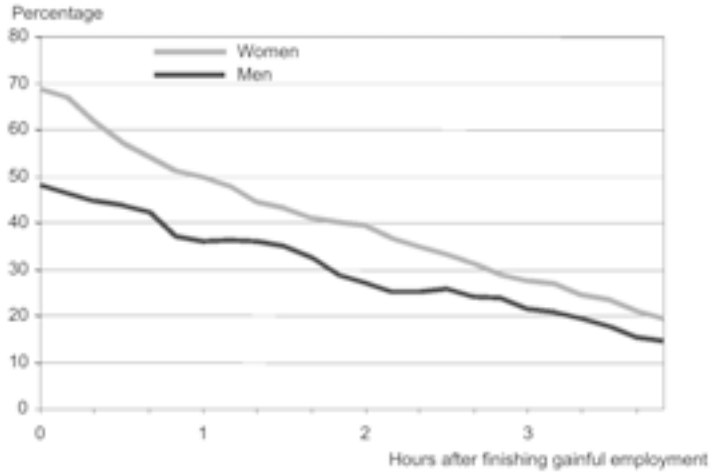
Figure 15b. Activities which follow free time periods according to sex. Swedish population 20-84 years. Percentage. Weekends.



Household work or free time after work?

In Figure 6, times during the day are shown on the horizontal axis. In Figures 16–18, which only concern people who are in gainful employment on the survey days and who finished work between 3pm and 7pm, the time has been replaced by the time that has elapsed since the working day ended. Work-related travel has been considered to be part of gainful employment. The origin of the horizontal axis is therefore normally the time at which the journey home from work is completed. The figures illustrate what the participants in the survey did as their first activity immediately after the last work-related activity and what happened over the next four hours.

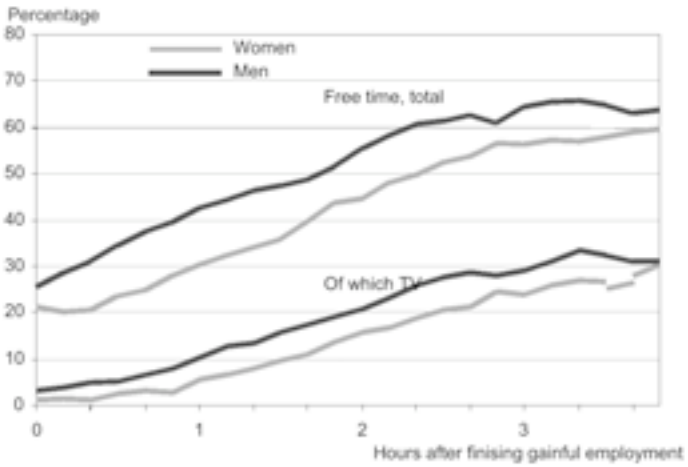
Figure 16. Proportion undertaking housework after finishing gainful employment on weekdays during 2000/01 according to sex. Swedish population 20–84 years undertaking gainful employment on the survey days and who finished work between 3pm and 7pm. Weekdays.



The results in Figures 16–18 provide further confirmation of the differences between the everyday lives of women and men, in particular that women take greater responsibility for housework and that men can end the working day with more choice as regards their next activity. Figure 16 shows that approximately 20 percentage points more women than men undertake housework immediately after finishing gainful employment (approximately 70% and 50% respectively). As the afternoon/evening progresses, the proportion involved in housework falls. The rate of fall is slightly greater for women than for men. After two hours, the difference is approximately 10 percentage points and after a further hour approximately 5 percentage points . By this time, between 20 and 30% are undertaking housework.

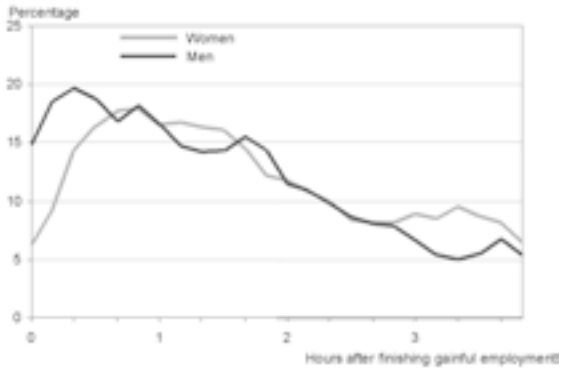
Enjoying free time is a mirror image of this trend. The proportion with free time increases over time. A consistently higher proportion of men compared with women have free time. During the first few hours after gainful employment finishes, the difference is about 10 percentage points . Thereafter the difference decreases. After three hours, 65% of men and 55% of women have free time. About half of them watch television (Figure 17).

Figure 17. Proportion with free time or watching television after finishing gainful employment on an average weekday during 2000/01 according to sex. Swedish population 20–84 years undertaking gainful employment on the survey day and finishing work between 3pm and 7pm. Weekdays.



For meals, the picture is slightly different. Initially, there is a fairly significant difference in that almost 10 percentage points , more men than women (about 6 and 15% respectively) eat a meal immediately, without needing to undertake any household work beforehand. From half an hour onwards after finishing work, there are no systematic differences.

Figure 18. Proportion eating a meal after finishing gainful employment on an average weekday during 2000/01 according to sex. Swedish population 20–84 years undertaking gainful employment on the survey day and finishing work between 3pm and 7pm. Weekdays.



Figures 16–18 are based on everyone who participated in the survey who was in gainful employment and who finished work between 3pm and 7pm. Consideration has not been given to whether they are single, have children, etc. If the figures were based only on cohabiting people, the result would essentially remain the same. Analysing parents with young children, for example, gives large random errors, particularly for the mothers of young children, since many of them are not in gainful employment at all owing to maternity leave, etc. Housework undertaken by the fathers of young children is at approximately the same level as that undertaken by all women, as shown in Figure 16.

Summary

The time use statistics show both similarities and differences between the everyday lives of women and men. There is a similarity in that the total time spent undertaking work does not differ. This assumes, however, that one ignores the fact that paid work is gross time and unpaid work is net time. Depending on how gross housework is defined, the total work undertaken by women could exceed that undertaken by men. There is a clear difference in the composition of the work. The work undertaken by women consists of equal proportions of paid and unpaid work, whilst that undertaken by men is strongly dominated by paid work. Gainful employment undertaken by women strongly depends on where they are in their lifecycle. Men devote more or less an equal amount of time to gainful employment throughout their lives up until retirement.

The only possible conclusion is that women take on more responsibility for work relating to the home and family.

In addition to the skew distribution of work and responsibility, there are also other aspects of the activities of everyday life which differ between the sexes. The statistics show that men are better able than women to make a clear distinction between work and free time. Men concentrate their work more clearly on weekdays and the daytime, whilst the work undertaken by women is distributed more evenly over the day and the individual days of the week. It is possible that the latter is a result of the fact that housework, which is after all mostly undertaken by women, may need to be undertaken when the need arises, regardless of the time and place. On the other hand, gainful employment takes place to a greater extent at agreed and predetermined times. A further difference is that men enjoy free time in longer, continuous blocks. Women's free time is more fragmented and interwoven with periods of housework.

Against this background, it is possible to understand that there is a difference in the opportunity for women and men to reconcile gainful employment and private life. Men have greater freedom to allocate time to work when necessary. For women, the greater responsibility for housework represents a barrier. In Sweden, however, the lack of childcare places does not represent a major barrier.

The statistics indicate that a redistribution of housework is necessary, both as regards responsibility and time in order to even out the conditions. In Sweden, such an equalisation took place during the 1990s. During this period, women reduced the amount of housework they undertook by an average of approximately 40 minutes per day, although men did not increase their contribution. Nevertheless, the effect is that housework is now more evenly shared between the sexes. Women's use of time has become slightly more similar to that of men as regards the extent and composition of work.

In order to achieve an even distribution of household work, a major redistribution of work would be required, of the order of 20 million hours per week for the population in the 20–64 age group. This corresponds to approximately five hours per person per week. This does not mean, however, that such a redistribution would be synonymous with a corresponding redistribution of responsibility.

ANNEX

Table B:1
Average time for activities, according to sex, hours and minutes per day, with 95-percent confidence intervals. Swedish population 20-64 years, year 2000/01

	Women			Men		
	Weekdays	Weekends	All days	Weekdays	Weekends	All days
Gainful employment	4:19±0:12	0:55±0:07	3:20±0:09	6:09±0:14	1:03±0:09	4:41±0:11
Travel related to employment	0:27±0:02	0:05±0:01	0:21±0:02	0:40±0:03	0:09±0:03	0:31±0:03
Gainful employment, total	**4:46±0:13**	**1:00±0:08**	**3:41±0:10**	**6:49±0:15**	**1:12±0:10**	**5:12±0:12**
Household work of which	1:48±0:04	2:25±0:05	1:59±0:03	0:50±0:03	1:18±0:04	0:58±0:03
Food preparation	0:39±0:02	0:52±0:02	0:43±0:01	0:21±0:01	0:30±0:02	0:23±0:01
Baking	0:03±0:01	0:04±0:01	0:03±0:01	0:00±0:00	0:00±0:00	0:00±0:00
Own production of food	0:01±0:00	0:02±0:01	0:01±0:00	0:01±0:01	0:02±0:01	0:01±0:01
Dish washing	0:18±0:01	0:24±0:01	0:20±0:01	0:09±0:01	0:13±0:01	0:10±0:01
Cleaning	0:27±0:02	0:38±0:03	0:30±0:02	0:12±0:02	0:24±0:02	0:16±0:01
Laundry, ironing	0:16±0:02	0:19±0:02	0:17±0:01	0:03±0:01	0:05±0:01	0:03±0:01
Maintaining, producing cloths	0:02±0:01	0:03±0:01	0:02±0:01	0:00±0:00	0:00±0:00	0:00±0:00
Heating, cutting firewood	0:01±0:00	0:01±0:00	0:01±0:00	0:03±0:01	0:04±0:01	0:03±0:01
Maintenance	0:19±0:02	0:26±0:03	0:21±0:02	0:28±0:04	0:50±0:05	0:34±0:03
Care of children	0:34±0:03	0:29±0:03	0:33±0:03	0:17±0:02	0:19±0:02	0:18±0:02
Help to others	0:08±0:02	0:11±0:02	0:09±0:01	0:07±0:02	0:08±0:02	0:08±0:02
Shopping and services	0:29±0:02	0:27±0:02	0:28±0:02	0:21±0:02	0:21±0:02	0:21±0:02
Other housework	0:10±0:01	0:09±0:01	0:09±0:01	0:08±0:01	0:09±0:01	0:08±0:01
Travel related to housework	0:30±0:02	0:28±0:02	0:29±0:01	0:24±0:02	0:31±0:03	0:26±0:02
Housework, total	**3:58±0:08**	**4:34±0:08**	**4:08±0:06**	**2:35±0:07**	**3:37±0:08**	**2:52±0:06**
Personal care	8:44±0:05	9:44±0:05	9:01±0:04	8:12±0:06	9:38±0:07	8:37±0:05
Eating	1:18±0:02	1:50±0:03	1:28±0:02	1:10±0:03	1:45±0:03	1:20±0:02
Travel related to personal care	0:01±0:00	0:01±0:00	0:01±0:00	0:01±0:01	0:02±0:01	0:02±0:00
Personal care, total	**10:03±0:06**	**11:36±0:06**	**10:30±0:05**	**9:24±0:07**	**11:26±0:07**	**9:59±0:06**
Study	0:27±0:05	0:11±0:03	0:22±0:04	0:20±0:05	0:08±0:02	0:17±0:04
Travel related to study	0:04±0:01	0:01±0:00	0:03±0:01	0:02±0:01	0:01±0:00	0:02±0:01
Study, total	**0:31±0:05**	**0:12±0:03**	**0:26±0:04**	**0:23±0:05**	**0:08±0:02**	**0:18±0:04**
Sports and outdoor activities	0:30±0:03	0:44±0:03	0:34±0:02	0:31±0:04	0:53±0:05	0:37±0:03
Participatory activities	0:05±0:01	0:06±0:02	0:05±0:01	0:07±0:02	0:09±0:02	0:08±0:02
Entertainment, culture	0:05±0:01	0:09±0:02	0:06±0:01	0:04±0:01	0:09±0:02	0:05±0:01
Social life	0:57±0:04	1:41±0:06	1:10±0:03	0:46±0:04	1:36±0:07	1:00±0:04
TV and radio	1:31±0:04	1:53±0:05	1:37±0:04	1:46±0:05	2:25±0:06	1:57±0:04
Reading	0:29±0:02	0:33±0:02	0:30±0:02	0:23±0:02	0:27±0:02	0:24±0:02
Hobbies	0:14±0:02	0:19±0:02	0:16±0:02	0:25±0:03	0:37±0:04	0:28±0:03
Other free time activities	0:21±0:03	0:25±0:03	0:22±0:02	0:17±0:02	0:24±0:03	0:19±0:02
Travel related to free time act.	0:23±0:03	0:42±0:04	0:28±0:02	0:25±0:04	0:48±0:05	0:31±0:03
Free time, total	**4:34±0:08**	**6:32±0:08**	**5:08±0:07**	**4:43±0:10**	**7:29±0:10**	**5:31±0:08**
Other, unspecified	0:08±0:02	0:06±0:01	0:07±0:02	0:07±0:02	0:07±0:02	0:07±0:01
Total	**24**	**24**	**24**	**24**	**24**	**24**
Number of diary days			**4018**			**3081**

Table B:2
Proportion undertaking activities on an average day, according to sex, with 95 percent confidence interval. Swedish population 20-64 years, year 2000/01

	Women			Men		
	Weekdays	Weekends	All days	Weekdays	Weekends	All days
Gainful employment	57±2	16±2	45±2	73±2	19±2	57±2
Travel related to employment	53±2	11±2	41±2	67±2	13±2	52±2
Gainful employment, total	**57±2**	**16±2**	**45±2**	**73±2**	**19±2**	**58±2**
Household work of which	95±1	96±1	95±1	77±2	83±2	79±2
Food preparation	85±2	86±2	86±1	62±2	66±2	63±2
Baking	5±1	6±1	5±1	0±0	1±0	1±0
Own production of food	4±1	4±1	4±1	2±1	3±1	2±1
Dish washing	65±2	72±2	67±2	40±3	48±3	42±2
Cleaning	61±2	69±2	63±2	34±2	45±3	37±2
Laundry, ironing	38±2	41±2	39±2	9±1	13±2	10±1
Maintaining, producing cloths	3±1	5±1	4±1	1±0	1±0	1±0
Heating, cutting firewood	3±1	3±1	3±1	6±1	8±1	7±1
Maintenance	36±2	40±2	37±2	28±2	43±2	33±2
Care of children	35±2	31±2	34±2	25±2	24±2	25±2
Help to others	15±2	17±2	15±1	10±2	12±2	11±1
Shopping and services	57±2	47±2	54±2	43±3	43±3	43±2
Other housework	35±2	27±2	33±2	25±2	23±2	24±2
Travel related to housework	67±2	57±2	64±2	57±3	56±3	57±2
Housework, total	**99±1**	**99±1**	**99±0**	**92±1**	**93±1**	**92±1**
Personal care	100±0	100±0	100±0	100±0	100±0	100±0
Eating	99±1	99±0	99±0	96±1	98±1	97±1
Travel related to personal care	5±1	5±1	5±1	6±1	7±1	6±1
Personal care, total	**100±0**	**100±0**	**100±0**	**100±0**	**100±0**	**100±0**
Study	11±1	7±1	10±1	7±1	5±1	7±1
Travel related to study	7±1	1±1	5±1	4±1	1±0	3±1
Study, total	**11±1**	**7±1**	**10±1**	**7±1**	**5±1**	**7±1**
Sports and outdoor activities	35±2	47±2	38±2	31±2	43±3	34±2
Participatory activities	5±1	5±1	5±1	6±1	6±1	6±1
Entertainment, culture	5±1	7±1	6±1	4±1	7±1	4±1
Social life	75±2	81±2	77±2	57±3	70±2	61±2
TV and radio	81±2	80±2	81±2	83±2	85±2	84±2
Reading	57±2	56±2	57±2	46±3	47±3	46±2
Hobbies	24±2	30±2	26±2	29±2	37±3	31±2
Other free time activities	36±2	43±2	38±2	32±2	40±3	34±2
Travel related to free time act.	38±2	55±2	43±2	38±3	57±3	44±2
Free time, total	**99±0**	**99±0**	**99±0**	**98±1**	**99±0**	**99±1**
Other, unspecified	17±2	15±2	16±1	16±2	14±2	15±2
Total	**100**	**100**	**100**	**100**	**100**	**100**
Number of diary days			**4018**			**3081**

Table B:3
Average time for activities, according to sex, hours and minutes per day, for those who undertook the activities, with percent confidence interval. Swedish population 20-64 years, year 2000/01

	Women			Men		
	Weekdays	Weekends	All days	Weekdays	Weekends	All days
Gainful employment	7:33±0:10	5:46±0:26	7:02±0:11	8:28±0:10	5:34±0:29	7:38±0:12
Travel related to employment	0:51±0:04	0:47±0:05	0:50±0:03	0:59±0:05	1:09±0:21	1:02±0:08
Gainful employment, total	**8:20±0:11**	**6:15±0:29**	**7:44±0:12**	**9:21±0:11**	**6:13±0:32**	**8:27±0:13**
Household work of which	1:54±0:04	2:31±0:05	2:05±0:03	1:04±0:03	1:34±0:04	1:13±0:03
Food preparation	0:45±0:02	1:00±0:02	0:50±0:01	0:33±0:02	0:45±0:02	0:36±0:01
Baking	0:58±0:10	1:09±0:10	1:01±0:08	0:55±0:25	0:44±0:25	0:52±0:20
Own production of food	0:32±0:11	0:45±0:09	0:36±0:09	1:09±0:35	0:54±0:16	1:05±0:25
Dish washing	0:28±0:01	0:34±0:01	0:30±0:01	0:22±0:01	0:27±0:01	0:23±0:01
Cleaning	0:44±0:03	0:55±0:03	0:48±0:02	0:36±0:04	0:54±0:04	0:41±0:03
Laundry, ironing	0:42±0:03	0:46±0:03	0:43±0:02	0:33±0:06	0:39±0:05	0:35±0:04
Maintaining, producing cloths	1:00±0:14	0:58±0:17	1:00±0:11	0:17±0:10	0:25±0:06	0:19±0:08
Heating, cutting firewood	0:19±0:04	0:30±0:13	0:22±0:05	0:43±0:12	0:50±0:13	0:45±0:09
Maintenance	0:52±0:05	1:04±0:05	0:56±0:04	1:37±0:11	1:57±0:09	1:43±0:08
Care of children	1:39±0:07	1:34±0:07	1:37±0:06	1:09±0:06	1:19±0:07	1:12±0:05
Help to others	0:56±0:09	1:02±0:08	0:58±0:07	1:13±0:18	1:08±0:12	1:11±0:13
Shopping and services	0:51±0:03	0:54±0:03	0:52±0:03	0:49±0:04	0:48±0:04	0:49±0:03
Other housework	0:27±0:02	0:32±0:03	0:29±0:02	0:31±0:04	0:40±0:05	0:34±0:04
Travel related to housework	0:44±0:02	0:48±0:03	0:46±0:02	0:42±0:02	0:54±0:04	0:45±0:02
Housework, total	**4:01±0:08**	**4:37±0:07**	**4:11±0:06**	**2:49±0:08**	**3:52±0:08**	**3:07±0:06**
Personal care	8:44±0:05	9:44±0:05	9:01±0:04	8:12±0:06	9:39±0:07	8:37±0:05
Eating	1:19±0:02	1:51±0:03	1:29±0:02	1:13±0:03	1:47±0:03	1:23±0:02
Travel related to personal care	0:25±0:06	0:27±0:06	0:26±0:05	0:26±0:08	0:29±0:05	0:27±0:06
Personal care, total	**10:03±0:06**	**11:36±0:06**	**10:30±0:05**	**9:24±0:07**	**11:27±0:07**	**9:59±0:06**
Study	4:06±0:26	2:42±0:23	3:42±0:20	4:31±0:40	2:27±0:32	3:56±0:31
Travel related to study	1:00±0:09	0:45±0:13	0:56±0:08	0:57±0:10	1:15±0:25	1:02±0:10
Study, total	**4:43±0:30**	**2:51±0:25**	**4:11±0:24**	**5:04±0:44**	**2:41±0:37**	**4:23±0:35**
Sports and outdoor activities	1:26±0:06	1:34±0:05	1:28±0:05	1:42±0:08	2:02±0:08	1:48±0:07
Participatory activities	1:40±0:17	2:29±0:34	1:54±0:15	1:56±0:20	2:22±0:22	2:04±0:16
Entertainment, culture	1:40±0:18	1:59±0:14	1:45±0:14	1:51±0:21	2:15±0:18	1:58±0:16
Social life	1:16±0:05	2:04±0:07	1:30±0:04	1:20±0:07	2:16±0:09	1:36±0:06
TV and radio	1:51±0:04	2:20±0:05	2:00±0:04	2:07±0:05	2:51±0:06	2:20±0:05
Reading	0:51±0:03	0:58±0:03	0:53±0:03	0:51±0:04	0:58±0:03	0:53±0:04
Hobbies	0:58±0:06	1:05±0:05	1:00±0:05	1:27±0:09	1:40±0:10	1:30±0:07
Other free time activities	0:57±0:06	1:00 ±0:05	0:58±0:05	0:52±0:06	1:02±0:06	0:55±0:04
Travel related to free time act.	1:00±0:06	1:16±0:06	1:05±0:05	1:05±0:08	1:24±0:07	1:10±0:06
Free time, total	**4:36±0:08**	**6:34±0:08**	**5:10±0:07**	**4:49±0:10**	**7:33±0:10**	**5:36±0:08**
Other, unspecified	0:45±0:12	0:38±0:08	0:43±0:09	0:43±0:09	0:52±0:11	0:46±0:08
Number of diary days			**4018**			**3081**

DISSECTING THE GENDER PAY GAP: WHAT CAN WE LEARN FROM INTERNATIONAL COMPARISONS?

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Executive Summary

Women continue to earn less than men. Despite much data collection and social-science research, considerable uncertainty remains concerning the social and economic factors underlying the gender pay gap. This uncertainty makes it difficult to assess the merits of policy interventions intended to reduce gender inequities in the labour market or to foresee how emerging trends in employment conditions (e.g. increasingly decentralised wage setting in some EU countries) will effect the status of women in the labour market.

This paper explores the potential contribution of internationally comparative data to an improved understanding of the gender pay gap. The first part of the argument is empirical and draws heavily upon recent OECD work, particularly, chapter 2 of the 2002 issue of the *Employment Outlook*, (OECD, 2002*a*).[1] After first documenting the size of the gender pay gap in different OECD countries, Section 1 uses regression-based decompositions to identify the determinants of international differences in the gender pay gap. This analysis is intended to illustrate the strengths and limitations of existing sources of internationally harmonised data, at least when attacked using the standard toolkit of labour economists (Altonji and Blank, 1999; Blau and Kahn, 2001). Section 2 of the paper then offers some reflections about the types of data collection initiatives most likely to advance the analysis of the gender pay gap from an internationally comparative perspective.

The empirical analysis of the gender pay gap suggests the following conclusions:

- The gender wage gap has narrowed since the mid-1980s in all OECD countries for which data are available, yet women still earn, on average, 16% less than men per hour worked. Gender differences in observable characteristics that human capital theory identifies as influencing productivity, such as education, potential experience and job tenure, account for little of the remaining gender gap in hourly wages. When account is also taken of the fact that women work fewer hours than men, the gender gap in take-home pay is seen to be considerably larger.
- An econometric decomposition of differences in the gender pay gap *across* 13 EU countries indicates that cross-country differences in the overall wage structure – as proxied by the relative wage structure for men – play an significant role in determining the relative wage received by women. In a few countries, notably the United Kingdom, the wage gap would be considerably lower if the wage structure were as compressed as in the EU average. However, the relationship between overall wage dispersion and the gender wage gap is complex and it does not appear that increased wage compression generally translates into a smaller gender pay gap, as had been conjectured by Blau and Kahn (1996) based on their comparison of the United States with other OECD countries.

[1] Section 1 of this paper is, in effect, a long extract from this chapter which has been lightly rewritten for the purposes of this paper.

