

*Measuring Labour Force Participation
of Women in Denmark*

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1. Introduction

From earlier censuses and surveys we know that women's participation in the labour market in Denmark has increased rapidly since the 1960's. Women's employment rate of 74 is one of the highest compared to other countries and today the gap between women and men's labour market participation is the lowest ever.

2. Methods

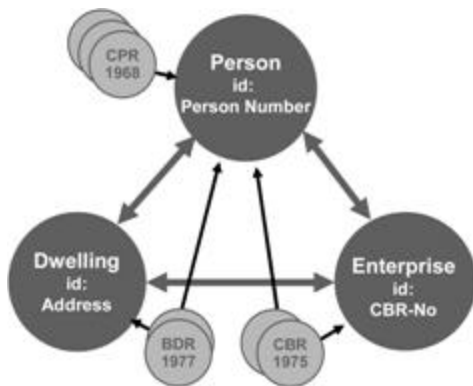
Most of the official statistics on labour market participation today is based on the Register-based Labour Force Statistics and the Labour Force Survey. The statistics on labour market conditions is a comprehensive system of registers and surveys in Statistics Denmark and it gives access to analyses on many different aspects of women's participation in the work force.

The register-based statistical system in Denmark

The Register-based Labour Force Statistics is part of the Danish statistical information system which covers the whole population of residents in Denmark.

Denmark introduced the Personal Identification Number (PIN) in 1968 and it was used in a census for the first time at the Population and Housing Census in 1970. Accordingly, this became the first Danish register using the Person Number as an identification key. During the 1970s, the first attempts were made to base the production of statistics on registers. In 1976 a register-based population census was conducted as a pilot project, but the registers were not sufficiently comprehensive and well-established until 1981, when a proper register-based population census was conducted containing most of the conventional population and housing census information. In Denmark, like in the other Nordic countries, registers based on administrative data cover a very substantial part of the production of statistics. The content of the registers cover many fields of social statistics such as population, education, labour market, income and welfare. The strength of the system is that the identification keys (person number, address, central business register number and property title number) make it possible to link data on individual level, both within a specific year and longitudinally across several years.

Figure 1. The basic registers in the Danish statistical information system

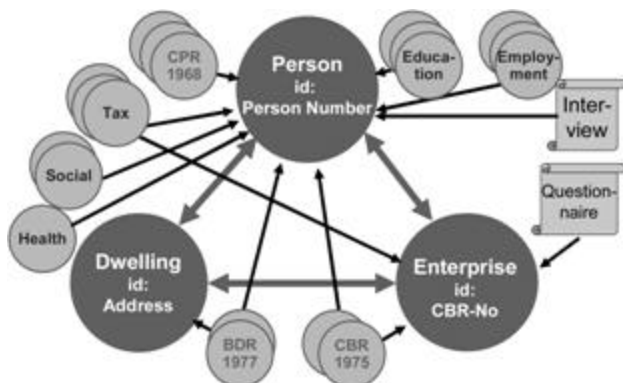


The most important sources for the statistical system are three administrative registers: The Central Population Register (CPR), The Central Business Register (CBR) and the Dwelling Register (BDR). These administrative registers contain the total population of people, businesses and dwellings, and are updated on a daily basis. Statistics Denmark receives copies of these registers and the quality of these registers is crucial for the quality of the statistics produced since these registers define the total population.

As shown in figure 2, Statistics Denmark uses a range of different registers to produce statistics, and interviews and questionnaires are also used where register information is not available. The

registers are linked by various keys for individuals, families, dwellings, workplaces and enterprises.

Figure 2. The statistical information system



The statistical registers, which are based on administrative registers, have the following characteristics:

- they contain high-quality data used in the administration
- they often comprise the entire population
- they cover several years
- they can be linked through a set of keys
- they are updated regularly, most often yearly

The Register-based Labour Force Statistics

The Register-based Labour Force Statistics (RAS) is a product of several of these administrative registers, among others the Central Customs and Tax Administration, the Salary Information Register (COR), Central Pension Register (CPS), the Population Statistics Register (PSD), the statistics on labour market policy measures and the Central Business Register.

The purpose of the RAS statistics is to provide a description of the Danish population's attachment to the labour market at a given moment in time – at the end of November each year. RAS statistics follow the international guidelines set by the International Labour Organisation (ILO). However it is worth noting that the guidelines from ILO are directed at surveys (Labour Force Survey) where information about attachment to the labour market is given by respondents. In RAS the guidelines from ILO have been adjusted to fit the possibilities available when using material based on registers.

