Hans Hansen

Elements of Social Security

A comparison covering:
Denmark
Sweden
Finland
Austria
Germany
The Netherlands
Great Britain
Canada

The Danish National Institute of Social Research 02:5

Elements of Social Security

Research Director: Niels Ploug
Lotte Rener has prepared the manuscript.

Contact group:
Lars Erik Lindholm, Swedish Ministry of Finance; Heikki Viitamäki, Vatt, Finland; Ursula Obermayr and Hans Stefanits, Austrian Ministry of Social Security and Generations; Ulrich van Essen, German Ministry of Finance; Hans Metz, Dutch Ministry of Social Affairs and Employment; John Ball and David Haigh, Department of Work and Pensions, UK; Edwin Ko, Inland Revenue, UK; Gary Bagley, Human Resources Development, Canada.

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For further information, please contact:
The Danish National Institute of Social Research
Herluf Trolles Gade 11
DK-1052 Copenhagen K
Denmark
Phone: +45 33 48 08 00
Fax: +45 33 48 08 33
E-mail: hah@sfi.dk
www.sfi.dk, where this publication is available

PREFACE

Elements of Social Security is a comparative study of important elements of the social security systems in Denmark (DK), Sweden (S), Finland (FIN), Austria (A), Germany (D), the Netherlands (NL), Great Britain (GB) and Canada (CAN). It should be emphasized that Germany is the former West Germany (Alte Länder).

This is the 9th and last edition of the publication, covering income levels and rules for social security and personal taxation for 1999. Basis for the projections to 1999 income levels is the 1998 data (in some cases 1999 data) for OECD's Taxing Wages as reported by national experts. Editions 1-4 of Elements of Social Security were published as working papers from the Danish Ministry of Economic Affairs, edition 5 as publication no. 97:8, edition 6 as publication no. 98:4, edition 7 as publication no. 99:14, and edition 8 as publication no. 00:7, from the Danish National Institute of Social Research.

The calculations have always been based on projected data, which in case of inaccurate projections may lead to incorrect results. In this edition calculations based upon 'correct' historical data, i.e. data published in The Tax/Benefit Position of Production Workers, The Tax/Benefit Position of Employees or Taxing Wages from the OECD or official national data, are included for Sweden covering the period 1991-1998. The differences between calculations based upon 'projected' and 'correct' data are relatively small, cf. chapter 3, section 3.1. The series of calculations for Sweden also contain the impact of the considerable changes in the Swedish tax/benefit system in that period, cf. chapter 3, section 3.2. A similar study for Finland is contained in chapter 4, for Canada in chapter 5, and for Denmark i chapter 6.

The sequence of the countries in the tables is DK, S, FIN, A, D, NL, GB and CAN. The Nordic countries are together, the new entrants to EU: FIN, S and A are together, the central European countries A, D and NL are together and GB is together with the European countries and Canada. The country 'blocks' also follow the broad categories in the welfare state theory, the Nordic model, the continental European model and the Anglo Saxon model.

Errors for Finland were found in the previous editions. Thy have been corrected in chapter 4. The cap for maximum U.B. in Austria was too high in table 2.4.A in no. 00:7 as were estimated net replacement rates for Austria in table 2.4.B at the two highest income levels. Old-age pensions were taxed too hard for the Netherlands.

Copenhagen, February 2002
Hans Hansen

CONTENTS

Page

CHAPTER 2, including Italy

INTRODUCTION

The August 1992 study

The 1st edition of this publication was an English version of a study published in August 1992 from the Danish Ministry of Finance, Overførselsindkomster i internationalt perspektiv (Income Transfers in an International Perspective).

In the August 1992 study the public social security systems of 6 countries. i.e. Denmark, Sweden, Germany, Great Britain, France and the Netherlands were studied and compared, based upon rules for 1991.

The social security systems in the 6 countries were categorized according to their characteristics with respect to general conditions for access to schemes, benefit formulas and methods of financing and subsequently compared.

The second part of the study was a comparison of the most important elements of the social security systems across the 6 countries. This comparison was made according to a common set of criteria for each element.

Finally a set of 'standard' income events (caused by e.g. illness or unemployment) were selected, and their effect on disposable income studied. The framework for this part of the study was the 'Average Production Worker' (APW) derived from OECD's 'The Tax/ Benefit Position of Production Workers'. The APW-calculations were performed for only 5 of the countries, Denmark, Sweden, Germany, Great Britain and the Netherlands.

In connection with the study a series of 'rules descriptions' were established, containing a rather comprehensive description of the social security rules for each country in the study.

English version and subsequent editions

As mentioned, the English version (1st edition) was based on the 'August 1992' study, but the scope was narrower. Only the 5 countries, for which the APW-calculations had been performed, were included, and only the social security elements corresponding to the selected 'standard' income events were studied and compared. This was also the case in the 2nd edition of the 'English version', which primarily was an update to 1992 income levels and rules for personal taxation and social security.

In the 3rd edition the number of cases was enhanced, and there was an update to 1993 income levels and rules. In the 4th edition of the study, the number of cases or 'standard' income events was the same as in the 3rd edition, the income levels and rules were for 1994, and Finland was included among the countries studied. The 5th edition was just an update to 1995 income levels and rules. The 6th edition had 1996 income levels and rules, the number of cases was the same as in the 5th edition, and Canada was included in the study. The 'special studies' chapters including time series of APW-calculations started with chapters for Sweden and Finland. The 7th edition was based on 1997 income levels and rules, the cases were enhanced to include disability pension and Austria was included among the countries studied. The 8th edition was a straight forward update to 1998 income levels and rules. A 'special studies' chapter for Canada was included. This 9th edition is an update to 1999 levels and rules and also includes time series of APW-calculations for Denmark together with updated series for Sweden, Finland and Canada. Documentation for the calculations included in the 'special studies' chapters is contained in appendix 2, 3, 4, and 5.

The income events applied in the study are:

- **Illness** (one week for a single APW)
- **Unemployment** (25 per cent and 100 per cent of the time for an insured and a non-insured single APW. 100 per cent of the time for the insured partner, usually working part time, in the APW-couple)
- **Injuries from work** (33.3 per cent and 100 per cent loss of working capability for a single APW)
- **Disability pension** (after former working period for a single APW, without former working period in relation to a single APW, the part time working partner in the APW-couple becomes a disability pensioner)
- **Retirement** (after former working period for a single APW and the APW couple, without former working period in relation to a single APW)
- **Having children** (1, 2 and 3 for the APW-couple)
- **Maternity leave** (max. period in each country and common period for all countries)

It is evident that these elements are not constituting the complete social security systems, e.g. education grants and a systematic coverage of social assistance are missing. On the other hand the selected 'standard' events are important components of social security expenditures in the countries studied.

The APW-calculations are useful but by concept somewhat simplified, therefore the results should be interpreted with care. More comprehensive comments on the APW-calculations will be made as the results are presented in connection with the study of the separate elements of the social security systems in the 8 countries.

1

MAIN CHARACTERISTICS OF THE SOCIAL SECURITY SYSTEMS OF THE 8 COUNTRIES

Three aspects of the institutional framework for the social security systems of the 8 countries are focused upon in this chapter:

1. General conditions for access to schemes
2. Benefit formulas (flat rate payments or benefits related to previous income)
3. Methods of financing social security
   (general taxes, social security contributions or otherwise)

The characterization of the three aspects of the institutional framework will be rather crude, and not without problems. Take for instance unemployment insurance. This scheme is voluntary in Denmark, Sweden and Finland (the 'earnings related' component in both S and FIN) but mandatory in the other countries. On the other hand in Denmark, Sweden and Finland self-employed people can join the insurance system, which was not possible (in 1999) in the other countries. This is the reason for 'unemployment insurance' being characterized as 'open with access for all relevant groups' in Denmark, Sweden and Finland, cf. the following.

1.1. General conditions for access

Table 1.1 shows the general character of conditions for access to social security in the 8 countries.

It is evident from table 1.1 that the Austrian, German and Canadian social security systems are characterized by schemes primarily for people working, with no or only relatively limited general access, while the Danish, Swedish and Finnish systems are characterized as being 'open' and with a relatively high degree of general access for all relevant groups, a main characteristic for the Nordic model. The British and Dutch systems are 'in between'.

Table 1.1. Access to social security, 1999

Elements	DK	S	FIN	A	D	NL	GB	CAN
Illness, benefits, insurance	□ [1]	□ [1]	□ [1]	■	■	■	□ / ■	■
Unemployment, insurance	□ [1]	□ [1]	□ [1]	■	■	■	■	■
Injured from work, insurance	□ / ■	□ / ■	□ / ■	□ / ■	■		□	■
Disability pensions	□	□ / ■	□ / ■	■	■	■	□ / ■	■
Retirement	□ / ■	□ / ■	□ / ■	□ / ■ [3]	■	□	■	□ / ■
Family allowance	□	□	□	□	□	□	□	□ [2]
Maternity leave, benefits	□	□	□	■	■	■	□ / ■	■

□ The access is in principle for all relevant groups.
■ The access is for people working, primarily employees.
1) Compensation is also for self-employed, therefore the character □ was used.
2) Means test to zero for relatively high income earners.
3) The minimum pension in Austria has the same characteristics as social assistance.
This is not, or only to a minor extent, the case in the other countries having a minimum pension (□).

What is the more specific content of this characterization?

In Germany there are, generally speaking, separate systems for different working groups in the population. The main groups in this connection are employees in the private sector, employees in the public sector and self-employed people.

The employees in the private sector have their own schemes for compensation in case of illness, unemployment, maternity leave, injuries from work, invalidity and retirement. Within the private sector there are separate systems for groups with particular professions, i.e. within agriculture and mining. The separate systems for the professions just mentioned are not considered here.

For employees in the public sector social security is included in the employment conditions. Self-employed people may join social security schemes of their own. Neither are considered here.

Another reason for the characterization of Germany is the connection between the contributions paid to the specific schemes and the right to receive benefits. Generally speaking, without former contributions there is no right to receive benefits. A minimum pension will, however, be part of a new German pension scheme from 2002.

Austria has a system similar in structure to that of Germany and which is also insurance based in the sense that access depends upon former contributions.

In Denmark the social security system is characterized as being relatively open with general access for all relevant groups. Membership of the voluntary unemployment insurance scheme is required in order to receive unemployment benefits, but also self-employed people can join the insurance scheme. The basic public pension system is open for all, only requiring a certain age and a certain length of the stay in the country. The additional public pension scheme requires a former working period and contributions paid to make the person entitled to benefits, it is a kind of defined contribution plan. Only employees can receive benefits from the additional public pension scheme. A new additional pension scheme was introduced on a permanent basis from 1999, where self-employed also have access. The original additional scheme is continued.

The Swedish system has the same characteristics as the Danish one. There is, however, a difference of degree, because the Swedish additional public pension scheme, which basically is a defined benefit plan, is much more important from the point of view of the recipient. The Swedish additional pension scheme is also open for self-employed people. A new Swedish pension scheme will gradually be introduced from 2003. It is contribution dependent, but not a defined contribution plan.

The general characteristics of the Finnish system follow the lines of the Danish and Swedish ones, it has the same degree of 'openness' as in the other two Nordic countries.

In Great Britain there are two separate components of the social security system, one for people with an appropriate contribution record primarily from working, the other non-contributory comprising income-related and non-income-related benefits, cf. section 1.2.

In the Netherlands there is a general social security system for all and, on top of that, a separate one for employees. This construction is connected to the method of financing, cf. section 1.3. There is no specific insurance for being injured from work. People being injured from work are eligible for compensation for illness and, if the loss of working capability is permanent, for invalidity pension according to the public scheme.

The Canadian system is close to the Austrian and German systems as far as access is concerned, it is primarily for people working, but the Canadian pension scheme also contains a residence based basic pension independent of former work history, just as in the Nordic countries and the Netherlands.

It can be debated whether family allowances belong to social security or not. They basically have the same character in all the countries with respect to the 3 aspects discussed in this chapter.

1.2. Benefit formulas

There are three basic 'benefit formulas' used in the social security systems studied here. One formula is the fixed amount, disregarding former income, it is the true 'flat rate' benefit. Another formula for the benefit is a certain percentage of the former income. This benefit formula usually has a maximum which can be reached at a lower or higher income. If the maximum is reached at a relatively low income the benefit will have a 'flat rate' character for many recipients. Finally the benefit may follow several steps, where the percentage may vary with the level of the former income, typically a decreasing percentage with an increasing income. This 'step formula' may have a maximum, but that is not always the case, e.g. the Finnish system has several examples of benefits following the 'step formula' without a maximum, there is no cap.

A few examples from the unemployment insurance schemes can illustrate the differences. Both the Danish and Swedish (the 'earnings related' component) unemployment benefits are a constant percentage of the gross wage, but the benefit reaches a maximum rather early in the income interval in the Danish case (a little below 2/3 of the APW income in 1999). In the Swedish case the maximum is reached below, but relatively close to the income level of the APW in 1999, while in 1994 it was just above the APW income level. In Germany, the maximum is reached at a much higher income level (approx. at 1.7 APW income). Several of the schemes also have minimum benefits, e.g. in Denmark, Sweden and Finland. In other countries, e.g. Germany and the Netherlands low unemployment benefits can be 'topped-up' by social assistance.

The APW income is used as a threshold for the characterization of the 'income-related' benefit formula. If the compensation has reached its maximum at the gross wage level of the APW (or just above), it is characterized as 'income-related, with a low cap', the cap being the income where the max. benefit is reached. If the cap is above (and more than just above) the APW income or if there is no cap (no maximum benefit) the benefit formula is characterized as 'income-related'. Based upon this criterion, the compensation for unemployment is classified as 'income-related, low cap' in Denmark and as 'income-related' in Germany. For Sweden the cap related to unemployment benefits was below the APW income in 1991, 1992 and the first half of 1993. In the second half of 1993 and in 1994 it was above the APW income and in 1995, 1996, 1997, 1998 and 1999 again below. In Finland the benefits from the voluntary unemployment insurance scheme follow the 'step formula' and there is no maximum. The scheme is characterized as 'income-related'.

The elements of the social security systems are characterized according to this interpretation of the terms 'flat rate' and 'income-related' in table 1.2.

Table 1.2. Benefits: 'flat rate' or 'income-related', 1999

Elements	DK	S	FIN	A	D	NL	GB	CAN
Illness, benefits, insurance	○	■	■	■	■	■	□	■
Unemployment, insurance	○	○	■	■	■	■ [1]	□	■
Injured from work, insurance	■	■	■	■	■		□	■
Disability pension	□	□ / ■	□ / ■	□ / ■ [3]	■	■	□	□ / ○ [2]
Retirement	□	□ / ■	□ / ■	□ / ■ [3]	■	□	□ / ■	□ / ○ [2]
Family allowance	□	□	□	□	□	□	□	□
Maternity leave, benefits	○	■	■	■	■	■	□ / ■	■

□ The benefit is 'flat rate'.
○ The benefit is 'income-related, low cap'.
■ The benefit is 'income-related'.
1) From March 1995 the 'entrance' conditions have been tightened considerably. Many newly unemployed will therefore receive a 'flat rate' benefit.
2) The disability pension in Canada is from the supplementary pension scheme alone, it consists of a flat rate component and a share of the earnings related retirement pension. The retirement pension consists of flat rate basic pensions and an earnings related supplementary pension. The max. retirement pension in the Canadian supplementary pension scheme is reached very close to the APW income level.
3) There is a minimum Austrian pension, which has the character of social assistance.

For Denmark nearly all the elements are characterized as 'income-related, low cap' or as 'flat rate'. The additional pension scheme for employees, cf. section 1.1, is dependent on former contributions. These contributions were basically related to the working period (hours per week, and years of occupation) not to income, but from 1998 the contributions also depend on income (1 per cent of the base for the general social contribution is also paid as a supplementary pension contribution) both for the temporary scheme in 1998 and the permanent scheme from 1999. The pensions from the supplementary schemes are not related to income, except for the contribution from the year 1998, which will be paid out as a lump sum when retirement age is reached. The pensions from the permanent schemes are 'equalized' as the rules are now. They will probably be changed from 2002. The only Danish 'income-related' element in 1998 is compensation for injuries from work, which in most of the countries has the same character.

Sweden and Denmark are often believed to have the same welfare state type of social security systems. According to the aspect in focus here, it is evident that the Swedish system is considerably more income-related than the Danish one. In the Swedish unemployment insurance scheme the position of the cap in relation to APW income has, as already mentioned, changed several times since the early 1990's. This is a result of the changes in the percentage of compensation (from 90 per cent to 80 per cent in mid 1993 and to 75 per cent from 1996 and back to 80 per cent from the last quarter of 1997) and the max. benefit, which had been on the 1992 level since mid 1993. It was first increased in 1998. In 1998 the cap was approx. 87 per cent of the APW income level, in 1997 it was 93 per cent. The cap was nominally higher in 1997 than in 1998, the increase in max. benefit in 1998 was not large enough to outweigh the effect from the increase in the compensation percentage. In 1999 the cap was 85 per cent of the APW income level.

In this broad classification the Finnish system has almost the same characteristics as the Swedish one, but often uses a 'step formula' without a maximum (e.g. illness, unemployment and maternity leave benefits).

The German system is, except for the family allowance (and social assistance, not systematically covered here), 'related to income'. Even the family allowance is in some cases 'related to income', because in Germany families with children either receive a refundable tax credit or a tax reduction based upon allowances (one per child) deductible in taxable income, whatever is most advantageous. The deduction in taxable income has the largest value for high income families, because of the progression in the German taxation scheme, so child benefits as allowances deductible in taxable income will typically be for high income families.

Austria has the same type of 'income-related' system as Germany. The Austrian family allowance scheme has a cash benefit component and a refundable tax credit component. In Austria there is no deduction in taxable income for children.

The British system is primarily 'flat rate' in the true sense of the word, but also has a few 'income-related' components.

The Dutch system is 'flat rate' for the general part of the system, while it is basically 'income-related' for the part concerning employees.

The Canadians primarily apply 'income-related' schemes where the cap usually is somewhat (approx. 10 per cent) above the APW income level, except in the supplementary pension scheme, where the cap is closer to the APW income level, and in the 'Workmen's Compensation' (injuries from work) where the cap (in Ontario) is almost 70 per cent above the APW income level.

One consequence of a 'flat rate' or an 'income-related, low cap' scheme is that the effective compensation percentage will decrease rapidly with increasing income, while in an 'income-related' scheme it will usually be almost constant over a much wider range of income. The 'step formula' will have a decreasing compensation profile but not as steeply decreasing as the 'flat rate formula'.

1.3. Methods of financing social security

There is some variation between the countries as far as methods of financing social security are concerned, but all 8 countries are using a mix of social contributions and general taxes.

In Sweden the major part of social security is financed by contributions paid by the employer, but a gradual change is taking place, where contributions from the employees are increased and those paid by employers decreased. In Germany social security is also mainly financed by contributions, equally shared by employers and employees. By far the major part of the Austrian benefit schemes is financed by contributions, but the minimum pensions are financed from general taxation. Minimum pensions, however, only constitute a minor share of the total expenditures for pensions in Austria. In the Netherlands the general system is financed by taxes (social contributions are incorporated in the first two tax brackets), the separate one for employees is financed by contributions paid by employers and employees. A reform in 1990 in the Netherlands partly shifted the payment of contributions for general social security from the employer to the employees. In recent years Dutch employers have taken over the sickness benefit scheme and are now sole contributors to the disability pensions schemes. In Great Britain the component of the system for people working is financed by contributions paid by the employer and the employees, while the component for other groups in the population is financed by taxes. Finland also has a mixed system for financing the social security system. Several of the Finnish schemes, e.g. unemployment insurance and retirement insurance are financed by a mix of social contributions paid by the employer and/or the employee and general taxes. In Denmark the general method of financing has mainly been by taxes. From 1994 a social contribution paid by the employees has been introduced as part of a new taxation scheme, in 1999 the contribution was 8 per cent of earned income (not including transfers) and there is no ceiling. The new social contribution is financing unemployment benefits, the early retirement scheme, illness benefits and labour market activities. The Danish change may be more formal than real. In Canada three of the schemes, illness, unemployment and maternity leave benefits belong to the Employment Insurance scheme, which is financed by contributions just as the supplementary pension scheme. Basic pensions and family allowances are tax financed. Compensation for injuries from work are financed by contributions from employers.

Again, the categorization according to methods of finance is crude.

Table 1.3 shows the variation between the 8 countries.