- Cross-country differences in the employment rate of women and the degree of occupational segregation by gender are also important proximate explanations of international variation in the gender wage gap. These 2 factors are closely intertwined since most of the international variation in the employment rate for women is due to differences in the extent to which less educated and less skilled women are integrated into the labour market, and these women – when they participate in paid-employment – tend to be strongly concentrated in a few highly feminised occupations.
- Except for a few countries, there is little evidence of an hourly wage penalty attached to motherhood (*i.e.* the so-called "family gap"). However, mothers earn considerably less than their childless peers when account is taken of the fact that they work fewer hours.

Among the avenues for future data collection that appear to merit consideration are:

- High priority should be placed upon *developing a replacement for the European Community Household Panel (ECHP)* which would recreate its core advantages - i.e. providing harmonised (panel) data for representative samples of households from EU member countries, containing extensive data on household structure, income sources and individual labour market characteristics). However, the decomposition analysis in Section 1 suggests several avenues of investigative directions that could not be pursued very far with the variables contained in the ECHP. We think the LFS is naturally a better source for the analysis of gender differences in the labour market, including the gender pay gap. We therefore welcome the efforts by Eurostat to collect information on earnings, as well as the inclusion of new primary variables or ad-hoc modules that will allow expanding the scope for investigation of this issue.
- Better information concerning *work schedules and time-use patterns* could make an important contribution to understanding the gender pay gap. Weekly hours spent in paid work is an essential start, but could usefully be supplemented by information on: (i) how those work hours are scheduled, including the incidence of "unsocial" hours, the stability and predictability of work schedules and the extent of employee say about their work hours; (ii) information about the time that is devoted to child care and, possibly, to other household responsibilities; (iii) self-assessed conflicts between work schedules and family activities; and (iv) information about the ways that working parents reconcile job and family commitments.
- Better information concerning *job and firm characteristics* may be useful for understanding gender differences in the types of jobs held and pay. The need here is to link detailed information about firm characteristics (size, capital intensity, detailed industry, workforce composition by occupation and gender, etc.) and the individual characteristics of a random sample of employees at those firms (demographic characteristics, tenure, earnings, hours, etc.). The Structure of Earnings Survey, managed by Eurostat, has the potential to offer this type of data in a cross-country comparable format. The plans for 2006 to expand its coverage of the economy – in terms of sectors and firms' size class – would be a very welcome development.
- Better information concerning gender differences in *aspirations, values and character traits* that affect labour market opportunities (e.g. employers' hiring and promotions decisions) and workers' career choices (e.g. field of study at university, occupation and fertility). This type of information might most usefully be gathered from labour market entrants and could include: (i) career aspirations, including the priorities assigned to high pay versus other job attributes (e.g. socially useful work or flexible hours); (ii) desired fertility and the associated anticipations regarding own and spousal labour supply adjustments following child birth; and (iii) how choices of the field of study and occupation are made.

1. Analysis of the gender pay gap in OECD countries using existing data sources

A. The unadjusted gender pay gap

Table 1 shows the ratio of gross hourly earnings of women relative to men for a recent year and carries out a sensitivity analysis of its measurement based on alternative measures (*i.e.* the ratio of mean and of median hourly earnings, and the ratios at the break-points for the bottom and top quintiles of the earnings distributions) and populations (*i.e.* full-time only and all wage and salary employees). Cross-country comparability is somewhat limited by the fact that hourly earnings are calculated on the basis of slightly different definitions of wages and hours worked across countries: in some cases (*e.g.* the ECHP countries) overtime pay and/or bonuses are included, in other cases (*e.g.* Canada and Sweden) they are not; hours worked normally refer to usual hours, including overtime, but in the case of Sweden they relate to contractual hours. These differences affect the gender

pay gap only to the extent that they are gender-biased.[2] Furthermore, there may be some measurement errors due to the fact that the available information on earnings has been derived from household surveys (except for Sweden), where the risk of mis- or under-reporting by the interviewees is quite high; however, there appears to be no reason to expect systematic differences by country in the extent of gender bias in this phenomenon.

No matter how the gender wage gap is measured, women's hourly earnings are below those received by men in all countries. On average, hourly rates of pay for women are 84% of men's wages, corresponding to a wage gap of 16%, either when measured for full-time workers only or for all workers, including part-timers. In both cases, the wage gap at the median is slightly lower. The measure of the wage gap based on the median rather than the average is more robust, since the former is not affected by extreme values at both ends of the earnings' distribution. Based on this measure, the wage gap between men and women working full-time appears narrowest — at 6% — in Belgium, followed by Australia, Denmark, France, Italy, Spain and Sweden, whereas it is largest — at 21% — in Switzerland and the United States.

Because a large fraction of the female workforce holds part-time jobs, especially in the Netherlands and Switzerland, looking at full-time workers only is a potentially serious omission. The hourly pay gap estimated on the basis of median wages for all workers, both full-time and part-time, is 4-5 percentage points higher than that estimated for full-time workers in Ireland, New Zealand, Spain and the United Kingdom, reflecting lower hourly wages for part-time workers, most of whom are women. In the remaining countries, however, there is little difference between the two measures of median wage gap. Particularly, in the two high part-time economies, the Netherlands and Switzerland, the median wage gap is even slightly lower when measured over all workers than over full-time workers only. This finding suggests that women in part-time jobs are not subject to an additional pay penalty in many OECD countries, perhaps thanks to recent changes in pay setting such as the collective bargaining initiatives in the Netherlands to equalise pay in full- and part-time jobs.

Table 1 presents two additional measures of the wage gap: the ratio of gross hourly earnings of women's to men's at the 20th and 80th percentiles of the female and male earnings distributions. The gender pay gap is significantly smaller at the 20th than at the 80th percentile in Nordic and English-speaking countries, particularly Finland and Denmark, and Australia and New Zealand, respectively. Conversely, for approximately half of the countries considered there appears to be either no clear difference or a greater female disadvantage in the bottom part of the earnings distribution than in the top part. The gender wage gap in Portugal and Spain is 6 and 9 percentage points greater at the 20th than at the 80th percentile of the earnings' distribution. This result could, however, partly reflect measurement error introduced by the self-declared nature of the available data, at least in part. If top earners — presumably for the majority men — have greater propensity to under-report their earnings than low or middle earners, the male-female wage gap at the 80th percentile is likely to be under-estimated.

Although the hourly wage can be thought of as the "true" price of labour, thus representing the most appropriate basis for the calculation of the gender pay gap, total weekly, monthly or annual earnings provide a better idea of how much women "take home" compared to men. Chart 1 shows the gender gap of monthly earnings for all workers, including part-timers, by adding to the gender hourly pay gap the gender gap in hours worked. As women are more likely to work part-time than men, and, once in full-time work (*i.e.* 30 hours of work per week or more), they work, on average, shorter hours than men (OECD, 1999), they earn considerably less, on a monthly basis, than men. In the Netherlands and the United Kingdom women earn just over half of what men earn.

The size of the remaining gender pay gap is the result of different wage developments for women and men and may reflect different stages of development in gender equality. Table 2 shows changes of the gender wage gap over the past two decades for a small selection of OECD countries. Over the 15-20 year periods analysed, the wage gap fell by between 14 and 38%, indicating substantial progress. The wage gap decreased most in the United States and France, whereas the figures for Sweden and Canada display less rapid movement. The strong narrowing of the gender wage gap in the United States is all the more remarkable as it occurred against the background of rising wage inequality, which Blau and Kahn (1997) find to have a positive correlation with the gender pay gap. Using their own expression, American women have been "swimming upstream", mainly thanks to improvements in their relative qualifications that were sufficient to counterbalance changes in the wage structure that worked against women. By contrast, in Sweden, much of the narrowing of the wage gap had

[2] For example, as men are more likely than women to work overtime hours, the gender pay ratio for Sweden, calculated on the basis of contractual hours, will be under-estimated compared to that of the other countries where overtime hours are taken into account.

already been accomplished in the 1970s. The relative stagnation of the gender pay gap in Nordic countries, in particular Denmark, has been attributed by Datta Gupta *et al.* (2001) to unfavourable wage structure effects that more than wiped out any gains that Danish women have made in their human capital over the period.[3]

A reduction of the gender pay gap, however, is not always a favourable development for women. Relative wage growth of women, in fact, may be strongly influenced by changes in workforce composition. The experience of transition countries, where employment losses during the transition period have hit less skilled women particularly hard, illustrates this possibility. For example, Hunt (2002) attributes almost half the recent narrowing of the gender wage gap in East Germany to exits from employment of low skilled workers who were disproportionately women. International comparisons also confirm that differences in the composition of the female workforce have an important effect on the gender wage gap. Chart 2 displays a positive relationship between the female employment rate and the gender wage gap across countries. The association between low employment rates and lower-than-average wage gaps may be viewed as a paradox: one would expect more women to be encouraged to enter employment if there is gender equality in pay and, in turn, pay equity regulations and practices to become increasingly important as more women enter the labour force. However, the apparent paradox is easily resolved, at least in part. Cross-country differences in female employment rates are mainly accounted for by the degree of integration of less educated, lower-paid women into employment (OECD, 2002*a*). In countries where a higher proportion of low-educated women are employed, the gender pay gap will tend to be wider, all other things being equal.[4] The decomposition analysis that follows provides an estimate of the quantitative importance of this compositional effect – and other factors – for determining the overall gender wage gap.

B. Decompositions of the wage gap

Possible sources of pay inequality between women and men are differences in human capital endowments and productivity-relevant characteristics (*e.g.* age, education and employment experience, but also less easily observed characteristics like motivation to work and effort); differences in jobs held; and differences in pay "all other things equal." Identifying these different components is important for policy purposes. In particular, differences in pay "all other things equal" reflect pay discrimination and are subject to being redressed through legislation on equal pay. The analysis that follows tries to quantify the different components of the gender wage gap using decomposition methods devised by Blinder (1973), Oaxaca (1973) and Juhn *et al.* (1991). In reality, it is very difficult to determine when the condition "all other things equal" is met on the basis of the available information, since only a small portion of the many characteristics that affect the wage paid can be observed, and women and men often perform very different jobs.[5] As a consequence, the type of analysis performed here can only suggest upper and lower bounds to the different components, corresponding to different assumptions on the role played by labour market discrimination, once the effect of differences in observed human capital endowments and productive characteristics is taken into account.

A simple within-country decomposition

The first step in the decomposition of the gender wage gap is to identify the contribution of observed endowments and productive characteristics. To do this, one needs to know how much the labour market "pays" for such endowments and characteristics. Different approaches exist in the literature on how to estimate these remuneration rates. Here, following Blau and Kahn (1996, 1997), it is assumed that the best estimate can be obtained through the estimation of country-specific male wage regressions, where selectivity problems are minimised.[6] Based on an OLS regression model and individual data, earnings functions for wage and salary male workers aged 20 to 64 years and working full-time (excluding apprentices) are estimated. A necessary condition to ensure cross-country comparability is to have the same specifications of wage regressions for all countries: for this reason, the analysis is restricted to 13 European countries for which comparable data are available from the European Community

[3] In the mid-1970s, the Danish government tried to restrict public-sector wage growth in order to reduce wages in the public sector relative to wages in the private sector. Rosholm and Smith (1996) show that this policy not only succeeded in its stated objective, but also widened the gender wage gap because women are much more likely than men to work in the public sector.

[4] Another aspect of this compositional effect is that higher employment rates for women are also associated with increased occupational segregation, since less educated women tend to be concentrated in a few female-dominated (and low paying) occupations when they are employed (OECD, 2002a).

[5] For this latter reason, policy action in some countries (i.e. Australia) has focused on pay differences that exist across different occupations that are deemed to be of equal value or "comparable worth", whereas many other countries have promoted policies and procedures designed to combat job and promotion discrimination ("affirmative action").

[6] It might be argued that the comparison of earnings of males and females should take account of the fact that the probability of having a wage and salaried job is not the same for women and men. However, as argued by Manski (1989) and Blau and Kahn (1996, 1997), mis-specification of the selection equation may lead to large errors. For this reason, we prefer to estimate our wage equations only on the male sample, which suffers less from the selectivity problem.

Household Panel (ECHP).[7] Following the standard Mincerian specification, the natural logarithm of gross hourly wages is used as the dependent variable, while education, potential experience (age minus age of first entry into the labour market after leaving full-time schooling) and potential experience squared, together with controls for occupations, tenure, permanent contracts and public/private sector, are included in the model. These variables will be called "observed characteristics" hereafter, to distinguish them from unobserved characteristics (such as motivation or the difference between actual and potential experience), whose effect is reflected in the residual.

The estimated coefficients from the male regressions can be interpreted as the market price for the observed characteristics that would apply to both men and women in the absence of discrimination. The product of these coefficients and the average gender gaps in the corresponding variables leads to a simple decomposition of the differential between average hourly wages of men and women into a part due to gaps in observed characteristics and an unexplained residual (Oaxaca, 1973; Blinder, 1973; Oaxaca and Ransom, 1999). The latter reflects gender differences in unobserved characteristics and/or discriminatory wage-setting practices that are unrelated to productive characteristics. Formally, this decomposition can be written as:

$$\Delta \log \overline{W_i} = \Delta \overline{X}_i \beta_i + \Delta \overline{\varepsilon}_i \quad , \qquad [1]$$

where *i* indexes countries, ¯ and (refer to country averages and gaps between men and women, respectively, *W* stands for gross hourly wages, *X* for the matrix of observable endowments and characteristics, (for the vector of estimated coefficients from the male regressions and (for the residuals from these regressions (that is, difference between actual and predicted values, the latter computed using the estimated coefficients from the male wage regressions). As shown in Chart 3, even after gender differences in observed characteristics are controlled for, there remains a substantial gap between the hourly earnings of men and women. Indeed, on average, once the effects of education, tenure, potential experience, and other observable characteristics are controlled for, gross hourly wages are still 15% greater for men than for women. These results must be interpreted with some caution, given the difficulty of measuring *actual* labour market experience, which is only partially circumvented through the inclusion of potential experience and actual tenure. The analysis in OECD (2002*a*) suggests that potential experience overstates women's actual labour market experience, as women spend less and more discontinuous time in employment than men, especially if they have children or a low level of educational attainment. As a consequence, the use of estimated male returns to experience overestimates the female rate of return to experience, thereby inflating the unexplained part of the wage differential.[8]

A cross-country decomposition

The components underlying Chart 3 cannot be fully compared across countries. In fact, each term of the decomposition is not only the result of gender gaps in observed and unobserved characteristics (or of discriminating wage-setting practices), but also reflects the structure of remuneration rates and wage premia, which differ across countries. Applying the decomposition method devised by Juhn, Murphy and Pierce (J-M-P hereafter, Juhn *et al.*, 1991) in a cross-country perspective, this problem can be overcome by taking one country as a benchmark and evaluating gaps in observed characteristics using the wage structure of that specific country. This way, cross-country differences in the gender wage gap can be decomposed into *i*) a component due to cross-country differences in gender gaps in observed characteristics; *ii*) a component due to cross-country differences in market prices for these characteristics; and *iii*) a residual difference reflecting differences in pay discrimination and/or in unobserved characteristics. The residual difference can be further decomposed under the extreme hypothesis that it can be entirely ascribed to differences in unobserved characteristics and/or in their remuneration. In this case, cross-country differences in remuneration rates for unobserved characteristics are estimated by assuming that they are fully reflected by differences between male residual distributions (that is, a greater residual male wage dispersion reflects steeper returns to marketable characteristics),[9] and differences in gender gaps in unobservable characteristics are obtained by subtraction.

Formally, the J-M-P decomposition can be written as follows (see also Blau and Kahn, 1996):

$$\Delta \log \overline{W_i} - \Delta \log \overline{W_k} = \Delta \overline{X}_i (\beta_i - \beta_k) + (\Delta \overline{X}_i - \Delta \overline{X}_k)\beta_k + (\Delta \overline{\varepsilon}_i - \Delta \overline{\eta}_{ik}) + (\Delta \overline{\eta}_{ik} - \Delta \overline{\varepsilon}_k) \quad , \qquad [2]$$

[7] See Annexe 2.B of OECD (2002a) for detailed documentation of data definitions and sources, as well as of the regression methods and results presented in this section.

[8] This problem is mitigated by the inclusion of actual tenure and occupations in the regressions, especially in countries where returns to tenure are substantial.

[9] This latter assumption is also extreme. Indeed, different dispersions of the male wage residual across countries might reflect cross-country differences in the distribution of unobserved endowments rather than their remuneration rate. If this were the case, residual dispersions would not be informative for the purpose of identifying the remuneration rates for unobserved endowments.

where *i* and *k* index countries (with *k* denoting the benchmark country), ¯ and *(* refer to country averages and differences between men and women, respectively, *W* stands for gross hourly wages, *X* for the matrix of observable endowments and characteristics, *(* for the vector of estimated coefficients from the male regressions, *(* for the residuals from these regressions and *(* for the "theoretical" residuals that would be obtained in country *i* if it had the same residual wage structure as country *k*. These "theoretical" residuals deserve some explanation: they are obtained calculating for each individual of country *i* the residual that an individual with the same ranking position with respect to the male distribution would have in the benchmark country *k*. Indeed, provided that the ranking of individuals reflects the distribution of unobserved characteristics, and that the distribution of unobserved characteristics in the male population is the same in all countries, cross-country differences between the residuals of individuals with the same ranking position reflect cross-country differences in remuneration rates for unobserved characteristics. Following this intuition, the first and third terms of the right-hand side of equation [2] represent the effect of cross-country differences in remuneration rates of observed and unobserved characteristics, respectively, for given gender gaps in characteristics. Conversely, the second and fourth terms represent the effect of cross-country differences in gender gaps in observed and unobserved characteristics, respectively, that would be obtained if country *i* had the same wage structure as country *k*.

The choice of the benchmark country depends on the objectives of the analysis. In the pioneering work of Blau and Kahn (1996), the authors try to establish what the gender wage gap in OECD countries would be if they had the same wage structure as the United States. The choice of the United States as benchmark country then follows immediately. Conversely, Kidd and Shannon (1996), being concerned with a comparison of just two countries (Australia and Canada), decompose the wage gap of each country using the wage structure of the other. For the analysis in this chapter, the choice is less obvious. A somewhat natural approach is to compare each country with the cross-country average. Accordingly, a virtual "benchmark country" is constructed by pooling together observations from all 13 countries, with remuneration rates estimated from a pooled male wage regression that includes also country dummies in order to make the estimation meaningful.[10]

Before proceeding further with the examination of the decomposition results, the reader deserves some guidance to their interpretation. On the basis of the available evidence, it is not possible to determine whether the residual term can be ascribed only to gender differences in unobserved characteristics and/or in their remuneration or rather to labour market discrimination.[11] However, comparing the full decomposition with one focussing on the first and second terms of equation [2] only, thus leaving the residual unexplained, provides estimates of upper and lower bounds to the effect of gender gaps in productive characteristics and the effect of the wage structure. This comparison is highlighted in Chart 4, which presents three different measures of the gender wage gap: *i*) the unadjusted wage gap, defined as the percentage difference between male and female average gross hourly wages; *ii*) the wage gap adjusted for cross-country differences in remuneration rates for observed characteristics, computed by subtracting the first term on the right-hand side of equation [2] from the unadjusted wage gap; and *iii*) the wage gap adjusted for cross-country differences in the whole wage structure, computed by subtracting both the first and third term of the right-hand side of equation [2]. This way, the difference between the middle and left-hand columns of Chart 4 gives a measure of the effect of the wage structure on the gender wage gap that takes account only of cross-country differences in prices for observed characteristics. Conversely, the difference between the right-hand and left-hand columns gives a measure of the contribution of the whole wage structure, based on the strong assumption that the entire residual reflects unobserved characteristics and their remuneration rates.

Chart 4 shows that the unadjusted gender wage gap would be substantially reduced or inflated for some of the countries analysed, if the structure of remuneration rates were similar to that of the average benchmark country. Particularly, in the United Kingdom, it would be between 2 and 4 percentage points smaller if this country had as compressed a wage structure as the benchmark country. By contrast, in the Netherlands, a narrower wage structure contributes to a smaller gender pay gap, moderating penalties due to the concentration of women into lower paid occupational groups.

[10] Decomposition outcomes are only partially robust to the choice of the benchmark country (Blau and Kahn, 1996) and a different choice might lead to somewhat different results from those presented below. Similar problems arise as regard to the choice of the reference group for categorical variables (Oaxaca and Ransom, 1999).

[11] Although differences in observed productive characteristics are generally considered legitimate sources of earnings inequality, they could also reflect the adaptation of women to the biases of the labour market and/or to so-called "pre-market discrimination," including cultural values and attitudes that discriminate against women. Even in this area, therefore, the distinction between discrimination, constraints and choice can be blurred.

Less disperse wage structures, however, are not always favourable to women. For instance, women usually benefit from their large presence in the public sector because, on average, public sector hourly wages are higher than wages in the private sector, all other things equal. As a consequence, a narrower-than-average wage differential between the private and the public sector in Belgium, Denmark, Finland, and the Netherlands contributes to a widening of the gender wage gap in these countries. This is particularly the case in Denmark, where the contribution of observed characteristics to the gender wage gap is positive mainly because wages in the public sector, where women are over-represented, are even slightly lower than in the private sector. Similarly, given that working women in Portugal are on average more educated than men and in high-pay occupations, greater than average returns to education and dispersion in occupational premia significantly reduce the gender wage gap. Indeed, the gender wage gap in Portugal would be 8.6 percentage points greater if it had the same wage structure as the benchmark country. Overall, these results show that Blau and Kahn's finding that the more compressed the wage structure the smaller the gender wage gap (Blau and Kahn, 1996), while pertinent to the comparison between the United States and other countries, cannot be generalised.

Once adjusted for the effect of the wage structure, the gender wage gap appears to be smallest in Greece, Italy and Spain, that is those countries that have a particularly low female employment rate. Indeed, the cross-country correlations reported in Table 3 confirm that the positive relationship between the female employment rate and the gender wage gap remains, and is slightly stronger, after adjusting for cross-country differences in the wage structure. The decomposition of the gender wage gap allows investigating this relationship more deeply. As shown in Table 3, two components appear to be particularly correlated with the female employment rate: gender gaps in educational attainment and in unobserved characteristics.[12] Female wage and salary employees tend to be more educated relative to their male peers in countries where there are fewer women in employment. Similarly, the gaps in unobserved characteristics between men and women (computed assuming that all the residual is due to gaps in unobserved characteristics and their remuneration rates) tend to be smaller in these countries. This seems to confirm the hypothesis put forward earlier that the relationship between the employment rate and the gender wage gap is, at least partially, the result of a simple composition effect. While in countries with low female employment rates women less endowed with marketable productive characteristics remain outside the labour market (unlike their male peers), in other countries these women manage to get a foothold into employment, although with low pay, thereby widening the gender wage gap.

The correlations presented in Table 3 also shed some light on the possible relationship between occupational segmentation by gender and the wage gap. The occupational controls used in this decomposition analysis, based on 15 major groups, are far too aggregate to capture fully the effect of occupational segmentation on the gender wage gap. If there is a significant effect of occupational segmentation on the gender wage gap that cannot be captured by the available occupational controls, this effect should then show up in the gap in unobserved characteristics. Indeed, Table 3 shows that there is a strong cross-country correlation between gaps in unobserved characteristics and the dissimilarity index computed on 115 occupational categories from the European Labour Force Survey (OECD, 2002*a*).[13] Furthermore, consistently with this hypothesis, Table 3 displays no significant correlation between the dissimilarity index and the other components of the gender wage gap. In sum, international differences in the extent of occupational segregation appear to be an important proximate explanation of differences in the size of the gender pay gap remaining after adjusting for workers' observable characteristics and the overall wage structure. However, the employment rate and the occupational segregation effects appear to be interrelated, with the cross-country correlation coefficient between female employment rates and the dissimilarity index being 0.56 for these countries.

C. The family wage gap

Mothers are less likely to be employed and, once in employment, they work fewer hours and appear to be more occupationally segregated than childless women (OECD, 2002*a*). Is there an additional labour market "penalty" associated with motherhood in terms of pay? Three main theoretical explanations for a wage gap between childless women and women with children — *i.e.* the so-called family gap — have been put forward in the literature (see Waldfogel, 1995): *i*) there may be differences in life-long accumulation of human capital

[12] Recall that the second term on the right-hand side of equation [2] _ when restricted only to educational variables _ represents the contribution of cross-country differences in gender gaps in education to the gender wage gap. Similarly, the fourth term on the right-hand side represents the impact of cross-country differences in gender gaps in unobserved characteristics on the gender wage gap.