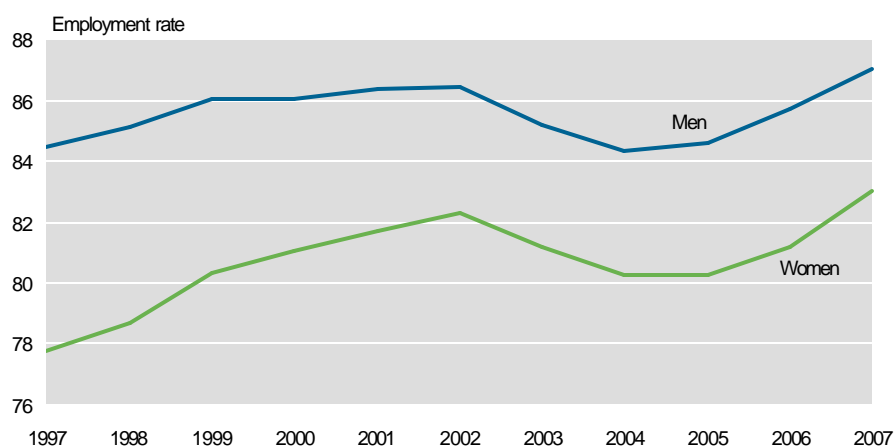
The first version of the RAS statistics includes the population resident in Denmark as of the 1 January 1981 and its attachment to the labour market at the end of November 1980 and the statistics have been compiled every year over the period 1981 to 2007 with a minor data break in 2003.

The RAS statistics divide the population in three main groups: persons in employment, unemployed and persons outside the labour force. Employed persons are either employees, self-employed or assisting spouses. Persons outside the labour force are divided into four groups. Persons temporarily outside the labour force, retired from the labour force, Pensioners and others outside the labour force. In some cases a person can be part of several different groups at the time of reference. To determine the most important attachment to the labour market an order of priority is used. The order of priority is based on the principles for the population's attachment to the labour market as given from ILO, the quality of the sources and the extent of the person's participation in the different activities. The register contains information on the employment conditions on a very detailed level for both employed, unemployed and other persons outside of

the work force. For employed the information are among other branch of industry, level of qualifications (ISCO), sector of the workplace. Information on extent of working time is not yet very useful but this is one of the sources which will be improved in the future.

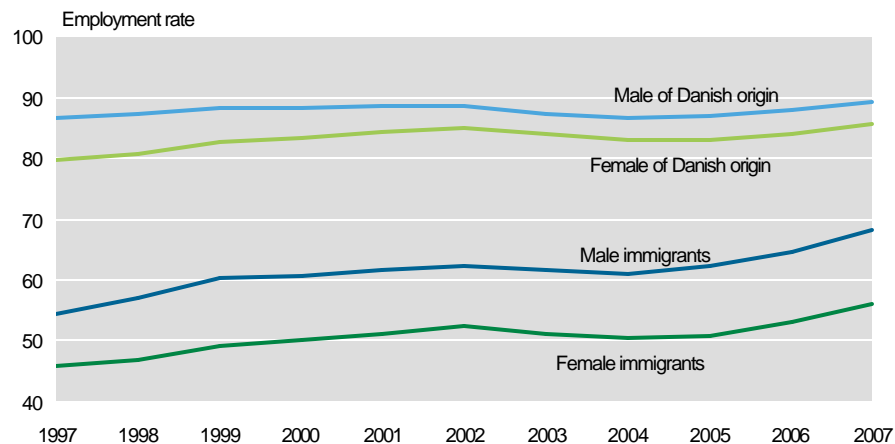
The register based labour force statistics is an excellent method for measuring and monitoring the attachment to the formal labour market. For the population in general the yearly statistics show that there are quite high employment rates for both men and women, and that the gap between men and women's employment is decreasing. In 2007 there was a 6 percentage point gap between men's employment rate at 80 and women's at 74 when looking at the age group 16-64. In the following analyses we have focused on the age group 30-54 to avoid the group of students and early retirements. For this age group the gender gap has been reduced from 7 to 4 percentage points over a period of ten years. Today 89 percent of men age 30-54 are employed compared to 86 percent of women.