As can be seen from the table, the characterization is not clear-cut, very often the financing is a mix of general taxes (or budget deficit) and social security contributions. The 'ratio' between the two methods depends on the business cycle. In a recession a larger part is financed by taxes or budget deficits, e.g. the unemployment insurance in Sweden and Germany has been supplemented by 'deficit' financing in recent years.

Table 1.3. Methods of financing social security, 1999

Elements	DK	S	FIN	A	D	NL	GB	CAN
Illness, benefits, insurance	■	■	■	■	■	■ 3)	■	■
Unemployment, insurance	■	■ 1)	■	■	■	■	■	■
Injured from work, insurance	■	■	■	■	■		□	■
Disability pension	□	■	■	■	■	■	■	■
Retirement	□	■	■	■	■	□ 2)	■	□ / ■
Family allowance	□	□	□	□	□	□	□	□
Maternity leave, benefits	■	■	■	■	■	■ 3)	■	■

□ Primarily financed by general taxes.
■ Primarily financed by contributions from employer and/or employee.
1) In recent years a substantial part of the expenditures has been financed by loans for the funds in charge of the system.
2) In the Netherlands, itemized parts of the first tax bracket finance the public old age pension system.
3) The employers are entirely in charge of these schemes from 1996.

The proportion of social contributions paid by the employer and the employees may change over time. In e.g. Sweden the social security contributions paid by the employer have, as already mentioned, been lowered in recent years, in order to reduce the labour costs. There has been a parallel increase in the employee paid contributions in Sweden since their introduction in 1993, a tendency which seems to have stopped now, and recent (from 2000) Swedish tax changes will ensure a gradual 'pay back' of social contributions to employees. Denmark has very small employer paid contributions.

According to economic theory, there is hardly any difference, at least not in the long run, between financing through taxation and contributions, the employees will pay for social security anyhow. Financing by contributions may, however, imply a higher degree of transparency, if the contributions reflect the costs of the scheme.

The schemes characterized by contributions paid by the employers and/or the employees and with benefits related to income, are often regarded as more 'insurance like' than other schemes. However, almost all elements of the public social security systems are 'pay as you go' schemes, and there is no actuarial connection between the contributions paid and the benefits received. The Danish supplementary pension scheme (ATP) is probably closest to being an 'insurance' system. It is a kind of defined contribution plan with an actuarial link between the contributions and the benefits. There is also a minor 'insurance' element in the new Swedish pension scheme, cf. chapter 2.

In systems based upon contributions, access to benefits is often conditional on having paid contributions, but not always. In Sweden e.g. there is a general access to the basic old-age pension also for people who have never been employed or self-employed. Denmark represents the 'opposite' case. As already mentioned, unemployment insurance is (from January 1994) basically financed by contributions paid by the employee and self-employed, but in order to be eligible for the benefit the employee and self-employed also has to be a member of the insurance system (and pay a special fee for the membership).

1.4. Conclusion

A general conclusion could be that, according to the first two of the three institutional aspects used for the comparison, the Danish system is opposite to the Austrian and German systems with the other countries in between. The principles used to finance the schemes are rather similar in the 8 countries, with Denmark having the lowest employer paid social contributions. The similarity between the Danish and the Swedish systems is not so strong as is often anticipated, they are quite different, which will become even clearer after the more detailed comparisons in the next chapter.

2

COMPARISON OF THE SEPARATE ELEMENTS OF SOCIAL SECURITY IN THE 8 COUNTRIES

This chapter will focus on the characteristics of each of the selected elements of the social security systems in the 8 countries. As already mentioned these elements are:

- Illness
- Unemployment
- Injuries from work
- Disability/invalidity
- Retirement
- Having children
- Maternity leave

As a supplement, a set of calculations of the combined effect of taxation and social security has been performed for each social security element and compared with disposable income when fully employed. As mentioned in the introduction, the framework for these calculations is the 'Average Production Worker' or 'Average Employee' derived from 'The Tax/Benefit Position of Employees', since the 1999 edition called 'Taxing Wages', an annual publication from the OECD.

The calculations are documented in appendix 1, and the following is a short note on the interpretation of the calculations.

2.1. Interpretation of the 'APW-calculations'

The calculations have the form of 'gross compensation percentages' (in some cases net compensation percentages, if that is the relevant concept) and 'change in disposable income'. The disposable income concept is somewhat crude, cf. appendix 1, and does not fully reflect the considerable variation in income conditions for production workers in the 8 countries. Day care for children and housing are disregarded, and only standard deductions in taxable income, standard social security contributions and public social security benefits are included.

The strength of the 'APW-calculation' of disposable income is that it is consistent across the 8 countries.

The 'APW' is a production worker, i.e. an employee in the private sector. The effect of income events could be different for other population groups, e.g. self-employed persons or public sector employees. The results are only valid for private sector employees.

The calculations are valid at two points in the income distribution, i.e. the single APW and the APW couple. These points are not the same in all 8 countries, cf. appendix 1 [1]. More important is the fact that 'single-point calculations' do not reflect the effects of varying income. This is important because 'flat rate systems' and 'income-related systems' have different characteristics, when the income varies. The problem could be solved by performing calculations at different income levels, and that has also been done in the case of unemployment benefits and old-age pensions, where impact calculations at varying income levels have been included, cf. the sections on unemployment and old-age pensions. The results from the other schemes are only valid for the 'APW-points' in the income distribution. Based upon supplementary information on the 'benefit formula' ('flat rate', 'income-related, low cap' or 'income-related') it is, however, possible to make some conclusions about the profile of net replacement rates (100 plus the percentage change in disposable income), often used in international comparisons.

The 'standard' income events have a defined length of time (one week, 3 months, etc.), other durations of the events could change the results. The 'seriousness' of the event could also influence the results, e.g. loss of working capability in connection with injuries from work. This problem could also be 'solved' by performing more calculations, and this has been done in a few cases. The results are only valid for the specific duration of the events assumed in the calculations.

Sometimes vacation pay and pay for overtime are not included in the basis for calculation of benefits. In this study all wage income is included in the basis for benefits (where that is relevant) and there are 260 wage days, 312 week days and 364 calendar days in the year, except where rules say otherwise. Most calculations are based upon current income, another simplification compared to the real world, where benefit calculations to a varying degree are based upon former income.

1) Cf. also the November 1994 edition of The Tax/Benefit Position of Production Workers, p. 259.

In several countries, it is possible to receive more than one kind of benefit (e.g. unemployment compensation and social assistance) at the same time. In the APW-calculations only one kind at a time is considered. Furthermore, it is the isolated effect of the event, which is calculated. Many of the 'events' lead to a decrease in disposable income and, therefore, other means-tested benefits (e.g. relating to day care for children or housing), could 'respond'. This combined effect is not included in the calculations. The calculations presented here are basically focusing on separate schemes, not so much on the 'standard of living' for the ill, unemployed etc., where all relevant schemes are involved, and where a 'stacking' analysis is more relevant.

The APW-calculations therefore have a very narrow interpretation, but they do provide a framework for illustration of the functioning of the tax/benefit rules and thereby hopefully contribute to an insight into the structural differences between the social security (and taxation) systems of the countries included in this study.

2.2. The social security elements

Illness

The effects on disposable income from short spells of illness vary to some degree among the 8 countries. This is mainly because in some countries the employer has a legal obligation to pay the usual or close to the usual wages during relatively short spells of illness whereas this is not the case in other countries. The existence of a waiting period in some of the countries is also of importance. Labour market agreements to supplement the public benefits are, however, implemented in most countries with low benefits and/or relatively long waiting periods.

Even in countries where the employer has an obligation to pay wages during short spells of illness (partly or in full), there will be groups who are not eligible for this, and for those the social security benefits for illness are relevant. The APW-calculations therefore cover two situations, one where the ill person is eligible only for public social security, and the other where the ill person receives the usual wage or a usual supplement to the public social security benefits.

The social security system is important for almost all groups when longer spells of illness are considered [2].

In 6 of the countries (Finland and Canada are the exceptions) the employer administers the public insurance scheme, at least for shorter spells of illness. Compensation for illness schemes are characterized on the basis of these criteria:

- Is it usual for the employer to pay wages (partly or in full) for a period?
- Is there a waiting period?
- For how long can the ill person receive the compensation?
- Is the system for all population groups?
- Is the benefit 'flat rate' or is it 'income-related'?

The result is contained in table 2.1.

2) In the Netherlands the compensation scheme was privatized in 1996.

Table 2.1. Characteristics of compensation for illness in 8 countries, 1999.

	DK	S	FIN	A	D	NL	GB	CAN
Is it usual for the employer to supplement the public benefit?	Yes [1]	Yes [2]	Yes [3]	No [4]	Yes [5]	Yes [6]	Yes	No [7]
Waiting period	No, for employees	Yes [2], 1 day for employees	Yes, 9 week-days	No	No	Yes 2 days	Yes 3 days	Yes 2 weeks
Maximum benefit period	54 weeks (2+52) [8]	No limit	300 week-days for same illness	64 weeks (12+52)	78 weeks for same illness	52 weeks	28 weeks	15 weeks
Eligible groups	Employees, Self-employed	Employees, Self-employed	Employees, Self-employed	Employees	Employees	Employees	Employees, Self-employed [9]	Employees
Benefit	Income-related, low cap	Income-related	Income-related	Income-related	Income-related	Income-related	Flat rate	Income-related
Special rules	Whitecollar workers receive wages			Longer period with wages for whitecollar workers	High income earners may leave the ystem			

1) From 1994 almost all blue-collar workers receive full wages in the first 2 weeks.
2) From 1992 the employers are obliged to pay benefits (80 per cent of wages for 2 weeks in 1999), and they can supplement the benefits from the insurance from day 15, cf. the comments on the table. From April 1993 there is a one-day waiting period.
3) There are labour market agreements in the private sector covering the income lost during short spells of illness, cf. also the documentation.
4) Usual wages are paid for some time, varying according to former work period and position as blue-collar (4-10 weeks) or white-collar (6-12 weeks) employee.
5) In Germany, the employer has a legal obligation to pay 80 per cent of wages for the first 6 weeks (1999), but most labour contracts still contain full wages for the first 6 weeks.
6) According to collective labour market agreements in the Netherlands, most employees receive full wages when they are ill, also in the waiting period.
7) There are supplementary benefits from some large corporations.
8) The 52 weeks are after the first 2 weeks where the employer pays wages or insurance benefits (the employer period). For newcomers, insurance benefits from the municipality may be received for the first 2 weeks.
9) Self-employed in GB receive from the Incapacity Benefit scheme.

Comments on table 2.1

In Germany, the employer's obligation to pay wages for the first 6 weeks of illness in Germany was reduced from 100 per cent to 80 per cent of the former wage in 1997, but most labour contracts still (1999) stipulate payment of usual wages for that period. This obligation depends on for how long the employee has worked for the employer. The insurance compensation was lowered from 80 per cent to 70 per cent of the gross wage.

In Austria, there is also a minimum work period before the employer is obliged to pay wages. For a blue-collar worker, the maximum duration of this obligation is 10 weeks (12 weeks for a white-collar worker). After that period he will receive 50-60 per cent of his former income for up to 1 year, first 50 per cent then increasing to 60 per cent.

In Great Britain, payment of Statutory Sick Pay is dependent on whether the employee has worked for the employer for a minimum length of time and has an income above the Lower Earnings Limit. If that condition is not met, the payment is made according to a lower rate (short-term Incapacity Benefit, lower rate) if the contribution record for that scheme is met. Many British workers receive supplementary benefits from the OSP (Occupational Sick Pay) scheme when they are ill. The OSP is a labour market agreement.

In Canada, a work requirement (700 hours in the last 52 weeks, 600 hours from 2000) has to be met before benefits can be received. There are supplementary benefits during illness for employees in some large corporations.

Sweden has changed its legislation concerning compensation for illness several times in recent years [3]. In 1993, a one-day waiting period was introduced. Sweden, Finland, Great Britain, the Netherlands, and Canada all have a waiting period, shortest in Sweden (1 day), longest in Canada (2 weeks).

3) Before March 1st, 1991, the compensation from the insurance was 90 per cent, and it was usual for the employer to pay 10 per cent of the former wage, the total compensation then usually being 100 per cent (up to an upper limit of 7.5 times 'basbeloppet', the 'basic rate' in the Swedish social security system). From March 1st, 1991, the benefit from the insurance was changed to 65 per cent of the wage for the first 3 days of illness and 80 per cent for the remaining days in the first two-week period. Again it was usual that the employer paid 10 per cent of the wage. The total compensation was then 75 per cent (first 3 days) and 90 per cent (for the remaining days of the first two-week period). From the third week the total compensation was 90 per cent (80 per cent from the insurance and 10 per cent from the employer until day 90, thereafter 90 per cent from the insurance). From the beginning of 1992 the employer is obliged to pay 75 per cent of the wages for the first 3 days and 90 per cent for the remaining days in the first two-week period. The insurance takes over from the third week, and the compensation is 90 per cent, and there is no supplement from the employer. The increased burden for the employer was compensated by a decrease in the social security contribution paid by the Swedish employers. In 1993 the system was changed again. This time a waiting period was introduced (1 day) and the compensation lowered for longer spells of illness. This again opens for supplements from the employer. In 1994 these were, however, restricted to the period from the start of the 3rd week to the 90th day of illness. From 1996 the gross compensation percentage was lowered to 75 in the entire scheme. This may be supplemented with 10 per cent from day 15 to day 90. In 1997 the employer paid benefits were for the first 4 weeks of illness (and the supplement was paid from the 29th to the 90th day), but that was changed back again to 2 weeks in 1998, when the compensation percent-age also was increased to 80. The supplement is paid from the 15th day and is still 10 per cent.

The maximum duration of the compensation in Denmark is 52 weeks within 1 1/2 years whereas it is 78 weeks in Germany within 3 years and 300 days within 2 years in Finland. The German and Finnish time limitations are only for the same illness, the Danish is general. Germany, Finland and Denmark are the only countries where the maximum benefit period is within a broader time limit.

In Germany, there is a maximum level of income to which the contribution percentage is applied. Employees with income above that level may leave the system for public insurance against illness.

The criterion for characterizing the benefit as 'flat rate', 'income-related, low cap' or 'income-related' is the same as was used in chapter 1. Finland has a 'step formula' without maximum, characterized as 'income-related'.

The level of compensation

The effect on disposable income of the 'standard' event 'being ill for one week' is illustrated by APW-calculations, in this case for the single APW.

Table 2.2. Effects on disposable income of being ill for 1 week in 8 countries, 1999

	DK	S	FIN	A	D	NL	GB	CAN
				Social security alone				
Compensation percentage	52	64	0	50	70 [1]	42	7	0
Change in disposable income, %	-0.7	-0.7	-1.5	-0.8	0.0	-0.9	-1.6	-1.5
	'Usual' situation (combined with social security)							
Compensation percentage	100	64	100	100	100	100 [2]	80 [3,4]	0
Change in disposable income, %	0	-0.7	0	0	0	0	-0.4	-1.5

1) The compensation percentage is before taxation, but with a maximum of 90 per cent of the former net income (applied here).
2) In the usual situation the waiting period of 2 days is also compensated.
3) The compensation percentage is after taxation (net income).
4) The range of variation is considerable for this compensation percentage.

For all countries, two calculations have been made, one covering the social security system alone, the other covering the 'usual' situation where the employer may pay wages (partly or in full) or may supplement the benefit from the social security system. The percentage change in disposable income is based upon the change in the annual disposable income of the APW caused by being ill for one week.

For shorter spells of illness the best compensation is received in Germany. The unchanged disposable income in the insurance case is a result of lower taxation of the remaining wage income, even after including the 'progressions vorbehalt'. Usually, Austria also has full compensation for shorter spells, but in the insurance case it is considerably lower. In Sweden there will always be a reduction of disposable income. The effect of the waiting day introduced in 1993 is significant, especially for short spells of illness. The relatively substantial reductions in disposable income in the insurance cases for Finland, Great Britain, Canada, and the Netherlands are primarily caused by the waiting period. For Austria and Denmark they are due to a relatively low compensation. In the 'usual' situation all these countries, except Canada, have a high degree of compensation.

For longer spells of illness the 'social security system' plays the dominant role for most groups. Waiting periods (Sweden, Finland, Great Britain, the Netherlands, and Canada) will be of less importance for longer spells of illness than for shorter spells. This will 'improve' the position of Sweden, Finland, Great Britain, the Netherlands and Canada compared to Germany, Austria and Denmark. After Germany, Sweden and Finland have the highest compensation in the 'social security alone' case for longer spells of illness in 1999.

Unemployment

In the case of unemployment insurance, the variation of the effect on disposable income is considerable among the 8 countries studied. This variation depends on both the principles of unemployment insurance and the level of benefits.

The criteria, according to which this important element of the social security system is characterized, are:

- Is insurance mandatory or voluntary?
- Is there a waiting period?
- Is the period during which benefits can be received dependent on the duration of former occupation?
- Is there a mechanism by which to renew the right to benefits?
- Is the benefit 'flat rate' or 'income-related'?
- For how long can the unemployed receive benefits?
- Is there an 'additional' system?

The characterization of the unemployment benefit (U.B.) schemes is contained in table 2.3.

Table 2.3. Characteristics of unemployment insurance in 8 countries, 1999

	DK	S	FIN	A
		Basic System		
Type of insurance	Voluntary	Voluntary [1]	Voluntary [1]	Mandatory
Eligible groups	Employees, Self-employed	Employees, Self-employed	Employees, Self-employed	Employees
Waiting period	No [2]	Yes [3], 5 days	Yes, 7 days	No
Duration of former period of work required for employees	52 weeks of work within 3 years	6 months of work within 1 year	43 weeks of work within 2 years	Minimum 52 weeks of work within 2 years
Renewal of rights	26 weeks of work within 3 years	As above, job offer	As above	As above
Benefit formula	Income-related, low cap	Income-related, low cap	Income-related	Income-related
Maximum benefit period	4 years, longer if person is 55-60 years, shorter if over 60	14-21 months dependent on age renewal: repeated, based on job offer [5]	100 weeks within 4 consecutive years. Longer when 57 years	20-52 weeks dependent on age and former work history
		Additional System		
Existence	None	None	Yes	Yes
Eligible groups			'Newcomers' and out-insured	Unemployed not eligible for insurance
Maximum benefit period			No limit	No limit
Benefit formula			Flat rate, means-test	Income-related [8]

Table 2.3. Continued

	D	NL	GB	CAN
		Basic System		
Type of insurance	Mandatory	Mandatory	Mandatory	Mandatory
Eligible groups	Employees	Employees	Employees	Employees
Waiting period	No	No	Yes, 3 days	Yes, 2 weeks
Duration of former period of work required for employees	Minimum 12 months of work within 3 years	26 weeks of work within 39 weeks and work in 4 out of 5 years	In 1 of 2 years 25 min.contr.paid and in each of 2 years a number of min.contr.credited [4]	420-700 hours in preceding year
Renewal of rights	As above,	As above,	13 weeks of work in the last 26 weeks	20 weeks in preceding year
Benefit formula	Income-related	Income-related	Flat rate	Income-related
Maximum benefit period	$^1/_2$ to 2 $^2/_3$ years dependent on age and former work history	Step 1: $^1/_2$ year	$^1/_2$ year in JSA (C) (182 days)	Up to 45 weeks dependent on work record and regional unemployment
		Additional System		
Existence	Yes	Yes	Yes	None
Eligible groups	Unemployed not eligible for insurance [6]	Unemployed not eligible for insurance from step 1	Unemployed not eligible for insurance. JSA (ib)	
Maximum benefit period	No limit	Step 2: [7] $^1/_4$ to 4 $^1/_2$ years Step 3: 2 years, longer when 57 years	No limit	
Benefit formula	Income-related	Income-related [7]	Flat rate, means-test	

1) Both Sweden and Finland have a general basic scheme for all meeting the eligibility criteria and on top of that a voluntary income-related insurance scheme.
2) In Denmark, the employer pays compensation for the first 2 days.
3) From July 1993 Sweden has 5 waiting days.
4) There are two initial qualifying conditions:
   a. During one of the two complete tax years prior to the calendar year in which the claim for unemployment benefits is made, earnings-related contributions must have been made for earnings equal to at least twenty five times the lower earnings limit (measured in GBP/week).
   b. In each of the complete tax years prior to the calendar year in which the claim is made, the claimant must have paid or been credited with contributions which total to those from income equal to at least fifty times the lower earnings limit. Concerning renewal, the claimant must have worked for at least 16 hours in each of at least 13 weeks in the 26 weeks before the benefit is reclaimed.
5) From July 1994 the rules were changed in order to stop the repeated renewals without time limitations. From 1995 the renewal mechanism was basically as before July 1994, i.e. without time limitation through job offers, limitations are being considered by the Swedish Government.
6) From 2000 the additional scheme is exclusively a 'follow-on' scheme to the insurance scheme.
7) The work condition for step 2 is 4 years out of 5. In step 3 of the system the benefit is 'flat rate'.
8) With a short work record there might be a flat rate ceiling.