[13] More rigorously, if there is a significant effect of occupational segregation on the gender wage gap, this should result in a significant correlation between the dissimilarity index and the sum of the gap in unobserved characteristics and the observed occupational gaps (evaluated at the remuneration rates of the benchmark country). Indeed, this correlation is equal to 0.67 in this sample.

reflected in actual labour market experience, job tenure, and on-the-job training among women with and without children of the same age; *ii*) women with family responsibilities might prefer jobs that do not require overtime work or high work intensity; *iii*) mothers may be less motivated to work than childless women. There can also be a discrimination effect, whereby some employers offering high-pay jobs prefer not to hire mothers because they think that mothers are less committed to work or more costly than childless women.

In the analysis that follows, the family wage gap is defined as the average wage difference between childless women and mothers expressed as a percentage of the average wage of childless women. Similarly, the family gap in monthly earnings is defined as the average difference in monthly earnings between childless women and mothers expressed as a percentage of the average earnings of childless women. It must be noted that the analysis that follows is made possible by the availability of data that allows cross-classifying labour market information with information on household structure. Chart 5 shows that monthly earnings of childless women are often higher than those of women with children (about 5% on average), although cross-country variation is quite large. Childless women spend on average considerably more time at work than women with children, mainly because women with children tend to work part-time more frequently. As a consequence, in countries where there is a substantial family gap in monthly earnings to the disadvantage of women with children (*e.g.* Austria, Belgium, Germany, Ireland, the Netherlands and the United Kingdom), the gap in hours worked is the main explanatory factor. Only in Austria and the United Kingdom, does there appear to be a family gap in gross hourly wages. In five countries (Greece, Ireland, Italy, the Netherlands and Spain), hourly wages for mothers are more than 10% higher than for women without children.

Once the effects of hours worked and observed characteristics are netted out, a substantial family wage gap in favour of childless women is still observed only in Austria and the United Kingdom (Chart 5). These gaps could reflect greater differences between actual and potential experience or lower effort for mothers than for childless women in these two countries. Alternatively, they might reflect discriminatory treatment by employers, not justified by motivation or work attachment. Overall, these findings on the family wage gap seem consistent with the existing literature, in which a significant impact of children on women's pay is generally found in the United Kingdom and the United States (see Korenman and Neumark, 1992, and Waldfogel, 1995, 1998) but little effect is found in countries of continental Europe (Harkness and Waldfogel, 1999, for Germany, Finland and Sweden, and Datta Gupta and Smith, 2002, for Denmark) with the notable exception of Austria (Gregoritsch *et al*., 2000).

A lack of evidence of a family wage gap based on the unadjusted data shown in Chart 5 may conceal a pay penalty associated to motherhood once the effects of differences in productive characteristics and of the wage structure are taken into account. Decomposing the family wage gap on the basis of the same methodology used above for the gender wage gap helps to clarify this issue. While the effect of the wage structure on the family wage gap is small in all countries, mothers appear to be better endowed with productive characteristics than childless women in most countries (see OECD, 2002*a*, for detailed results). This outcome likely reflects the fact that women with children are on average older, thereby with more experience and longer tenure, and more advanced in their career. This latter hypothesis is confirmed by a sensitivity analysis, where the decomposition has been implemented on smaller samples of women belonging to the narrower age groups (using age classes no wider than 10 years). In these cases, the contribution of observed and unobserved characteristics to the family gap becomes positive in most countries, especially as regards to gaps in occupations, suggesting that childless women tend to work in higher-pay occupations than mothers of the same age.

Overall these results show that women with children are not unambiguously at a disadvantage in terms of hourly wages. Nevertheless, a substantial total earnings gap exists in about half the countries examined because reconciling work and family results in mothers spending less time at work. Seen from this perspective, policies directed at facilitating and increasing labour market participation of mothers can also be effective in reducing the family gap in earnings. Of course, work-life reconciliation has significance beyond its potential to increase the number of hours mothers devote to paid-employment, including potential impacts on fertility and child development. As is illustrated for 4 OECD countries in Chart 6, the trend increase in employment rates for women has been associated with very different trends in fertility. Rising female participation coincided with rising fertility in Denmark and the Netherlands during 1985-2002, consistent with these countries having been among the pioneers in "family friendly" employment policies (OECD, 2002*b*). By contrast, rising female employment was associated with declining fertility in Ireland and Japan, suggestive of women facing greater barriers to reconciling parenting and careers.

2. Data needs for improving our understanding the gender pay gap

The gender pay gap is one of the structural indicators that the European Commission publishes annually in the Spring Report to the European Council. The data source used to calculate it has been, up until today, the ECHP,

on the basis of which results are available as a time series between 1994 and 2001. The definition itself of this indicator is dependent upon the way the ECHP structures information on earnings and hours worked (by putting a rather arbitrary lower limit of 15 hours of work).

While a lot of efforts are being devoted to finding an alternative source for the calculation of the structural indicator of gender pay gap in all the countries of the EU, we run the risk of loosing a EU-wide source for its analysis in relationship with human capital and job characteristics, to improve our understanding of its determinants.

The decomposition analysis in part 1 of this paper suggests that internationally comparative analysis can provide an important supplement to national studies in trying to understand gender differences in pay and labour market experience more broadly. Such analysis is, of course, heavily dependent on access to internationally harmonised data and Eurostat has become one of the leading sources of such data, as exemplified by the ECHP data used above. Thus, a first implication would appear to be that Eurostat continue to provide that type of data. However, the decomposition analysis also pointed toward a number of investigative directions that could not be pursued very far with the variables contained in the ECHP. Examples include the measure of actual labour market experience, and the assessment of how the detailed structure of compensation, by detailed occupational or industry category, affects the relative earnings of men and women. Furthermore, we know little on the determinants of gender differences in occupational choices and working hours.

Among the possible avenues for future data collection by Eurostat, the following may merit consideration:

- The ECHP has been (and continues to be) an important resource for studying the gender pay gap, as well as a much wider range of gender differences in economic and social life. Clearly, this is a model worth building upon. It is important that the replacement of the ECHP can recreate the core advantages of that survey, *i.e.* harmonised (panel) data for representative samples of households from EU member countries, containing extensive data on household structures, income and living conditions and individual labour market characteristics. To the extent feasible, the replacement for the ECHP should add new variables that will help to elucidate the economic and social processes which generate differential labour market outcomes for women and men. The question is which household survey is best placed to do this. The new EU-SILC, due to gradually replace the ECHP as from end 2004, is a household survey whose main purpose is to assess the income and living conditions in the EU, and not so much to follow developments in the labour market. As such, EU SILC is somewhat better focussed but less extensive than the ECHP. Namely, information on current monthly earnings is compulsory only for those Member States that have no other source than EU-SILC to calculate the (unadjusted) gender pay gap. Furthermore, its panel component has been reduced to a core of variables allowing to measure income dynamics (i.e., persistence of income poverty) and labour market transitions. No information will be available on the activity history of individuals in the cross-sectional component of SILC, nor will it be possible to distinguish between public sector and private sector workers.[14] On the other hand, the minimum required sample size, as stated in the Framework regulation, will not greatly differ from the sample size of the ECHP, thus continuing to limit in some countries the possibility to use the full set of detailed variables in multivariate analysis.
- We think that the Labour Force Survey (LFS) is naturally a better source for the analysis of gender differences in the labour market, including the gender pay gap. We therefore welcome the efforts by Eurostat to collect data on wages based on this source, even if on a voluntary basis by Member States. We also welcome the inclusion of new variables like for example the «supervisory responsibilities» and «lack of care facilities» as well as the formulation of some relevant ad-hoc modules on the reconciliation of work and family life, the length and patterns of working time, work organisation and working time arrangements. These developments will help to bring new light to the issue of gender differences in the labour market. Ideally, microdata should be made available to external academic researchers, as is the case for the Current Population Survey, the US equivalent of the LFS. However, if the microdata will continue not be made available to external researchers, it is at least important that Eurostat and the European Commission exploit the full potential of this wealth of data through complete and rigorous analysis of the determinants of gender differences in the labour market (and in particular of the gender pay gap).
- Better information concerning *job and firm characteristics* would also be useful for investigating gender differences in labour market outcomes, including pay. The primary need here is to better understand how firms' recruitment, promotion and compensation policies contribute to disparate outcomes for men and women. For example, Bayard *et al.* (1999) show that gender segregation in employment across occupations, across firms and

[14] In practice, only for those countries with an integrated survey (that is, integrating the cross-sectional component with the longitudinal one) providing information on current monthly earnings will it be possible to conduct an analysis of the gender pay gap; these are a minority of countries.

across occupations within firms, all play an important role in explaining the overall gender pay gap in the United States; as do gender pay gaps within firm-occupation cells. It follows that the relatively aggregated occupational and sectoral data provided in household surveys, particularly the ECHP but also the LFS, cannot capture much of how firms' recruitment and compensation policies affect the overall gender pay gap. The best way to collect such data appears to be to link detailed information on firm characteristics (size, capital intensity, detailed industry, workforce composition by occupation and gender, etc.), which is collected from employers or administrative registers, with survey data collected from a random sample of employees at those firms (demographic characteristics, tenure, earnings, hours, etc.). An employer survey also has the advantage, compared to a household survey, to provide more reliable information on earnings; on the other hand, it normally does not give information on the household situation of employees (thus limiting the possibility to explore some of the determinants of the gender pay gap). The Structure of Earnings Survey, managed by Eurostat, is a unique example of an employer-employee matched data set at the level of the EU. The coverage of the economy by this survey - in terms of sectors and firms' size class – is still too limited, especially for the purposes of analysing gender differences in the labour market. However, the plans for 2006 to expand its coverage are promising. There remains the problem that the microdata from this survey are not made available, at least for the moment, to external researchers.

- Better information concerning *work schedules and time-use patterns* would make an important contribution to better understanding the gender pay gap. The fact that child-rearing — as well as caring for elderly or disabled family members and other unpaid household work — is still considered to be mainly the responsibility of women appears to play a major role in the persistence of large gender differences in labour market outcomes (Polachek, 2004). One of the main channels through which caring responsibilities affect careers is the constraint they place upon the hours during which mothers can make themselves available for paid employment.[15] Data on weekly hours spent in paid work are essential for analysing work schedules, but should be supplemented by information on: (i) how those work hours are scheduled, including the incidence of "unsocial" hours, the stability and predictability of work schedules, and the extent of employee say concerning their work hours (including the ability to schedule leave time); (ii) information on time devoted to caring responsibilities and, possibly, to household management more generally; (iii) self-assessed conflicts between work schedules and family activities; and (iv) information on the amount and quality of support that working parents receive from *e.g.* formal and informal childcare providers and other sources. The European Survey of Working Conditions provides a useful model of the types of questions that can be asked, but is itself somewhat limited for lacking many of the individual and family variables available in the ECHP and in the LFS.[16] The ad-hoc modules of the LFS, mentioned above, will represent a very precious source of information on all these aspects.
- Finally, better information concerning gender differences in *aspirations, values and character traits* that may affect labour market opportunities or life choices that strongly influence those opportunities (e.g. fields of study at University, occupation, fertility and whether or not to interrupt their career following child birth) would also be of value. This information might be most usefully gathered from labour market entrants and could include: (i) relative priorities between pay and other job attributes (e.g. socially useful work or flexible hours); (ii) fertility aspirations (as well as the associated anticipations concerning their own and their spouse's labour supply adjustments following child birth); (iii) how choices of the field of study in tertiary education or occupation are made. The First Destination Survey of recent university graduates in the United Kingdom provides a useful national example of a survey which collects data of this type and it has been shown that gender differences in these variables are strongly correlated with gender differences in pay shortly after completing formal schooling (Chevalier, 2004).
- Some methodological developments may also be needed in order to better monitor gender differences in the labour market. For example, a revision of the international standard classification of occupations (ISCO-88) would be needed in the light of the important transformations in the occupational (and sectoral) structure of the economy. In particular, the national occupational classifications tend to divide typically male production occupations into finer sub-categories than typically female service occupations (OECD, 2002a). For example, the typically female occupation «housekeeping and restaurant service workers» includes many more workers than the male-dominated occupation «miners, shot-firers, stone-cutters and carvers». This has the consequence of biasing the measures of occupational gender segregation in the economy (particularly the measures of occupational concentration).

[15] A recent article in Fortune illustrates this point with reference to a highly unrepresentative sample of American women who are top level business executives: many said their career success would have been impossible – or, at least, irreconcilable with an acceptable family life – but for their husbands' willingness to withdraw from the labour force and take primary responsibility for parenting and home management (Morris, 2002).

[16] See OECD (2004a) for an analysis of ESWC data showing that self-assess conflicts between work time and family life increase very strongly with longer work weeks, time on the job outside of normal work hours, and irregular and unpredictable work hours, but are significantly reduced when workers have some say concerning when they work.

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Table 1. Gender wage ratio, 1998

Unadjusted indicatorsa of wage and salary employees aged 20 to 64 yearsb

	Hourly earnings, full-time wage and salary employees				Hourly earnings, all wage and salary employees			
	Ratio of means	Ratio of medians	Ratio of the 20th percentiles	Ratio of the 80th percentiles	Ratio of means	Ratio of medians	Ratio of the 20th percentiles	Ratio of the 80th percentiles
Australia (2000)	91	92	96	87	89	90	96	85
Austria	79	80	76	80	79	79	76	80
Belgium	91	94	91	91	93	93	91	92
Canada (2000)	82	81	81	86	81	78	81	81
Denmark	89	93	96	87	89	92	95	88
Finland	82	87	92	77	82	87	92	77
France	87	93	89	89	89	93	90	91
Germany	80	83	80	80	81	83	78	80
Greece	80	80	84	82	87	82	85	88
Ireland	81	81	80	83	79	76	75	82
Italy	85	91	90	87	91	93	91	93
Netherlands	80	86	85	80	79	87	86	81
New Zealand (2001)	86	91	92	85	84	87	93	83
Portugal	92	85	89	95	95	85	89	98
Spain	88	93	86	95	86	88	84	91
Sweden (2000)	86	90	92	84	83	88	91	81
Switzerland (2001)	76	79	74	78	78	80	74	77
United Kingdom	80	85	85	80	75	79	79	76
United States (1999)	79	79	83	78	78	76	82	78
OECD unweighted average[c]	84	86	86	85	84	85	86	84

a) Percentage ratios of female to male wage.
b) Australia, Canada, New Zealand, Sweden: 18-64 years and Switzerland: 15 to 64 years.
c) For above countries only.
Source: OECD calculations using the ECHP, wave 5, and various national surveys (see OECD, 2002a, for details).

Table 2. The narrowing of the gender wage gap since the early 1980s, selected OECD countries

Gender wage gap (initial year= 100)

	Period	Index
Australia	1984-2001	82
Canada	1980-1999	85
France	1980-1999	66
Japan	1980-2000	81
Korea	1977-1997	70
Portugal	1975-1999	70
Sweden	1975-1995	86
United Kingdom	1980-2000	70
United States	1979-1999	62

Source: OECD calculations using various national surveys (see OECD, 2002a, for details).

Table 3. Employment rates, occupational segregation and the gender wage gap

Simple correlations with gender wage gap componentsa

	Employment rate[b]	Dissimilarity index[c]
Hourly wage gap	0.58 *	0.45
Hourly wage gap, adjusted for the whole wage structure	0.62 **	0.43
Gaps in observed characteristics	0.28	-0.02
of which: Education	0.69 **	0.28
Gaps in unobserved characteristics	0.72 **	0.73 **

a) * and ** mean significant at the 5% and 1% level, respectively.
b) Women in wage and salary employment divided by the female population aged 15 to 64 years.
c) Dissimilarity index calculated for the 115 occupations at the 3-digit level of the ISCO.
Source: OECD calculations using ECHP, waves 4 and 5 (see OECD, 2002a, for details).

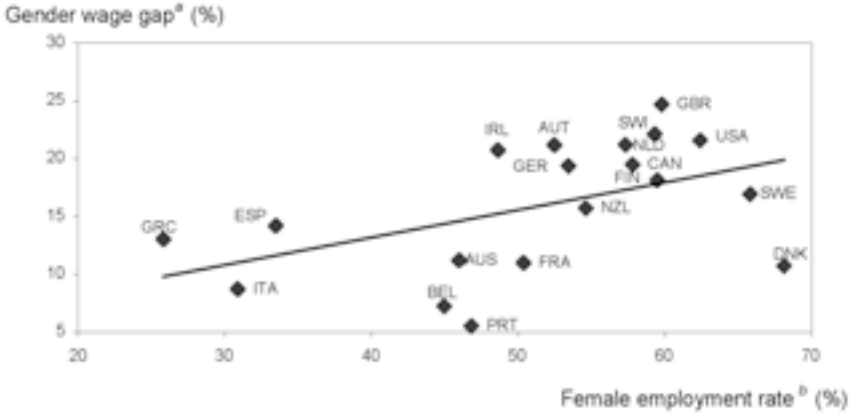
Chart 1. The gender gap in monthly earnings, 1998

The contribution of hourly wages and hours workeda

a) Percentage difference between male and female average hourly wages and hours worked per month.
Source: OECD calculations using the ECHP, wave 5 (see OECD, 2002a, for details).

Chart 2. The gender wage gap and women's employment

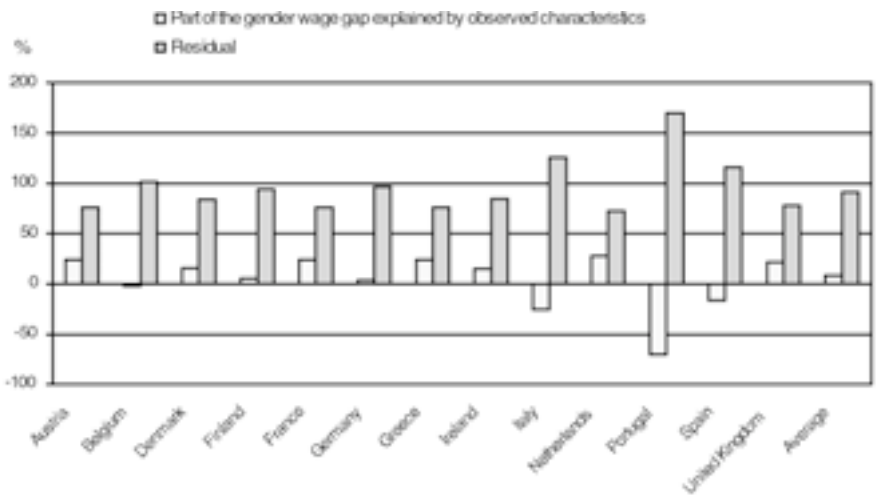
Persons aged 20 to 64 years



a) Percentage difference between male and female average hourly wages.
b) Percentage share of women in wage and salary employment.
Source: OECD calculations using the ECHP, wave 5 and national labour force surveys (see OECD, 2002a, for details).

Chart 3. A within-country decomposition of the gender wage gap

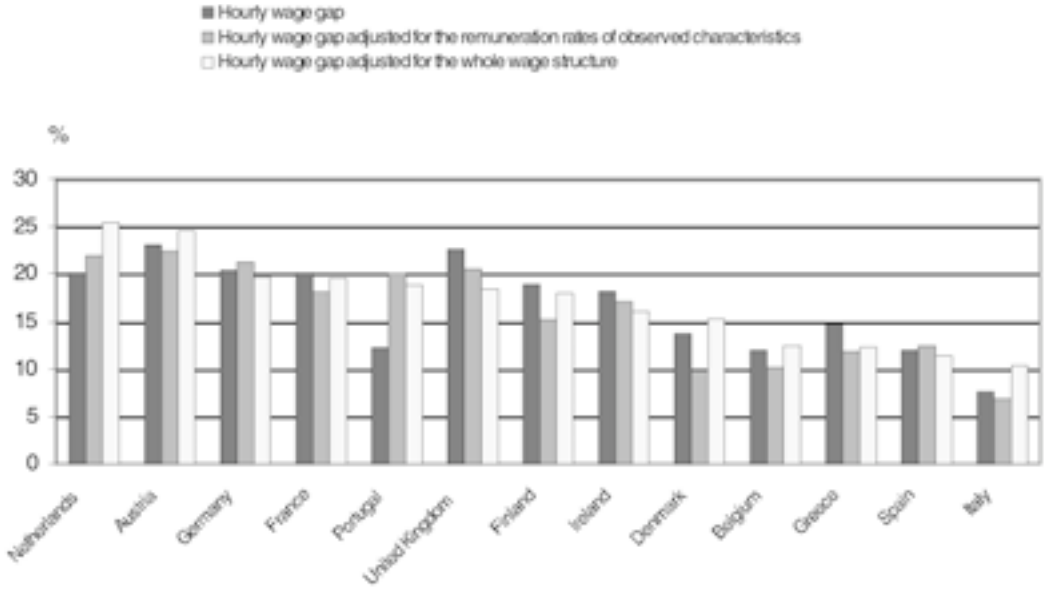
Percentage of total hourly wage gap, persons aged 20 to 64 years



Source: OECD calculations using ECHP, waves 4 and 5 (see OECD, 2002a, for details).

Chart 4. The gender wage gap adjusted for the effect of the wage structure

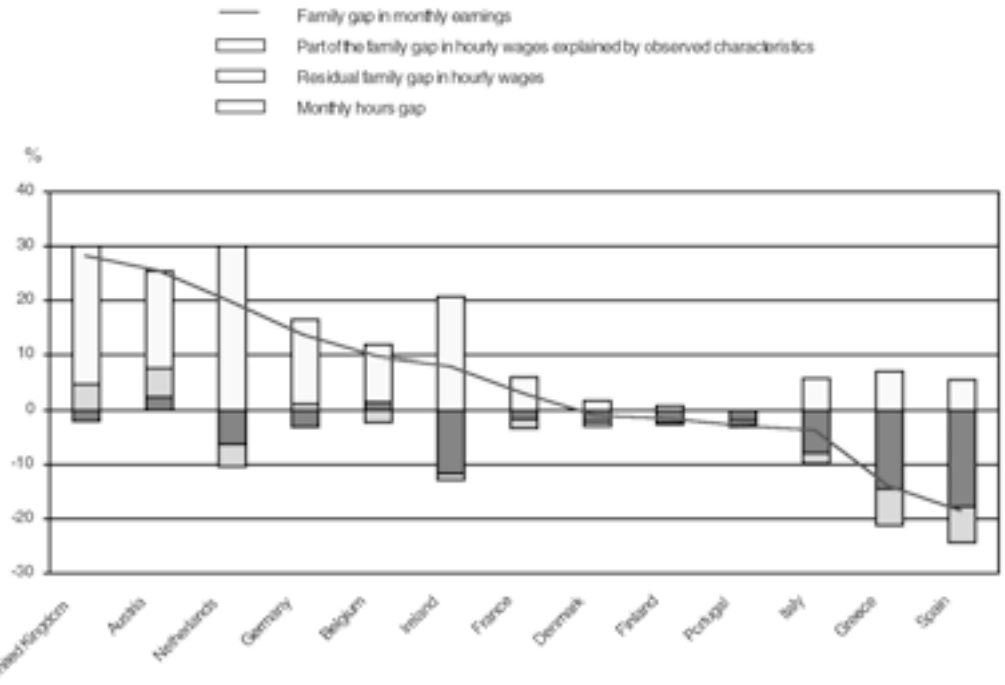
Percentage difference between male and female average gross hourly wages, persons aged 20 to 64 years[a]



Source: OECD calculations using ECHP, waves 4 and 5 (see OECD, 2002a, for details).