Figure 3. Employment rate aged 30-54. 1997-2007



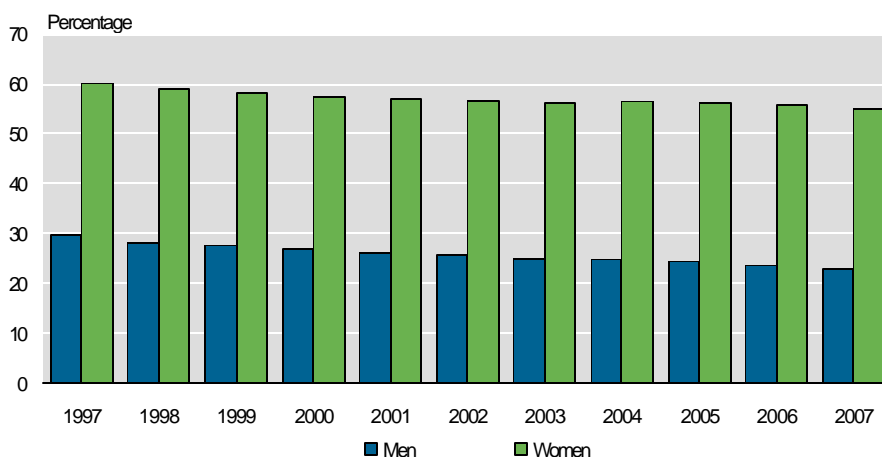
When analysing women's labour market participation in Denmark it is often necessary also to consider ancestry as a factor since immigrants in Denmark and especially immigrant women have a comparatively low employment rate. If we look separately at the immigrants there has been an increase in the gender gap from 9 percentage points in 1997 to 12 in 2007 and the immigrant women's employment rates were as low as 56 in 1997. In 2007 the employment rates for men and women of Danish origin were 89 and 86 respectively.

Figure 4. Employment rate 30-54 years by ancestry and gender. 1997-2007



The Danish labour market is generally characterised as quite gender-segregated. Only 15 percent of all employed are at a workplace where the share of men and women is fifty-fifty. Figure 5 shows that more than half of the employed women work in the public sector. This only applies to one out of four employed men. This reflects that it is almost only women who work with nursing of children, elderly and sick people which is mainly connected to the public sector and that almost only men work in the private sector construction industry.

Figure 5. Share of employees in the public sector. 1997-2007



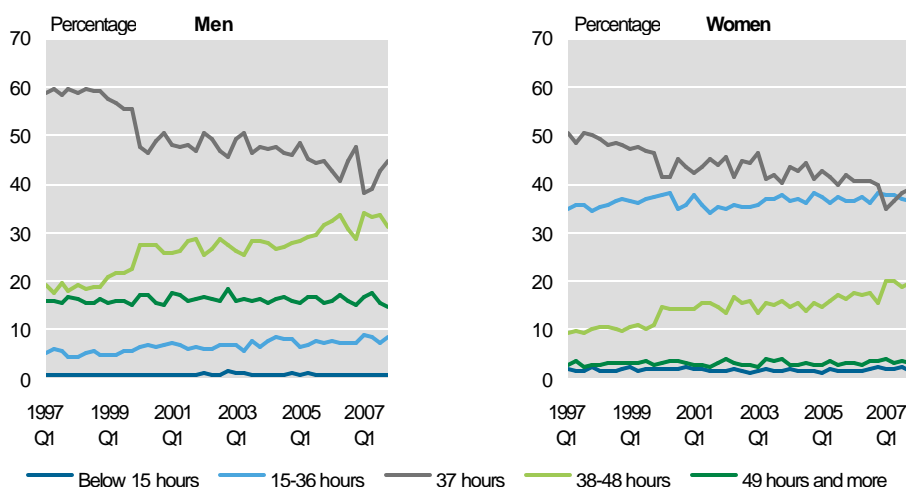
The register-based labour market statistics is as mentioned a reliable and stable method for measuring the resident population's attachment to the labour market on a yearly basis. It is not yet useful for analysing the amount of working hours and naturally it is not capable of doing any analysis on the informal sector.