Comments on table 2.3

Unemployment insurance is mandatory except in the 3 Nordic countries. The Danish insurance scheme is 'completely' voluntary. Both Finland and Sweden have a basic scheme providing a minimum benefit which can be received when the work conditions are met, it is not necessary to be a member of any insurance scheme. These are general schemes for all meeting the eligibility criteria. On top of that both Sweden and Finland have a voluntary earnings-related scheme. In both Denmark, Sweden and Finland a minimum length of membership is required (for employees it is 1 year in Denmark and Sweden, $^5/_6$ year in Finland in 1999) before the employee or the self-employed person is eligible for the insurance benefit from the voluntary schemes.

Four countries (Great Britain, Sweden, Finland, and Canada) have a waiting period varying in length from $^1/_2$ week in Great Britain, 1 week in Sweden, $1^2/_5$ week in Finland to 2 weeks in Canada. In Canada, it is possible to receive social assistance in the waiting period, but it will be reclaimed when the U.B. is received.

A work condition has to be met in all the countries before the unemployed can receive benefits from the insurance schemes. The Netherlands has a double condition relating both to the short-term (26 weeks of work within 39 weeks before unemployment) and the long-term (work, but not all the time, for 4 years out of the 5 preceding calendar years) for entitlement to income-related benefits. If only the first condition is met, the benefit will be flat rate in the basic system (70 per cent of the minimum wage). In three of the countries (Sweden, Great Britain[4)] and Canada), the requirement for former work must have been met within 1 year prior to unemployment. In Finland and Austria, it is within 2 years prior to unemployment, and in Germany and Denmark it is within 3 years. The requirement in both Germany and Denmark[5)] is work for 1 year.

In Sweden[6)], the right to receive insurance benefits can be renewed (when the initial period has expired) by a 'job offer' (which can be claimed by the unemployed). This has also been the case in Denmark, but from January 1994 the benefit period was changed to 7 years (9 years if paid leave was included), from 1996 it was further reduced to 5 years, including periods with education and/or job training and from 1999 it has been 4 years. Renewal of the benefit period in Denmark requires a new working period as it does in the other countries. Only in Sweden repeated 'job-offers' can continue to renew the benefit period, which in practice is without time limitations. Some kind of limitation is, however, under consideration and has been for some time. Repeated use of the U.B. in Canada (e.g. by seasonal work) results in a decreasing compensation percentage down to a floor.

According to the definitions used here, cf. chapter 1, section 1.2, the benefit formula is 'flat rate' in Great Britain, 'income-related, low cap' in Denmark and Sweden and 'income-related' in Finland, Austria, Germany, the Netherlands[7)], and Canada. In Sweden, the cap, as earlier mentioned, has changed position several times in relation to the APW income. In 1999 it was below the APW income.

In the 'flat rate' and 'income-related, low cap' countries there is a decreasing compensation percentage (here assumed to be after tax, but that is not important) for income higher than that of the APW (and an increasing compensation percentage for lower income down to the cap). This is also the case in the Finnish 'income-related' scheme using a 'step formula' (no cap), but the decrease is more gradual than for the 'flat rate' and 'income-related, low cap' schemes. In Sweden the compensation percentage is decreasing for income above the APW level, and after an initial increase down to the cap close to being constant for income below that level. The Danish profile is similar to the Swedish one, but with a lower cap. The constant compensation percentage is reached at approx. 63 per cent of the APW income in the Danish scheme, whereas it is reached at approx. 85 per cent of the APW income in Sweden (moving from higher to lower income). The compensation percentage is almost constant in Germany and the Netherlands, at least to an upper income limit, which for Germany is approx. 1.7 APW level, for the Netherlands approx. 1.4 APW level.

4) For Great Britain it is a little more complicated, cf. table 2.3.
5) Changes were implemented in Denmark from 1997, before then it was 1/2 year of work.
6) The rights for renewal were changed in Sweden from July 1994. From January 1995 the rules were changed back again, but new changes are under consideration.
7) On the assumption that the 'double' work condition is met.

Austria also has a relatively high upper limit. The maximum insurable income in Canada is approx. 1.1 APW level. Above these limits, the compensation percentage will also decrease in these four countries. Table 2.4.B contains net replacement rates for all 8 countries in case of unemployment at varying former income.

Usually, the 'income-related' schemes also have a minimum, which, however, is reached at low income levels. Denmark probably has the most narrow gap between the maximum benefit reached at approx. 0.63 APW income level and the minimum benefit reached at approx. 0.52 APW income level. This implies that the income range with a constant compensation percentage is quite small in Denmark. Table 2.4.A includes information on the income levels (in per cent of that of the APW) at which minimum and maximum benefits are reached.

Only one country (Canada) has a 'claw-back' clause, i.e. a claim for paying back benefits (either wholly or partly), if the earned income, when employment is obtained again, is above a certain, relatively high, threshold, the already mentioned maximum insurable income.

There is substantial variation among the countries, with regard to the maximum period for which the benefit can be received. Austria has a relatively short benefit period varying from 20 to 52 weeks, depending on work record and age. The maximum period requires work for 9 years within the last 15 years and an age of over 50. The minimum period requires work for 1 year within the last 2 years, cf. table 2.3. In Germany, the length of the benefit period varies from $^1/_2$ year to 2 $^2/_3$ years dependent on work history and age. The maximum length requires an age of over 54 and a little more than 5 years of work within the last 7 years. For the minimum period, the requirement is, cf. table 2.3, 1 year of work within the last 3 years. If step 1 (basic system) and step 2 (additional system) in the Dutch system are taken together the maximum length of the benefit period is 5 years with income-related benefits. The maximum length again requires a relatively high age and a long working history. In Sweden, the formal benefit period is 1$^1/_6$ years, longer if the unemployed has reached the age of 57, in fact there are no time limitations. Finland has a benefit period of 100 weeks, longer when the unemployed reaches the age of 57. Denmark and Great Britain have 'uniform' benefit periods, longest in Denmark (4 years), shortest in Great Britain ($^1/_2$ year under the JSA (C) scheme from October 1996), also with a prolonged period in Denmark for the elderly in the 55 to 60 age group (but shorter for unemployed between the age of 60 and 67). The length of the benefit period in Canada depends on the former working record (preceding year) and the unemployment rate in the province (high rate implies longer benefit period).

For three of the countries with relatively short periods in the basic system (Austria, Germany, and the Netherlands) there is an 'additional system' primarily for unemployed whose rights in the basic system have expired. The 'split' between the basic system and step 2 of the additional system in the Netherlands, cf. table 2.3, is rather formal. These two parts constitute the earnings-related scheme and are quite coherent. In Great Britain, the unemployment benefit scheme JSA (C) is 'replaced' with JSA (IB) after $^1/_2$ year (from October 1996), often with little economic consequences for the recipient (the only difference for a single is that the benefit now is means tested against other income). In Sweden, there is also a scheme alongside the insurance system, but that is an alternative system for people who are not insured. That scheme became part of the mandatory insurance system from July 1994. From January 1995 the alternative system regained its orginal role as a short-term scheme (short benefit period) which may be supplemented and finally 'replaced' by social assistance. From 1998 this scheme was replaced by the basic general component of the Swedish unemployment benefit scheme. It has the same benefit period as the voluntary earnings-related component. Finland has both an additional and an alternative scheme. The alternative scheme in Finland is primarily for people, who are not eligible for the insurance scheme (not insured), whereas the additional scheme is a parallel scheme to social assistance. It is primarily for unemployed 'newcomers' or 'out-insured' from the voluntary insurance scheme or the alternative scheme, which has the same duration and work conditions as the insurance scheme.

The additional schemes in Finland, Great Britain, Austria, Germany, and the Netherlands are quite different. In Finland, it is a parallel scheme to social assistance with no time limitations. This is also the case for the British JSA (IB) scheme, which is a parallel to Income Support. In Austria and Germany, it is a continuation of the insurance scheme but with a lower benefit level, it is means-tested and with no time limitations (it has some of the characteristics of the social assistance scheme). In the Netherlands, it is a time limited continuation of the insurance scheme with the same benefit level (except in the last step where the benefit is 'flat rate' and usually lower). Except for the last step, it has none of the characteristics of the social assistance scheme.

The level of compensation

In this case the 'standard' events are unemployment for 3 months and for the whole year. The calculations have been made for two situations, one where the unemployed single APW is eligible for insurance benefits and one where he or she is not. The results of the calculations for the two situations are summarized in table 2.4 and 2.5 respectively. The effect on disposable income is calculated in relation to the annual disposable income of the APW. Only Canada and Great Britain have a maximum benefit period shorter than a year in 1999. Social assistance benefits (JSA (IB) in Great Britain) have been applied for the rest of the year in these cases.

Table 2.4. Effects on disposable income of being unemployed for 3 months and the whole year in 8 countries, 1999.

	DK	S	FIN	A	D	NL	GB	CAN
Eligible for insurance, 3 months of unemployment								
Compensation percentage	52	63	46	56 [1]	60 [1]	70	14.5	46.5
Change in disposable income, %	-9.6	-8.8	-9.7	-7.7	-6.6	-6.6	-19.1	-9.9
Eligible for insurance, 12 months of unemployment								
Compensation percentage	52	67	50	56 [1]	60 [1]	70	15	48
Change in disposable income, %	-38.6	-30.5	-41.4	-44.0	-41.8	-27.9	-80.3	-44.1

1) The compensation per cent is after tax.

The decrease in disposable income is smallest in the Netherlands and Germany followed by Austria when the APW is unemployed for 3 months and eligible for insurance benefits. The decrease is somewhat larger in Sweden, Denmark, Finland and Canada, smallest in Sweden, largest in Canada. Great Britain has the largest decrease of the 8 countries. The picture is somewhat different for the APW who is unemployed for the whole year, and the 'ranking' of the countries has changed. The Netherlands is still the country with the smallest change, but the German change is now larger than the Dutch, the Swedish, the Danish and the Finnish ones, but still smaller than the Austrian and Canadian ones. It is especially the variation in the progression of tax schemes and the German and Austrian benefits being on a net (after tax and social contribution) basis, which causes the changed picture from 25 per cent to full unemployment. In Great Britain, which still has the largest change, it is possible to supplement the insurance benefit with other benefits, especially for housing [8], an aspect not included in the calculation.

The results in table 2.4 refer to the income level of the APW. In the section 'Comments on table 2.3' it was, however, mentioned that profiles for the schemes would differ considerably with varying income. Net replacement rates in case of unemployment, when benefits from the insurance scheme are received and the former income varies, are contained in table 2.4.B. The variation spans the interval 0.75 to 2 times the APW income level.

Table 2.4.A contains the income levels expressed as percentages of the APW income, where the minimum and maximum level of unemployment benefits are reached for a single. This is not relevant for all countries.

Table 2.4.A. Percentage of gross APW income where minimum and maximum U.B. is reached in 8 countries, 1999.

	DK	S	FIN	A	D	NL	GB	CAN
Minimum U.B.	52	35	22	- [1]	- [1]	53 [2]	- [3]	- [1]
Maximum U.B.	63	85	-	150	168	141	- [3]	109

Note: Irrelevant is indicated by -.
1) There is no minimum benefit as such in Austria, Germany and Canada, but at low earned income there is no insurance.
2) The benefits corresponding to the minimum wage (70 per cent) are the floor. Benefits lower than that will be 'topped-up' by social assistance.
3) The British benefits are pure flat rates, so minimum and maximum is not relevant.

8) Housing benefits are also available in most of the other countries, but not to the same extent as in Great Britain.

For countries with a maximum level of unemployment benefit, this maximum will in all cases have been reached at the upper limit (2 times the APW income) of the income interval. It is also evident that the minimum level of unemployment benefit (where relevant) will not have been reached in any case at the lower limit (0.75 times the APW income).

The results for the insurance schemes of the 8 countries, when former income varies, are, as already mentioned, contained in table 2.4.B.

Table 2.4.B. Net replacement rates in case of unemployment for the whole year in 8 countries, varying former income levels for insured single APW, 1999.

Former income, per cent of APW	DK	S	FIN	A	D	NL	GB	CAN
75	79	81	62	57	59	73	25	55
100	61	69.5	59	56	58	72	20	56
125	52	58	53	56	58	70	16	50
150	46	50	49	56	58	67	14	42
175	41	44	47	50	55	59	12	37
200	37	40	44.5	45	48.5	53	10	33

Denmark and Sweden start with high replacement rates which then quickly decrease with increasing income. Great Britain has the same profile but at a much lower level. The continental European countries start at a lower level than Denmark and Sweden, but stay at their respective levels over a much larger income interval and give a better relative compensation for medium to high income earners. There are no incentive problems for the continental European schemes for relatively low income levels, which may be the case for the Danish and Swedish schemes.

The Finnish scheme with its stepwise benefit formula has a profile which lies between that of the continental European countries and the other two Nordic countries.

The Canadian scheme reaches its maximum at a somewhat higher relative income level than the Swedish one, but its profile is not very different, although at a lower level.

The calculations in the case where the unemployed person is not eligible for insurance benefits are more difficult to interpret. In general the calculations in table 2.5 show rather large decreases in disposable income. This is partly because housing costs and allowances are not taken into consideration in the calculations.

Housing allowances are separate components of the social assistance schemes in several countries and often more generous than ordinary housing benefit schemes (Denmark, Sweden, Finland and Germany but not in Great Britain and the Netherlands). Canada only has housing allowances in relation to social assistance. For those receiving social assistance there is therefore in the first mentioned countries and in Canada a tendency to overestimate the negative impact of this 'income event', compared to receiving unemployment insurance benefits, when housing benefits and allowances are not taken into consideration.

In the calculations for Denmark, the unemployed receives social assistance (without allowances for housing). In Sweden (except for the period of July 1st to December 31st 1994 when the system was integrated in the mandatory insurance scheme), a special labour market compensation was received, but this could be supplemented by social assistance and housing allowances (not included in the calculations). From 1998 this element in Sweden is the basic (general) level in the Swedish unemployment benefit scheme. In Denmark and Sweden, these elements of social security are alternatives to unemployment benefits from the voluntary schemes. The Danish social assistance system was changed fundamentally from 1994. The benefit became related to the maximum benefit for unemployment and it became taxable. The system, as mentioned, also includes allowances for housing costs (this allowance is non-taxable), in some cases more favourable than the ordinary housing benefit scheme. The minimum U.B. (the rate in the alternative scheme) has been used in the case for Finland, when the unemployed is not eligible for earnings-related U.B. This is also equivalent to the benefit for the out-insured.

Table 2.5. Effects on disposable income of being unemployed for 3 months and the whole year in 8 countries, 1999.

	DK	S	FIN	A	D	NL	GB	CAN
Not eligible for insurance, 3 months of unemployment								
Compensation percentage	31	26	19	51.5[1)]	53[1)]	31	14.5	6.5
Change in disposable income, %	-14.1	-17.2	-15.5	-8.7	-8.1	-10.0	-19.1	-18.9
Not eligible for insurance, 12 months of unemployment								
Compensation percentage	31	28	21	51.5[1)]	53[1)]	31	15	6.5
Change in disposable income, %	-59.1	-70.2	-73.4	-48.5	-48.5	-53.3	-80.3	-91.2

1) The compensation per cent is after tax.

In Germany, the additional scheme is primarily for people whose rights to receive insurance benefits have expired, but only if the person needs the compensation. Austria has a similar scheme. In Great Britain it is also possible to supplement the compensation (JSA (IB)) shown in table 2.5 with for instance compensation for housing expenditures just as in the case with unemployment benefits. In the Netherlands, the unemployment insurance system consists of 3 steps, the first is the basic system, where the duration of the benefit period is $^1/_2$ year. In step 2 the length of the benefit period (dependent on former work) varies from $^1/_4$ year to 4 $^1/_2$ years. Step 3 has a benefit period of 2 years and thereafter the unemployed will receive social assistance (older unemployed workers can stay longer in step 3). Step 2 and 3 are categorized as the additional system in table 2.3. The out-insured Dutch unemployed APW in table 2.5 receives social assistance, which on a net base is equivalent to the flat rate benefit in step 3 of the U.B. scheme.

The out-insured Canadian unemployed receives social assistance, the rate of Ontario has been applied. Housing allowances are available in Canada in these cases, but have, as already mentioned, not been considered in the calculations in table 2.5.

Even if direct comparison of the outcome recorded in table 2.5 is difficult, it is evident that the schemes of Austria, Germany and The Netherlands give a considerably better compensation than those of the Nordic countries. The schemes of Great Britain and Canada give a low compensation.

In order to see the impact of unemployment on the disposable income of a married couple, the case where an insured part-time working partner becomes unemployed was studied (unemployed for the whole year). The results are contained in table 2.6.

Table 2.6. Effects on the couple's disposable income from unemployment during the whole year for the part-time working partner in the APW-couple in 8 countries, 1999.

	DK	S	FIN	A	D	NL	GB	CAN
Compensation percentage	70	78.5	63.5	56 1)	60 1)	70	15	41
Change in disposable income, %	-6.9	-7.6	-12.0	-15.8	-12.3	-10.1	-29.1	-17.6

1) The compensation per cent is after tax.

It is evident that the relative loss of income in the Danish case is modest, some would say very modest. This could imply small economic incentives for the part-time working partner in a couple to seek for a job in case of unemployment, if the joint income is basis for such decisions, especially if the unemployed is entitled to the prolonged benefit period, cf. comments on table 2.3. The low reduction in the Danish case is partly due to the taxation of couples. The lower income for the wife as unemployed results in increased tax reductions for the husband, because of increased unused tax allowances for the now unemployed partner, which are transferable to the spouse. The Swedish case is, after the increase to 80 per cent of the gross wage in compensation, not very different from the Danish one. The other countries have more substantial decreases in this case, the British decrease is for instance 4 times as large as the Danish one.

Injuries from work

In the Netherlands, there is no separate compensation scheme covering the 'event' of being injured from work. The injured person receives compensation for illness and, if the loss of working capability becomes permanent, public invalidity pension, cf. the section on this. In the 7 other countries there are specific schemes for industrial injuries. Compensation is, however, typically received some time after the injury, sickness benefits may cover the interim period. Only permanent benefits from the schemes are considered here. The level of compensation varies a great deal. The gross compensation percentages are high in 2 of the countries (Denmark and Sweden), relatively high in Finland, Austria and Germany, while they are somewhat lower in Great Britain. Canada has a high compensation (90 per cent) of lost net income. The minimum loss of working capability, making the injured person eligible for permanent compensation, varies from 6.7 per cent in Sweden, 10 per cent in Finland, 14 per cent in Great Britain, 15 per cent in Denmark to 20 per cent in Austria and Germany. In the Netherlands (where the injured person receives invalidity pension according to the public scheme), the threshold is 15 per cent loss of working capability. This is very much in line with most of the other countries as far as industrial injuries are concerned, but it is a low minimum for ordinary disability pensions, cf. the section on this. There is no stated minimum in Canada.

The compensation from the insurance can be supplemented by, or co-ordinated with, the public invalidity pension scheme. In Denmark and Great Britain the two systems are combined, in Sweden and Germany a co-ordination takes place.

The scheme is financed by the employer in 6 of the countries whereas it is financed by taxes in Great Britain.

The level of compensation

Two sets of calculations have been performed, one where the working capability is completely lost, and one where $^1/_3$ of the working capability of the single APW is lost. In the latter case it is assumed that the injured person still receives $^2/_3$ of his or her former working income. Only current permanent benefits are considered. Supplementary benefits for immobility or special care are not included.

The results of the calculations are shown in table 2.7. The impact on disposable income is again measured in relation to the current annual disposable income of the APW.

Sweden has the most transparent system, the compensation percentage is 100 and there is no change in disposable income. The compensation is in relation to the loss of income, not the degree of disability. In the Danish case there is a considerable increase in disposable income (in the case of complete loss of working capability) for the injured person. This is because the compensation for injuries from work is combined with the public invalidity pension scheme. In the case of $^1/_3$ loss of working capability, the Danish APW is not eligible for invalidity pension and there is a modest drop in disposable income. The separate compensation for injuries from work is related to income and proportional to the degree of disability.