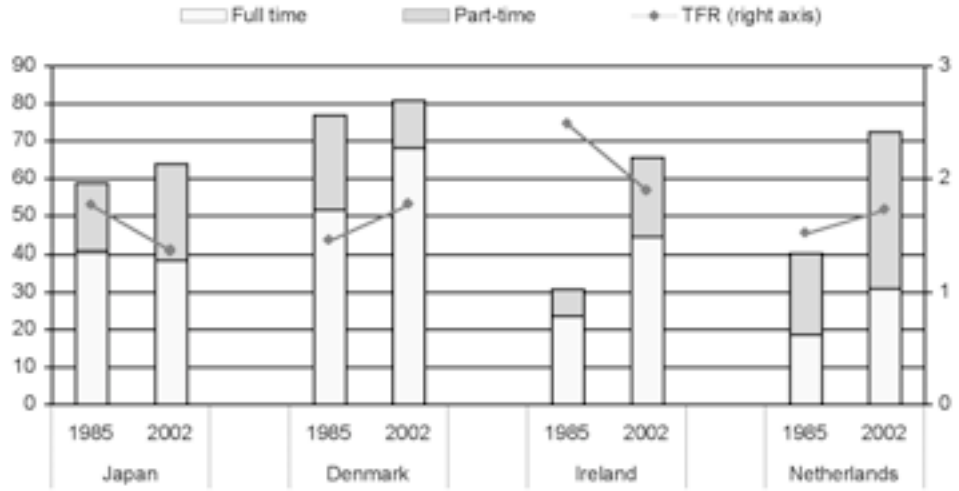
Chart 5. A decomposition of the family gap in monthly earnings[a]

Women aged 20 to 54 years



a) Percentage difference between average gross monthly earnings of childless women and women with children.
Source: OECD calculations using ECHP, waves 4 and 5 (see OECD), 2002a, for details).

Chart 6. Recent growth in female employment and total fertility rates in 4 OECD countries, 1985-2002



Source: OECD Babies and Bosses project.

GENDER, JOBS AND WORKING CONDITIONS IN EUROPE : KEY LEARNING FROM THE EUROPEAN WORKING CONDITIONS SURVEY

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All Opinions expressed in this paper are those of the author and cannot be attributed to the European Foundation for the Improvement of Living and Working Conditions.

The objective of this paper is to present some lessons from analyses on gender of the European working conditions surveys, on how to make statistics and indicators on working conditions more gender-sensitive. A lot of it presents work in progress and may not reflect final analysis.

I – The European working conditions surveys (EWCS)

3 EWCS (the last one was extended to 13 candidate and applicant countries) have been carried out so far. Their main characteristics are summed up in the table below.

	EWCS 1	EWCS 2	EWCS 3	WCS in ACC 12 + Turkey)
Dates of data collection	4 Mar. and 22 Apr. 1991	27 Nov. 1995 / 19 Jan. 96	1 Mar. and 30 Apr. 2000	15 May-4 Jul. 2001 + 12 Jun-3 July 2002 for Turkey
Coverage (countries)	12 Member States	EU 15	EU 15 + Norway	ACC 12 + Turkey
Target Sample size (Detailed)	1,000 per country except Luxemburg 500	1,000 per country except Germany 2,000 (1,000 for East G and same for W. Germany) and Lxbg 500	1,500 per country except Luxemburg 500	1,000 per country except Malta and Cyprus 500
Number of interviews (total)	12,819	15,986	21,703	12,077 (11, 522 + 1,020)
Sampling frame	Multi-stage random (probability) one	Same	Same	Same

See (Paoli and Parent-Thirion, 2003) for further information, including a discussion on sample design and weighting against the LFS and other EUROSTAT survey sources on standard parameters including age, sex, region, sector and occupation. The fieldwork and data preparation was conducted by INRA-Europe.

The questionnaires used for the various editions of the surveys were built up with the help of expert groups composed of members of the Administrative Board of the Foundation, members of its Committee of Experts, academic experts as well as national statistical institutes.

The European Foundation has carried out four working conditions surveys to date. The first survey took place in 1991 and covered 12 member states. The second edition was done in 1996 and covered 15 member states. The third edition was done in 2000 and covered the same 15 member states, as well as Norway. It was complemented in 2001/2002 by a survey in 13 acceding and candidate countries.

The questionnaire has been expanded at every new episode of data-collection in order to integrate concerns of the social debate, emerging issues and to build on lessons from technical field reports. However, most questions

have remained identical in order to allow the building of trends. This is what builds its strength and its reputation. The questionnaire looked at the following dimensions:

- **Employee information**
  - demographics: age, gender, nationality (Q1a-d), household composition (EF 7,12,13 and 19),
  - his /her labour history and current occupation (Q2a-c, 5, 6, 7),
  - employment status (Q35a, b),
  - activities outside work (EF 20) (household tasks, education and training, leisure)
- **Company information**
  - size, activity, sector (Q3, 4)
- **Nature of the work**
  - physical work, use of computers, telework, direct contact with (outside) people (Q9)
- **Physical environment factors, occupational risk prevention**
  - exposure to physical risks (Q8),
  - painful positions (Q9)
  - information about risks (Q 10)
  - wearing protective equipment (Q 9)
- **Working time**
  - working hours (Q11),
  - commuting time (Q12),
  - irregular working hours (Q13a-e),
  - part time (Q14),
  - shift work (Q15a-b),
  - changes in working time (Q16 a-b),
  - compatibility of working hours with life outside work (Q17)
- **Organisation of work**
  - repetitive work (Q9, 18),
  - monotonous work (Q21.4),
  - job autonomy and control (Q22.1, 22.2),
  - control over pace of work (Q22.3)
  - control over working time (incl. breaks, holidays) (Q23.2, 23.3, 23.4),
  - work at high speed/tight deadlines (Q18.b1, b2)
  - factors determining pace (Q19, Q23, Q20),
  - interruptions (Q20),
  - support from colleagues/teamwork (Q23.1, 24.b2),
  - task rotation (Q24.b),
  - skills and training (Q21.6, Q26),
  - complexity of job/organisational responsibilities (Q21, Q24.a, Q5)
- **Work satisfaction/health**
  - work related problems with health (Q31),
  - absenteeism (Q32.a-c),
  - satisfaction with working conditions (Q34),
  - work sustainability (Q33)
- **Information and consultation**
  - Consultation on working conditions (Q27.a, Q27b)
- **Violence and discrimination**
  - physical violence in the workplace (Q28.1, 2),
  - intimidation and sexual harassment (Q28.4,5),
  - discrimination (Q28.6-10)
- **Income**
  - income levels (EF21),
  - remuneration (EF22, 23)

The objectives of the surveys are to provide an overview of working conditions in order (1) to analyse relationships between changes/ working conditions, (2) to identify groups at risk, (3) monitor trends and – this may be a new objective- (4) to contribute to the Lisbon Strategy on quality of work and employment by providing homogeneous indicators on this issue to a European audience.

II – A framework for analysing the relationship between gender, employment and working conditions

Figure 1. A framework for analysing the relationship between gender, employment and working conditions

Gender interacts on work in complex ways. The segregated nature of men and women's employment and unpaid work are fundamental working conditions, which in turn are related to a number of other working conditions. Thus it is important to examine the interaction between gender and occupational position to tease out a fuller understanding of how gender is related to working conditions, for many working conditions are more closely related to occupational position (or sector) than to gender ***per se***.

III – Continuity is the norm, change the exception

Trends in some aspects of working conditions can be assessed using the earlier waves of the survey from 1991 and 1995/6, once a number of methodological issues have been addressed in the design of the analysis. For information on changes over the period on working conditions in general, see Paoli (2001).

The main conclusion is that the gender dimension of working conditions remained pretty stable over the 1990s with 3 exceptions:

- The speed of work, which is a key element of work intensity, has increased for both sexes over the period, but the increase had been greatest among women so that the gender gap has closed. Work intensity may have harmful effects on health of workers and lead to a decrease in learning. Certain groups are most exposed e.g. managers where long hours are correlated to work intensity.
- The gender gap on Sunday work is closing due to an increase in Sunday work for white-collar women
- The gender gap is increasing though reports of intimidation are increasing for both sexes.

IV – Gender segregation in domestic responsibilities

Gender segregation refers to the pattern whereby women are under-represented in some jobs and over-represented in others relative to their percentage share of total employment. Gender segregation is a persistent feature of European labour markets, despite women's growing presence in the labour market and the important in-roads that they have made into the higher status professional and managerial occupations in recent decades.

One of the main lessons of the survey is that, even when women are employed, they continue to shoulder the main responsibilities for running the home and looking after children. This is nothing new and consistent with other studies.

This 'second shift' must be addressed alongside employment to obtain a complete picture of men and women's work. This gender division in the household constrains women's economic independence and men's involvement in their fathering role. These gender-differentiated roles also produce unequal workloads. On average, when women are employed they spend more time in total on paid and unpaid work, particularly if they work full-time.

In order to be able to describe women's volume of work, indicators on unpaid work together with household information (demographics and possibly sharing of tasks, support infrastructure, employment status of other members of the household and their incomes) are needed.

IV –Gender segregation in employment

In itself, gender segregation is one working condition that is one indicator of the degree of gender difference in labour market positions. Gender segregation also contributes to a number of negative outcomes for women; particularly wage inequalities. However, segregation does not always operate unambiguously against women. For example, particular hazardous working conditions may be disproportionately found in male-dominated areas of employment, while other negative conditions are mainly a feature of female-dominated jobs. Thus, the policy implications are two fold: one is to reduce gender segregation; the other is to improve the working conditions in female-dominated areas of employment.

Broadly speaking, women's jobs involve caring, nurturing, and service activities for people, while men monopolise management and the manual and technical jobs associated with machinery or physical products which are considered to be 'heavy' or 'complex'. Men hold 80% or more of the jobs in the armed forces, the craft and related trades and plant and machine operator jobs. Men also hold more than two thirds of the skilled agricultural and fishery jobs. At the top of the occupational hierarchy men occupy more than sixty percent of the legislative and managerial occupations. In contrast, two thirds of clerical, and service and sales workers are women.

The professional, associate professional and elementary manual occupations are more evenly split between the sexes at this aggregate level, but in these occupational groups the segregation is only exposed at the sub-category level. Hence, men predominate in the physical, mathematical and engineering professions and associate professions, while the majority of health and educational professionals and associates are women. In the elementary occupations women are disproportionately represented in cleaning and agricultural-related jobs, while men dominate general labouring activities.

Women employed part-time are even more segregated into female-dominated jobs than women full-timers. They account for particularly large proportions of the workforce in service and sales, cleaning, clerical and health and teaching professions. By contrast, the lower incidence of male part-time employment is more dispersed across the occupations, but with the highest rates found in agricultural, driving and teaching jobs. Part-time employment is rare in the managerial positions, regardless of gender.

Related to this gender segregation is the different pattern of occupational concentration for the sexes. One quarter of employed men in the European Union are concentrated in the craft and related trades, and a further 12% are plant and machine operators. Overall, half of employed men are in manual (blue- collar) jobs (ISCO groups 6-9), compared to just over one in five employed women. Women's employment is mainly concentrated in clerical, service and sales work, where 43% of employed women are found. Around one quarter of each sex are employed in the professional and associated occupations, with 9% of employed men and 6% of employed women are in the highest level government and senior management grades.

Women part-timers are even more heavily concentrated into service, clerical and elementary jobs than women in full-time jobs. By contrast, men's part-time jobs are less heavily concentrated into particular occupational areas, and a high proportion of male part-timers are employed in professional or managerial areas compared to the situation of women in part-time work.

One outcome of occupational segregation is gender differences in lines of supervision and management in the workplace. Just over 60% of the workforce has a man as their immediate manager or supervisor, 21% are under the authority of a woman and the rest do not have a manager. Women are more likely to be in charge of other women: less than 10% of employed men have a woman as their immediate line manager compared to just over one third of employed women.

Construction, extraction and utilities are largely male enclaves. Men also predominate in transport, manufacturing and agriculture. Women fill almost all the jobs in private households - largely as domestic workers - and three quarters of the jobs in the health and education sectors. The sex ratio is more even in the other sectors. The service sectors of health and education, other community services, sales, hotels and catering and domestic workers rely particularly heavily on the use of part-time workers. Any changes in the working conditions in sales, hotels and catering and in health and education has a major impact on women, for these sectors account for over half of all women's employment. Part-timers are even more heavily concentrated into these sectors than are full-timers, and this applies for men as well as women.

Manufacturing and financial services are also numerically important sectors, each employing one out of every ten employed women in the EU. Men's employment is less concentrated in particular sectors, but more than one quarter are affected by working conditions in manufacturing and another 17% are located in sales, hotels and catering. Construction, financial services and transport are also major employers of men. The state in its role as an employer has a particularly large influence over the working conditions of women, for 32% of employed women work in the public sector or in a state-owned company, compared to 19% of men. Conversely men are more likely to be employed in the medium or large private sector companies.

If we want to describe jobs in a gender-sensitive way, we may build on qualitative information on occupational categories where female are more represented. Indeed, some female occupations remain broadly overlooked and little information is available on occupations such as domestic workers, teachers etc. It is hence important to review our 'old' indicators in the light of new jobs (a lot of them held by female workers) and modern work to ensure they are adapted and relevant.

Wording is important as well and the balance between describing job characteristics in a female or male way or a neutral generic way is not easy to achieve. For instance, nurses will lift patients and workers on building sites cement bags. A neutral (male?) way would be to ask people whether they are exposed to moving and lifting heavy loads; however this may fail to capture the risks and responsibilities of moving elderly patients, young children etc and it may be more interesting to ask people whether their job involves 'moving and lifting **people or** heavy loads'.

V – The job content and workplace environment of men s and women's employment

Analysis of the EWCS has shown that there are some gender differences on some aspects of working conditions, but not a systematic pattern on all the indicators investigated.

The main gender differences are that women are ***more likely*** to be working in jobs dealing directly with customers or other users of their workplace; to be low paid; to have experienced or to be aware of intimidation and discrimination at their workplace, and to feel that they have insufficient health and safety information when they work in hazardous conditions. Compared to men, women are ***less likely*** to have planning responsibilities, are less exposed to physical or material hazards, and have lower levels of job autonomy and working-time autonomy.

It is important to explore gender differences by occupational status group to obtain a fuller understanding of the relationship between gender and many aspects of working conditions, for two reasons.

One reason is that for some working conditions this more detailed analysis reinforced the message that the overall gender differences are still present when comparisons are made within occupational status groups, and in some instances the difference is more pronounced than when it is averaged across all employment. For example, within each occupational status group women received less training than men and this gender gap was particularly pronounced in blue-collar (manual) employment. Similarly, within each occupational status group women are less likely to be working with computers. There are also important occupational differences between men and women who are homeworkers.

The second reason is that for some other working conditions there is an interaction between gender and occupational status that may even contradict the overall comparison for all employment. Firstly, among white-collar workers women are more likely than men to have the 'people' work of dealing directly with customers and other users of their workplace; while perhaps surprisingly the gender difference is reversed among blue-collar workers. Secondly, exposure to physical and material hazards is a particular risk for men, but mainly those men employed in blue-collar jobs, after them come women in blue-collar jobs. The risk of exposure is

lower for white-collar workers, and there are few gender differences among these white-collar workers. Thirdly, the average gender difference in exposure to poor ergonomic conditions is slight, but on closer inspection it is evident that in some occupational categories, notably professional work, women are more at risk of ergonomic hazards than are men with comparable occupational status. A fourth example is that job autonomy and working-time autonomy is generally higher for men and higher for both sexes if employed in professional and managerial jobs, but within the professions women have notably less working-time autonomy.

Part-time jobs are segregated into a narrower range of occupations than full-time jobs and the jobs are typically more monotonous with fewer opportunities for learning or formal training compared to full-time ones and lower-paid. Part-time workers have lower rates of exposure to physical, material and ergonomic hazards, and are less likely to have an intense pace of work.

More emphasis should be placed on developing indicators that explore the positive and negative aspects of the 'people' work that women do, and the content of the questionnaire should be reviewed from this standpoint. In some parts of the questionnaire this might be addressed by refining existing questions, or definitions.. In relation to the issue of 'people' work and interaction at the workplace generally revisions are required to develop indicators of physical and psychological safety from intimidation and harassment, and to explore the issues of discrimination.

A second recommendation is that questions on earnings are important; these question (s) should –ideally - allow for the measures of average monthly and hourly pay for men and women and hence calculate the actual gender pay gap.

VI – The working time conditions of men's and women' employment

The fundamental gender difference in working-time conditions is the volume of hours worked. A large proportion of women's employment is organised on a part-time basis. This is partly because many women with young children or other domestic responsibilities seek out part-time work as one means of managing the demands on their time, particularly when alternative sources of childcare are scarce. However, employers' decisions about whether to use part-time workers are influenced by a number of other considerations other than workers' working-time preferences, and part-time work is particularly concentrated in certain lower-status, usually low-paid areas of service work.

A sizeable minority of the European workforce work very long weekly hours. This is more prevalent for men than women, but women are not immune: 21% of employed men and 9% of employed women have usual weekly hours at or above the 48-hour limit set by the Working Time Directive.

Aside from the volume of hours worked, the other main gender differences is that women tend to have more fixed or regular elements to their schedules – the same number of days per week, hours per day, fixed start and finish times. Men report more autonomy to vary their working hours. A slightly higher proportion of men have schedules that involve evening or nightwork, but the difference is not great. There is also little difference in men and women's involvement in weekend work and rotating shifts.

Part-time work may mean shorter hours, but it does not necessary protect workers from being involved in schedules that fall out of the 'standard' of daytime, weekday schedules. Part-timers have higher rates of involvement in evening, nightwork and weekend work than do full-timers.

Certain working-time conditions – notably long hours, nightwork and rotating shifts – are known to pose health risks, and have been the focus of health and safety protective legislation, including some parts of the Working Time Directive. However, to assess working-time conditions it is also relevant to consider working-time preferences, and in connection with this, the particular topic of 'work-family' compatibility. Men and women are more likely to report that their work schedules are compatible with their family and social life if they have 'standard' work schedules of daytime, weekday, fixed hours and if they do not work long full-time hours. Men are even more likely to report this incompatibility, often because the 'non-standard' elements of their schedules are part of a longer working week. Work-family policy must address men's schedules and not just focus on women's employment patterns. However, more detailed investigation is required to gain a better understanding of what men and women consider a 'compatible' schedule to consist of, and why.

This analysis suggests that in discussions of working conditions it is also important to develop indicators of working-time preferences and 'work-family' compatibility, as well as the more usual measures of actual working-time patterns. Furthermore, that information about the type of schedule, and the workers degree of control over any variability in this schedule should be considered in conjunction with the volume of hours worked. No such systematic information is currently collected at a European level.

Hence the need to reflect on the development of more time-related indicators to address the blurring frontiers between work and non-work, and understand household choices. This requires looking at:

- duration : information on weekly and daily working hours are important. A reflection should be carried on how best to gather information on annual working time (and its variation). Commuting time is important and wording can be more or less gender-sensitive: from "in total how many minutes per day do you normally spend travelling from home to work and back" to " y compris le temps d' attente des transports, ou les trajets pour accompagner les enfants a l'école ou sur leur lieu de garde" (free translation: including transportation waiting time and time needed to take children to school or minders) . The issue of measuring as well the unpaid work (discussed above) is important in relation to health impact.
- time when work is taking place.
- Predictability
- Variability
- Autonomy/control
- Preferences
- Impact
- Household characteristics and constraints

VII - The impact of working conditions on health, work family compatibility and satisfaction

Multivariate analysis was used to examine which working conditions have the greatest impact on the probability of ill-health, whether or not the job is judged to offer work-family compatibility and satisfaction with working conditions.

Each of the following working conditions was found to have a significant and independent effect on the probability of having work-related illness. The 'traditional' health and safety risks of poor ergonomics conditions, and exposure to hazardous physical and material conditions are bad for health. A number of aspects of working-time conditions also increased the risk of work-related illness: having disruptive interruptions in the work-day, unsociable work schedules (evening, nights or long days), an intense pace of work and long hours of work. Working-time autonomy helped to reduce the risk of work-related illness. Once these specific working conditions are taken into account then being in managerial, professional or skilled manual work further increases the risk of work-related ill-health.

When differences in men and women's working conditions and occupational position are controlled in the analysis we found that women were more susceptible to work-related ill-health than men. This may be partly due to the additional domestic workloads that many women carry. It may also be because there are other working conditions that women are disproportionately exposed to but which are not picked up by the existing indicators in the survey. This issue requires further analysis and consideration in light of the current review of the EU regulatory framework on health and safety.

The key working conditions that reduce the 'work-family' compatibility of jobs are long and unsociable hours, for both women and men. Working-time control or autonomy had a positive effect, but the effect is weak compared to the negative effect of unsociable hours. It appears that a low level of unsociable hours that the employed have no control over is more compatible with family life than a higher level of unsociable hours over which they have some apparent control. Gender and occupation had no independent effect on 'work-family compatibility' once the actual working conditions were taken into account.

Satisfaction with working conditions was reduced by poor ergonomic conditions, hazardous physical and material exposures, disruptive interruptions, an intense pace of work, the volume of hours worked and weekend

work. Satisfaction was enhanced by working-time autonomy, task autonomy and managerial or professional status. The effects of these working conditions on satisfaction were similar for men and women, except that the volume of hours had less of an effect on men's satisfaction levels than on women's.

On indicators for outcomes, it is important to integrate as well positive outcomes and to reflect on the possible female-blindness of some occupational health indicators. For more on the last issue, see Vogel (2003)

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OCCUPATIONAL SEGREGATION AND ITS CONSEQUENCES

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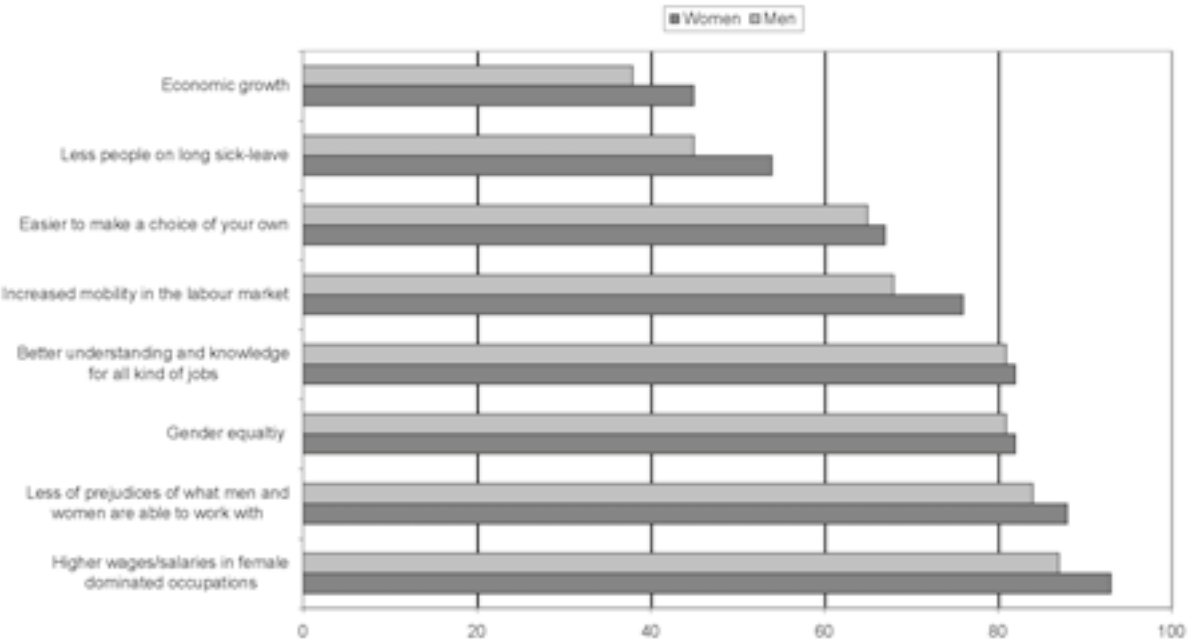
In a survey, carried out in 2003, two randomly selected groups of adults and teenagers were asked about the consequences of a less sex-segregated labour market. The core question was formulated: *"Do you think a **less sex-segregated labour** market will imply (i) higher degree of gender equality,(ii) higher wages/salaries in female dominated occupations,(iii) higher economic growth (iv) ……?* The number of factors they were asked to value was eight, and the response alternatives were: "yes", "no" and "don't know". The figures below show the percentage who answered *"yes, a less segregated will have a positive impact on …"*.[1] Figure 1a show the answers from the group of adults.