Labour Force Survey

The other main source for measuring men and women's labour market participation in Denmark is the interview-based Labour Force Survey (LFS) – a survey which is conducted quarterly in all the EU countries. Concerning the employed the LFS provide detailed data on e.g. hours worked, conditions of employment, job search and participation in courses and other education, e.g. in-service training or school courses. Consequently, the survey can, among other things, estimate the number of employed people who work at home regularly, hours worked, how many self-employed people who work during weekends or the length of unemployment between jobs. The LFS is a sample survey and hence subject to sampling errors. Quarterly results of less than 8000 persons make it difficult to use for small population groups. The survey is therefore not suitable for analysis on immigrants' labour force conditions.

The analysis from the register-based labour force statistics has shown that the employment rate for both men and women have been increasing during the last decade even with the cyclical decrease in the middle of the period. Along with the results of the LFS we can get a much clearer picture of the employment conditions during the last decade. For not only has the employment rate increased but also the amount of hours worked has increased, see figure 5. For both men and women there has been a decrease in the percentage of employed working the normal working hours in Denmark of 37 hours a week. This decrease corresponds the rise in employed working 38-48 hours a week. It also shows that where 14-18 percent of the employed men work 49 hours or more a week this only applies for 3-4 percent of the employed women. Almost six out of ten employed women work less than 37 hours. This applies to less than one out of ten employed men.

Figure 6. Employed people aged 30-54 years. 1997-2007



3. Dissemination

Statistics Denmark disseminates statistics via several media. One of the main dissemination sources is the StatBank (www.statbank.dk) where most of the social statistical data is published as aggregated tables with core variables gender and age. Data can be selected with great detail depending on the character of the data and the number of variables in the table. The figures on employment rates and amount of hours worked presented above are all produced on the basis of aggregated tables in the StatBank.

The Ministry of Gender Equality and Statistics Denmark have created a database which contains gender-segregated statistics on everything from demographic data, the labour market and education to politics and management. The database is available from both the ministry's and Statistics Denmark's homepages. It is updated when the relevant yearly registers are ready for publication.

Publications with specific focuses are another part of Statistics Denmark's dissemination strategy. Gender is usually not the main focus of these focused publications. But as gender is a core variable by default when producing social statistics there is a lot of published statistical material to be found on the discrepancies between men and women's employment, educational choices and attainments, wages, branches of industry etc.

Researchers in Denmark are frequent users of the statistical registers in Statistics Denmark. To facilitate register-based research Statistics Denmark has given access to de-identified micro data from the statistical registers to researchers situated in Denmark. One of the latest gender-related register-based research is a substantial report on the gender pay-gap 1997-2006 from the Danish National Centre for Social Research, 2008. The main conclusions show that the gross pay-gap has stagnated around 17-19 percent. In spite of the fact, that women have overtaken the men on length of education and almost have caught up with the length of working experience. The gender-segregated labour market is one of the main contributors to the continued gender pay-gap in Denmark in the research period. The level of educational attainment has very little influence.

Ministries, labour market organisations and other interested parties can also purchase specially designed reports on gender and labour market statistics. This service is widely used.

One of the latest dissemination methods is an application which allows companies to withdraw a gender-segregated earnings statistics concerning their own company. This dissemination method was invented to facilitate the monitoring of a new law on statistics on equal pay which was put in force by 2007. The law implies that all companies with at least 35 employees have to prepare a

yearly gender-segregated report to Statistics Denmark on the earnings of their employees if there are at least ten persons of each sex employed. The employees are to be categorised by the 6-digit DISCO-code (Danish version of International Standard Classification of Occupations) which makes it possible to compare persons who in practice are performing the same tasks even though their educational or professional fields are not comparable. The purpose of the law is to raise awareness on equal pay and to intensify the process of reducing the gender pay gap. Companies who report the gender-segregated statistics on earnings can withdraw a gender-segregated earnings statistics for their own company. According to the law these reports should be treated in the company's works council.

4. Plans for the future

A unique new source of administrative data is in the make. A new law on E-Income which applies from 1 January 2008 will strongly improve the quality and the contents of employment data. The law deals with the establishment of a joint public register on income administered by the Danish taxation authorities. The law implies that public and private employers and income payers have to report all kinds of income like salary, pension and welfare benefits at least once a month for every single recipient. The monthly updating of all occurrences of employment will provide better and quicker data on wage periods, number of jobs, amount of working hours and place of work. The data will among other provide better opportunities for analysing the structure of the women's labour market attachment and the gender pay-gap.