Table 2.7. Effects on disposable income from being permanently injured from work in 8 countries, 1999.

	DK	S	FIN	A	D	NL	GB	CAN
Complete loss of working capability								
Compensation percentage	113	100	85	80	67	70	53	90 [1]
Change in disposable income, %	+28.4	0	-8.6	+9.3	+16.0	-27.9	-29.7	-10.0
Loss of $^1/_3$ of working capability								
Compensation percentage	77	100	85	67	67	63	28	90 [1]
Change in disposable income, %	-3.6	0	-1.7	+2.9	+12.5	-10.7	-17.0	+0.8

1) The compensation per cent is after tax.

In Germany, the compensation is calculated on the basis of gross income and is proportional to the degree of disability. The compensation is not taxed, and there is no 'Progressionsvorbehalt', cf. appendix 1 (Germany, Unemployment). These conditions lead to increases in disposable income in both cases, most when the working capability is completely lost. The relative impact in the case with $^1/_3$ loss of working capacity is, however, large in proportion to the loss of working capacity because the tax free compensation here replaces income with a relatively high marginal taxation.

Austria has a scheme of similar design as the German one, and with similar effects. The relative effects in the two cases are close to being proportional to the degree of disability but that is because the 100 per cent loss of working capability has an extra benefit (20 per cent of the basic pension).

The Finnish scheme leads to relatively modest declines in disposable income in both cases. The compensation is related to income and proportional to the degree of disability.

The Canadian scheme compensates a high proportion of lost net income and is proportional to the degree of disability. The negative effect in case of full disability is relatively modest, in case of $^1/_3$ loss of working capability there is a small positive effect due to the progression in the tax scheme.

In Denmark, Sweden, Finland, Austria, Germany, and Canada the compensation is 'income-related', the cap is at a high income level, whereas the British system is 'flat rate' and graduated after the degree of disability. Combined with Incapacity Benefit the negative impact on disposable income is similar to that of the Netherlands (phase 1, cf. below), in the 100 per cent loss of working capability case. Incapacity Benefit is assumed not to be received in the 33$^1/_3$ per cent loss of working capability case in Great Britatin. For the Netherlands it is, as already mentioned, the impact of the public invalidity pension scheme which is presented in table 2.7. The scheme is 'income-related' and the compensation is related to the degree of disability. The initial (phase 1) benefit is time limited for most new recipients (after 1994), most of whom will experience reduced benefits when phase 2 starts, cf. the section on invalidity pension.

Disability/invalidity

Industrial injuries are related to accidents at work or diseases developed from work. Disability is related to illness in general. The typical 'route' for disability pensioners is illness and then a decision in favour of rehabilitation or disability pension. Disability pension is usually obtained after illness for a considerable time and mainly if the loss of working capability is permanent. Sickness or related benefits may cover the interim period, which, as mentioned, may be long.

In the cases illustrated here, only the permanent benefit is included in the calculation, and the impact is related to current (1999) income.

The age is sometimes important for the first time recipient of disability pensions (accrual rates vary in some countries with age). In the cases illustrated here, it is assumed that the first time recipient is maximum 50 years old. In cases where a specific age is needed (e.g. for taxation in Germany, and age related supplements in Great Britain), this is assumed to be 35 years.

Disability pensions from private or labour market arrangements have been disregarded.

The principles for disability pensions vary considerably among the 8 countries studied. In some countries the disability pension scheme is aligned with the old-age pension scheme. This is for instance the case in Denmark, Sweden, Finland, Austria, Germany and Canada. In other countries it is aligned with sickness benefits, for instance in Great Britain and the Netherlands. 'Anticipated' pension points or years for periods without an actual income are used in several countries to calculate an old-age like pension. Important criteria for characterization of disability pension schemes include:

- Minimum and maximum age for first time recipients of disability pension?
- Does disability pension continue as old-age pension?
- Are all citizens eligible for pensions from the scheme or the basic part of it?
- Is the pension dependent on former work and income or is it a 'flat rate'?
- Is the pension graduated according to the loss of working capability?
- Is the level of the pension dependent on the age of the first time recipient?
- Is the level of the pension dependent on being married or single?
- Is the pension means-tested?
- Is there an additional scheme?

The categorization of the public disability pension schemes according to these criteria is contained in table 2.8.

Table 2.8. Characteristics of public disability pension schemes in 8 countries, 1999.

	DK	S	FIN	A
Basic Public Scheme				
Minimum age, start	18	16	16	-
Maximum age, start	66	64	64	56 [1)]
Continue as old-age pension	No	No	Yes	Yes
Eligible groups	All	All	All	Employees
Pension dep. on work hist. and income	No	No	No	Yes
Pens. graduated accord. to loss of w. cap.	Yes	Yes	No	No
Pens. dependent on age of 1st time recip.	Yes	No	No	Yes
Pens. dependent on marital status	Yes	Yes	Yes	No
Means-testing	Yes	Yes	Yes	No
Additional Public Scheme				
Existence	None	Yes	Yes	None
Eligible groups		Empl. + self.	Empl. + self.	
Pension dependent on work hist. and income		Yes	Yes	
Continue as old-age pension		Yes	Yes	

Table 2.8. Continued

	D	NL	GB	CAN
		Basic Public Scheme		
Minimum age, start	-	-	-	18
Maximum age, start	59 [2]	64	64/59	64
Continue as old-age pension	Yes [3]	No	No	No
Eligible groups	Employees, Some self-empl.	Employees [4]	Employees, Self-employed	Employees, Self-employed
Pension dep. on work hist. and income	Yes	Yes	No	Yes
Pens. graduated accord. to loss of w. cap.	No	Yes	No	No
Pens. dependent on age of 1st time recip.	Yes	Yes [5]	Yes [6]	No
Pens. dependent on marital status	No	No	No	No
Means-testing	No	No	No	No
		Additional Public Scheme		
Existence	None	None	None	None
Eligible groups				
Pension dependent on work hist. and income				
Continue as old-age pension				

1) Persons who become disabled in the age bracket 57-64 years (55-59 years for women) receive an early retirement pension.
2) Persons who become disabled in the age bracket 60-64 years start in the retirement scheme for disabled, where the formal retirement age is 60 years.
3) Only disability pension due to 'Erwerbsunfähigkeit', 'Berufsunfähigkeit' based pension will be increased as old-age pension.
4) From 1998 there will also be a scheme (WAZ) covering self-employed.
5) The duration of the benefit at the highest level depends on the age of the first time recipient.
6) Incapacity Benefit and Severe Disablement Allowance both have age additions, highest for young people.

Comments on table 2.8

The age range between the minimum and maximum age is for eligibility for disability pension, i.e. the range where it is possible to start as a recipient of disability pension. In two of the countries, Austria and Germany, the maximum age is lower than the formal old-age pension age. In these countries, early retirement possibilities for disabled are covering the ages up to the formal retirement age.

In some of the countries basic disability pension continues as old-age pension. This is the case in Finland, Austria and Germany (Erwerbsunfähigkeit). The early retirement pensions for disabled in Austria and Germany also continue as old-age pension.

Only the three Nordic countries have residence based disability pension schemes, in all the other countries a former working or contribution record is required. Without this there will be no pensions, social assistance will be the alternative (Great Britain has a non contribution alternative Severe Disablement Allowance, which, however, may be 'topped-up' with Income Support). For old-age pension, cf. the following section, the Netherlands and Canada also have residence based schemes, but not for disability pensions.

In all the countries where eligibility depends on former work and income the level of the pension also depends on these parameters, except in Great Britain, where the pension is flat rate.

In Denmark, Sweden and the Netherlands the pension is graduated according to loss of working capability, in the other countries a 'full' pension or no pension at all is received. The Netherlands has the lowest 'entry' level, 15 per cent loss of working capability, in Sweden it is 25 per cent and in Denmark it is 50 per cent.

The pension may vary according to the age of the first time recipient. In Denmark there are age groups where it is not possible to receive (for the first time) certain of the pension levels, e.g. the highest level cannot be received for the first time in the age bracket 60-66 years. In other countries, e.g. Austria and Germany, the accrual rate for 'anticipated' years is (after a threshold age) smaller than for 'real' years. In general the higher the age, the larger the pension. In Great Britain it is the other way round. The age supplement of the pension is highest for younger people. In the Netherlands, it is more the duration of the pension at the highest level which depends on age, the higher this is the longer the duration is.

Only the Nordic countries differentiate the basic pension according to marital status and means test (taper) the basic pension, in Sweden and Finland only when it is 'integrated' with the public occupational pension, in Denmark it is against a wider range of other income sources.

Sweden and Finland have, as already mentioned, additional occupational pension schemes which for disability pensioners apply 'anticipated' time. The accrual rate for 'anticipated' time is lower than for 'real' time in the Finnish scheme (but not in the Swedish), so Finnish disability pension will often also depend on the age of the first time recipient.

It is worth mentioning that disability pension schemes are often complex and the eligibility criteria vary considerably. They are mainly based on medical assessments but some times also on social and economic conditions. All this is not reflected in table 2.8. Major reforms of the schemes in Denmark, Sweden and Germany are in the pipeline.

Level of compensation

Only permanent benefits for 100 per cent disability are included in the calculations which have been made for the single APW in two situations, one where there is a former working record and all access conditions are met and another where there is no former working record at all. The two cases are recorded in table 2.9. It should be emphasized that no supplementary benefits (e.g. for care or help to get around) are included, and that the calculations cover a 'full' disability pension at the highest level.

Table 2.9. Net replacement rates in case of disability in 8 countries, 1999.

	DK	S	FIN	A	D	NL	GB [1]	CAN
				With former working record				
Net replacement rate	74	61	63.5	68	60	72	28.5	40
				Without former working record				
Net replacement rate	74	45	32	36 [2]	22 [2]	47 [2]	21	23 [2]

1) In the British cases the benefits can be 'topped-up' with Income Support. In the second case (no former working record), it would result in a net replacement rate of 28.3 per cent if the case is ordinary disability, 34.9 per cent if it is severe disability. This would also be the result in the first case (with former working record) for severe disability.
2) These cases are based on social assistance because the persons have no pension rights.

The supplements for care and other help vary considerably from a relatively modest level in Denmark to a relatively generous level in Great Britain. If the maximum of the Disability Living Allowance is included in the calculations for Great Britain, the net replacement rate would more than double. The British case without former working record could also be 'topped-up' with Income Support, cf. note 1) for table 2.9. The Danish disability pension scheme is, as the only one, completely independent of former work and income. The net replacement rates are quite similar for 6 of the countries (former work record), only Great Britain and Canada are at a substantially lower level.

It should be remembered that the duration of the benefit period in the Netherlands varies with the age of the 1st time recipient. For a 35-year-old person it is $^1/_2$ year, for a 40-year-old it is 1 year. For a 50-year-old it is 2 years and for a 59-year-old and older it is until old-age pension. When the benefit period expires the benefit is calculated on a reduced basis.

Compared to the cases in table 2.7 for industrial injuries, it is evident that the compensation recorded in table 2.9 is lower.

Table 2.10 contains the cases where the usually part-time working spouse becomes disabled while her husband continues to work at APW income level.

Table 2.10. Effects on the couple's disposable income from permanent disability for the part-time working partner in the APW-couple in 8 countries, 1999.

	DK	S	FIN	A	D	NL	GB	CAN
Compensation percentage	75.5	61	67	53	37	70	43	41
Change in disposable income, %	+0,7	-8.8	-8.8	-13.1	-10.8	-10.1	-17.3	-17.5

The negative impact on the family disposable is approximately 10 per cent in most countries, more in Austria, Great Britain and Canada. Only Denmark has a small gain, caused by the relatively high flat rate benefit in relation to the $^1/_2$ APW income. Again, it should be remembered that the duration of benefit at this level in the Netherlands is only temporary in most cases.

Retirement

Pension schemes are very important where public expenditures and distribution of income between the generations are considered, especially because of an ageing population in many countries (including the 7 European countries and Canada in this study) in the coming decades.

This study only deals with public pension schemes, implying that the comparisons between the countries can be only partial. Private pensions and/or company based pensions and/or labour market agreed schemes are important in many countries, especially in those countries where the public pension schemes are not so generous. Company pension schemes are important in the Netherlands, Great Britain and Canada, and labour market pension schemes are under gradual implementation in Denmark. Negotiated pensions (avtalspension) are usual in Sweden; they are not included here.

For this element of social security too, there is a substantial variation among the 8 countries studied. Important criteria for characterization include:

- What is the formal age of retirement?
- Does the pension scheme allow flexible retirement?
- Are all citizens eligible for pensions from the scheme or the basic part of it?
- Is the pension dependent on former work and income or is it a 'flat rate'?
- Is the level of the pension dependent on being married or single?
- Is the pension means-tested?
- Is there an 'additional' public pension scheme?

The categorization according to these criteria of the public pension schemes in the 8 countries is shown in table 2.11.

Table 2.11. Characteristics of public pension schemes in 8 countries, 1999.

	DK	S	FIN	A
		Basic public pension scheme		
Formal pension age	67	65	65	60/65 [1]
Flexible retirement	No	Yes	Yes	Yes
Eligible groups	All Residence based	All Residence based	All Residence based	Employees, Self-employed
Pension dependent on work history and income	No	No	No	Yes
Pension dependent on marital status	Yes	Yes	Yes	No
Means-testing	Partly	Partly	Partly	No [3]
		Additional public pension scheme		
Existence	Yes	Yes [4]	Yes	None
Eligible groups	Employees [6]	Employees and self-employed	Employees and self-employed	
Pension dependent on work history and income	Only on work history [6]	Yes	Yes	

Table 2.11. Continued

	D	NL	GB	CAN
		Basic public pension scheme		
Formal pension age	65	65	60/65 [1]	65
Flexible retirement	Yes	No	Only postponement	No
Eligible groups	Employees, Some self-empl.	All Residence based	Employees, Self-employed	All Residence based
Pension dependent on work history and income	Yes	No	Yes [2]	No
Pension dependent on marital status	No	Yes	No	Yes
Means-testing	No	No	No	Partly
		Additional public pension scheme		
Existence	None	None	Yes	Yes [5]
Eligible groups			Employees	Employees and self-employed
Pension dependent on work history and income			Yes	Yes

1) 60 years for women, 65, years for men. In Great Britain, It will be increased to 65 for women over a period of 10 years starting in 2010. In Austria, the pension age will also be increased to 65 years for women (from 2018 to 2033).
2) In Great Britain, the basic system is for people who have been working. There are non contribution based pensions for special groups, e.g. persons over 80 years who are not entitled to the basic pension.
3) There is no minimum pension in Austria, but a 'safeguard' which has all the characteristics of social assistance, including means-testing.
4) The Swedish Government has decided on a new pension system to replace the existing one. A gradual implementation will take place from 2003.
5) The Canadian Additional pension Scheme CPP allows flexible retirement between the age of 60 and 70.
6) In 1999, a new additional scheme was implemented, which also covers the self-employed. The pension was designed with 'equalisation' but that will probably be changed from 2002, so future pensions will reflect former income.

Comments on table 2.11

The formal retirement age is not a good indicator for the actual time of retirement, but it is an important signal. Great Britain has decided to increase the retirement age for women from 60 to 65 years over a period of 10 years starting in 2010. The same will take place in Austria from 2018 to 2033. The German reforms, cf. the following, will result in a higher actual retirement age. That is also the aim of the recent Swedish pension reform, which will start in 2003, and of the reduced options for retiring before the formal 'pension age' in the Netherlands and Denmark. In Austria the reductions in pensions will be increased from 2000 in relation to early retirement.

Some of the countries (Sweden, Finland, Austria, Germany and Canada) have flexible public old-age pension schemes, which can also be used for early or postponed retirement. In Sweden and Finland, a pension can be obtained from the age of 60 years (61 years from 1998 in Sweden) at the cost of an actuarial reduction in the pension for the rest of one's life. This is also the case in Canada, but only from the additional pension scheme. The Austrian pension scheme can also be used for early retirement with quite modest reductions in the pensions received. In Germany, some early retirement schemes are being replaced by a flexible pension following the same principles as the Swedish and Finnish systems. This flexible German scheme will be implemented gradually from 2001 to 2012 and will contain a higher minimum age for receiving pension than in the replaced early retirement schemes. According to the 1992 reform the time span over which the age increase takes place has later (after 1992) been shortened. The increase from 60 to 65 years in the scheme for long-term unemployed took place from 1997 to 2001. In the scheme for wives the change will be accomplished from 2000 to 2004, and in the scheme for long time insured the increase from 63 to 65 years took place in 2000 and 2001. There are exemptions for groups who would be negatively affected by the 'acceleration' of the 1992 reform, they will follow the original plan in the 1992 reform. In all five countries, it is also possible to postpone retirement until after the formal retirement age and then obtain an actuarial increase in the pension.

In Great Britain and the Netherlands, it is not possible to receive a public pension (related to age) before the formal retirement age, but in Great Britain it is possible to postpone the retirement and then receive a bonus. Denmark does not have a flexible old-age pension system, but other schemes, e.g. the 'Efterløn' scheme, established according to labour market agreements, are dedicated for early retirement and quite popular. Great Britain and the Netherlands have private pension schemes, which can also accomodate early retirement. Besides the flexible old-age pension scheme Finland also has an unemployment pension scheme for early retirement from unemployment. Some of the countries, e.g. Denmark, Sweden, Finland and Austria, also have special part-time pension schemes with access before the formal retirement age, and the requirements include reductions of the number of hours worked.

All countries except Austria, Germany and Great Britain have a basic public pension available for all citizens. In countries with a basic pension (minimum pension) for all, i.e. Denmark, Sweden, Finland, the Netherlands, and Canada, this is residence based and 'flat rate'. In Germany, the public pension system is basically for private sector employees and for specific groups of self-employed. In Great Britain, it is broader, but still basically for people with a work and contribution record. Austria's pension scheme is also for people who have worked. This is very different from the other countries. Furthermore, the level of pension according to the German basic public scheme is dependent on work history and income. There is a maximum level for that pension because both the number of years at work (50 years is, in practice, the most) and the income factor applied in the formula for the actual calculation of pensions have limits. The pension level in Austria also depends on former income. The basic pension in Great Britain is 'flat rate'. There is no pension for people without a work record in the pension schemes of Austria, Germany and Great Britain (Great Britain has a residence based scheme for persons over 80 years, but this is of minor importance). Pensioners without a former work record will have to rely on social assistance or social assistance type schemes.

The basic gross pension received depends on marital status in Denmark, Sweden, Finland, the Netherlands, and Canada, but not in Austria, Germany, and Great Britain. Pensions based on full own contributions in Great Britain do not differ according to marital status, whereas pension is lower if based on a spouse's contributions. Taxation may, however, also have an impact. A married couple of two pensioners often receive less than twice the net amount of a single person, but the ratio of disposable income for a couple compared to that of a single pensioner varies a great deal.

Means-testing of pensions is a Nordic and Canadian phenomenon. In Sweden and Finland, the basic pension (part of it in Sweden, all of it in Finland) is means-tested only in relation to income from the additional pension scheme. The means-testing is due to the 'integration' of the two parts of the public pension scheme. In Denmark, several income sources may result in means-testing of public basic pensions. In Canada, one component of the basic pension, i.e. the guaranteed income supplement, is means-tested against other income including pensions from the additional scheme, CPP. The type of social assistance benefits that pensioners in Austria, Germany and Great Britain can receive, are all means-tested against any other income.

Additional pension schemes are available in Denmark, Sweden, Finland, Great Britain and Canada. The most important of these are from the recipient's point of view the Swedish and Finnish schemes. The average pension from the Swedish additional pension scheme is substantially larger than pensions from the basic scheme. Part of the basic Swedish pension is means-tested against income from the additional pension scheme in such a way that the combined marginal percentage is 100, a consequence of the 'integration'. There is a rather severe taxation of income from the additional pension scheme that is in excess of the means-tested part of the basic pension. The contribution to disposable income from additional pensions is therefore considerably smaller than the gross level might suggest. The Finnish additional pension system has similar characteristics, the combined marginal percentage from means-testing is, however, lower, i.e. 50 per cent. From 1996 the whole basic pension is exposed to means-testing in Finland. Also the Canadian CPP scheme is an important component and it is integrated with the basic scheme using a taper of 50 per cent, but only the guaranteed income supplement is means-tested. The British and especially the Danish additional schemes consist of more modest supplements to the basic pension systems.