Diagram 1a Percent of women and men who believe that a less sex-segregated labour market would have a positive impact on the following parameters

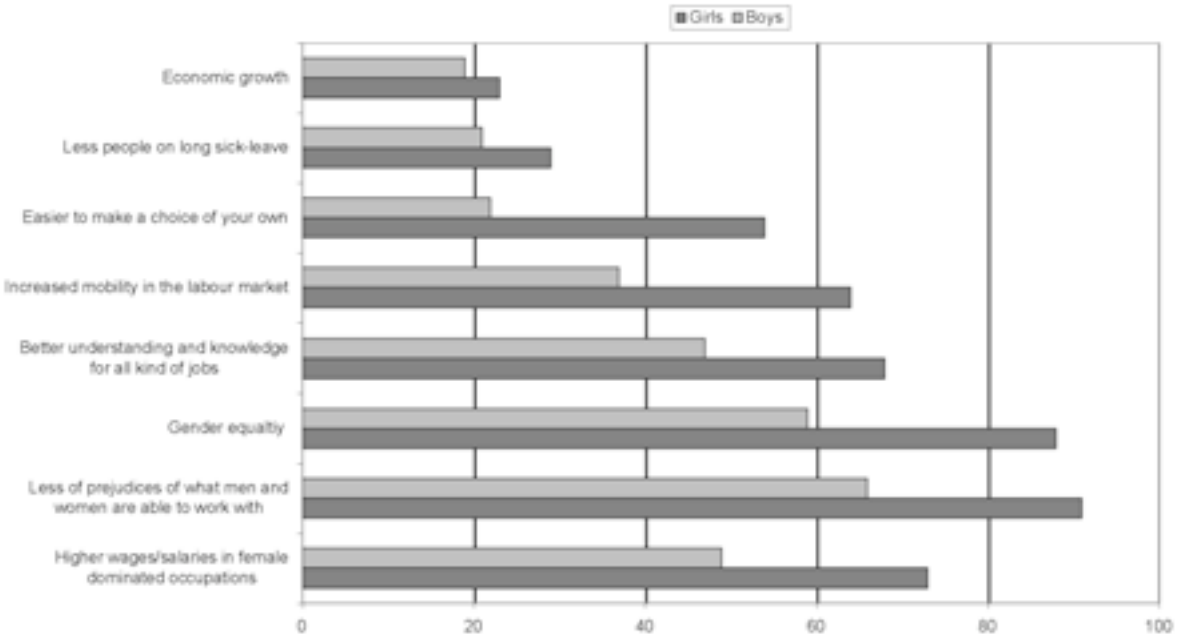


Most adults, both women and men, seem convinced that a sex-segregated labour market does have a *negative impact* on different parts of the economy and that less segregation would improve one or more aspects of the economy, e.g. through increasing wages/salaries in female-dominated occupations. More than 60 per cent also believes that less segregation will increase mobility and make it easier to make a (real) choice of your own. The similarities between the answers from men and women may show that less sex-segregation in the labour market is in the interest of both sexes.

[1] This questionnaire was carried through spring 2003. It was a small pilot study with the primary aim to find out whether there were any differences between men and women and between old and young ones in this respect. (See SOU 2004:43 chapter 5 for a closer description of the study.)

The same similarity is not found among teenagers (age 18-19 years). Girls are more optimistic (than boys) when asked about the possible consequences of a less sex-segregated labour market. Ninety percent of the girls but only sixty percent of the boys do for instance believe that less of sex-segregation will increase gender equality and improve knowledge about what women and men are able to work with. Despite a generally lower percentage (compared to the adults) the difference between boys and girls is big except for "economic growth" and "length of sick leave".

Diagram 1b Percent of boys and girls in upper secondary shool (3rd year) who believe that a less sez-segregated labour market would have a positive effect on the following parameters.



One explanation to the difference between adults and teenagers may be the various labour market experiences. The larger difference between the sexes (among teenagers) is harder to explain. One possible explanation is that women in general know more about the disadvantages a sex-segregated labour market creates than men (in general) simple because these disadvantages often strikes aginst female labour. This lack of information among young men can be compensated for by work experience which then explains why the difference disappear with age.

The answer to this question clarifies that both men and women do consider sex-segregation as something negative. If men and women in general see *de-segregation* as a mean for improvements (in many aspects) this might be a strong incentive for politicians, employers and for society as a whole to act to destroy structures that preserve sex-segregation in the labour market.

In this paper I will very briefly point out a few areas which I think are relevant when discussing the *consequences* of a sex-segregated labour market today and needs more of attention both in statistics in general and in statistical analysis in particular.

- Lack of labour and lack of jobs

The forecasts for the coming decades often predict labour shortage in certain areas, both for typical male dominated and female dominated jobs. This shortage will increase the need for higher labour mobility and flexibility. In regions where traditional male jobs have disappeared this is already obvious. Men who have lost their jobs and don't want to move to another area must look for jobs in the female dominated sectors or remain unemployed. Many men have to be re-oriented towards a kind of jobs they never have had in their mind before. This is also the case for many employers. They have to consider recruitment from a group of labour they have

never considered before. Their group of recruitment has in that sense become much bigger. The sex-segregation does however delay the necessary transition.

The sex-segregation may also prevent mobility if people suffering from work-related sicknesses have difficulties finding new jobs. Those on long sick leaves, unable to return to their previous jobs and tasks, may be prevented to make a "new start" because of the existing sex-segregation. It is therefore necessary that individuals as well as employers are willing to re-value their attitude towards different jobs and different kind of labour.

Another aspect of this is the trend among young women to leave (some of) the female dominated areas and turn to less traditional ones. This may force employers (in typical "female" occupations) to improve working-conditions or/and to recruit male labour. Women's growing interest for non-traditional jobs is often explained by their interest for higher education (in general) but their intentions to find jobs with higher wage, interesting jobs and/or jobs with better career prospect is probably as important.

- Education and expansion of education

Fifty percent of a cohort is expected to participate in undergraduate education at university or college before the age of 26. Women in Sweden have already achieved this goal (the figure for women is close to 60%), men have not. The regional differences are however big and it is obvious that "class" may be as important as "sex" for these differences. Anyway, women's interest for education is much higher than men's even when controlled for class and region.

The growing interest among young women to participate in higher education has extended their prospects on the labour market considerably. They are now seeking non-sex-typical education at the university-level to a much higher degree than before. Recent data from The National Agency for Higher Education (Högskoleverket) show that 50 percent of the most common subjects/programs were female dominated (>60 % women) in the fall 2002, 30 percent were sex-balanced (40-60 % men/women) and the rest was male dominated. Since women's credentials are better than men's (on average) the number of women at the universities will probably continue to grow.

The sex-segregated labour market does however create problem if women *run the risk* of not being recruited to jobs equivalent to their qualifications and competence. Furthermore the existence of vertical segregation may also prevent women from reaching higher positions. The end-result may therefore be that women run the risk of being both low paid (relatively), over-qualified and with limited possibilities to make a career despite their qualifications.

- General contra specific skills

Sex-segregation has decreased on the Swedish labour market. The reduction is not dramatic but the trend is clear. This is primarily an effect of an ongoing sex-transformation within occupations demanding higher education and specifically of women entering male-dominated occupations. In jobs demanding shorter education de-segregation has been slower. In that respect the labour market consists of two parts. One with continues de-segregation and one with just slowly changes. As the former segment is much smaller (in number of employees) than the latter, the process of de-segregation will be slow.

A closer look at mens and womens occupations does reveal an interesting pattern. The classification of male dominated occupations is far more detailed. This is especially visible in manual and non-manual jobs demanding shorter education. The impression this gives is that men seem to have a wide spectrum of job possibilities while women have just a few. An example illustrates this. According to the standard for Swedish occupational classification (SSYK) there are approximately thirty (30) different specifications for "machine operators" but only one (1) for "nursing assistant/nurse's assistant". (See table 1.)

Table 1 Machine operator and its different specialities according to SSYK. (SSYK – standard for Swedish occupational classification)

SSYK	
8251	Machine operators – printing
8231	Machine operators – rubber products
8232	Machine operators – plastic products
8260	Machine operators – textile-, fur and leather products
8240	Machine operators – wood products
8252	Machine operators – bookbinderies
8230	Machine operators – paper products
8221	Machine operators – medical and hygienic products
8263	Machine operators – shoe products
8271	Machine operators – meat and fish products
8275	Machine operators – fruit and vegetables products
8272	Machine operators – dairy products
8274	Machine operators – bakeries
8276	Machine operators – sugar products
8277	Machine operators – tea, coffee and cacao products
8278	Machine operators – breweries
8279	Machine operators – tobacco products
8222	Machine operators – ammunition and explosive products
8212	Machine operators – stone and concrete products
	etc
5132	Nursing assistant, nurse's assistant

Every operator is specialised in different fields depending on branch of industry while women (and men) working as nursing assistant or nurse's assistant do not seem to be specialised at all. They are obviously considered more general in their profession. The question is whether this is an effect of sex-segregation, if it is an obstacle to the de-segregation process and if this undermines the efforts to equalise the wages in female and male dominated occupations? A change from a general denomination into more specific ones may look as in table 2 below.

Table 2 Conceivable specialities connected to nursing assistant (an example)

Xxx1	Nursing assistant – geriatrics
Xxx2	Nursing assistant – orthopaedic
Xxx3	Nursing assistant – internal medicine
Xxx4	Nursing assistant – infection
Xxx5	Nursing assistant - surgery
Xxx6	Nursing assistant - thorax
Xxx7	Nursing assistant - psychiatry
Xxx8	Nursing assistant - oncology
	etc.

The previous system for classification gives the impression that male jobs are more specific and female jobs more general. One explanation to this may be that most male jobs were (are) found within industries where the tradition to keep different tasks separated is very strong. In sectors with many female jobs general descriptions were normal and any specific competence became (is) in that respect suppressed. One reason to this may have been employers' wish to keep these jobs general because it made the staff easily replaceable and flexible. Employees can work wherever the employer wants him/her to.

This example, in way of categorization two typical male and female occupations, may also be considered when discussing the pay-gap between men and women in general and between men's and women's occupations in particular. One aspect which underlines this is the big difference in number of employees in the two occupations. The group of nursing assistants is far bigger than the machine operators altogether and of course much bigger than every single group of machine operators.

- Sex-segregation and wages

The direct effect of the sex-segregated labour market on women's wages is a largely unexplored area. Since work done primarily by women are *on average* lower paid than work done mainly by men questions concerning what wages really reflect are raised: Is it productivity differences, differences in skills and education, market forces, prejudices and/or different attitudes towards male and female labour and their jobs? Since the gender wage-gap, after controlling for differences in age, level of education, working-hours and sector, is smallest in occupations with a high proportion of women and largest in occupations where that proportion is relatively small, the conclusion is that sex-segregation does have a direct impact on the wage structure. The figures 2a and 2b illustrate this.

Diagram 2a: Occupations with the smallest gender wage-gap in Sweden in 2000. (Adjusted for age, education, working hours and sector).

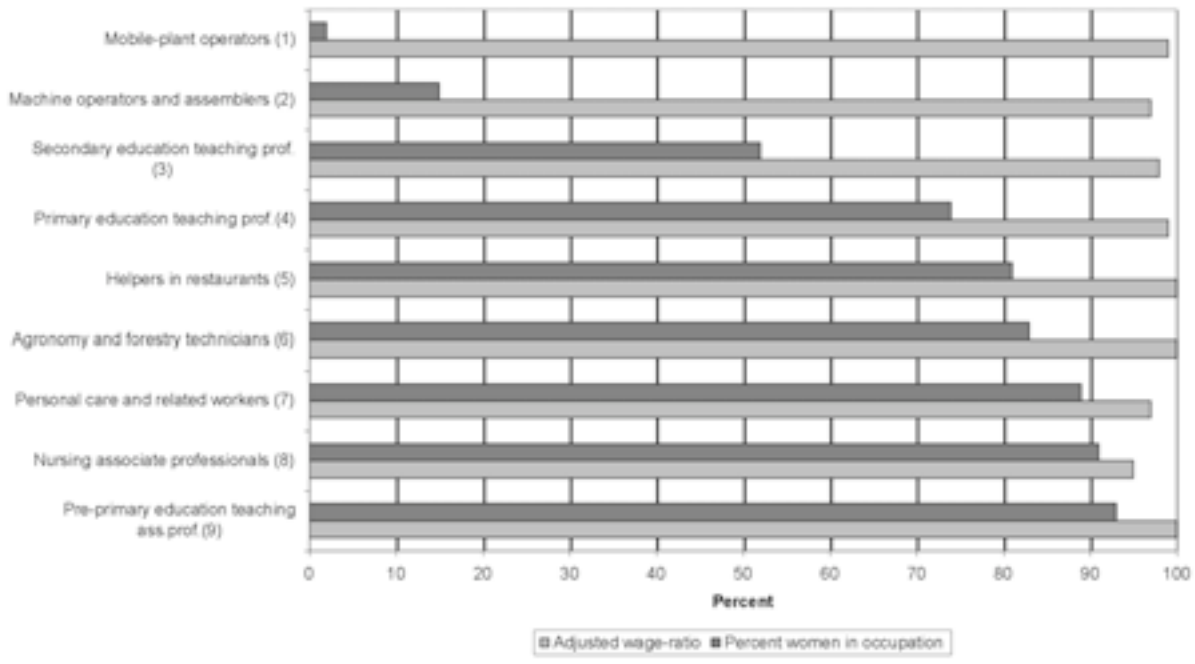
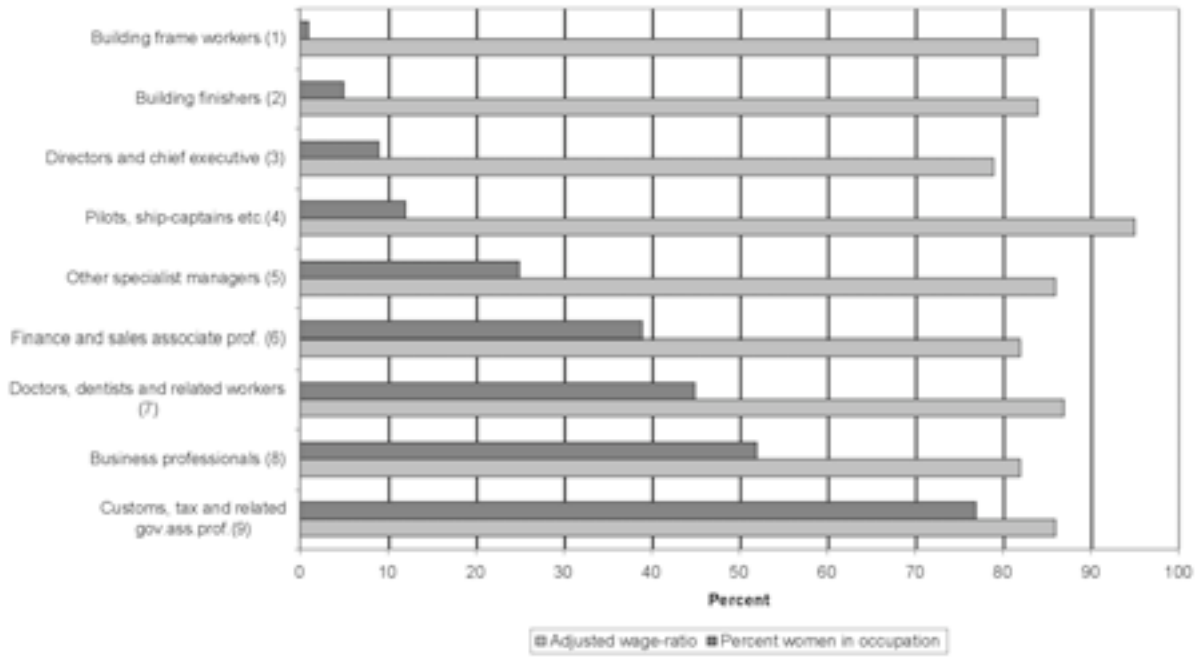


Diagram 2b: Occupations with the biggest gender wage-gap in Sweden in 2000. (Adjusted for age, education, working hours and sector)



Since the gender wage gap is largest in male dominated occupations and smallest in jobs where women are dominating you can also say that there are more of equal wages in female dominated occupations than in male ones. Another interpretation is that the lower wages in the female sector make it easy for men (who are new-entrants) to catch up on women despite women's longer experience. This is harder for women entering the male dominated sector. Female dominance is however not always equal to small wage-gaps. In business professionals and customs, tax and related governmental jobs the female proportion of women is very high but the wage gap is still substantial. Depending on the character of these jobs it may be the existence of vertical sex-segregation, men in the top-positions and women in the lower ones, that explains the bigger gap.

There are different ways of testing for segregation. In a study by Löfström (1999a) 314 different occupations in Sweden were analysed to estimate separate effects of *sex* and *share of women* in the occupation, thereby obtaining separate measures of discrimination and the crowding/comparable effect. Estimations of wage equations normally refer to individual data*,* i.e. data on men's and women's wages and their respectively productivity related characteristics. The data in the study referred to were not individual data but *collective or group data.* This means that data more represent occupation than person.

According to the results men would loose more than women from a high proportion of women in the job, irrespective of level of education. The negative effect was higher the higher the level of education. Being well educated and working within a female dominated field was not as profitable (meaning level of wages) as being educated and working in a male dominated profession.

In a study by Johansson et al (2001) the same effect was estimated. They found a negative and significant effect on men's wages (when the share of women in a specific occupation increased) while the effect on women's wages was inconclusive. The regression results reveal minor differences between years but the differences between men and women were substantial. The share of women in an occupation did have a significant positive effect on women's wages until the 80s but thereafter the effect is non-significant. For most years the effect on men's wages are significant and negative. (See table 3.)

Table 3: Regression results for women and men.
Dependent variable: log wage (per hour). Independent variables: age, age squared, level of education, branches of industry, sector, citizenship, white or blue collar, regions and proportion of women in an occupation. (Estimates for the one of the variables are presented below.)

	Proportion of women	
Year	**Women**	**Men**
1981	0,113*	-0,075
1986	0,100**	-0,089*
1991	0,053	-0,079*
1995	-0,006	-0,065
1998	0,000	-0,112*

**significant at 1%-level *significant at 1%-level.
Source: Johansson et al (2001) Table A4 and A5, p 39-40.

In a study by Hansen et al (2000) the purpose was to find whether there was any "wage penalty" for working in occupations with a high concentration of women. The main results did indicate that the share of women had a negative and significant effect on female wages while the effect on male wages was small and insignificant. The authors did however find that the negative effect (of the share of women) on Swedish data was only half of the corresponding figure for U.S. Their explanation to this was that the higher degree of *general wage equality* in Sweden made the wage penalty, due to the female concentration, less.

In the study they also estimated the wage gap within three occupational groups, one dominated by female, one by male, and one where the proportion of men and women was close to equal. They found a small but insignificant gender wage gap in male-dominated occupations but a significant gap in female-dominated occupations. Most of the differences were due to unobserved factors (e.g. discrimination). In occupations where the representation of men and women was almost equal, the gap was almost as large as for the female dominated occupations. This was contrary to the results the authors expected. The gap ought to be smallest within this group, and this made them conclude that affirmative action as a policy to desegregate the labour market would only have a limited effect on the unexplained wage gap.

- Sex-segregation in the market and in the family

Sex-segregation in the labour market tends to keep the division of household work between the spouses unchanged. Sex-segregated wages/salaries and sex-segregated working hours reinforce this tendency. This is of course a serious consequence of the occupational segregation. The unequal division of work within the household has however been reduced somewhat (primarily due to women's higher labour force participation) but it is still considerable. The process of further reduction in horizontal and vertical sex-segregation in the labour market must therefore be followed, or preferably started, by a more equal division of household work between the spouses. Men and women with equal responsibility for the household are found to be more equal in the labour market while a more unequal division tend to make men and women more unequal in the market too. The measures taken to reduce the sex-segregation must therefore be related to what you think causes and keep it. Rising wages in female dominated jobs may increase integration both in the household and in the market. And a more equal division of household work in the families may increase women's chances to get better paid jobs and reach higher work positions.

The issue of family and work is on the agenda in most European countries at the moment. The main reason is the falling fertility rates and the increasing participation rates among women. It is still hard to combine family and work and since it is only women that gives birth to children this turn out to be a female issue. Their prime liability for the children tends to keep the division of work within the households unchanged and also to preserve the segregation in the labour market. In this perspective the reluctance among young women today of becoming mothers is understandable. The problem is not a problem for women only, but for the whole society. Old structures of gender inequality collide with new ideas expressed by the younger generations, perhaps women in particular, of how to organise (modern) family- and working life in a more gender equal way.

- Summary

Sex-segregation in the labour market has decreased in Sweden during the last decades. This is largely a consequence of young women entering jobs that previously were dominated by men. Women are in majority among university students today and in the younger generation's women now have generally a higher educational level than men. This means that women have broadened their choice of occupation to a much larger extent than men. For men, we can not see any significant change, men entering typical female dominated jobs are still very rare. If the de-segregation process is to continue it is necessary to change this, and stimulate men to take jobs traditionally dominated by female labour.

According to empirical studies, the segregated labour market has a profound effect on various economic variables. One is the wage structure, where it is generally found that the wage rate (for both men and women) decline with the share of women in the sector. Another effect, probably of greater economic importance, is the question of matching job seekers with the demand in different occupations. If de-segregation continues and the traditional sex domination in different sector is dissolved, then the labour market as a whole becomes more flexible and it is easier to match demand and supply in a specific occupation. This in turn may have great positive effects on the economy as a whole. Finally, a survey shows that a vast majority of people with work experience believes that a de-segregated labour market has a positive effect on a number of economic and social variables.

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THE CONSEQUENCES OF GENDER SEGREGATION FOR THE GENDER PAY GAP

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Gender segregation and concentration provides a basis for gender differentiation in pay. Segregation can affect pay within organisations and between organisations; it can be used as a basis for differentiation of pay levels and pay supplements and for differentiation in promotion opportunities (pay and job grade promotion). It is this linkage that can be considered to be at issue in the debate over equal pay for work of equal value; the concentration of women in particular job areas allows the payment for work at below the level for equivalent work in male occupations (Bergman 1986; Grimshaw and Rubery 1997).

Segregation can also be the outcome of differential wage levels. For example if sectors- such as for example the public sector- set pay at below the level necessary to attract male applicants, the outcome may be increased feminisation as the male recruits dry up (Reskin and Roos 1990). Thus the relationship between gender segregation and gender pay inequality is mutually constitutive and interactive, rather then always going from segregation to low pay.

The role of segregation in causing gender pay differences is of course disputed; for some the association between lower pay and segregation is the result of the exercise of preferences, or indeed the trade off between pay and other job attributes (Polachek 1976). During the course of this paper we will present some evidence that suggests that this association has to be understood through the opportunities for discriminatory pay policies and not simply or mainly as reflection of gendered choices or preferences. Thus where data are available on workplace characteristics we find increasing evidence that it is these characteristics rather than individual characteristics that are powerful in explaining the gender pay gap. Thus one important conclusion is the need to expand data on workplace characteristics if we are to further our understanding of the relationship between gender segregation and pay. This need is reinforced by the observation- consistent with the notion of gender mainstreaming- that the presence of gender segregation means that developments in pay policies and practices are likely to have differential gender effects. For example, changes to public sector pay, or to low pay regulation, need to be analysed for gender effects, along with the implementation of new payment systems (Rubery et al. 2003). Similarly management policies of organizational restructuring may impact upon efforts to close the gender pay gap. The introduction of new systems of work organization and training, as well as policies of downsizing, outsourcing and privatisation impact differentially on groups of male and female workers (due to sex segregation by occupation, job task and contract type) and these gender effects need to be taken into account. However, while segregation has consequences for life chances and resources in all countries, the size and form that these 'penalties' of segregation take can be shown to vary considerably.

To explore these issues further this paper is divided into three parts. In the first part we review research on the decomposition of the gender pay gap and reveal the importance of including workplace based characteristics, including in particular gender segregation at the workplace, in the explanation of the gender pay gap. Secondly we consider the importance of differences between countries in the shape and form of wage structures in influencing the penalties attached to gender segregation. Thirdly we discuss the likely impact of trends in both labour demand and labour supply on the combined effects of gender segregation and gender pay inequalities.

Workplace characteristics, gender segregation and the gender pay gap.

The traditional approach to explaining the gender pay gap has been to use decomposition techniques that estimate the unexplained share of the gender pay gap after controlling for differences in education, age and experience. However, when differences in occupational and industrial segregation are incorporated into the analysis, it is often found that these have greater explanatory power than differences in age, education, or career interruptions. These compositional effects are also often outweighed by gender differences in remuneration by occupation, sector and gender concentration (CEC 2002). In a recent study in *Employment in Europe* (CEC 2002) these differences in remuneration in total accounted for around nine percentage points of the EU gap of 16 points (op. cit.: Chart 27). In its conclusion, this study emphasizes the need to re-examine what we might interpret as the social and the management functions of labour markets in future explorations of the gender pay gap:

> *The analysis has identified gender segregation by sector and occupation and lower paying female-dominated sectors and occupations as the biggest contributors to the gender pay gap at EU-level. . . . Secondly, the differences in the remuneration of the same characteristics between men and women have to be examined – in particular the fact that a higher female employment share in a sector or occupation is associated with lower earnings even more so for women. Given that the analysis has controlled for inter-sectoral and occupational differences this could reflect (societal) preferences regarding the valuation of various types of jobs – the more so as women are more often employed in sectors and occupations in which productivity is more difficult to measure* (CEC 2002: 42-43).

The problem of including occupational segregation variables within the decomposition analysis is that some analysts treat these as evidence of revealed preferences and thus as part of the explained portion of the gender pay gap. However, this approach focuses on the supply side of the labour market and ignores the influence of the demand-side- and in particular the influence of organisation and workplace in the setting of pay. To large extent this focus on the supply side reflects the availability of data. Where, however, studies are able to include a range of other variables that pick up characteristics associated with the workplace a different picture of possible causative factors emerge. Instead of occupational segregation being regarded as evidence of differential preference of individuals it can be viewed as a characteristic of particular workplaces, organisations and sectors and as part of the factors that influence the setting of wages by employers.

While investigation of the impact of workplace variables is limited by quality of data sets, several national studies have already made significant progress (Table 1). For example, for the Netherlands, Spijkerman (2000) shows that gender differences in job level offer the most powerful explanation for the average gender pay gap – explaining a full 38% of the gap, compared to just 7% due to differences in education, 5% due to age differences and 4% due to differences in experience. This finding reflects the strong obstacles associated with vertical segregation within organizations, with women over-represented in the lower level jobs and under-represented in the high level jobs (cited in Plantenga and Sjoerdsma 2002). For the UK, three related studies draw on detailed workplace level data to show that workplace characteristics are more important factors in explaining wage differences than personal characteristics (Forth and Millward 2000, 2001; Anderson et al. 2001). For example, in the private sector the marginal effect of working in a workplace with only men raises pay by 6 per cent, compared to a gender mixed workplace, while working in am all female workplace reduced the pay by 7%. Similar effects were found in the public sector (Forth and Millward 2000).

A study in a similar vein that preceded these relatively recent studies is that by Le Grand (1991), which draws on the 1981 Level of Living Survey for Sweden to investigate the effectiveness of solidarity wage bargaining in securing equal treatment of men and women in the Swedish labour market. The hypothesis is that if solidarity wage bargaining was powerful in promoting equal pay for equal job types then controlling for job characteristics ought to generate an adjusted pay gap of zero. The results show that variables related to job segregation (especially positional grade and occupational segregation, measured as female share in the occupation) have most explanatory power, accounting for around three quarters of the explained gender pay gap. Overall, Le Grand shows that if men and women had the same positional grade, and if there were no occupational segregation, then the unadjusted gender pay gap would decrease by around 40 per cent (from a gap of 20 points to around 12). There are two further empirical findings of note. The first relates to the inclusion of a range of variables that measure working conditions, such as the degree of autonomy and inconvenience of working hours. Le Grand shows that the pay difference between men and women has very little to do with Adam Smith's theory of 'compensating differentials', since gender differences in working

conditions explain very little of the gender pay gap. This finding suggests that there can be no a priori assumption that lower pay implies a trade-off in favour of more family friendly policies. The second finding is that in the original specification, Le Grand did not include industry or occupational variables. Further tests were carried out with an expanded wage model with 26 industry dummies but this only reduced the adjusted pay gap by 0.5 per cent (op. cit.: 272). It is likely that the small effect of the industry variable is due to these effects been picked up in other variables such as working conditions and positional grade (normal skill demands and supervisory position).

This accumulating evidence suggest the need to move away from solely or primarily supply-side orientated data sets to explain gender equality and instead to increase the information available on the relationship between workplace characteristics and pay in order to understand more about how the processes of allocation of labour between workplaces and within workplaces influences the gender pay gap.

Table 1: Examples of national studies where workplace characteristics are important in explaining the gender pay gap

Country	
Denmark	Importance of company culture – gender segregation in one company is associated with different bonuses, piece rates, but not in another company (Højgaard 1996).
Finland	A female-dominated workplace is associated with lower female earnings for all levels of education; higher educated women in a female dominated workplace earn 97% of average male full-time pay, compared to 143% when in a male-dominated workplace (Kandolin 1997)
Greece	Sex segregation by occupation and by sector account for 57% of the gender pay gap in industry and 51% in services (Karamessini and Ioakimoglou 2002)
Netherlands	Gender differences in job level (i.e. vertical segregation) explain 38% of the pay gap, compared to just 7% due to differences in education (Spijkerman 2000)
Portugal	The variable female share of occupation explains 60% of the pay gap (Ribeiro and Hill 1996)
Sweden	Measures related to occupational sex segregation (vertical and horizontal) explain around three quarters of the explained gender pay gap (Le Grand 1991) The adjusted pay gap widened in the private sector by 1.6 points, but narrowed in the public sector by 1.4 points (1991-2000) (SOU 2001)
UK	Female share of work group explains 25% of gender pay gap for full-timers and 10% of the gap between female part-timers and male full-timers (Anderson et al. 2001) Between 1980 and 1994, women enjoyed a higher markup from collective bargaining than men, coupled with a slower fall in collective bargaining coverage (from 50% to 36% for women and from 51% to 29% among men); this means that changes in collective bargaining coverage narrowed the pay gap by worsening average male earnings at a faster rate than women's (Bell and Ritchie 1998).

Source: examples of research cited in national reports produced by the EC's Expert group on gender and employment (Emerek 2002; Lehto 2002; Plantenga and Sjoerdsma 2002; Gonzalez 2002; Spånt and Gonäs 2002, Grimshaw et al. 2002)

Relative wages in female-dominated occupations, industries or contracts.

Recent research on the gender pay gap has found that the pay penalty attached to working in female dominated jobs varies according to the overall structure of wages in the economy (OECD 2002, Rice 1999, Blau and Kahn 1992; Bettio 1988). Thus it is possible to differentiate the gender segregation or gender disadvantage effect from the wage structure effect; some societies may have either lower levels of gender segregation – or more female-dominated jobs further up the job hierarchy- but still have the same or an even wider pay gap than a more segregated society, simply because there are larger pay penalties attached to being clustered in lower level jobs where the wage differentials are wide rather than narrow. This finding has provided the clue to why the gender segregated Nordic societies tend to have relatively narrow overall gender pay gaps; here its the narrow overall wage structure that is of most benefit to women. While this research that differentiates between job ranking and the size of differentials has opened up comparative research on the gender pay gap, there is still a need to explore further the factors influencing pay in female dominated occupations. The wage structure research focuses primarily on the overall dispersion of pay, but there are also differences in the individual ranking of occupations and sectors that are likely to influence which groups of women face particular wage penalties in the labour market.

A study for the OECD (Grimshaw and Rubery 1997, OECD 1998) of pay in female-dominated occupations across seven countries found that wages in the occupations where women are most concentrated were even lower paid, on average, than the pay for women in all remaining occupations. However, the size of this pay penalty varied widely. For example, sales and shop assistants were found to have earnings close to or under half of male average earnings in the US and the UK but near to 60% or over in Australia, France and Norway. Among nurses the pattern was rather different with much higher relative pay levels for professional nurses in the US and Australia- well above male average earnings -, somewhat lower than male average earnings in Canada and the UK but earnings equivalent only to 88% of male average earnings in Norway. However, nurse assistants and auxiliaries received the highest relative pay in Norway- at 77% of male average pay, compared to rates as low as 55% in the United States (see table 2). These findings suggest that there are differences not only between countries in how far low skilled female work is rewarded but also in the differentials attached to high skill female work, relative to male average earnings. It is not necessarily the case that a country that rewards some women with very low earnings has the same policy towards all types and grades of female-dominated jobs. These findings underline the complexity of comparing payment systems and the wide scope for public or social choice, as embedded in the prevailing pay structures.

Table 2: Relative pay in female-dominated jobs: an OECD comparison

	Full-time	*Part-time*	*All*
Sales/shop assistants			
Australia	58.8	57.2	57.8
Canada	55.6	52.5	..
France	59.0	59.0	59.0
Germany	46.4	..	..
Norway	64.0	62.4	63.0
United Kingdom	47.3	43.5	44.4
United States	52.2	50.7	50.4
Professional nurses			
Australia	102.6	106.2	104.2
Canada	94.4	..	97.1
Germany	75.4	..	..
Norway	86.0	91.1	88.2
United Kingdom	96.0	92.0	94.3
United States	146.4	123.6	131.0
Nursing assistants/auxiliaries			
Canada	62.6	..	65.3
France	72.9	72.0	72.7
Germany	51.4	..	..
Norway	73.6	79.8	77.2
United Kingdom	63.3	62.2	62.8
United States	51.8	63.1	55.2

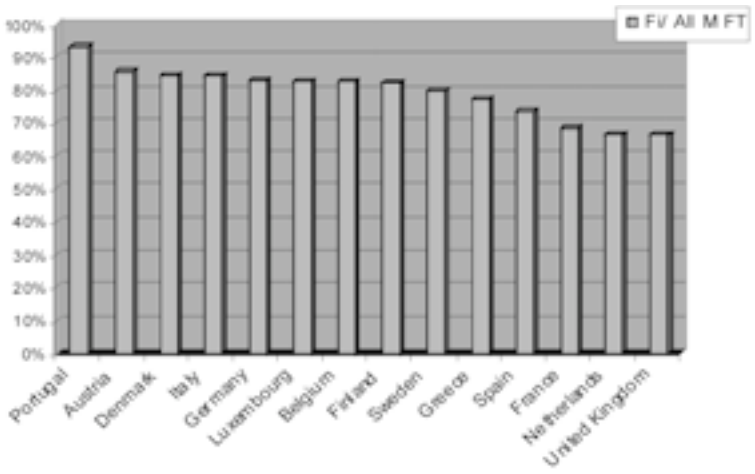
Source: OECD 1998 tables 2.4 and 2.5 based on Grimshaw and Rubery 1997, tables 13, 14 and appendix table 5

The only dataset where we can compare pay levels by detailed occupational or industrial category at the EU level is the Structure of Earnings Survey; as this excludes public services many female-dominated jobs such as nurses are not represented in the dataset. However, figure 1 shows how the relative level of pay received by women in female-dominated occupations varies across member states. We show this by computing the ratios of female earnings within an occupation to average male full-time earnings in the whole economy. The occupations selected for the most part are characterised by female dominance but we also include one male-dominated occupation for the sake of comparison. We find a similar range of variation to that found in the OECD study: for example the ratios for 'models, sales persons and demonstrators' varied from 46.3% in the UK to 74.5% in Sweden, for personal and protective services from 44.8% in the UK to 78.8% in Sweden and

for clerks from 66.4% in the UK to 93.3% in Portugal. The male-dominated occupation- plants and machine operators- also shows wide variation between countries; the UK and Sweden again account of the lowest and highest but it is notable that there are major differences between two Southern countries- Greece, where the ratio is the third highest at 70% and Portugal where it is the second lowest at 57.4%. We have also included some female-dominated industrial sectors such as retail, textiles and hospitality and catering where again the spread of earnings ratios varies by a factor of 20 to 28 percentage points, with member states distributed across this range, even though the UK and Sweden continue to appear at either end of the spectrum.

These differences in ratios, however, do not only reflect differences in tendencies towards compression or dispersion of earnings or the related differences in the size of the gender pay gap. Although there is obviously some tendency for the most dispersed countries to have the lowest ratios and the least dispersed the highest, there is also evidence of differences in relativities within countries that is not simply related to the degree of inequality. Figure 2 shows there are wide variations in the size of differentials among women workers; taking 'models, sales persons and demonstrators' as the base level we find the advantage for women of obtaining a clerical job compared to a sales job varies from as low as 7% in Sweden to over 40% in not only the UK and Portugal but also Denmark and Luxembourg. In contrast taking a job as a plant machine operative involves a penalty of 8% in Portugal but an improvement of 16% in Greece and 20% in the UK. This finding of variations in relative pay structures when pay structures are compared internationally has been supported by a recent study of the ILO October earnings inquiry data that collects information on occupational earnings on a world-wide basis (Freeman and Oostendorp 2000)[1]. Furthermore the most recent Employment in Europe publication has provided a wealth of detail on wage structures by industry across Europe which reveals the high level of variation both in the size of differentials and in the ranking of industries and sectors (see table 3). This information on occupational and sectoral wage structures suggests the need to move beyond a notion of a common set of factors shaping pay systems (for example using the primary decomposition by experience and education) and to instead develop a more complex analysis of wage structures which recognises the role of both societal factors and organisational factors in shaping earnings. What is remarkable is that the gender pay gap still persists in all countries- and reappears in various forms- whatever the measured level of segregation or indeed the shape of the wage structure. We therefore need to understand how gender interacts with these societal and organisational factors to create different forms of gender inequality- sometimes more focused, for example on higher qualified women, sometimes more on less qualified women, and to undertake this more detailed and nuanced analysis we need better data on wage structures at the organisational and occupational level.

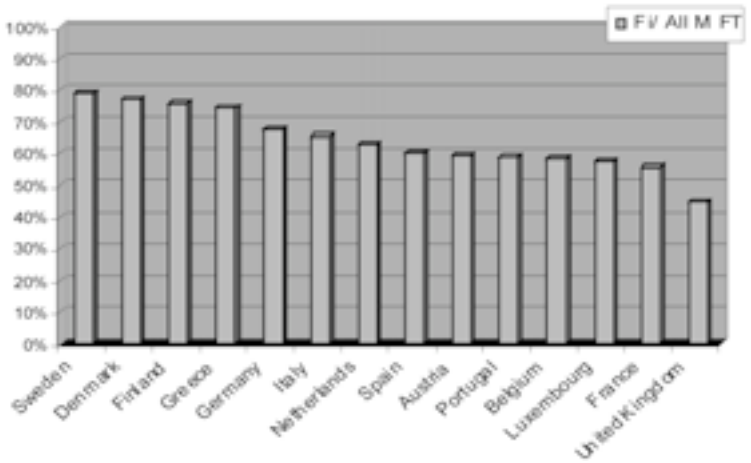
Figure 1.(a) Relative Level of Pay of Women in Selected Occupations - Clerks



Note: Relative level of pay is calculated as the ratio of female gross hourly earnings in ISCO 4 to average male full-time earnings in the whole economy, overtime excluded; no data for Ireland
Source: Structure of Earnings 1995

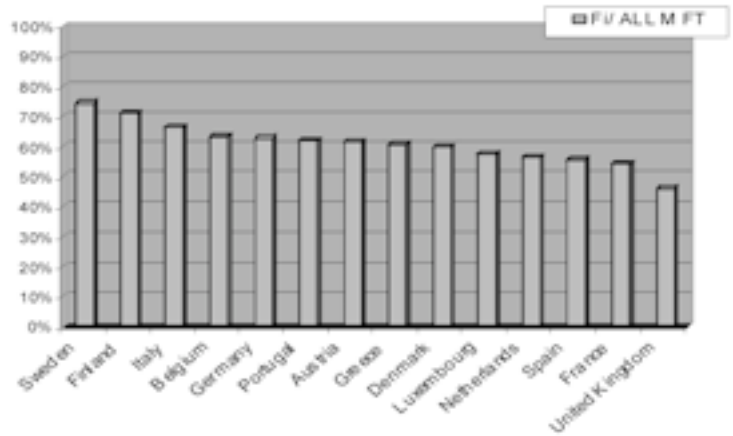
[1] We have also looked at the range of ratios for male pay within the same selected occupations and sectors. There is clear evidence of variations in structures for male as well as female workers, but the floor to the labour market for men tends to be higher, thereby restricting the range of ratios between countries. By and large the minimum ratio in these occupations is 70% or higher. The main exception to this finding is for some service sector jobs in the UK where the ratios fall well below 60% for sales and for personal and protective service workers. There are a few other examples where male occupations or sector ratios fall below 70% of male average earnings but out of 90 observations only 12 fell below 70%, three below 60% compared to 64 out of 90 for women's earnings. These are all low paid jobs for men as well as women with the earnings ratio only rising once above the average male earnings level (for male workers in textiles in Sweden).

Figure 1.(b) Relative Level of Pay of Women in Selected Occupations - Personal and Protective Service Workers



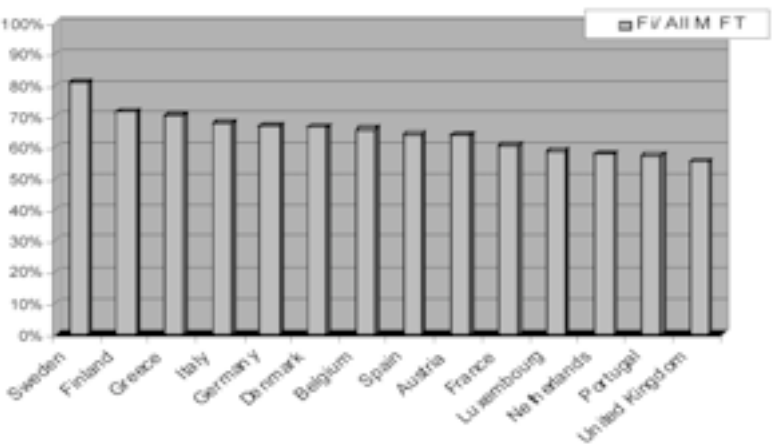
Note: Relative level of pay is calculated as the ratio of female gross hourly earnings in ISCO 4 to average male full-time earnings in the whole economy, overtime excluded; no data for Ireland
Source: Structure of Earnings 1995

Figure 1.(c) Relative Level of Pay of Women in Selected Occupations - Models, Sales Persons and Demonstrations



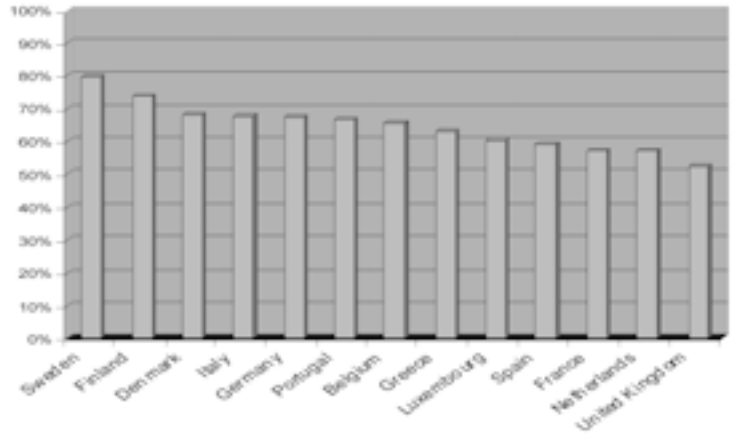
Note: Relative level of pay is calculated as the ratio of female gross hourly earnings in ISCO 4 to average male full-time earnings in the whole economy, overtime excluded; no data for Ireland
Source: Structure of Earnings 1995

Figure 1.(d) Relative Level of Pay of Women in Selected Occupations - Plant and Machine Operators and Assemblers



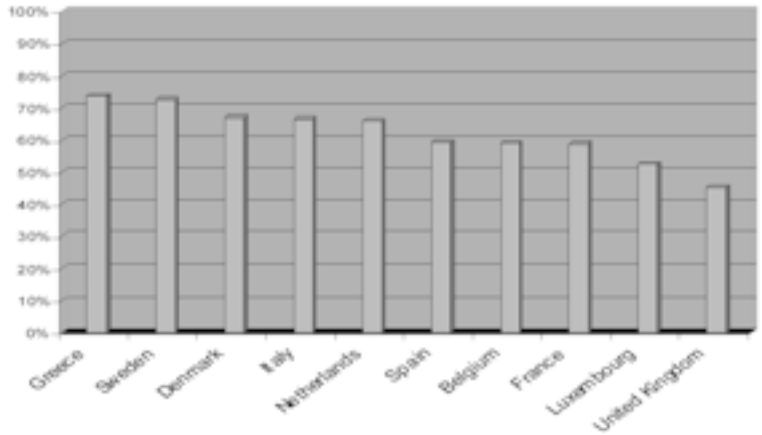
Note: Relative level of pay is calculated as the ratio of female gross hourly earnings in ISCO 4 to average male full-time earnings in the whole economy, overtime excluded; no data for Ireland
Source: Structure of Earnings 1995

Figure 1.(e) Relative Level of Pay of Women in Selected Sectors - Retail Trade



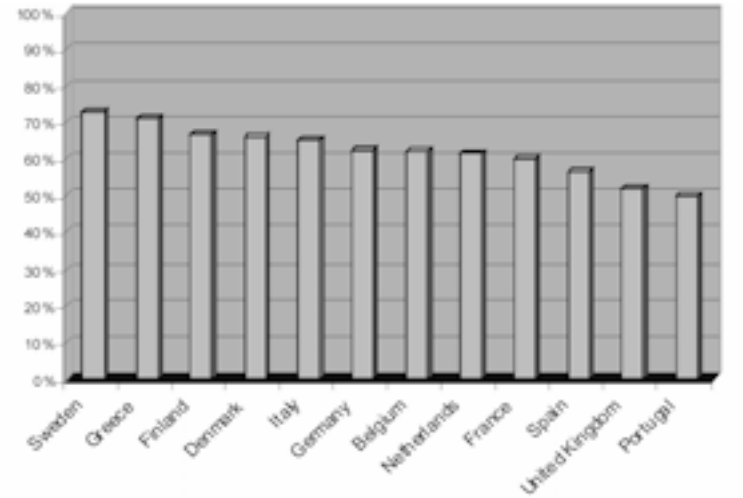
Note: Relative level of pay is calculated as the ratio of female gross hourly earnings in ISCO 4 to average male full-time earnings in the whole economy, overtime excluded; no data for Ireland
Source: Structure of Earnings 1995

Figure 1.(f) Relative Level of Pay of Women in Selected Sectors - Hotels and Restaurants



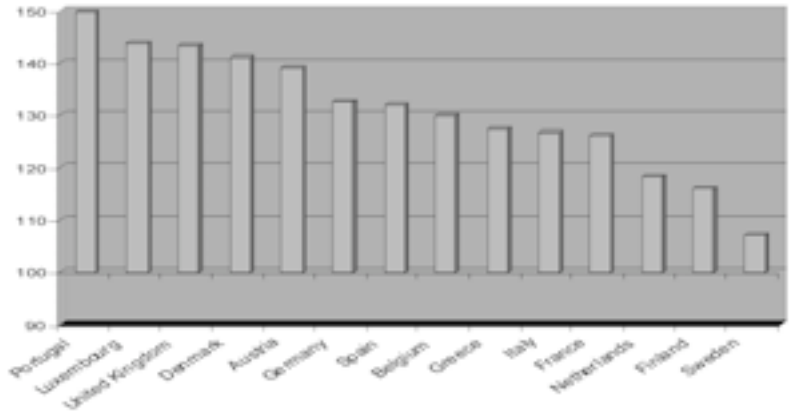
Note: Relative level of pay is calculated as the ratio of female gross hourly earnings in ISCO 4 to average male full-time earnings in the whole economy, overtime excluded; no data for Ireland
Source: Structure of Earnings 1995

Figure 1.(g) Relative Level of Pay of Women in Selected Sectors - Manufacturing of Textiles



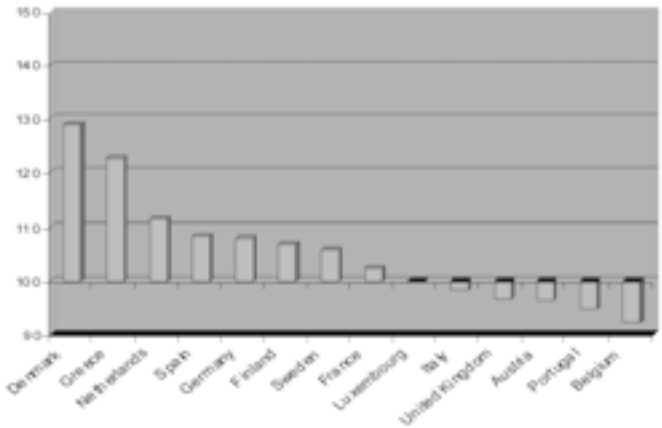
Note: Relative level of pay is calculated as the ratio of female gross hourly earnings in ISCO 4 to average male full-time earnings in the whole economy, overtime excluded; no data for Ireland
Source: Structure of Earnings 1995