The level of public pensions

Two sets of calculations have been performed. One concerns persons with former work and income, the other concerns people with no former working income. For those with former work, it is assumed that the former APW (and the former part-time working partner in the APW-couple) receives the maximum possible pension in 1999. In some additional schemes, e.g. the Danish and the British ones, it is not possible to obtain full pension rights in 1999. In these cases it is assumed that the APW (and the part-time working partner in the APW-couple) has been a member for as long time as possible. In Sweden and Finland, it is possible to obtain full pension rights from the additional pension scheme in 1999. For Germany it is assumed that pension rights have been obtained for 45 years (including education).

It is important to emphasize that it is the maximum pension, and not the average pension, which has been calculated, and that the assumptions are simplified.

For people without former working income the situation is also extreme. They have obtained no pension rights (basic or additional) at all, unless the rights are based on residence (Denmark, Sweden, Finland, the Netherlands, and Canada).

On these assumptions, the APW-calculations show the pensions received at the formal age of retirement in the 8 countries in 1999.

Table 2.12. Net replacement rates at retirement in 8 countries, 1999.

	DK	S	FIN	A	D	NL	GB	CAN
				With former work, single APW				
Net replacement rate	54	62	66	86	74	49	51	55
				With former work, APW-couple				
Net replacement rate	55	63.5	70	84	69	42	55	58
				Without former work, single APW				
'Net replacement rate'	47	39	32	52 [1)]	22 [1)]	49	29 [1)]	41

1) The replacement rates for Austria, Germany and Great Britain are based on social assistance type benefits for pensioners with no former work record.

Note: For persons without former occupation the net replacement rate is strictly speaking meaningless. The interpretation is: 'Replacement' relative to the annual disposable income of the APW.

In the case with former work, the net replacement rate for the single APW is high in Austria followed by Germany, Finland and Sweden, and relatively low in the Netherlands, with Canada, Denmark and Great Britain in between. In 1993, the pensions in Sweden were lowered by approximately 2 per cent, compared to what they would have been in 1993 without reductions. This 'mechanism' continued until it stopped in 1999.

In the case of the 'APW-couple' formerly with $1^1/_2$ income, the net replacement rate is a little higher than for the single pensioner in Denmark. This is also the case in Sweden.

In Finland (where the former part-time working spouse also receives some of the basic pension), the net replacement rate is substantially higher for the couple. In Great Britain, the flat rate benefit results in a relatively high replacement rate for the person formerly with $^1/_2$ income implying a higher net replacement rate for the couple. This is also the case in Canada. In Germany, the splitting taxation system for couples implies a high disposable working income resulting in a lower replacement rate than for singles (pensions are not taxable in the cases presented here, cf. appendix 1 on Germany). In Austria, where the wife was pensioned 5 years ago (at the age of 60), the indexation of her pension has not followed wage development, implying a lower replacement rate for the couple than for the single (man). In the Netherlands, the replacement rate is also lower for the couple, here it is because of the rate structure for couples, cf. appendix 1.

In the case without former work, the pensions in the Netherlands and Denmark are relatively high and somewhat lower in Canada, Sweden and Finland. Among the three countries with social assistance type minimum pensions Austria has the highest coverage, which in fact is higher than in any of the countries with residence based minimum pensions, but means-tested to a larger extent. Only basic rates have been included in the social assistance type cases. In Germany, Austria and Great Britain the public pensions are very much dependent on former participation in the working life, whereas that is not so much the case in Finland, Sweden, Canada and Denmark, and not at all the case in the Netherlands.

'One-point' estimates as in table 2.12 give some insight in similarities and differences across countries, but 'multiple-point' estimates are much more revealing. Table 2.12A, therefore, contains net replacement rates for single pensioners with a former working record and different former income levels stretching from 75 per cent to 200 per cent of the APW income level. The assumptions are again simplified, it is for instance assumed that each specific income level is constant, i.e. the 75 per cent level is 75 per cent of the APW level in all working years. This implies that the 200 per cent APW also has this level in his or her first working year, or in the first year when pension rights are obtained.

Table 2.12.A. Net replacement rates for single pensioner, varying former income levels. 1999.

Former income, per cent of APW	DK	S	FIN	A	D	NL	GB	CAN
75	69	67.5	68.5	85	69	62	56	66.5
100	54	62	66	86	74	49	51	55
125	46	62	66	85.5	78	39	48	45
150	40.5	63	66.5	86	81	34	45	39
175	36	55	67	86	79	30	40	34
200	32.5	50	67	82	70	27	36	30

Table 12.2A reveals very substantial differences for the level of net replacement rates across countries at given income levels and very different profiles for the countries when income varies.

Two of the countries, Denmark and the Netherlands, have 'pure' flat rate pensions, indicating a rapid decline in net replacement rates with increasing income.

Two countries, Austria and Germany, have 'purely' income-related pensions at least up to a relatively high former income level, where a maximum pension is reached. For Austria, the result is an almost constant and very high net replacement rate up to and including the next to the highest former income level. For Germany the net replacement rates increase quite significantly up to the 150 per cent former income level and then starts to decline after the maximum has been reached. The increasing replacement rates for Germany over the first income interval is because the pensions are proportional to former gross income. There is no taxation at these pension levels, only a social contribution (fixed percentage) is levied, while the denominator in the calculation of the net replacement rates is taxed according to a progressive tax scheme.

The remaining countries, Sweden, Finland, Great Britain, and Canada, all have a mixture of flat rate and income-related components. The income-related components have a maximum in 3 of the countries, but not in Finland (where the flat rate component is tapered off already at the 75 per cent former APW income level). The Finnish net replacement rates are almost constant for the whole income range (and beyond), which is very unusual. For Sweden, the net replacement rate is highest at the lowest income level due to favourable taxation of the pension. The net replacement rate is then almost constant until the 150 per cent APW income level where it starts to decline. The income-related component of the Swedish scheme increases with income more than in proportion to the income rise until its maximum is reached, but the flat rate component contributes to a decreasing net replacement rate, these two effects together with taxation of pensions and wages result in an almost constant replacement rate up to 150 per cent former APW income.

The British income-related component reaches its maximum at a higher income level than the Canadian one, resulting in a more gradually declining profile for net replacement rates. The profiles for Denmark ('pure' flat rate), Great Britain and Canada (both a mixture of flat rate and income-related components) are quite similar, as are the net replacement rates for these three countries.

Having children

Only 'ordinary' family allowances, i.e. allowances for couples with children, are considered here. In addition, all countries also have special or additional allowances or tax credits for single parents.

Seven of the countries have cash benefits and one (Germany), has (from 1996) refundable tax credits or, if that is advantageous for the families, allowances which are deductible in taxable income. Austria has, in addition to the cash benefit, also refundable tax credits for families with children. Superficially most of the family allowance schemes look alike, but there are, however, some significant differences in the criteria applied.

The family allowance schemes were categorized according to these criteria:

- Is the family allowance a cash transfer or/and a tax credit/deductible tax allowance?
- Is the allowance for all families (couples) with children?
- Is there a graduation of the allowance according to the number and/or age of the children?
- Is the allowance means-tested?
- For how long can it be received?

The result of the categorization is contained in table 2.13.

Table 2.13. Characteristics of ordinary family allowance schemes in 8 countries, 1999.

	DK	S	FIN	A
Type of scheme	Cash benefit	Cash benefit	Cash benefit [1]	Cash benefit/ tax credit
Eligible groups	All families with children	All families with children	All families with children	All families with children
Graduation according to number and age	Flat rate per child. Highest for infants (0-2 years)	Flat rate per child. Increasing from 3rd child until 5th child	Flat rate per child. Increasing from 2nd child until 5th child	Flat rate benefit increasing with age [4]. Tax credit increasing from 2rd child
Means-testing	No	No	No	No, but large family supplement is means-tested
Maximum duration (age of child)	Until: 18	Until: 16/end of school	Until: 17	Until: 19/27

1) Up until 1994 there were tax deductions in the Finnish scheme.
2) The deductible tax allowance has the same nominal value for all children.
3) Canada also has a supplementary scheme for low income families, both federal and provincial.
4) As of January 1999 also a large family supplement for the 3rd and subsequent children. Means-tested.

Table 2.13. Continued

	D	NL	GB	CAN
Type of scheme	Tax credit/ allowance	Cash benefit	Cash benefit	Cash benefit [3]
Eligible groups	All families with children	All families with children	All families with children	All families with children
Graduation according to number and age	Flat rate per child [2]. Increasing from 3rd child until 4th child	Flat rate per child. Increasing with age	Flat rate per child. Highest for first child	Flat rate per child. Highest from 3rd child. Highest for 0-7 years
Means-testing	No	No	No	Yes
Maximum duration (age of child)	Until: 18/27	Until: 16/18	Until: 16/19	Until: 18

1) Up until 1994 there were tax deductions in the Finnish scheme.
2) The deductible tax allowance has the same nominal value for all children.
3) Canada also has a supplementary scheme for low income families, both federal and provincial.
4) As of January 1999 also a large family supplement for the 3rd and subsequent children. Means-tested.

Comments on table 2.13

The German tax credit scheme works very much like a cash scheme, the tax is reduced every pay day or, if there is no tax, the tax credit is paid in cash to the recipient (it is a refundable tax credit). Most families in Germany will receive tax credits, only relatively few with high incomes will have the deductible tax allowance (in these cases the tax credits will be reclaimed).

There is some variation in terms of graduation according to number and age of the children. In Denmark, the cash benefit is highest when the child is 0-2 years, a little lower from 3-6 years and lowest from 7-17 years. In the Netherlands, the allowance is highest when the child is in the upper age bracket, which is also the case in Austria for the cash component. In Finland, Austria (tax credit), Germany (tax credit) and Great Britain, there is graduation according to the number of children. In Finland, Austria and Germany, the 'youngest' children receive the highest allowance. In Great Britain, it is the first, the oldest child, who receives the highest allowance. Sweden had a scheme similar to the Finnish one, but from 1996 new entrants stopped, implying that in the long run there would be no graduation according to the number of children, if this rule was maintained.

It was not; in 1998, the graduation according to number of children was reintroduced. In the Netherlands, the allowance for all children increased by the number of children, but this ´bonus´ was stopped for new entrants from 1995. In Canada, there is graduation according to both the number of children and their age.

Only in Canada, family allowance is means-tested, and the means-testing may result in zero family allowances. The large family supplement in Austria is only available for families with an income below a relatively high level. Prior to 1996, family allowances were also means-tested in Germany but only for the second and subsequent children and only down to a minimum.

The maximum age of children is not a good indicator for when the allowance stops. In some countries it can be extended when the children are participating in education (marked as the age after the / in table 2.13, maximum duration), in other countries special allowances for education replace the family allowance. Ideally, the family allowance and allowances for education should be considered together, this has, however, not been done here.

It should be mentioned that Canada also has a refundable tax credit scheme for families with children (couples and single parents) and low income. From July 1997 to July 1998 there was a 'phase-in, a maximum and a phase-out' profile, according to earned income, in this scheme. It was an earned income supplement for low income families with children, designed as supplementary child benefits, earlier it was of the same type as the US earned income tax credit scheme. From July 1998 the basis was changed to all income and the phase-in component was eliminated, cf. the section 'Changes 1999' for more details. The British ´Family Credit´ scheme served the same purpose, it was not a family allowance scheme, but included having children among the eligibility criteria. The British 'Family Credit' scheme was replaced late in 1999 by 'Working Families Tax Credit', which is also based on refundable tax credits.

The level of the family allowance

The APW-couple has 1.5 times the income of the single APW. The effect on disposable income of having children (receiving family allowance) is calculated relatively to the disposable income of the couple without any children. The children are assumed to be in the age bracket 1-6 years. Child no. 1 is assumed to be 6 years old, child no. 2 is 3 years old and child no. 3 is 1 year old (and, even if that is not quite possible, born in 1999). In the Canadian case, the means-testing has an effect on the allowance for all 3 family types in table 2.14.

Table 2.14. Effects on disposable income of receiving family allowance in 8 countries, 1999.

	DK	S	FIN	A	D	NL	GB	CAN
	Percentage change in disposable income with:							
1 child (no. 1)	+4.3	+4.1	+4.3	+6.6	+5.5	+2.6	+3.5	+1.3
2 children (no. 1+2)	+8.5	+8.2	+9.5	+13.9	+11.0	+5.1	+5.9	+2.6
3 children (no.1+2+3)	+13.2	+13.3	+15.8	+22.4	+17.6	+7.4	+8.3	+7.5

Note: Child no. 1 is 6 years old, no. 2 is 3 years old and no. 3 is 1 year old.

The most generous scheme is the Austrian one (substantial improvements in 1999) followed by the German one. The new German scheme (from 1996) based on tax credits is substantially more generous than the old one and was further improved in 1997 and 1999. Finland follows after Germany (since 1997), the Finnish benefits were nominally unchanged from 1996 to 1999. Denmark and Sweden are now close. The nominal rates were increased in Sweden in 1998, when they were brought back to their 1995-level, cf. also chapter 3 the section on child benefits, but were unchanged in 1999. Furthermore, the graduation according to the number of children was reintroduced in the Swedish scheme from 1998. This has an impact in the case with 3 children. The Danish rates are increased every year. The relative impact of family allowances in the Netherlands and Great Britain is in several cases less than half of what it is in Austria and Germany. Last is Canada, where the means-testing has a substantial impact, especially for families with 1 and 2 children. The Ontario supplement has a positive impact in 1999 for families with 3 children.

The results depend on the selected ages at least for Denmark, Austria, the Netherlands and Canada.

Maternity leave

In all 8 countries maternity leave and the associated compensation for loss of income is an important element of the social security system. Compensation in connection with maternity leave is often a separate part of the system for compensation in connection with illness. Only 'ordinary' maternity leave schemes are covered. Many countries have supplementary schemes, some of which are mentioned in the notes to table 2.15.

Relevant criteria for characterization of maternity leave benefits are:

- For how long can the benefit be received?
- Has the father a legal right to a share of the maternity leave and the benefits?
- Is the benefit a 'flat rate' or is it 'income-related'?

Even if there is a close connection to the system for illness related insurance in several countries (income concepts, administration, etc.) there are also significant differences. There is no waiting period in any of the 7 European countries when compensation in connection with maternity leave is considered. There is a waiting period in Canada, where this scheme together with that for sickness benefits are part of the Employment Insurance scheme. Neither is there a special low compensation percentage for the first period of the maternity leave (that was the case in the Swedish sickness benefit scheme for several years until 1996), but there may be for the last part.

Table 2.15 shows the compensation in connection with maternity leave categorized according to the criteria listed.

Table 2.15. Characteristics of compensation in connection with 'ordinary' maternity leave in 8

	DK	S	FIN	A
Maximum benefit period	28 + 2 + 2 weeks [1]	64 + 2 weeks [2]	281 days [3] (approx. 47 weeks)	16 weeks
Participation of the father, rights	Minimum 4 [7] weeks	Minimum 30 days	Minimum 18 days [3]	None [4]
Benefit formula	Income-related, low cap	Income-related [2]	Income-related	Income-related

Table 2.15. Continued

	D	NL	GB	CAN
Maximum benefit period	14 weeks	16 weeks	18 weeks	27 weeks [6]
Participation of the father, rights	None [5]	None	None	No separate rights, 10 weeks to share
Benefit formula	Income-related	Income-related	Mixed	Income-related

1) A new scheme (implemented from the start of 1994) for 'leave of absence for parents' may be used to prolong the maternity leave substantially (by up to 1 year). The scheme is intended to increase 'rotation' on the labour market. It will probably be abolished from 2002.
2) From July 1st 1994 a special benefit for care of small children (1-2 years) was introduced. That replaced the last 12 weeks of maternity leave. The new scheme was abolished from January 1995 and the old reimplemented. In the 'old' scheme 52 weeks of the leave has a benefit which is income-related, the benefit in the remaining 12 weeks is flat rate. The 2 extra weeks are for the father and must be taken just after delivery.
3) Week days. Finland also has a special benefit if one of the parents stay at home to care for the child.
4) Austria has a supplementary scheme where the father can also participate. The benefits are reduced.
5) Germany has a supplementary system where the mother or the father can receive 600 DM/month in up to 24 months for children born in 1999. After 6 months this benefit is means-tested, for high income families (140,00 DEM and above) immediately.
6) 2 of the 27 weeks will be waiting period. If the father participates, there will also be a 2-week waiting period for him.
7) The 4 weeks are split in 2 + 2 weeks. 2 weeks can be taken just after delivery and 2 weeks after the 'ordinary' leave expires. A new maternity leave scheme will be implemented from 2002.

Comments on table 2.15

It is obvious from the table that variation in the maximum benefit period is very considerable with Sweden having more than 4.5 times as long a period as Germany. The three Nordic countries have the longest benefit periods and they are letting the father participate in the maternity leave. This is also the case in Canada. Sometimes the father has his own rights (Nordic countries), sometimes they are shared with the mother (Nordic countries and Canada). The Swedish system is very flexible both with regard to the mother and the father's rights (most of the maternity leave can be divided between the two of them in varying proportions) and with regard to splitting the leave period. The leave period can be split into minor periods until the child is 8 years old. It is also possible to work part time and be on leave the rest of the time. In Finland, there is also considerable flexibility in dividing the maternity leave between the mother and the father. There are 10 weeks to share between the parents both in Denmark and in Canada. In Denmark, there are also 2 + 2 weeks separately for the father.

Austria, Germany, the Netherlands and Great Britain have schemes characterized by relatively short benefit periods and with rights for the mother only. The compensation is basically equal to the lost income in Austria, Germany and the Netherlands. In Sweden (1999), it is 80 per cent of the lost income (up to an upper limit) for the first 8 weeks (4 weeks for each of the parents), and also 80 per cent for the following 44 weeks, which can be divided between parents (the two separate weeks for the father is compensated in the same way), and then a low flat rate compensation for the remaining 12 weeks. In Denmark, the compensation is 'income-related with a low cap' (the maximum will be reached at approx. 60 per cent of the APW income, for income below that level, the compensation equals the lost income). Finland uses a 'stepwise' benefit formula, which is income-related with a decreasing compensation rate for increasing income. In Great Britain, the benefit is 'income-related' for the first part of the period (the first 6 weeks) and 'flat rate' for the last part. The Canadian benefits are income-related, 55 per cent of the lost income, up to a ceiling, 39,000 CAD being the maximum insurable amount.

The level of compensation

With considerable variation in the duration of paid maternity leave between the countries, two calculations have been made. The first shows the effect on disposable income of utilizing the maximum possible duration (one year being the limit as the calculation concerns the change in annual disposable income) of the maternity leave in each country, the second shows the effect of a 'common period'; that of Germany which is 14 weeks. Table 2.16 contains the results. Several of the countries have, as already mentioned, supplementary maternity or parental leave schemes, usually at lower benefits than during the 'ordinary' leave. The supplementary schemes are not included in the calculations.

Table 2.16. Effects on disposable income from 'ordinary' maternity leave benefits in 8 countries, 1999

	DK	S	FIN	A	D	NL	GB	CAN
				Maximum duration of maternity leave				
Compensation percentage	52	80	69	100	100 [1)]	100	53	53
Change in disposable income, per cent	-6.9	-6.8	-8.7	0	0	0	-4.3	-6.7
				Common duration of maternity leave				
Compensation percentage	52	80	69	100	100 [1)]	100	58.5	50
Change in disposable income, per cent	-3.0	-1.6	-2.2	0	0	0	-3.0	-3.8

1) The compensation per cent is after taxation.

The change in disposable income is measured in proportion to an APW-couple with two children. The interpretation is then that the family gets its second child at the start of the year. Concerning the 'timing problems' here, cf. appendix 1 (Denmark, The couple gets the second child and then has 2 children). In the three Nordic countries it has been assumed that the father uses his minimum rights (for Denmark only 2 weeks) in the case of maximum duration. The Canadian father does not participate in the maternity leave in the calculation presented here.

Three of the countries with short maximum benefit periods, Austria, Germany and the Netherlands, have full compensation for the lost income, this is not the case for the fourth country, Great Britain, where the decrease, however, is modest. In the three Nordic countries the APW-couple experiences relatively modest decreases in disposable income, both in the maximum duration and in the common duration case. The Swedish system has the longest income-related benefit period of the 8 countries. The loss of income during maternity leave is also relatively modest in Canada.

2.3. Summary tables of APW-calculations for 1999

The results reported in section 2.2 are summarized in tables 2.17 and 2.18.

Table 2.17. Summary, 'standard' income events for APW-families without children, 1999

	DENMARK		SWEDEN		FINLAND		AUSTRIA	
	Compensation %	Change disposable income, %	Compensation %	Change disposable income, %	Compensation %	Change disposable income, %	Compensation %	Change disposable income, %
Ill 1 week, single APW	52 [1], 100 [1]	-0.7, 0.0	64 [1]	-0.7	0 [1], 100 [1]	-1.5, 0.0	50 [1], 100 [1]	-0.8, 0.0
25% unemployment, eligible for compensation, single APW	52 [1]	-9.6	63 [1]	-8.8	46 [1]	-9.7	56 [2]	-7.7
100% unemployment, eligible for compensation, single APW	52 [1]	-38.6	67 [1]	-30.5	50 [1]	-41.4	56 [2]	-44.0
25% unemployment, not eligible for compensation, single APW	31 [1]	-14.1	26 [1]	-17.2	19 [1]	-15.5	51.5 [2]	-8.7
100% unemployment, not eligible for compensation, single APW	31 [1]	-59.1	28 [1]	-70.2	21 [1]	-73.4	51.5 [2]	-48.5
Female 100% unemployment, eligible for compensation, APW-couple	70 [1]	-6.9	78.5 [1]	-7.6	63.5 [1]	-12.0	56 [2]	-15.8

1) The compensation percentage is before taxation. For illness there are two compensation percentages and changes for all the countries, except Sweden and Canada. The first one refers to insurance alone, the second one includes usual compensation from the employer. For Sweden the two coincide from 1993.

2) The compensation percentage is after taxation.

Table 2.17. Continued.

	GERMANY		THE NETHERLANDS		GREAT BRITAIN		CANADA	
	Compensation %	Change disposable income, %	Compensation %	Change disposable income, %	Compensation %	Change disposable income, %	Compensation %	Change disposable income, %
Ill 1 week, single APW	90 [2], 100 [1]	0.0, 0.0	42 [1], 100 [1]	-0.9, 0.0	7 [1], 80 [2]	-1.6, -0.4	0 [1]	-1.5
25% unemployment, eligible for compensation, single APW	60 [2]	-6.6	70 [1]	-6.6	14.5 [1]	-19.1	46.5 [1]	-9.9
100% unemployment, eligible for compensation, single APW	60 [2]	-41.8	70 [1]	-27.9	15 [1]	-80.3	48 [1]	-44.1
25% unemployment, not eligible for compensation, single APW	53 [2]	-8.1	31 [1]	-10.0	14.5 [1]	-19.1	6.5 [1]	-18.9
100% unemployment, not eligible for compensation, single APW	53 [2]	-48.5	31 [1]	-53.3	15 [1]	-80.3	6.5 [1]	-91.2
Female 100% unemployment, eligible for compensation, APW-couple	60 [2]	-12.3	70 [1]	-10.1	15 [1]	-29.1	41 [1]	-17.6

1) The compensation percentage is before taxation. For illness there are two compensation percentages and changes for all the countries, except Sweden and Canada. The first one refers to insurance alone, the second one includes usual compensation from the employer. For Sweden the two coincide from 1993.

2) The compensation percentage is after taxation.

Table 2.17. Continued.

	DENMARK		SWEDEN		FINLAND		AUSTRIA	
	Compensation %	Change disposable income, %	Compensation %	Change disposable income, %	Compensation %	Change disposable income, %	Compensation %	Change disposable income, %
Injured, total loss of working capability, single APW	113 [1]	+28.4	100 [1]	0.0	85 [1]	-8.6	80 [1]	+9.3
Injured, 1/3 loss of working capability, single APW	77 [1]	-3.6	100 [1]	0.0	85 [1]	-1.7	67 [1]	+2.9
Pensioner [2], disability, former working period, single APW	74	-26	61	-39	63.5	-36.5	68	-32
Pensioner [2,3], disability, no former working period, single APW	74	-26	45	-55	32	-68	36	-64
Pensioner, disability, wife (former ½ APW), APW-couple	75.5 [1]	+0.7	61 [1]	-8.8	67 [1]	-8.8	53 [1]	-13.1
Pensioner [2], old-age max. working period, single APW	54	-46	62	-38	66	-34	86	-14
Pensioner [2,3], old-age no working period, single APW	47	-53	39	-61	32	-68	52	-48
Pensioner [2], old-age max. working period, APW-couple	55	-45	63.5	-36.5	70	-30	84	-16

1) The compensation percentage is before taxation.
2) The compensation percentage is after taxation.
3) Strictly speaking "nonsense". The concepts are relative to the APW.

Table 2.17. Continued.

	GERMANY		THE NETHERLANDS		GREAT BRITAIN		CANADA	
	Compensation %	Change disposable income, %	Compensation %	Change disposable income, %	Compensation %	Change disposable income, %	Compensation %	Change disposable income, %
Injured, total loss of working capability, single APW	67 1)	+16.0	70 1)	-27.9	53 1)	-29.7	90 2)	-10.0
Injured, 1/3 loss of working capability, single APW	67 1)	+12.5	63 1)	-10.7	28 1)	-17.0	90 2)	+0.8
Pensioner [2], disability, former working period, single APW	60	-40	72	-28	28.5	-71.5	40	-60
Pensioner [2,3.] disability, no former working period, single APW	22	-78	47	-53	21	-79	23	-77
Pensioner, disability, wife (former 1/2 APW), APW-couple	37 1)	-10.8	70 1)	-10.1	43 1)	-17.3	41 1)	-17.5
Pensioner [2.] old-age max. working period, single APW	74	-26	49	-51	51	-49	55	-45
Pensioner [2,3.] old-age no working period, single APW	22	-78	49	-51	29	-71	41	-59
Pensioner [2.] old-age max. working period, APW-couple	69	-31	42	-58	55	-45	58	-42

1) The compensation percentage is before taxation.
2) The compensation percentage is after taxation.
3) Strictly speaking "nonsense". The concepts are relative to the APW.

Table 2.18. Summary, benefits for APW-families concerning children, 1999

	DENMARK		SWEDEN		FINLAND		AUSTRIA	
	Compensation %	Change disposable income, %	Compensation %	Change disposable income, %	Compensation %	Change disposable income, %	Compensation %	Change disposable income, %
1 child (6 years old)	-	+4.3	-	+4.1	-	+4.3	-	+6.6
2 children (6 and 3 years old)	-	+8.5	-	+8.2	-	+9.5	-	+13.9
3 children (6, 3 and 1 year old)	-	+13.2	-	+13.3	-	+15.8	-	+22.4
Birth of child no. 2, benefits, maximum duration	52 [1)]	-6.9	80 [1)]	-6.8	69 [1)]	-8.7	100 [1)]	0.0
Birth of child no. 2, benefits, standard duration	52 [1)]	-3.0	80 [1)]	-1.6	69 [1)]	-2.2	100 [1)]	0.0

1) The compensation percentage is before taxation. The first case with benefits in connection with birth reflects the effect of the maximum duration of the benefit. The second case reflects the effect of a common duration.
2) The compensation percentage is after taxation.

Table 2.18. Continued

	GERMANY		THE NETHERLANDS		GREAT BRITAIN		CANADA	
	Compensation %	Change disposable income, %	Compensation %	Change disposable income, %	Compensation %	Change disposable income, %	Compensation %	Change disposable income, %
1 child (6 years old)	-	+5.5	-	+2.6	-	+3.5	-	+1.3
2 children (6 and 3 years old)	-	+11.0	-	+5.1	-	+5.9	-	+2.6
3 children (6, 3 and 1 year old)	-	+17.6	-	+7.4	-	+8.3	-	+7.5
Birth of child no. 2, benefits, maximum duration	100 [2]	0.0	100 [1]	0.0	53 [1]	-4.3	53 [1]	-6.7
Birth of child no. 2, benefits, standard duration	100 [2]	0.0	100 [1]	0.0	58.5 [1]	-3.0	50 [1]	-3.8

1) The compensation percentage is before taxation. The first case with benefits in connection with birth reflects the effect of the maximum duration of the benefit. The second case reflects the effect of a common duration.
2) The compensation percentage is after taxation.

2.4. Developments

Introduction

A series of changes in the social security and taxation schemes will be mentioned country by country in the following section, 'Changes 1999'. Then follows short comments on the 'APW-calculations' for 1999 compared to those for 1998, including an attempt to explain at least the major changes.

Changes 1999

DENMARK

Taxation and social contributions

The 1994 tax reform was fully implemented in 1998. A new reform started in 1999 with the main objective of reducing the tax value of negative capital income. The reform will be implemented gradually from 1999 to 2002. The allowance in the 'middle state tax' bracket will also be increased significantly and the tax rate for the 'bottom state tax' will be reduced.

A social contribution of 1 per cent of working income (fixed amount for taxable benefits) was introduced in 1998 for temporary pension savings. This social contribution became permanent in 1999, levied by 1 per cent on working income and taxable benefits.

Related to the early retirement reform, cf. later, a specific contribution was introduced for this scheme. The scheme is voluntary, just as the unemployment insurance scheme is, but if joined, contributions for both schemes have to be paid. The unemployment insurance scheme can be joined separately.

Unemployment benefits

The duration of the benefit period has been reduced several times in the 1990s. In 1999 it was reduced to 4 years, a change that was implemented gradually.

From 1999, participation in active labour market measures will have to start after maximum 1 year of unemployment, for young unemployed below 25 years after maximum 6 months of unemployment.

Older unemployed have a longer benefit period in some situations; in others it might be shorter. From 1999 it is possible to continue receiving U.B. after the rights have expired, if that happened after the age of 55 years, until the age of 60 years, if continued membership of the U.B. and early retirement schemes implies eligibility for early retirement at the age of 60 years. Before 1999 this was possible if the U.B. rights expired after the age of 50 years. The benefit period is only 2 1/2 years for unemployed over 60 years. These age groups are now also obliged to participate in active labour market measures.

Early retirement

The ordinary early retirement scheme ('Efterløn') was changed in 1999. The entrance benefit was lowered and is now constant through the whole period (average of step 1 and 2 benefits in the old scheme), premiums for delayed early retirement or none at all were introduced, and benefits can be received until the age of 65, the new formal retirement age (from 2004). A specific contribution for the scheme was introduced and the condition for membership of the unemployment insurance scheme was increased to 25 out of the last 30 years. The previous separate part-time scheme was abolished and is now integrated into the new scheme.

SWEDEN

Taxation and social contributions

The state tax scheme was changed in 1999. The tax rate was lowered from 25 per cent to 20 per cent for income above the first threshold (219,300 SEK), but only up to a new threshold (360,000 SEK). For income above the new threshold the tax rate is 25 per cent. A tax credit (not for pension income) of 1,320 SEK was introduced, it is tapered by 1.2 per cent of income above 135,000 SEK.

The employee paid social contribution is a contribution for pensions from 1999, when it became 6.95 per cent. The maximum income for employee paid contributions was increased from 7.5 times to 8.06 times the 'augmented' basic rate. The increased ceiling is designed in such a way that the new ceiling minus the pension contribution (which is now the income concept pension rights are based on) equals 7.5 times the 'augmented' basic rate, the maximum income generating pension rights.

Pensions

General outline

The new Swedish pension scheme was legally implemented in 1999. The first payments will start in 2003. There will be a long (17 years) gradual phase in period and an equally long phase out period of the old scheme. The new scheme will be fully implemented for those who were born in 1954 or later.

The new scheme has 3 components, an unfunded income-related component, a funded income-related component and a flat rate minimum pension, basically for those who have no or only a small pension from the other components

Income-related components

The annual pension right is 18.5 per cent of the base. The base is factual income up to a ceiling and a ficticious supplement for instance for parents looking after children and receiving parental benefits. The state pays the 18.5 per cent of the ficticious supplement. 2.5 percentage points of the 18.5 per cent are allocated to the funded scheme, which is a defined contribution plan.The pension outcome from this component depends on the yield from the invested funds.

The 16 percentage points of the base is for the pay as you go component. There is no actual savings, the contributions (both from the employer and the employee) are used to pay for current pensions. There is, however, a book-keeping procedure. The rights of each year, 16 per cent of the base, are registered and the rights of the previous years are indexed by an income based index, so that all rights are in the income level of the current year. The index for each year is constructed on basis of the development in the preceding 3 years.

When a person turns 65 his accumulated pension rights in the pay as you go scheme are divided by an actuarial estimate of the remaining life span for his or her cohort. This division is, however, also reflecting an anticipated norm growth rate of incomes of 1.6 per cent per year (this could also have been done by increasing the accumulated pension rights). The actual indexing of one year's pension is done by the income based index from which is subtracted the norm growth of 1.6 per cent. This means that the pensions follow the real income development in society. The amount from the funded component can be used to buy a pension, there are different options.

The income-related pensions can be received from the age of 61 years (against an actuarial reduction for the rest of the life) and as 25 per cent, 50 per cent, 75 per cent or a full pension.

Balancing mechanism

If there is a deficit for a given year the indexing of both the pension rights and the current pensions will be lowered. The deficit is determined by the 'balancing factor', which is calculated as the pension contributions + the buffer fund divided by the pension obligations of a given year. If that factor is below 100, the wage base index is reduced accordingly. If the wage index for a given year is 102 and the balancing factor 99, the reduced index will be 102 x 99 = 101, the indexing will be halved.

Minimum pension

The guaranteed pension is for those with no or only a small income-related pension. It is a flat rate pension with an amount of 2.13 times the basic rate (not augmented) for single pensioners and 1.90 times the basic rate for married pensioners. The guaranteed pension is residence based, it takes a 40-year stay in Sweden from the age of 25 to obtain a full pension. This pension can be received from the age of 65 years.

FINLAND

Taxation and social contributions

From 1998 to 1999 most state tax rates were decreased by 0.5 percentage points and the thresholds were increased. The social contribution based on taxable income for local taxation was lowered from 1.95 per cent in 1998 to 1.5 per cent in 1999. The 'low earned income allowance' was changed significantly in 1999. The maximum allowance increased from 5,500 FIM to 8,600 FIM. The tapering starts from an income of 75,000 FIM in 1999 up from 43,000 FIM in 1998. The taper is 3 per cent of income above that level in 1999, in 1998 it was 2 per cent of income above 43,000 FIM. The 'low earned income allowance' is only relevant for working income.

Illness

The wage base used to calculate the benefits was reduced by 5 per cent in 1998 and 1999, up from 4.5 per cent in 1997.

Unemployment benefits

Just as for sickness benefits the wage used to calculate the benefits was reduced by 5 per cent in 1998 and 1999, up from 4.5 per cent in 19997. The basic benefit which is also the minimum U.B. was increased from 120 FIM per day in 1998 to 121 FIM in 1999.

Family allowances

The child benefits were reduced in 1996 compared to 1995. They have been nominally unchanged from 1996 to 1999.

Maternity leave benefits

The wage base used to calculate the benefits was reduced by 5 per cent in 1998 and 1999, up from 4.5 per cent in 1997. The formula is the same as used for sickness benefits, but there are no waiting days for maternity leave benefits.

AUSTRIA

Taxation and social contributions

There were no changes in the Austrian scheme for personal taxation from 1998 to 1999.

Family allowances

The Austrian family allowances have two components, a cash benefit and a refundable tax credit. Both were increased by 1,500 ATS (annual basis) from 1998 to 1999. Furthermore, a 'large family' supplement of 2,400 ATS was introduced in 1999. It is for the 3rd and subsequent children if the family income is below 504,000 ATS.

GERMANY

Taxation and social contributions

The German personal taxation scheme was changed considerably in 1996 folowing the rulings of the Constitutional Court. The non-taxable income (basic allowance) was more than doubled and the tax schedule changed up to a relatively high income. In 1999 the non-taxable income was increased again and the tax rates reduced. A new tax reform continuing these trends was adopted in 2000. The non-taxable income (basis allowance) will be gradually increased and the tax rates gradually lowered until 2005. The social contributions were lowered a little in 1999. The tax reform 2000-2005 includes limitations on the social contributions for pensions, implying reforms of the German pension schemes.

Family allowances

The present structure of the German family allowances is from 1996, following another ruling from the Constitutional Court. The scheme now consists of refundable tax credits or, if that is of advantage for the family, a tax allowance for each child. The tax allowance will only be an advantage for families with high incomes, where the progressive tax schedule increases the tax value of the allowance with increasing income. The refundable tax credits were increased to 3000 DEM (annual basis) for the first and second child (no changes for the 3rd and subsequent children) in 1999. There were no changes in the tax allowance in 1999.

THE NETHERLANDS

Taxation and social contributions

From 1999 the Dutch tax schedule has 4 'slices', before then it was 3. The 'old' 1st slice has so to speak been split into 2 slices. The first has a tax rate of 35.75 per cent up to a taxable income of 15,000 NLG and the second has a tax rate of 37,05 per cent up to a taxable income of approx. 48,000 NLG. The new 1st slice has a somewhat lower tax rate than the old one, but the income range is smaller. The new 3rd and 4th slices are similar to the old 2nd and 3rd ones respectively. A substantial tax reform was implemented from 2001.

GREAT BRITAIN

Taxation and social contributions

The personal tax scheme was changed in 1999 when the 20 per cent tax bracket was abolished and a new 10 per cent bracket was introduced. The tax rates in the new scheme are 10, 23 and 40 per cent. The threshold between the first (10 per cent) and the second (23 per cent) bracket was, however, lowered significantly from 4,300 GBP to 1,500 GBP, the second bracket is now wider than before. The social contribution (2 per cent) for earnings equal to the LEL was abolished in 1999. Social contributions for the employee are only levied on income between the LEL and the UEL, and from 2000 there is also a zero band here, between the LEL and the Primary Threshold. The employer paid social contributions were also reformed in such a way that a uniform percentage is now used above the earnings threshold. All three changes were recommended or endorsed in the 'Taylor' report, the foundation for 'The Modernisation of Britain's Tax Benefit System', a programme of the New Labour Government.

Pensions

The British old-age pension system will be reshaped significantly in future. The basic pension or national pension will still be there. The SERPS will first be changed (from 2002) to give higher pensions for former low to medium income levels, the Second State Pension. In the end it is the plan to replace SERPS with a flat rate pension. The income- related future occupational pension scheme will be the Stake-Holder Pension scheme (from 2001), in principle a private scheme but supported by the state to keep down administrative costs.

Family allowances

The ordinary child benefit for the first child was increased significantly from 11.45 GBP/week in 1998 to 14.48 GBP/week in 1999. The benefit for the other children just followed the price index.

Working families tax credit

From October 1999 the Family Credit (FC) scheme was replaced by the Working Families Tax Credit (WFTC). The new scheme uses refundable tax credits instead of cash benefits. The refundable tax credits are designed as means-tested child benefits, paid on top of ordinary child benefits. The structure of the new scheme is similar to that of the old FC scheme, but the taper is smaller, 55 per cent. The FC scheme also had a disregard (in income) for child care (CCD), this is also changed into a tax credit in the new scheme. The new scheme is designed to make work pay better than it did in the old scheme. It is targeted to improve the returns from work especially in the income range 100-300 GBP per week, the typical income range for reentry to work from unemployment. The administration of WFTC is done by Inland Revenue. Another cash based scheme, the Disability Working Allowance, was at the same time replaced by the Disabled Person's Tax Credit, and a tax credit for children, the Children's Tax Credit was introduced from 2001. There is, at least in Great Britain and in Canada, cf. the next section, a development towards using the tax scheme instead of the benefit scheme to secure adequate income primarily for families with children. This can be seen as a step in the direction of integration of the tax and benefit schemes.

CANADA

Taxation and social contributions

The federal tax rates and tax brackets stayed constant also in 1999, the brackets only change when the annual price increases are above 3 per cent. The means-tested supplement to the basic tax allowance from 1998 was changed to a uniform increase of this allowance in 1999. Contributions for CPP (Canada Pension Plan) increased slightly whereas those for the EI (Employment Insurance) decreased slightly. Local taxes for Ontario dropped significantly from 42.75 per cent to 39.50 per cent. Surtaxes for Ontario, however, increased at the same time.