Figure 2.(a) Wage Differentials Among Women in Selected Occupations - Clerks



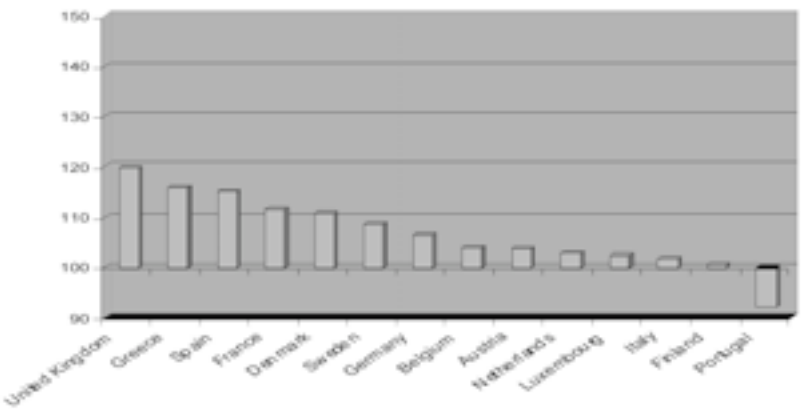
Note: Female Average Gross Hourly Earnings for Models, Sales Persons and Demonstrators = 100; overtime excluded; no data for Ireland
Source: Structure of Earnings 1995

Figure 2.(b) Wage Differentials Among Women in Selected Occupations - Personal and Protective Services Workers



Note: Female Average Gross Hourly Earnings for Models, Sales Persons and Demonstrators = 100; overtime excluded; no data for Ireland
Source: Structure of Earnings 1995

Figure 2.(a) Wage Differentials Among Women in Selected Occupations - Plant and Machine Operators and Assemblers



Note: Female Average Gross Hourly Earnings for Models, Sales Persons and Demonstrators = 100; overtime excluded; no data for Ireland
Source: Structure of Earnings 1995

Table 3: Inter-industry wage differentials in industry and services (deviations from country-specific average in %) in the EU and the accession countries

	Industry				Services				
	Mining and quarrying	Manufacturing	Electricity, gas and water supply	Construction	Wholesale and retail trade	Hotels and restaurants	Transport, storage and communication	Financial intermediation	Real estate, renting and business activities
DK	21	-3	14	-2	-5	-22	3	12	11
D	10	8	22	-19	-16	-45		26	
EL	14	-7	58	-21	-26	4	21	56	12
E	24	6	75	-17	-14	-29	19	88	-15
F	-23	-3	26	-13	-11	-15	-20	37	13
IRL	7	0	64	-7	-19	-36	6	39	24
I	11	-5	43	-15	-11	-32	10	70	-5
L	-20	-10	45	-33	-30	-45	4	71	-9
NL	69	4	39	-1	-13	-37	-5	42	1
P	-4	-15	67	-14	0	-29	32	141	1
A	17	3	40	-1	-10	-38	-8	40	8
FIN	-3	-1	15	-5	-1	-34	1	28	5
S	9	-1	9	-8	-6	-31	-1	46	7
UK	26	-3	31	-5	-18	-41	-5	72	15
BG	59	-10	82	-19	-27	-34	21	84	-13
CY	14	-15	48	-12	-6	-17	11	49	-1
CZ	20	-8	23	-7	1	-23	4	76	7
EE	30	-6	14	-10	-11	-39	16	113	-1
HU	30	-3	35	-23	-19	-49	12	94	6
LT	20	-4	28	-12	-15	-34	7	86	13
LV	-7	-10	48	-17	-26	-35	27	105	10
PL	68	-12	28	-12	-9	-32	19	54	6
RO	65	-16	54	-26	-26	-33	38	173	-11
SI	27	-9	22	-14	-2	-16	13	58	24
SK	26	-1	-10	-4	-14	-22	5	55	10

Source: Eurostat, LCS
Notes: no data available for Belgium, Malta and Turkey

Source: Table 29: CEC 2003

Differences in wage structures apply not only to occupational and industrial differentials but also to differences by contract type which in turn are related to patterns of occupational gender segregation. Evidence from the most recent Employment in Europe (CEC 2003) suggests that the cost of being part-time worker is negative for those in the lower parts of the occupational distribution- involving a pay penalty of 5% compared to full-timers, while in the top decile of the earnings distribution part-timers actually receive a premium on hourly pay of 11% . It is in the bottom part of the distribution that part-time work tends to be concentrated and has been associated with the growth of occupational segregation (Rubery et al. 1999). There are also differences again between countries, with particularly negative premia for part-time work in the UK (CEC 2002; Grimshaw and Rubery 1997)

Trends in the demand and supply side

Gender segregation at work is changing. More women are entering higher level jobs (see tables 4 and 5); more women are becoming continuous employees, thereby providing a basis for challenging the male incumbents of the highest rungs of the occupational and organisational ladders. However, while women are making entry into higher level jobs, there is also evidence that the feminisation of jobs leads to change in the nature and quality of those jobs and even to the emergence of new divisions within job categories. There is a strong case for further empirical comparative investigations of the processes of desegregation and the consequences for job quality across European countries, perhaps following the work of Reskin and Roos (1990) who investigated processes of desegregation in the US, through considering both the upgrading of women's position within the labour supply or gender queue, and the downgrading or restructuring of jobs within the job queue. This time there would be a need for an inter-country as well as an inter-occupational comparison.

Table 4: Female Share of Higher level Jobs in the EU, 1992-2001

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Belgium	:	42.6%	42.7%	42.1%	42.4%	42.7%	43.1%	42.3%	44.1%	42.5%
Denmark	42.0%	42.9%	43.1%	41.7%	43.0%	45.9%	44.5%	44.0%	44.6%	45.2%
Germany	44.4%	44.6%	44.8%	45.1%	45.6%	45.6%	45.8%	46.1%	46.4%	46.6%
Greece	35.2%	34.9%	35.6%	35.9%	36.2%	36.2%	38.4%	38.5%	39.4%	39.9%
Spain	36.3%	38.8%	38.4%	39.6%	40.0%	40.4%	40.6%	40.4%	41.7%	42.4%
France	39.1%	41.7%	41.8%	42.8%	42.8%	42.8%	43.5%	43.3%	43.8%	44.0%
Ireland	38.5%	39.4%	41.2%	41.7%	42.2%	41.5%	:	43.5%	44.0%	44.1%
Italy	40.3%	40.5%	40.6%	41.2%	41.3%	40.8%	39.8%	40.8%	39.9%	41.8%
Luxembourg	35.6%	34.0%	35.3%	34.5%	34.5%	37.5%	37.3%	39.4%	39.7%	40.6%
Netherlands	35.6%	36.4%	37.5%	37.0%	38.1%	39.1%	39.6%	41.2%	40.8%	41.3%
Austria	:	:	:	40.2%	41.5%	42.1%	42.8%	42.5%	44.0%	44.0%
Portugal	45.3%	44.6%	44.0%	44.5%	44.3%	45.1%	44.2%	43.3%	44.0%	44.6%
Finland	:	:	:	:	:	50.9%	50.1%	49.7%	50.1%	51.0%
Sweden	:	:	:	:	:	46.2%	46.0%	46.3%	46.7%	46.7%
UK	39.9%	40.7%	40.8%	40.4%	41.0%	41.1%	40.9%	41.3%	41.5%	39.5%
EU	40.6%	41.6%	41.8%	42.0%	42.4%	42.8%	42.8%	43.1%	43.4%	43.4%

Source: European Labour Force Survey (EWERC calculations)
Note: Higher Level Jobs defined as ISCO 1-3; EU figures for each year include only countries with available data and, therefore, is not strictly comparable overtime.

Table 5. Female Share of Legal Professionals, 1992-1999

	1992	1993	1994	1995	1996	1997	1998	1999
BE	:	23.8%	30.4%	33.3%	38.1%	40.0%	40.7%	40.0%
DE	26.3%	27.2%	28.2%	29.3%	31.8%	30.9%	34.3%	34.2%
ES	30.2%	34.4%	34.4%	35.2%	35.8%	37.4%	37.0%	37.6%
FR	37.8%	29.1%	24.1%	28.1%	35.0%	40.4%	42.3%	47.3%
GR	36.4%	41.9%	40.6%	44.1%	44.4%	45.9%	47.7%	:
IT	21.3%	23.3%	26.8%	25.3%	30.8%	30.4%	29.9%	30.7%
NL	30% (*)	37.0%	39.4%	41.7%	40.5%	47.9%	36.0%	41.3%
UK	28.7%	31.1%	30.7%	35.7%	35.1%	34.1%	30.7%	35.1%

Source: European Labour Force Survey (EWERC calculations)
Other EU countries excluded due to data reliability reasons; Legal professionals refer to ISCO cat. 242
: denotes missing or unreliable data (*) that data should be treated with caution due to reliability problems

The changing nature of occupations and labour market systems not only threaten to reduce the benefits from women's higher education and upward mobility but may also act to reverse progress in women's jobs in the medium and lower sections of the labour market. A number of threats can be identified. These include the trend towards more fragmented organisations which could act to undermine the effectiveness of existing legislation on equal pay, which is based on comparable work for the same employer. There are an increasing number of situations in which there is no single, clear-cut, unambiguous employer (Earnshaw et al. 2002). In these cases, the scope for pay comparisons is restricted. This occurs, for example, when: work has been sub-contracted; franchises are operated within other employing organisations; joint ventures or partnerships are operating; employment agency staff are used. The further fragmentation of the public sector, through the contracting out

of services, may also widen the pay gap as this sector has been particularly important in providing women with both career opportunities and an integrated and regulated pay system. Other changes that may have a negative impact on gender pay equality, even with the same pattern of segregation, include the decline in trade union strength and collective bargaining coverage in some countries, the trend towards more individualised or performance related pay and the move towards flatter, more delayered organisations that may further restrict career mobility opportunities for women. A greater emphasis on career mobility across organisations may also penalise women, particularly if they have childcare responsibilities.

These changing characteristics of jobs and occupations suggest that tracking change in the distribution of men and women by occupation may not provide a very good predictor of patterns of inequality and that more attention needs to be given to developing datasets that include the workplace characteristics- the collective bargaining, payment systems and ownership variables- to understand trends in gender inequality that are linked to patterns of segregation. For example the trend towards performance related pay will be more likely to have negative impacts for gender equality if the application of PRP and/or the size of the awards is greater in male than female dominated occupations or workplaces. Where the public sector contracts out to private sector firms there needs to be information collected on whether this primarily affects female rather than male groups (Escott and Whitfield 1995). We also need to know whether particular occupations are associated with highly specialised organisations- thereby restricting pay comparisons with different occupations under the principles of equal value- or whether they are integrated into complex organisations where there is more scope for ensuring that jobs are valued according to skill not gender. This more detailed work has yet really to be undertaken at the national level, let alone the European level, but there may be a need to consider move towards more workplace-based surveys at a European level if we are to understand the complexities of both labour market change and changes in the patterns and consequences of gender equality.

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GENDER INEQUALITIES IN PAY AND CAREERS: FRANCE

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Despite the steady increase in the number of women in employment since the 1960s, there are still many gender inequalities in the labour market. Some of these are well known: differences in working hours, gender-specific jobs, unequal pay. Whilst the figures themselves are now relatively well established, the analysis of these disparities requires further development, particularly in order to understand how these pay differentials are formed and evolve. The first section of this paper will briefly run through the inequalities in employment opportunities and pay in France. The second section will focus on trying to understand the pay differentials between men and women. The third section will introduce the time dimension and present some methodological questions relating to career analysis. The fourth and final section will then summarise some of the results of studies into the careers of women and men.

1. Employment and pay inequalities: situation in France

1. 1. Converging activity rates

In France, as in other developed countries, the female activity rate has risen significantly since the 1960s. The overall activity rate for women went up from 52 % in 1975 to 63 % in 2003, while the rate for men fell over the same period from 83 % to 75 % (diagram 1). The female and male activity rates are therefore converging, with the highest increase in the female activity rate being for the age groups in which family responsibilities are at their most onerous (25-49) (Insee, 2004). At the two extremes, there are twice as many men under 20 in work as women of the same age, whereas the increase in the activity rate for 50 year-olds is mainly among women due to the combined effects of a reduction in early retirement schemes and the fact that the baby boom generation, which has been more active than its predecessors, is now in its fifties.

This positive trend in female employment has been accompanied by other changes in the labour market which are less beneficial for women. The impact of unemployment is still unequal: the unemployment rate for women was 2% higher than for men in the 1st quarter of 2003 and, in the under 25 age group, almost one in four young women were in this situation as against only one in five young men.

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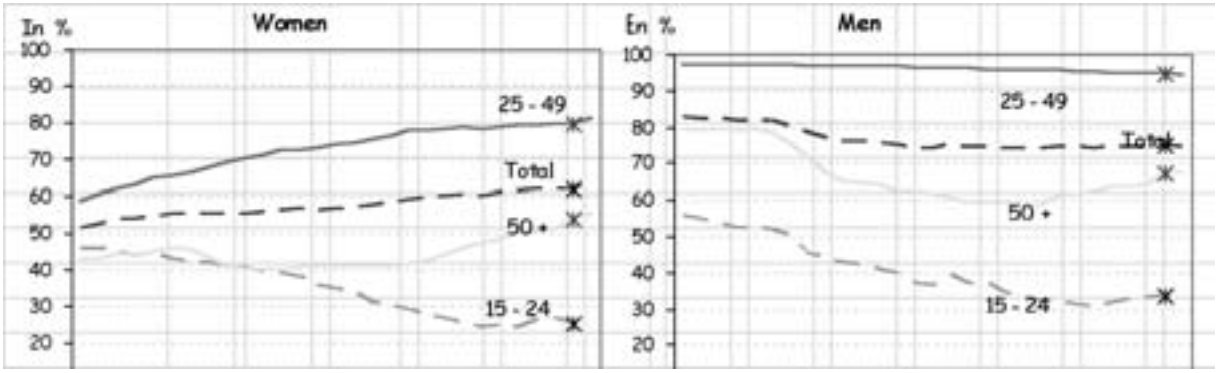
Diagram 1
Activity rate by age group from 1975 to 2003



Note: activity rate in March of each year, except for census years (January in 1990 and 1999), up to 2001, activity rate in the first quarter as of 2002; the change in series is marked by *.
Scope: persons aged 15 - 64.
Source: Insee, labour force surveys. Diagrams taken from Insee, 2004.

1. 2. Jobs remain very gender specific

There are also more women than men in temporary jobs, such as fixed-term contracts, training placements and assisted employment (11% of female employees as against 6 % of men). Although the proportion of part-time jobs has slipped back slightly in recent years, at the beginning of 2003, they still accounted for 30 % of the active female population in employment as against 5.5 % for men (Table 1). Women also outnumber men four to one when it comes to underemployment, i.e. they work part-time and want to work more.

Table 1: active population in employment by job status (in '000)

	Women		**Men**		**Total**
	Full time	Part time	Full time	Part time	
Non-salaried	**711**	**188**	**1 796**	**94**	**2 788**
Salaried	**7 032**	**3 138**	**10 785**	**644**	**21 599**
Temporary	108	29	276	16	428
Apprentices	55	24	164	27	271
Private sector:	4 620	2 215	8 340	445	15 621
Of which FTC(1)	*349*	*267*	*349*	*78*	*1 044*
Trainees and assisted contracts (2)	*82*	*81*	*90*	*39*	*292*
Public sector:	2 249	870	2 005	156	5 280
Of which FTC (1)	*194*	*147*	*125*	*47*	*513*
Trainees and assisted contracts (2)	*65*	*67*	*66*	*28*	*227*
Total	**7 744**	**3 326**	**12 581**	**738**	**24 387**

(1) excluding trainees and assisted contracts.
(2) some are fixed-term, others not.
Source: Insee, labour force survey, 1st quarter 2003. Table taken from Insee, 2004.

In France as elsewhere, jobs are still also very gender-specific. Women work more in tertiary activities (73 % of jobs in the education, health and social action sector are filled by women), whilst industry and construction remain dominated by men: under 20 % of jobs in the car industry and less than 10 % of those in the construction sector are held by women. This job specialisation in terms of sector of activity is compounded by unequal access for women and men to different professional categories (Table 2). Almost half of all women are clerical and service staff (12 % of men), whereas over one-third of all men are manual workers (10 % of women). Above all, there is nothing like parity when it comes to managerial positions and jobs with responsibility. In the private

sector, two-thirds of management jobs are filled by men, and fewer than two company managers in ten are women. Similarly, women accounted for only 30 % of business start-ups or transfers in 2002, and these were mainly in the tertiary sector (services to private individuals, commerce, health, education). State civil service jobs mirror those in the private sector in terms of their marked specialisation and the discrepancies in the hierarchical levels of men and women.

Table 2: Persons in employment by professional category

	Women (in '000)	**Men (in '000)**	**% of women**	**% of the female active population**
Farmers	245	542	31.1	2.2
Craftsmen/women	181	538	25.2	1.6
Tradesmen/women and related workers	222	369	37.6	2.0
Managers of businesses with 10 or more employees	19	109	14.9	0.2
Senior civil servants, senior managerial staff and higher intellectual professions	1 205	2 306	34.3	10.9
Middle-level professions	2 711	2 954	47.8	24.5
Clerical and service staff	5 358	1 565	77.4	48.4
Manual workers	1 102	4 912	18.3	10.0
Total (including undeclared)	**11 069**	**13 318**	**45.4**	**100.0**

Source: Insee, labour force survey, 1st quarter 2003. Table taken from Insee, 2004.

This situation has changed little over time. The proportion of women in managerial posts has risen since 1990, from a quarter to a third, but some jobs do remain very gender specific: it is still women who make up just under 90 % of those employed in direct services to private individuals, and almost 80 % of those in the middle level health and social work professions.

1. 3. Pay inequalities

The consequences of the skills gap between women's and men's jobs are well known: the average pay for women remains well below that for men. In the private sector, women working full-time earn 20% less on average than their full-time male colleagues (table 3), whilst in the State civil service women's pay in work year equivalents is 14% lower than for men (table 4). There are, however, discrepancies within professional groups, and the higher one goes up through the hierarchical structure, the wider the gaps in remuneration between men and women: in the private sector, female employees earn 8% less than men, but this difference swells to 24% among management staff. There are various possible explanations and combinations thereof: even within a given professional group, such as management staff, women may fill posts which are less well paid than the ones taken by men; the individual average pay characteristics (in terms of age, experience, training) may differ; and there may also still be differences in pay which are not explained by personal and employment characteristics.

Table 3: net annual pay by socio-professional category in the private and semi-public sector

In euros and %

	Women	Men	Ratio of women's:men's salaries
Managerial	32 930	43 140	76
Middle-level professions	19 440	22 510	86
Clerical and service	14 790	16 080	92
Manual workers	12 980	15 750	82
Overall	**18 050**	**22 490**	**80**

Scope: fill-time salaries in the private and semi-public sector
Source: Insee, Annual declarations of social data 2001. Table taken from Insee, 2004.

Table 4: net annual pay by socio-professional category in the public sector

In euros and %

	Women	Men	Ratio of women's:men's salaries
Managerial	26 562	32 552	82
Middle-level professions	19 898	21 119	94
Clerical and manual workers	16 432	18 632	88
Overall	**22 237**	**25 895**	**86**

Scope: permanent and non-permanent staff in State ministries, in mainland France.
Source: Insee, extracts of 1/12 from civil servants pay slips. Table taken from Insee, 2004.

The gap between the average pay for men and women has narrowed since the 1960s, as women have become better qualified; it stood at around 35 % in the 1960s, and was still up at 28 % in 1980 for full-time private sector employees. It has been stable since the mid-1990s.

2. Understanding the pay gaps between men and women

Various studies have tried to understand this gap between the average pay for women and men, and to separate differences which can be attributed to objective empirical factors (level of qualifications, professional experience, working hours, skill level of jobs, etc.) from those which can be attributed to hidden factors or differences in the performance of individual female and male characteristics.

2. 1. Components of the method

The standard approach now is to apply the Oaxaca wage decomposition (Oaxaca, 1973 and Oaxaca and Ransom, 1988), which, in analysing the differential between the average male salary and the average female salary, consists of separating that which can be attributed to differences in the structure of female and male employment from elements which are linked to differences in valorising individual characteristics. It corresponds to the following equation :

$\overline{W_h} - \overline{W_f} = \hat{\beta}_h(\overline{X_h} - \overline{X_f})' + \overline{X_f}'(\hat{\beta}_h - \hat{\beta}_f)$ where $\overline{W}_h$ and $\overline{W_f}$ are average male and female salaries, $\overline{X_h}$ and $\overline{X_f}$ the average individual characteristics for men and women, and $\hat{\beta}_h$ and $\hat{\beta}_f$ the estimated performance of the individual characteristics in terms of pay for men and for women.

As a method, this sort of decomposition gains in quality if sufficiently detailed data are available on the human capital of the individuals and on the characteristics of the post filled, which is not always easy. For example, information on qualifications, training or professional experience is *a priori* of high quality in surveys of households or individuals. These individuals may, however, be less precise when it comes to working hours, the sector of activity and the size of the enterprise in which they work, and even as regards their pay (with or without bonuses, gross or net, etc.). Conversely, whilst the employer has a precise knowledge of the characteristics of the job and remuneration, he/she will know considerably less about the employee's training or family situation. It is therefore relatively rare to have a good level of detail on all the different dimensions; ideally it should be possible to couple surveys of employees with surveys of employers, as was done, for example, with the 1992 survey of labour costs and the structure of earnings (Bayet, 1996).

In estimating salary equations in order to implement the Oaxaca decomposition, it is also prudent to correct any selection biases relating to the fact that the analysis only investigates the pay of the sub-sample of persons in employment. However, the selection of this sub-sample may not turn out to be random, as, certain unobserved characteristics which explain the pay may also explain whether or not the post is filled. This question of participation (or non-participation) in the labour market is particularly relevant for women. To take this factor into account, a participation equation needs to be estimated before the salary equation, and this may require explanatory variables at household level (e.g. activity of the spouse, or the number and age of children).

2. 2. Measuring professional experience

When looking at the components of human capital, measuring professional experience can be tricky. Different studies have shown that if pay is explained by potential experience, i.e. the difference between age and the age of completion of studies, the value of this professional experience is under-estimated. The danger of under-estimating the value of professional experience is higher with women, given that their actual experience is, on average, less than that of men. For example, employees aged 45 and under have an average of 14.9 years of potential experience for both men and women, but only 13.2 years of actual experience for men and 12.3 years for women (Meurs and Ponthieux, 2000). The main sources of this difference are the average 0.8 years of unemployment for women as against 0.6 years for men, and the average 1.2 years of inactivity for women as against 0.1 year for men. Thus, substituting actual experience for potential experience, its value rises from 0.9 % to 1.1 % per annum for men and from 0.5 % to 0.9 % per annum for women.

To accurately measure human capital it is therefore necessary to calculate actual experience, and to have sufficiently detailed information on individual careers, which makes it possible at least to separate periods of actual employment from periods of unemployment and inactivity.

2. 3. Recent results in French data

The most recent study of pay discrimination conducted on French data (Meurs and Ponthieux, 2000), which relates to employees aged 45 and over, showed that in 1997 the average monthly salary for men was 27 % higher than for women, all working hours combined. Almost 85 % of this difference is explained by the shorter hours worked by women and by «less favourable individual characteristics» (jobs and experience amongst others). Around 15% of this pay gap had no explanation, and was due to the better performance among men of individual characteristics in terms of pay and the poorer performance of these characteristics among women. If this analysis is, however, confined to full-time employees, the average pay gap is 11 %. Half of this figure can be explained by the different characteristics and the other half can be termed discrimination.