In 1997 the WIS (Working Income Supplement) scheme was reshaped to contain a new refundable tax credit scheme designed as child benefits (on top of the ordinary child benefit scheme). There was a 'build-up' phase, where the benefit grows from zero to its maximum, then a constant phase, where the benefit is unchanged, and finally a 'tapering' phase, where the benefit is reduced to zero when income increases. The 'build-up' phase was abolished in 1998, implying that all low income families (with children) start as recipients. This new scheme, which replaced WIS, is called NCBS (National Child Benefit Supplement), which together with CTB (Child Tax Benefit), the 'ordinary' child benefit scheme, now constitutes the CCTB (Canada Child Tax Benefit). This is the federal child benefit program. From 1998 NCBS was supplemented with a provincial scheme, together the federal child benefit scheme, CCTB, and the provincial child benefit schemes constitute the NCB (National Child Benefit) program, cf. Chapter 5 for more detail. The plan is that the NCB will be developped into a uniform child benefit scheme replacing all other benefits for children.

Comments on 'APW-calculations' for 1999 compared to 1998.

DENMARK

Most net replacement rates in the Danish cases decreased marginally from 1998 to 1999. The main reason is that the relative increase in most benefits (mainly flat rates) was slightly smaller than the relative wage increase from 1998 to 1999, this, again, is due to the regulation mechanism for most benefits being based on former wage changes but only partially. For more detail, cf. Chapter 6.

The changes from 1998 to 1999 are small, but over the years they add up. The net replacement rate in case of 100 per cent unemployment was for instance 70 per cent in 1991. In 1999 it was 61 per cent for an unemployed receiving unemployment insurance benefits. There were no major rule changes for this benefit in the period.

SWEDEN

While 1998 was the 'turning point' for the Swedish social security system, it was the year when most benefits increased for the first time since the early 1990s, relatively little happened in 1999. The unemployment benefits (maximum) were nominally unchanged from 1998, resulting in slightly decreasing net replacement rates for these situations. The 2 per cent reduction in pensions stopped in 1999, resulting in increasing net replacement rates for pensioners. The family allowances were nominally unchanged from 1998 to 1999, the positive impact from this scheme decreased a little. For more detail, cf. Chapter 3.

FINLAND

For Finland there were both a data revision and major errors in the calculations for 1998, why it hardly is meaningful to comment on differences between these and the 1999 results. Chapter 4 contains comments on differences between the corrected 1998 calculations and the 1999 results. The main result here is that most negative impacts are a little larger in 1999 than in 1998, and the positive impacts, from family allowances, are a little smaller.

AUSTRIA

Most changes in the Austrain tax/benefit calculations were very small from 1998 to 1999. The tax scheme was the same in the two years implying a slightly increasing tax burden for the reference APW income level. The positive impact of gross income based and tax free benefits then increased marginally from 1998 to 1999. Family allowances were improved in 1999 and the positive impact from these benefits increased from 1998 to 1999. The pensions are based on proxies, so minor changes in the base for these proxies are reflected in the results, and are of no major importance. The calculations are not precise enough to make a meaningful interpretation of such changes.

GERMANY

Most relative impacts on disposable income are quite stable from 1998 to 1999. The tax and social contribution burden decreased marginally from 1998 to 1999 implying slightly smaller net replacement rates for tax free benefits based on gross wages, e.g. compensation for industrial injuries. Pensions came out with lower net replacement rates for the same reason and because the rate increase was much smaller than the wage increase (pensions at the levels used in this study are not taxed but there is a proportional social contribution). The child benefits improved from 1998 to 1999 implying a larger relative positive impact from this component in 1999.

THE NETHERLANDS

The impacts for the Netherlands are, generally speaking, very stable from year to year, most benefits are strictly income-related. In 1999, an alternative procedure for calculation of WW contributions from transfer income was used, and this results in some differences between 1998 and 1999, but they are only due to the change in calculation method. Old-age pension was taxed too hard in 1998, especially for the single pensioner, resulting in higher net replacement rates for this benefit in 1999 than in 1998. But this is just a consequence of the mentioned error.

GREAT BRITAIN

There are, generally speaking, only marginal differences between the impact on disposable income from the selected 'events' in 1998 and 1999. The negative impact from most events was slightly larger in 1999 than in 1998 because the indexation (price based) of most benefits is smaller than the wage development. The positive impact from family allowances was higher in 1999 than in 1998 because of improvements of this benefit scheme.

The small changes for Great Britain also add up. The net replacement rate for the 100 per cent unemployed was 22 per cent in 1991. In 1999, it was a little less than 20 per cent for the unemployed receiving JSA. This change may seem small, but it is almost the same relative reduction as in the Danish case for the same benefit.

CANADA

The revised data series from Statistics Canada, cf. Chapter 5, only make a modest impact on the results for unemployment benefits, compensation for industrial injuries and maternity leave benefits. These benefits are strictly income-related, and the 1998 and 1999 results are very similar. There is an impact on pensions where the net replacement rates decrease, but if the 1998 wage level is corrected according to the revised data, the decrease is rather modest, cf. Chapter 5 for further details. The impact from child benefits decreases a little from 1998 to 1999 except in the case with 3 children where the Ontario child care supplement scheme, cf. Chapter 5, has a full year effect.

3

TIME SERIES OF APW-CALCULATIONS, SWEDEN

Introduction

This chapter focuses on two topics. The first topic is a kind of sensitivity calculation, where the impact of variations in the APW gross wage income on the changes in disposable income caused by the different 'events' is studied. The variation is generated by the difference between projected APW gross wage income and 'correct' APW gross wage income for the Swedish APW, cf. below for a definition.

The other topic is a short history of major changes in the Swedish tax/benefit system since the early 1990s. The calculations based on 'correct' APW gross wage income are used to illustrate the impact of the changes in the Swedish tax and benefit schemes from 1991 to 1998. For 1999 the calculations contained in this edition of 'Elements' have been applied.

3.1. APW-calculations based on projected and 'correct' data

The calculations of impacts on disposable income of the APW from different 'events' are based on projected data in each edition of 'Elements of Social Security'. If these projections are inaccurate it will have an impact on the calculated results, i.e. replacement rates or changes in disposable income. How significant is this impact? In order to answer that question the calculations from 1991 to 1998 for the Swedish APW have been repeated, this time using 'correct' data, and the results of the repeated calculations have been compared with the original calculations in the respective editions of 'Elements'.

'Correct' data are defined as the 1995 edition of 'The Tax/Benefit Position of Production Workers' from the OECD for the years 1991-1994 and the 1996, 1997 and 1998 editions of 'The Tax/Benefit Position of Employees' for the years 1995, 1996 and 1997 respectively.For 1998 it is the 1999 edition of 'Taxing Wages', as the OECD publication is now called. The OECD publications cover the position of the fully employed production worker or employee. The calculation of the benefits has been carefully checked by the Swedish Ministry of Finance, so 'correct' data supplemented by checks from the Swedish experts constitute the best possible basis for the calculations. Even the rounding rules in the Swedish taxation scheme have been implemented in the calculations based on 'correct' data.

Sweden was chosen as the first country for this type of study because the Swedish system is a mix of 'income-related' and 'flat rate' benefits and because there were both minor (1991, 1992 and 1995), 'medium' (1994) and rather substantial (1993 and 1996) projection errors of the APW-income level. For 1997 and 1998 'correct' data and 'Elements' are identical. Finally, the Swedish Ministry of Finance was willing to participate in these very detailed calculations, which would not have been possible without their help.

The repeated calculations are primarily to evaluate the calculations based on projected data, but they also tell about the impact of the changes in the Swedish taxation and social security system over the period 1991-98, cf. section 3.2.

The basic APW-calculations for the 8 years from 'Elements' and 'correct' data are contained in table 3.1.

Table 3.1. Sweden, single APW

	SEK							
Used in:	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**
'Elements'								
Gross wage	162,085	169,700	178,700	180,000	191,000	200,000	209,214	216,216
Tax and social contribution	45,205	47,467	52,890	55,143	62,315	67,318	72,220	76,126
Disposable income	116,880	122,233	125,810	124,857	128,685	132,682	136,994	140,090
'Correct' data								
Gross wage	162,400	171,000	173,900	183,100	190,260	204,714	209,214	216,216
Tax and social contribution	45,548	47,901 1)	51,246	56,198 1)	62,032	69,069 1)	72,220	76,126
Disposable income	116,852	123,099 1)	122,654	126,902 1)	128,228	135,645 1)	136,994	140,090

Source: 1995 edition of 'The Tax/Benefit Position of Production Workers', 1996 to 1998 editions of 'The Tax/Benefit Position of Employees', and the 1999 edition of 'Taxing Wages', OECD.

1) 'Correct' data deviate from the 1995 edition of the OECD publication in which there are minor errors for Sweden for 1992 and 1994. There is also a minor deviation in 1996 compared to the 1997 edition of the OECD publication. The 1998 gross wage differs a little from that in 'Taxing Wages', which is a preliminary figure.

Note that disposable income ('correct' data) is lower in 1993 than in 1992, this will be of importance later, cf. section 3.2.

The calculations based on 'Elements' and 'correct' data are presented in table 3.2. For illness it is only the 'insurance' case which is included in the table. For 1993 it is 'the new rules' for illness and unemployment benefits which are contained in the calculations. The new cases from the 1993 edition of 'Elements' have also been calculated for 1991 and 1992 but only based on 'correct' data.

Table 3.2. Sweden. Relative change in disposable income, per cent

	1991		1992		1993 New rules	
	Elements	'Correct' data	Elements	'Correct' data	Elements	'Correct' data
Ill, 1 week	-0.5	-0.5	-0.3	-0.3	-0.6	-0.5
Unemployed 3 months, insured	-2.9	-3.0	-3.1	-3.3	-5.9	-6.0
Unemployed 12 months, insured	-	-11.9	-	-13.0	-19.2	-19.9
Unemployed 3 months, non-insured	-15.8	-15.9	-15.9	-16.0	-16.9	-16.8
Unemployed 12 months, non-insured	-	-67.0	-	-67.5	-69.7	-69.2
Wife unemployed 12 months, insured	-	-3.5	-	-3.5	-7.4	-7.6
Injuries work, 100 % loss	0	0	0	0	0	0
Injuries work, 33 1/3 % loss	0	0	0	0	0	0
Pensioner, full working history	-31.2	-31.3	-31.2	-31.7	-33.0	-31.3
Pensioner, no working history	-58.7	-58.7	-58.6	-58.9	-59.4	-58.4
Pensioner couple, full working history	-	-30.0	-	-30.4	-31.6	-29.8
Family						
1 child	+5.0	+5.0	+4.8	+4.8	+4.7	+4.8
2 children	+10.1	+10.1	+9.6	+9.6	+9.4	+9.6
3 children	+17.6	+17.7	+16.9	+16.8	+16.4	+16.8
Maternity						
Maximum period	-3.5	-3.5	-3.5	-3.4	-3.3	-3.6
Common period	-0.8	-0.9	-0.9	-0.8	-0.8	-0.9

To be continued...

Table 3.2. Sweden. Continued.

	1994		1995		1996	
	Elements	'Correct' data	Elements	'Correct' data	Elements	'Correct' data
Ill, 1 week	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7
Unemployed 3 months, insured	-6.1	-6.1	-6.8	-6.7	-7.5	-7.9
Unemployed 12 months, insured	-20.0	-20.1	-23.0	-22.7	-26.2	-27.8
Unemployed 3 months, non-insured	-15.7	-15.8	-16.1	-16.0	-16.9	-17.1
Unemployed 12 months, non-insured	-64.0	-64.6	-65.9	-65.8	-69.3	-70.0
Wife unemployed 12 months, insured	-7.7	-7.7	-7.7	-7.7	-9.5	-9.6
Injuries work, 100 % loss	0	0	0	0	0	0
Injuries work, 33 1/3 % loss	0	0	0	0	0	0
Pensioner, full working history	-31.5	-32.6	-32.9	-32.6	-34.3	-35.7
Pensioner, no working history	-58.1	-58.8	-58.8	-58.7	-59.5	-60.4
Pensioner couple, full working history	-29.7	-30.9	-31.2	-31.0	-32.7	-34.2
Family						
1 child	+4.7	+4.7	+4.6	+4.6	+3.8	+3.7
2 children	+9.5	+9.3	+9.2	+9.2	+7.6	+7.4
3 children	+16.6	+16.3	+15.0	+15.0	+11.4	+11.1
Maternity						
Maximum period	-3.6	-3.6	-6.5	-6.5	-8.5	-8.5
Common period	-0.8	-0.9	-1.5	-1.5	-2.0	-2.0

To be continued...

Table 3.2. Sweden. Continued.

	1997		1998		1999	
	Elements	'Correct' data	Elements	'Correct' data	Elements	'Correct' data
Ill, 1 week	-0.8	-0.8	-0.7	-0.7	-0.7	
Unemployed 3 months, insured	-8.3	-8.3	-8.6	-8.6	-8.8	
Unemployed 12 months, insured	-29.2	-29.2	-29.8	-29.8	-30.5	
Unemployed 3 months, non-insured	-17.2	-17.2	-17.4	-17.4	-17.2	
Unemployed 12 months, non-insured	-70.6	-70.6	-70.4	-70.4	-70.2	
Wife unemployed 12 months, insured	-9.1	-9.1	-7.6	-7.6	-7.6	
Injuries work, 100 % loss	0	0	0	0	0	
Injuries work, 33 1/3 % loss	0	0	0	0	0	
Pensioner, full working history	-36.3	-36.3	-37.5	-37.5	-37.7	
Pensioner, no working history	-60.7	-60.7	-61.4	-61.4	-61.4	
Pensioner couple, full working history	-34.8	-34.8	-36.0	-36.0	-36.5	
Family						
1 child	+3.7	+3.7	+4.2	+4.2	+4.1	
2 children	+7.3	+7.3	+8.4	+8.4	+8.2	
3 children	+11.0	+11.0	+13.7	+13.7	+13.3	
Maternity						
Maximum period	-9.3	-9.3	-7.3	-7.3	-7.1	
Common period	-2.3	-2.3	-1.7	-1.7	-1.6	

To be continued...

Table 3.2. Sweden. Continued.

	1997		1998		1999	
	Elements	'Correct' data	Elements	'Correct' data	Elements	'Correct' data
Disability pensioner, full working history	- 37.3	- 37.3	- 38.5	-38.5	-38.7	
Disability pensioner, no working history	- 54.6	- 54.6	- 55.5	-55.5	-55.4	
Wife disabled, husband works	- 8.0	- 8.0	- 8.5	-8.5	-8.8	

Comments on table 3.2.

1991

The results of the two sets of calculations are almost identical. The small differences, which can be observed, are primarily due to a tax rate which was a little too low in 'Elements' combined with a slightly underestimated income level for the production worker. The effects of refined calculations of the benefits as well as application of correct rounding in the tax scheme are hardly visible.

1992

The deviations are slightly larger in 1992 than in 1991, but the results of the two sets of calculations are still very close. The only reason for the differences is the somewhat underestimated income level for the production worker in 'Elements'. In 1992, unemployment benefits (both when insured and non-insured) and pensions were not directly linked to income, resulting in slightly higher negative impacts under 'correct' data than in 'Elements'. A slight effect is also seen for family allowances. The refinements in the calculation of the benefits are hardly visible.

1993 (The rules from July 1st apply)

In 1993 there was a significant overestimation of the APW income level in 'Elements', cf. table 3.1, and an error in the calculation of the social security contributions. The error on the social contributions was that transfers (benefits for illness, maternity and unemployment) were not included in the basis for calculation of the contributions, which they should have been. The overestimated income level only has a minor effect on the income-related benefits (illness, unemployment insurance) whereas it contributed to too large reductions in disposable income where flat rate benefits (or benefits not directly dependent on the current income) were involved (unemployment benefits for the non-insured, pensions and family allowances). For flat rate benefits (unemployment benefits for the non-insured) the error on social contributions counteracted the income level error. For income-related benefits the social contribution error had the effect of underestimating the negative impact of the event (the social contributions became too small, the disposable income too large). This pattern is quite obvious from table 3.2. The deviations are larger in 1993 than in the previous two years, but still relatively small.

1994

The only reason for deviations in 1994 is the somewhat underestimated gross wage in 'Elements'. This results in differences for unemployment benefits (non-insured) and pensions which in 1994 were not directly linked to income. For these components the negative impact on disposable income is higher using 'correct' data than in 'Elements', as should be expected. For family allowances, which are also flat rate, a similar effect is seen.

1995

The gross wage in 'Elements' is somewhat overestimated. That results in a little too high negative impact in 'Elements' for unemployment benefits where these have flat rate character (single persons all receive maximum or minimum U.B.). As expected, the same is the case for pensions which are not directly linked to income. For family allowances the difference between projected and 'correct' data is too small to have any impact on the percentages.

1996

The gross wage according to 'correct' data is almost 2.5 per cent higher than in 'Elements', implying a somewhat larger negative impact (smaller positive impact for family allowances) in all cases except illness, unemployment for the part-time working partner in the couple, injuries from work and parental benefits, which are all related directly to income.

1997

'Correct' data and 'Elements' are identical. From the year 1997 results from the disability pension scheme are also included in Table 3.2. When a few more years are recorded a separate text section for this scheme will be included.

1998

'Correct' data and 'Elements' are identical.

The conclusion is that the results are quite reliable even when the projections are not all that accurate. Calculations based on 'correct' data are documented in Appendix 2.

3.2. Changes in the Swedish tax/benefit system. 1991-1999

Introduction

The Swedish tax/benefit system has been changed considerably in the 1990s. It started with the tax reform in 1991, when marginal tax rates were lowered significantly and the overall structure of the tax system was simplified.

The first benefit scheme to be reformed was sickness benefits, the reform started during 1991, and there have been regular changes since. Unemployment benefits, pensions, parental benefits, and students allowances followed from 1993, later joined by family allowances. Benefits and compensation percentages were not increased again until 1998.

The purpose of this section is to give an impression of the major changes and their implications. This can be done in many ways. Here it will be in a very simple fashion, by using the calculations for 1991-1998 from section 3.1 supplemented with 1999 calculations for Sweden from chapter 2.

Personal taxation

In 1992, the year after the tax reform, there were no changes. In 1993 the 'default' deduction in income (related to work expenses, transportation, etc.) of SEK 4,000 was abolished and only transportation costs above SEK 4,000 and other costs (membership of unemployment insurance, etc.) over SEK 1,000 could be deducted in the annual income return. The first mandatory employee paid social contribution for sickness insurance was introduced, 0.95 per cent of the income (up to the usual ceiling, which is 7.5 times 'basbeloppet'). The contribution is deductible in taxable income.

In 1994, the personal allowance was diminished and another social contribution, this time for unemployment insurance, was introduced. It was 1 per cent of the income (up to the usual ceiling) and also deductible. The personal allowance was only applicable for local government taxation in 1994.

In 1995, only transportation costs above SEK 6,000 were deductible. The state tax rate was increased from 20 to 25 per cent, and the personal allowance was reintroduced for central government taxation. The social contribution for sickness insurance was augmented to 2.95 per cent of the income and the contribution for unemployment insurance, cf. also the section on U.B. was 'replaced' by a contribution for pensions of 1 per cent.

In 1996, the employee paid social contribution for sickness insurance was increased to 3.95 per cent of the income and the personal allowance was decreased from 0.25 'basbelop' to 0.24 'basbelop' (basic cases).

In 1997, the social contribution for sickness insurance was increased to 4.95 per cent and the minimum state tax was increased from SEK 100 to SEK 200.

In 1998, the combined social contributions paid by the employee increased to 6.95 per cent. It should also be recalled that the basic rate ('basbeloppet'), which determines the personal allowance, is price indexed (sometimes only partially), and then tends to fall behind the wage development.

A tapered tax credit was introduced in 1999 with a maximum of SEK 1,320, tapered with 1.2 per cent of income above SEK 135,000. A state tax rate of 20 per cent was introduced for taxable income between SEK 219,300 and SEK 360,000. Above that threshold the tax rate is 25 per cent. The upper limit for social contributions was increased from 7.5 to 8.06 times the highest of the two 'basic rates'.

What was the effect of these changes? The single 'production worker' does not experience them all, he or she does not pay central government tax (beyond a nominal SEK 100; SEK 200 from 1997), but table 3.3 contains the average tax over 9 years for the 'production worker' (APW).

Table 3.3. Average tax for single APW, 1991-1999. Income at APW level.