3. Looking at the time dimension and analysing differences in careers: what are the questions and what are the data?

3. 1. A multitude of issues

In addition to the static analysis of pay and employment gaps between men and women, an analysis of career differences is more complex, but also more interesting. There are many dimensions to the study of careers, which are centred on two main issues: career paths and salary careers. It can try and answer many questions: what differences are there in the conditions of access to the labour market for men and for women? What are the differences in the number of years worked between men and women and what are these linked to? Are women worse affected by unemployment than men, do they remain unemployed longer, and do they exit differently? Are the end-of-career and retirement conditions identical for men and for women? Likewise, in terms of salary careers, questions can be asked whether the pay gaps between men and women are there at all ages, whether they widen during their careers, and if women are promoted as regularly as men, etc.

3. 2. The need for complex data

In answering these types of questions, the main difficulty lies in the nature of the data required. In general, the data from traditional cross-sectional surveys no longer suffice. Use can therefore be made either of retrospective data from cross-sectional surveys of individuals, or of panel data from surveys or administrative sources.

Retrospective data

A number of French studies conducted by the INSEE contain retrospective data on personal careers. This is the case, for example, with the Wealth surveys (1998 and 2003), the 1997 Youth and Careers survey, or the 2003 Life History survey. Information on careers is generally collected via activity status calendars, which track the different periods of life since the completion of studies, by status. For example, the 1998 Wealth survey distinguishes the following types of status: apprentice-trainee, seeking first job, resumption of studies or training, national service, employee, unemployment (for over one year), farm holder, craftsman, trader/industrialist, liberal profession, family help, retirement-early retirement, inactive-at home (not seeking

employment). The Life History survey, which is currently being processed, takes a look at the main stages of working life since the completion of studies and their length (one year minimum), qualifying each period of work by status and profession, and each period of non-employment by the reasons for this (unemployed, schoolchild/student, conscript, retired, woman at home, other inactivity, switching between employment and inactivity over a period of several years, several professions for less than one year each time).

The main drawback with this method of collection is the «memory effect». Interviewees can forget certain (and especially short) periods, get dates wrong, etc. On the other hand, the advantage is that the information on careers is then gathered as part of a very detailed survey on the characteristics of individuals and the households to which they belong. Ideally, one should then be in the position to relate a women's career, for example, to her family situation, and with the career of her spouse, if necessary.

Panel data

Panels have a very different outlook, as they return to the same people with questions at different times. Timeline and career data are thus collected by comparing successive interviews. The disadvantage with this is that if this collection method alone is used, you need to wait 40 years before you get the first complete set of career data! In addition, long-lasting household panels run a severe risk of attrition.

With regard to household surveys, we do at present tend to have short panels covering periods of a few years. For example, one third of the sample for the French labour survey was renewed up until 2002, hence the formation of three-year panels. The European household panel has now seen eight different waves. These short panels are more useful for studying year-on-year changes between, for example, employment, unemployment and inactivity.

Panels formed from administrative sources are also used to analyse careers. In general, they cover longer periods but are fairly poor in terms of individual descriptors. In addition, the «household» approach is generally absent. In France, use is made, for example, of a panel which began in 1976 and is derived from files on employers' salary declarations. A file on the pension rights acquired by a sample number of individuals is currently being compiled at the Ministry of Social Affairs, from files on contributors to pension schemes. With the retirement pension being calculated on the basis of career components, this sort of file contains a complete description of the career, including changes in sector of activity, status, etc. (Colin, De Freitas, Michaudon, 2003).

Generally speaking, there are at least two advantages to longitudinal data: the possibility of following trends over time, particularly the gaps between men and women, by isolating age effects from generation effects and, as regards panels, the opportunity to account for hidden disparities.

4. Some results on the differences between female and male careers

Both the available panel data and the surveys containing retrospective information have already led to a number of comparative analyses of the careers of women and men in France. The next section of this text summarises some of these.

4. 1. Career paths

In terms of activity, there are still differences between women's and men's careers, even if a clear trend towards convergence can be detected. For instance, the number of years worked at a given age by women remains lower, although the gap has narrowed over the course of generations. Using retrospective information on the activity status calendars contained in the 1998 Wealth survey, it was estimated that women of the 1948-1952 generations had worked for an average of 16.6 years by the age of 40 - five years less than men of the same generations, but 1.2 years more on average than women of the 1933-1937 generations, who had worked eight years less than men of their generations (Lagarenne, Martinez, Talon, 1999). In the course of generations, the number of years worked by men has fallen, as a result of longer studies and rising unemployment, whilst it has risen for women as the increase in the female activity rate more than makes up for the longer period spent studying. In terms of exposure to unemployment, in 1998 15 % of men and 17 % of women of the 1948-1952 generations had experienced unemployment during their professional careers; these proportions rise to 22 % for men and 31 % for women for the 1963-1967 generations.

This type of data on calendars of professional activity status have also helped in simulating the age of retirement for men and women still in employment, by applying transformation rules between years worked and years counted for old-age insurance. It was thus estimated in 1998 that 85 % of men from the 1933-1937 could have counted at least 160 quarters by the age of 60, as against 43% of women, these figures changing to 62 % for

men and 68 % for women of the 1963-1967 generations (women benefiting from various provisions for looking after children which mean that years not worked count towards pensions).

The best time to observe an entire career is of course…the point at which it ends, upon retirement. Data from pension funds can, for example, be used to construct career typologies (Briard, 2003). The main disadvantage is that if one wishes to work on entire careers, only the older generations, who have cashed in their rights, can be studied.

The short-term panels from the employment survey, on the other hand, permit the year-on-year study of transitions between different types of employment status: stable employment, specific forms of employment (FTC, temporary, trainee or assisted contract), unemployment, and inactivity (Bloch, Estrade, 1998). The differences between men and women are fairly small, however, compared with those related to age. It can, however, be noted that women switch more frequently to inactivity, from stable employment and particularly from unemployment, whilst men move more often from specific forms of employment to stable employment.

4. 2. Salary careers

Studies accounting for how careers really develop are more sensitive. In France, a panel was set up at the INSEE which, for all persons born in October of an even-numbered year, gathers data on their career since 1976, taken from salary statements made by private sector employers. The data known for each year of employment in the private sector are: the profession at a fairly aggregated level, working hours distinguishing between part time and full time, the sector of activity, the size of the employment establishment, its geographical location, the length of employment, and the pay received. The value of the panel data lies for a large part in the length of time the panel covers (now 25 years) and the large number of individuals it monitors. Its main limitations lie in the absence of information on qualifications and especially the fact that it is not possible to account for periods during which individuals do not appear on salary statements (unemployment, inactivity, work in a self-employed capacity, transfer to the public sector).

A recent study came up with entirely new findings on the comparative careers of women and men (Le Minez and Roux, 2002), and on the trend in wage gaps in the course of careers. It particularly highlights the key role of part-time work in career differences.

Thus, at the start of a career, the median monthly salary for men in their first long-term job (lasting at least six months) was 16 % higher than for women amongst new employees starting in 1992. This gap was smaller for new starters in 1976, when it stood at 11 %. Women's first pay packets rose less than men's, and the widening of the gap is due to differences in the characteristics of these first jobs, in particular the fact that more of them were part-time jobs and that this was more marked for women than for men.

On the other hand, looking at the characteristics of a specific first job, «the pay gap between females and males in their first jobs has fallen» (12 % in 1976 as against 7 % in 1992).

Then, «the earnings gaps between men and women widen very quickly in the course of their careers»: setting out from the same starting situation, the monthly salary for men rises faster than for women, a trend which is more marked for recent generations than for previous generations. If one takes, for example, those starting jobs between 1976 and 1980, the pay gap between men and women who started in similar jobs is 11 % for the first job and 18 % after five years. For those who started working in 1991 or 1992, men are paid 8 % more than women in their first jobs, rising to 22 % after five years. To explain this result which may seem paradoxical within the overall context of a reduction in average hourly pay gaps, the authors suggest changes in professional circumstances: «in comparable first jobs, men have more opportunities than women to experience changes in their circumstances which eventually lead to pay increases». «The changes in professional circumstances which have the greatest effect in amplifying the monthly pay gaps between men and women are those linked to part-time work. Cross-cohort pay gaps have increased because women switch more often to part-time work and stay in it longer». In fact, if one seeks to neutralise the effect of changes in professional circumstances by taking comparable points of departure and career paths, the monthly pay gap after five years is 14 % for those who started working between 1976 and 1980 and 11 % for those who started more recently (since 1990).

Another interesting issue on the topic of salary career differences between men and women is the impact of career breaks on pay. Different studies tend to show that career breaks are more damaging for men than for women in terms of subsequent pay. D. Meurs and S. Ponthieux (2000), for example, show that periods of unemployment have a negative effect on the pay of both men and women, but the effect is more pronounced for men. The same statement can be made for periods of inactivity, as men are penalised almost three times more heavily than women. Some studies, such as Bayet (1996), even show that for female employees a career break can have a positive impact on pay (0.35 % per annum for inactivity at the start of working life to 0.7 % per annum

for inactivity in the course of working life), whereas for male workers - another category in which relatively long career breaks can be observed - the impact of career gaps is negative. It is true that career breaks are, as has been seen, of a different nature for men and women: more often unemployment for men and inactivity for women. It therefore seems that inactivity among women is perceived less negatively by employers.

5. Conclusion and outlook

Since job characteristics and female and male human capital differ from each other, in order to conduct a full analysis of pay gaps, it is necessary to separate as much as possible those elements which are caused by differences in individual and job characteristics from those which can be described as discrimination. To do so, measurement will be all the more effective if we have a good description of the different components of human capital (level of training and detailed actual professional experience) and of the jobs filled (profession, sector of activity, working hours, type of contract, size and location of the enterprise, associated pay). This sort of level of detail can be difficult to obtain, unless surveys of employees are coupled with those of employers.

Longitudinal data are needed to monitor trends in gender pay gaps over time, be these in terms of career paths or salary careers. In this respect, retrospective data such as activity status calendars in household surveys, which record and qualify the different periods of professional life, have proven to be of great interest. Annual sets of data on pay, on the other hand, are very difficult to collect from individuals themselves and, in order to track pay trajectories, the use of administrative files seems more appropriate.

The results of the studies presented here also suggest that to understand job segregation and its consequences, progress can still be made in behavioural analysis, conducted into both employees and employers. The Ministry of Labour recently conducted a survey of enterprises on managing «older workers» (2001 Employees' jobs by age survey described, for example, in Richet-Mastain, Brunet, 2002). One could by the same token look into the management of employees by sex, and the mechanisms - voluntary or otherwise – governing the differences in promotion and pay between women and men. Similarly, when it comes to individuals, comparatively little is yet known about the strategies governing their choice of activity and, especially, their choice of job. These are all avenues which remain to be explored in order to further this analysis.

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25th CEIES seminar

GENDER STATISTICS

Occupational segregation: extent, causes and consequences

Stockholm, 21 and 22 June 2004

Summary and draft recommendations

Ineke Stoop, CEIES Member

Summary

In the 19th century Gustave Flaubert wrote his dictionary of idées reçues, so-called received ideas, or rather preconceived ideas, things that everybody knows without needing empirical evidence. One of the important functions of statistics is to demythologise preconceived ideas on our society. One important function of CEIES seminar may be to demythologise preconceived ideas on statistics. For two days, 100 persons from 28 countries, among whom 28 speakers, have helped us to see through these idées reçues. I am sure that you understand that I cannot summarize everything that has been said.

Examples of preconceived ideas on society are that gender inequality is directly reflected in occupational segregation, that occupational segregation is highest in 'old-fashioned' countries without adequate care provisions, and that the gender wage gap is highest in countries with high occupational segregation. Statistical analyses presented here indicate that these preconceived ideas may not be true. Surprisingly, for instance, occupational gender segregation appears to be highest in Sweden, the country we all look up to as the forerunner of gender statistics.

One of the preconceived ideas on statistics is that the gender wage gap and occupational segregation can easily be measured by simple indicators. At the end of this seminar we know that the concept of occupational segregation is often used rather loosely, and should be defined more precisely. Overall occupational segregation should be broken up into horizontal and vertical occupational segregation. These different components are not as easy to measure as one might expect. Furthermore, contrary to expectations, occupational segregation and its components are not an adequate measure of gender inequality; especially not when comparing countries. Neither is it true that occupational segregation and its components are an adequate measure of gender inequality, nor can they be used just like that to compare countries.

Another established idea on statistics is that extensive information is available on occupational segregation and that data sources are not used sufficiently. This would be the providers' point of view, and of course holds some truth. The opposite preconceived idea is that not enough information on occupational segregation is collected or available for further research. This would be the users' point of view, and of course also is partly true. This seminar paid tribute to both points of view and has given a good overview of the information that actually is available, and of the information that could be improved or extended in the area of gender statistics.

Several participants mentioned the Beijing Platform for Action and the Community Framework Strategy on Gender Equality 2001-2005, and the dual approach towards gender mainstreaming and positive action. What are the role, the position and the aims of gender statistics in this context? Ms Hedman's contribution gives a concise answer to this question:

- All statistics should be collected by sex;
- All variables and other characteristics should be analysed and presented with sex as a primary and overall classification. This, in turn, enables all analyses and presentations to be sex specific;
- All statistics should reflect gender issues.

In official statistics on individuals, a distinction is generally made between men and women. This is important, but – as has been amply shown during the past two days – it is only one aspect of gender statistics. A further requirement is that statistical information should be relevant for both men and women. The Beijing Platform for Action emphasizes the importance of improving data collection on the full contribution of women and men to the economy, including their participation in the informal sector(s) which includes unpaid work, domestic work and care for children and other dependants. When describing and analysing contributions to the economy, one cannot ignore occupational segregation, the subject of this seminar. From the contributions, it will be clear that many participants share, acknowledge and support the goals of gender statistics, but that the informal sector, care activities and unpaid work, are not fully covered in official statistics and that lacunae and biases in the statistical information remain.

An additional action in the Beijing Platform for Action is to involve centres for women's studies and research organizations in developing and testing appropriate indicators and research methodologies to strengthen gender analysis. This seminar can be considered as a good example of this involvement, and of the usefulness of the outcomes of this involvement. Another proposed action was to appoint staff for gender statistics purposes. Work on gender statistics should permeate every relevant field rather than be a task for a special unit or a specially appointed person and this can only be done by giving gender statistics a strategic position in the statistical organizations.

From many contributions to this seminar it will be clear that official statistics in Europe can provide a wide and in-depth view of occupational gender segregation, and that an increasing number of publications on this issue are available. Existing data sources that are indispensable for producing gender statistics are:

- ECHP and its successor EU-SILC;
- Time Use Surveys and the harmonized outcomes
- Labour Force Surveys
- Structure of earnings survey

Many contributions to this seminar, based on these surveys and other data sources, have shown that gender inequality is still surprisingly large in Europe, but also that statistics often lack the appropriate amount of detail, or ignore important components of gender inequality. New initiatives can help to fill in these data gaps. Useful additions are the ad hoc modules in the Labour Force Surveys, for instance on the reconciliation between work and family life. Furthermore, the inclusion of questions on wage and earnings in the LFSs can be of great value. And finally, the definition of indicators on child care and care for other dependants and the collection of data on care use will certainly be welcomed by those who study occupational segregation. Care provisions and care use are important topics that are difficult to measure, as regulations are not comparable across EU countries.

At this seminar statistical overviews of the situation of men and women have been presented, household satellite and gender accounts, and in-depth analyses of occupational segregation, its causes and consequences. Each provides insight into gender issues in its own way. The contributions of researchers outside official statistics have show that further research on and advanced analyses of gender issues can help in understanding and explaining the differences between men and women, and is indispensable in developing and detailing policies on equality of or in the labour market. This implies that microdata, covering different aspects of individual and household situations, should be available for secondary analysis by researchers outside official statistics.

Many contributions have highlighted the importance of measuring non-economic, social or even psychological issues, such as the division of household and care tasks within the family, attitudes on child care, work and career orientations, the perceived need for care leave, life style preferences, attitudes towards gender roles, second earner identity, etc. etc. Information on these topics appears to be indispensable when trying to explain gender inequality, occupational segregation and the gender wage gap. This type of data is not available from administrations, registers and public records. It requires surveys, questionnaires that cannot be answered by proxy. One might discuss whether these topics are within the remit of official statistics. However, data on values, preferences and attitudes, preferably comparable across cultures, should be available one way or another.

Statistics on and analysis of occupational segregation require information on paid and unpaid work. Until recently unpaid work was considered to be of little social or economic value in official statistics, and persons outside the labour market were seen as inactive, despite the housework, care and informal labour they provided.

From the contributions it is clear that this has changed, and that unpaid work is increasingly being taken into account and acknowledged as an important social and economic factor. Many contributions have proved the relevance, indeed the indispensability, of the Time Use Survey in measuring unpaid work, and the importance of the regular and expanded application of time use surveys.

As mentioned earlier, papers presented at this seminar have convincingly shown that both occupational segregation and the gender wage gap are multi-faceted, complex phenomena that require stringent definitions, advanced analyses and detailed microdata. Precise and clear conceptualisation of these issues, and the harmonization of concepts is an ongoing concern of statistics. From the contributions it was also clear that Eurostat is very much involved in conceptualisation and harmonization. One interesting question that came up during a discussion was whether statistics or indicators should always be harmonized, as national situations can vastly differ. An indicator of occupational segregation, for instance, can be built on different occupational classifications per country. Another example of the importance of national differences is the definition of part time work as a non-standard job, whereas a Eurostat publication shows that in the Netherlands more than 70% of the women and more than 20% of the men work part time. Furthermore, studies of occupational segregation are hampered by a male bias, i.e. that very detailed classifications are available on typically male occupations whereas different occupations, in which women are predominant, are clustered in a single group.

An analysis of occupational segregation and the gender wage gap requires information on individual characteristics (such as age, education, experience, job career, family composition), institutional characteristics (fiscal regulations, age structure), work place characteristics (sector, working time flexibility, child care facilities, paid parental leave, social drawing rights), and job characteristics (non-standard jobs, large and small part-time jobs, temporary jobs, dynamics). This information could partly be available at an aggregated level for proper multi-level analysis, and should partly be available from integrated data sources.

Draft recommendations

In drawing recommendations from this seminar, the subcommittee on social statistics realized that this is neither the time nor the place to recommend new data collections or to propose extra work, especially as new initiatives on data collection have already been taken at Eurostat. Therefore some recommendations will follow-up on recommendations from earlier CEIES seminars.

Firstly, one of the recurrent themes of this seminar was the great demand for time use data. Time Use Surveys are an essential means for measuring informal and unpaid work, activities that should be taken into account in labour market policies and gender statistics. The use of the harmonized TUS data of Eurostat should be promoted, and the future of Time Use Surveys should be safeguarded. To make this more feasible, one of the recommendations of the 18th CEIES seminar, on "Active Ageing Statistics" held in the Hague in May 2002, should be taken up, namely to consider the possibility of a light diary version of the TUS; a 30-category version has been suggested.

Secondly, from this seminar too it is clear that statistics in general and gender statistics in particular require the input from researchers outside official statistics. The accessibility of microdata is a prerequisite for further research. The recommendations from the of the 19th CEIES seminar on "Access to Microdata for Research Purposes", held in Lisbon in September 2002, can give guidelines on how to provide access while protecting confidentiality. Further to this, the new free dissemination policy of Eurostat should be applauded. This is a very favourable development and will ensure that statistics will be put to greater, and better, use.

Another major theme from this seminar was the positioning within statistical organizations of gender statistics programmes. It was clearly felt that gender statistics issues should **not** be delegated to a department or person somewhere in the operational part of the organization; on the contrary gender mainstreaming in statistics requires that gender statistics programmes are strategically positioned.

When presenting the statistics, we recommend every statistical organization to publish user-friendly booklets such as Women & Men in Data from the Czech Statistical Office, or Women and Men in Sweden from Statistics Sweden.

For a more in-depth analysis of occupational segregation and the gender wage gap, we recommend that cross-classifications of occupation and wage according to personal and family circumstances, but also according to

the institutional context (e.g. fiscal regulations) as well as the work environment (e.g. working time flexibility, childcare facilities, etc.) are introduced.

Ad hoc modules are a valuable asset to LFSs. Inclusion of information on wages and care in LFSs are therefore strongly encouraged.

To measure occupational segregation data are required in the area of hard-core statistics. Data on subjective or hard-to-measure aspects of social life are needed too, such as the division of household and care tasks within the family, the need for childcare and parental leave and attitudes and preferences with regard to work and family life. This implies, among other things, that in this field registers will never be able to completely replace surveys. This should be taken into account when redesigning statistics.

Not as a recommendation but as a conclusion it should be added that this seminar has shown again that presentations from different areas and viewpoints, and discussions between users and producers of statistics provide a very valuable input in the constant strive for enhanced quality of official statistics and for an effective use of statistical data.

Gender statistics – 25th CEIES Seminar

Reaction from Eurostat

A. Baigorri

European Commission, Eurostat

The CEIES subcommittee on social statistics recognizes the work already done by Eurostat and the initiatives now in progress in the domain of gender statistics, particularly those related to core surveys such as the Labour Force Survey (LFS) and Statistics on Income and Living Conditions (SILC). With regard to the specific recommendations Eurostat welcomes the proposals for future work and would like to make the following remarks:

1. Promotion and future development of Time use surveys (TUS)

As requested, Eurostat is going to promote the dissemination of the existing TUS data and plans to develop a Community database of harmonized time use microdata. In 2004 work will focus on old Member States and in 2005 on new Member States and candidate countries. In line with this recommendation, a project is now being finalised on the possibilities of using time use data to support different policy areas.

For the time being the priority is now to complete the database with 21 Member States and to encourage the rest to participate in the project. New waves of harmonized TUS would be considered if there is a justified demand to undertake this project. In this case the recommendation on lighter diaries could be developed.

2. Improve the access to micro data

The need for researchers outside official statistics to access micro data for further research is recognized by Eurostat. The dissemination of anonymized micro data will be treated in the context of the new policy on free dissemination of data in Eurostat. The simplification of procedures to give access to researcher is also envisaged.

The micro data should be anonymized according to the criteria adopted in collaboration with Member States. This anonimysation, has already been agreed for the ECHP and the LFS, in line with the Commission regulation 831/2002, which regulates the dissemination of micro data.

3. Position gender statistics programs strategically within the organisation.

Eurostat welcome this recommendation that applies both to Eurostat and Member States. In Eurostat, gender statistics are organized as a separate module of the statistical program, and, although located in the Labour market unit, they aim an horizontal functioning across different statistical domains.

4. User-friendly presentation of statistics

Eurostat will continue its effort to present user-friendly books and Statistics in Focus publications, related to gender statistics. In the context of the free dissemination of data, the gender dimension should be included when data are available. The improvement of cross-classifications, relevant for gender analysis will be done, mainly by the introduction of new variables in the LFS and by the implementation of the integrated system of earnings and labour cost statistics.

5. Encourage the implementation of ad-hoc modules and the collection of information on wages and care in the LFS

LFS modules complement the core LFS to satisfy new policy demands. The program for 2004-2006 covers: "Work organisation and working time arrangements (2004)", "Reconciliation of work and family life (2005)" and "Transitions from work to retirement (2006)". A new program 2007-2009 is now under development. Annual ad-hoc modules are also planned in SILC.

The introduction of a variable on earnings in the LFS is a long standing demand from the Commission. Although the LFS is not considered to be the best source of wage statistics, one strength of the LFS is the possibility to link information at micro level with other socio-economic variables. At present Member States are conducting feasibility studies to evaluate how a variable on earnings might be incorporated into the survey. If the results are positive a new Council/EP regulation, would need to be adopted, prior to the implementation.

The Structure of Earnings Survey (SES) is a better source for wage statistics and the data collected from the 2002 wave are due at the end of June 2004. It includes micro data on wage components, but the coverage of the 2002 survey is limited to enterprises in certain NACE and size classes.

In relation to care statistics, several projects will be implemented in the coming years. A new variable will be introduced into the LFS, likely in 2005, to allow the calculation of new indicators for Guideline 6 of the 2003 Employment guidelines. The LFS 2005 module will investigate some aspects of care, both for children and other dependents and parental leave. Finally, variables on the care of children will be included in SILC to measure the number of hours of child care for each child and type of care, with first results to be available in 2007.

6. Need for information on subjective or hard-to-measure gender issues

Eurostat agrees with the statement mentioned in the recommendations that registers never will be able to completely replace surveys. However, subjective information should be strictly limited in the main surveys. It could be considered when developing specific modules of the LFS and SILC, although pure opinion/subjective surveys are on the borderline of the activities of the National Statistical Institutes. Some NSIs do not treat these surveys as a core activity; for this reason, Eurostat has not been active in this domain.

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