	1991	1992	1993	1994	1995	1996
Gross wages, SEK	162,400	171,000	173,900	183,100	190,260	204,714
Tax + social contributions, SEK	45,548	47,901	51,246	56,198	62,032	69,069
Average tax, %	28.05	28.01	29.47	30.69	32.60	33.74
Average local tax rate, %	31.15	31.04	31.04	31.05	31.50	31.65
	1997	**1998**	**1999[1]**			
Gross wages, SEK	209,214	216,216	220,644			
Tax + social contributions, SEK	72,220	76,126	77,096			
Average tax, %	34.52	35.21	34.94			
Average local tax rate, %	31.66	31.65	31.48			

1) Preliminary calculation ('Elements').

The average tax for the APW increased by almost 7 percentage points in the period. Simultaneously a significant reduction in the employer paid social contributions from approx. 38 per cent to approx. 33 per cent of the wage bill was implemented. The increased tax burden is of interest in itself, but it is also of importance when the impact of 'social events' is calculated, depending on how the benefits are taxed. 1999 saw a minor decrease in the tax burden due to the lower local tax rate and the tapered tax credit.

Sickness benefits

As already mentioned, the Swedish sickness benefit scheme has been changed several times in recent years.

Before March 1st 1991 the sickness insurance covered 90 per cent of the former income (up to the usual ceiling in the Swedish system), and the employer usually covered the remaining 10 per cent.

From March 1st 1991 the coverage was changed to 65 per cent for the first 3 days, and 80 per cent of the lost income for the remaining days during the first 2 weeks of sickness. The employer usually 'topped up' with 10 per cent of the lost income. From the beginning of the 3rd week until day 90 the coverage was 80 per cent and the employer supplemented with another 10 per cent. After day 90 the coverage was 90 per cent from the insurance scheme, and there was no supplement from the employer.

In 1992, the employer became responsible for paying 'sick pay' during the first two weeks of illness. The coverage was 75 per cent in the first 3 days and 90 per cent in the remaining part of the first two weeks of illness. From the beginning of the 3rd week the insurance paid 90 per cent of the former income (no supplement from the employer). Compared to the March 1 December 31 period in 1991 there were no changes for the recipient but the financing was changed. The increased burden for the employer was compensated through a decrease in the employer paid social contributions.

From April 1st 1993 a waiting day (first day of sickness) was introduced and the coverage changed to 80 per cent from the start of the 3rd week until the end of the 52nd week, and thereafter 70 per cent. Both percentages could be augmented by 10 percentage points paid by the employer.

The only change in 1994 was a limitation of the possibility of the employer to augment the coverage. The restricted period was from the beginning of the 3rd week until the 90th day of sickness, and the supplement was 10 per cent of the lost income.

1995 saw no changes, but in 1996 a general coverage of 75 per cent was introduced. The employer paid period was enhanced from 2 to 4 weeks in 1997, it was changed back to 2 weeks in 1998. The coverage was 75 per cent in 1997, this was changed to 80 per cent in 1998 and was also the compensation percentage in 1999.

The many changes have had an impact on the compensation both for short and long spells of sickness. Table 3.4 shows the effect of 1 week of sickness on the annual disposable income of the APW.

Table 3.4. Impact on annual disposable income from 1 week of sickness. APW-income level for single.

	1991	1992	1993	1994	1995	1996	1997	1998	1999[1)]
Reduction in disp. income, %	0.5	0.3	0.5	0.6	0.6	0.7	0.8	0.7	0.7

1) Preliminary calculations ('Elements').

The impact is calculated for the insurance coverage only. If the supplement from the employer is included, the impact in 1991 is identical to the one in 1992. The change from 1992 to 1993 is due to the waiting day. From 1995 to 1996 the coverage was reduced from 90 to 75 per cent for the last 2 days of the week with illness, and this is just visible in the reduction percentage for the two years. The 'increased' negative impact from 1996 to 1997 is mainly due to rounding. The increase in the compensation percentage from 75 to 80 per cent in 1998 is just visible.

Unemployment benefits

From July 1993 several significant changes were implemented. The gross compensation was lowered from 90 to 80 per cent of the former income and the maximum benefit was reduced to the 1992 level, where it has been until 1998! The combined effect of the two changes was to increase the income level where the maximum benefit becomes effective. If the maximum benefit had been unchanged or even increased this income level would have been even higher. Furthermore, a waiting period of 5 days (1 week) was introduced.

From July 1994 the unemployment insurance scheme changed status from voluntary to mandatory. Quite substantial administrative changes were involved. From January 1994 a social contribution of 1 per cent of the income was introduced, cf. the section on personal taxation. This contribution replaced the former voluntary member fee (which however in most cases was much lower). It was also planned that (after some time) the 'job-offer' could only once renew the rights to benefits, the next time a 'real' job is required. The work condition in the voluntary scheme was replaced by a contribution condition (social contributions should have been paid for a certain period of time). The alternative system, KAS (Kontant ArbejdsmarkedsStøtte) was integrated in the insurance scheme, it had no role of its own in a mandatory scheme. The many changes had no impact on the benefit level, and the unchanged maximum benefit had the implication that this became effective at the same nominal income in 1994 as in 1993.

From January 1995 the system was, generally speaking, turned back to the situation from before July 1994. The mandatory period had lasted half a year. The maximum benefit was as already mentioned nominally unchanged. The social contribution of 1 per cent was abolished (but one for pensions, also of 1 per cent, was introduced at the same time) and the 'old' member fee was reinstated. The 'old' work conditions 'replaced' the contribution condition but was changed from 75 days over 4 months within the last 12 months to 80 days over 5 months within the last 12 months. A membership period of 1 year of the insurance scheme was reintroduced as a co-condition (together with the work condition) for benefit eligibility. Only work after joining the scheme counts. The KAS scheme was also reintroduced. In 1996 the gross compensation was lowered to 75 per cent. The compensation was also 75 per cent for 3 quarters of 1997, and 80 per cent for the last quarter as well as 80 per cent in 1998. The maximum benefit was increased from SEK 564/day to SEK 580/day in 1998, when the work condition was also changed to 6 months with work within the last 12 months. There were no changes from 1998 to 1999.

Table 3.5 contains the impact on annual disposable income from unemployment spells of varying duration.

Table 3.5. Impact on annual disposable income from unemployment (insured). APW-income level for single, 1.5 APW-income level for couple.

	1991	1992	1993	1994	1995	1996	1997	1998	1999[1)]
Single, 25 % unemployed. Reduction in disposable income, %	3.0	3.3	6.0	6.1	6.7	7.9	8.3	8.6	8.8
Single, 100 % unemployed. Reduction in disposable income, %	11.9	13.0	19.9	20.1	22.7	27.8	29.2	29.8	30.5
Net replacement rate, %	88.1	87.0	80.1	79.9	77.3	72.2	70.8	70.2	69.5
Couple, spouse with 0.5 APW income. 100 % unemployed. Reduction in disposable income, %	3.5	3.5	7.6	7.7	7.7	9.6	9.1	7.6	7.6

1) Preliminary calculation ('Elements').

The single 'production worker' receives maximum compensation in 1991, 1992, 1995, 1996, 1997, 1998 and 1999 (equivalent to a gross coverage of 87 per cent, 86 per cent, 76 per cent, 70 per cent, 69 per cent, 68 per cent and 67 in the respective years when 100 per cent unemployed and the waiting period, from 1993, has been taken into account), and approx. 78.5 per cent of the lost gross income in 1993 and 1994. The spouse with 0.5 APW income receives the percentage share in all the years, i.e. 90 per cent in 1991 and 1992, 80 per cent from 1993 to 1995 and 75 per cent in 1996. For 1997 a percentage share of 76.25 was applied (weighted average of 75 and 80). In 1998 and 1999 the share was

80 per cent. From 1993 the gross coverage in the 0.5 APW case is somewhat smaller than the mentioned percentage shares because of the waiting period.

The change in impact for the single APW from 1991 to 1992 is due to a small relative increase in the maximum benefit compared with a substantial relative increase in gross wages. From 1992 to 1993 the significant changes already mentioned made their impact (for 1993 it is the 'after July 1st rules' which have been applied for the whole year), especially for short spells of unemployment where the 5-day waiting period is most important. In 1995, the change for the single, compared with 1994, is due to the fact that the unemployed single person 'again' receives the maximum compensation, which is nominally unchanged since 1992. The implication is a gross coverage of 76 per cent in 1995 compared with 78.5 per cent in 1994. The same maximum benefit is applied again in 1996 and 1997 reducing the gross coverage to 70 per cent and 69 per cent respectively when 100 per cent unemployed, especially the reduction from 1995 to 1996 is substantial. In 1998, the negative impact from unemployment continued to increase. The maximum benefit was increased, but the gross coverage decreased to 68 per cent. 1999 had an unchanged maximum benefit and saw an increased negative impact, which would have been substantially larger without the tapered tax credit.

For the single person, the negative impact on disposable income from unemployment has almost tripled for short spells (25 per cent unemployment) over the 9 years studied. For long spells (100 per cent unemployment), the negative impact has increased a little more than 2.5 times.

The relatively strong change from 1992 to 1993 for the couple depends on changes in both the unemployment insurance scheme and in the taxation scheme. The increased relative impact in 1996 is due to the reduction of the compensation to 75 per cent. The smaller impact in 1997 is because of the higher average compensation, 76.25 per cent. In 1998, the compensation percentage of 80 reduces the negative impact further. This impact was unchanged in 1999.

KAS (Kontant ArbejdsmarkedsStøtte) was an alternative scheme to the voluntary unemployment insurance scheme. It was designed for unemployed who were not members of the insurance scheme or have not been members long enough (1 year) to obtain benefit rights. The benefit period was relatively short, and it was possible to receive social assistance as a supplement. From 1998 KAS was replaced by the basic insurance scheme fulfilling the same objectives as KAS but without the short benefit period. It has the same work condition as the voluntary scheme, but can also be accessed by fulfilling specific work conditions after ending a period of studies. The minimum age for receiving basic insurance benefits is 20 years.

The KAS scheme has not been changed significantly in its life time, except in the 2nd half of 1994 when KAS was integrated with the mandatory unemployment insurance scheme. The KAS scheme and its successor are mandatory in the sense that benefits can be received if only working and age requirements are met. There is no membership requirement. On the other hand, the recipient does not have to be a member of any insurance scheme so in this sense it is not a mandatory but a general scheme.

The rates are low (they are identical to the minimum rates in the insurance scheme). From July 1993, the rate was reduced to 1992 level, but increased significantly in 1994 and then stayed nominally unchanged in 1995. From 1996 there was a decrease in the rate at the same time as the gross compensation in the insurance scheme was lowered to 75 per cent. This level was maintained in 1997. In 1998, when the compensation in the voluntary income-related scheme increased, the flat rate benefit in the basic scheme also increased. It was unchanged in 1999.

Table 3.6 contains the impact on disposable income when receiving KAS, from 1998 when receiving benefits from the basic scheme. The case, where KAS is received for the whole year (longer than the benefit period), should be interpreted as the 'annual rate' of impact. This is not a problem in the basic insurance scheme having the same benefit period as the voluntary scheme.

Table 3.6. Impact on annual disposable income from unemployment (KAS). APW-income level for single.

	1991	1992	1993	1994	1995	1996	1997	1998	1999[1)]
Single, 25 % unemployed. Reduction in disposable income, %	15.9	16.0	16.8	15.8	16.0	17.1	17.2	17.4	17.2
Single, 100 % unemployed. Reduction in disposable income, %	67.0	67.5	69.2	64.6	65.8	70.0	70.6	70.4	70.2
Net replacement rate, %	33.0	32.5	30.8	35.4	34.2	30.0	29.4	29.6	29.8

1) Preliminary calculation ('Elements').

The impact of the rate reduction from 1992 to 1993 and the increase in 1994 is quite obvious as well as the rate reduction in 1996 and the unchanged rate in 1997. The rate increase in 1998 is seen in the 100 per cent case, but not in the 25 per cent case. The gross income in this case increases more from 1997 to 1998 than the gross income of the APW, but the net income increases less than for the APW resulting in a slightly increased negative impact. The negative impact is slightly smaller in 1999 than in 1998 despite unchanged benefits. This is due to the tapered tax credit having a major effect on these relatively low income cases.

Net replacement rates in the 30-35 per cent bracket are highly unusual in the Swedish social security system and the minimum benefit (even with the relatively short benefit period under KAS) will hardly be the only income source. It will probably be supplemented by social assistance, where allowances for housing costs are important components. This aspect is not covered here, cf. 'Unemployment Benefits and Social Assistance in Seven European Countries' September 1995, Dutch Ministry for Social Affairs and Employment, for calculations including housing allowances.

Compensation for injuries from work

The rules concerning eligibility for benefits from the insurance for injuries from work scheme are comprehensive and complicated as in most other countries. Compensation can be obtained during illness, permanent loss of working capability and in case of death. For illness, a special 'coordination period' existed until July 1993 according to which sickness benefits under the insurance scheme of injuries from work were paid after special rules. From July 1993, these special rules were abolished and replaced with ordinary rules for sickness benefits, cf. the section on sickness benefits.

If loss of working capability is permanent the lost income is replaced completely (up to the usual ceiling in the Swedish system). There is, therefore, no reason for calculating the impact on disposable income from compensation for permanent loss of working capability, as there is none.

Old-age pensions

The Swedish public pension system consists of disability pension, partial pension and old-age pension. The old-age pension scheme, which is considered here, is very flexible. It is possible to receive this pension, also on a partial basis, from the age of 60 (61 from 1998). If the pension is received before the age of 65 there will be a permanent reduction, if it is received (for the first time) after the age of 65 there will be a permanent bonus. The bonus increases by waiting to 'take up' the pension until the age of 70.

There have been relatively few changes in the rules for old-age pension. From 1993, the pensions have been based on 98 per cent of the 'basic rate' down from 100 per cent. From 1999, the base was again 100 per cent of the basic rate. The components of the public pensions are defined as shares of the 'basic rate'. As a partial compensation for the reduced base, one of the components, 'pensionstilskuddet', which is means-tested against other pension income, was increased in 1993 (its 'share' of the basic rate was increased). In 1999, there was a further increase in the share for 'pensionstilskuddet'.
The basic rate is price indexed but with several exceptions, implying that the indexation is only partial. From 1995, there have been two basic rates, one that was more fully indexed and for instance applied for measurement of obtained pension rights, and then the other one that for instance was used for payment of pensions, and here, as mentioned, only with a value of 98 per cent until 1999.

The old-age pension scheme will be reformed, and a new system will be introduced gradually from 2003. The contributions to the new scheme have already started, cf. the sections on personal taxation and unemployment benefits, when an employee paid social contribution of 1 per cent of the income (up to the usual ceiling) was introduced in January 1995.

Table 3.7 contains the net replacement rates (based on disposable income) for a single pensioner and a pensioner couple in various situations. Only old-age pension is considered.

Table 3.7. Net replacement rates (%) for pensioners (starting at 65 years). The reference for singles is the APW-income level, for the couple it is 1.5 times that level.

	1991	1992	1993	1994	1995	1996	1997	1998	1999[1)]
Single, full working record	68.7	68.3	68.7	67.4	67.4	64.3	63.7	62.5	62.3
Single, no working record	41.3	41.1	41.6	41.2	41.3	39.6	39.3	38.6	38.6
Couple, full working record (1.5 APW income)	70.0	69.6	70.2	69.1	69.0	65.8	65.2	64.0	63.5

1) Preliminary calculation ('Elements').

The reduction of the base from 1992 to 1993 is not evident in the net replacement rates, on the contrary, these are increasing from 1992 to 1993. This is caused by a nominal decrease in the disposable income for the 'Production Worker' from 1992 to 1993, cf. section 3.1, table 3.1, the denominator in the calculation of the net replacement rate decreases and the nominator increases, but not as fast as it would have done without the reduction from 100 to 98 per cent of the base. In 1994 and 1995, the changes make their impact, the net replacement rates are decreasing, especially from 1993 to 1994 when disposable income from work increased much more than the base for pensions. This was again the case from 1995 to 1996, though even stronger, and again from 1996 to 1997, only this time more moderately. From 1997 to 1998, the wage development was much stronger than the increase in the basic rate, implying further quite significant decreases in the net replacement rates for pensioners. In 1999, the 100 per cent of the 'basic rate' as basis helped reducing the decrease in the net replacement rates to a modest level in the cases with former full working record. In the no-working record case, the new basis and the increased 'pensionstilskud' (there is no taxation) resulted in an unchanged replacement rate in 1999. In the calculations presented, the number of 'pension points' in the supplementary pension scheme have been constant. In the real world these will increase slightly at least until 1999 (the new pension reform will imply a changed basis for calculation of pension rights). This implies a slight overestimation of the decrease in the net replacement rates.

Child benefits

The basic Swedish allowance for children has been SEK 9,000 annually for each child from 1991 to 1995. The supplement for more children was 0.5 basic allowance for child no. 3, 1.0 basic allowance for child no. 4 and 1.5 basic allowance for child no. 5 and higher numbers until 1994. From July 1994, the supplement for child no. 5 (and higher numbers) was reduced to 1.0 basic allowance, the other supplements were unchanged. In 1995, supplements were changed again, i.e. for child no. 3 it became SEK 2,400, for no. 4 it became SEK 7,200 and for no. 5 (and higher numbers) SEK 9,000. From 1996, the basic allowance was lowered to SEK 7,680 and no 'new' supplements would be paid. Benefits 'attached' to the allowance for children (support for children and allowances for education) were also reduced. The rates in 1997 were unchanged compared to 1996. In 1998, the rates were increased to the 1995 level (SEK 9,000 annually for each child) and access to the supplements was 'reopened', the rates here also being at the 1995 level. There were no changes in the benefit levels from 1998 to 1999. Table 3.8 contains the effect on disposable incomes for a couple (1.5 APW income level), who receive allowances for children from 1991-1999.

Table 3.8. Impact on disposable income from allowance for children. 1.5 APW-income level for couple.

	1991	1992	1993	1994	1995	1996	1997	1998	1999[1)]
1 child, increase in disposable income, %	5.0	4.8	4.8	4.7	4.6	3.7	3.7	4.2	4.1
2 children, increase in disposable income, %	10.1	9.6	9.6	9.3	9.2	7.4	7.3	8.4	8.2
3 children, increase in disposable income, %	17.7	16.8	16.8	16.3	15.0	11.1	11.0	13.7	13.3

1) Preliminary calculation ('Elements').

The effect of the nominally unchanged allowances is quite evident. From 1992 to 1993 there is, however, no visible change. This is caused by a somewhat lower nominal disposable income also for the couple in 1993 compared to 1992, but not so much lower that it makes an impact on the percentages. The reduction in the supplement (3 children) in 1995 is clear, and the reductions in 1996 are very substantial. It is assumed that child no. 3 was born in 1996, and that there is no supplement. The decrease in positive impact continued in 1997, as the benefits were unchanged from 1996. If the relative increase in 1997 should be the same as it was in 1991 the allowance for 3 children (together) should be more than SEK 14,000 higher than it was in 1997. In 1998, when the rates were returned to their 1995 level and the supplement for child no. 3 (and more) reintroduced, there is a marked increase in the impact of the benefit, especially in the case with 3 children. The 'deficit' of SEK 14,000 in 1997 is reduced to SEK 8,500 in 1998. In 1999 it increases to SEK 9,500 because of nominally unchanged benefits.

Parental benefits

The parental insurance scheme is a remarkable component of the Swedish social security system. The scheme provides a high degree of flexibility for parents in terms of care for children in connection with births, illness or 'leave' to contact day care institutions or schools. Only the maternity leave part of the scheme is considered here. In this scheme, parents are entitled to income-related benefits for 360 days and thereafter they are entitled to a (low) flat rate benefit for another 90 days. In case of twins or even more children born at the same time, the duration of the benefit periods are enhanced.

The scheme for parental leave in relation to births was changed in 1994, when a special benefit for child care was introduced from July 1994. This new benefit replaced the last 90 days of the benefit period. According to the new scheme parents received a taxable benefit of SEK 2,000 per month per child in the age group from 1 to 3 years. The full benefit was received if the parents did not use public day care at all, a partial benefit was received if public day care was used on less than a full-time basis. Expenditures for private day care were deductible in taxable income. The scheme was only in operation for six months from July 1994 until January 1995. From January 1995 the 'lost' 90 days of the maternity leave were reintroduced.

The compensation for the 360 days with income-related benefits was 90 per cent of the lost income (up to the usual ceiling). In 1995, this was changed to one month (30 days) for each of the parents with a benefit of 90 per cent of the former income and 300 days, which can be divided between the parents, with a gross coverage of 80 per cent of the former income.

From 1996, the gross compensation was changed to 85 per cent for two months (one for each of the parents) and 75 per cent for the remaining 10 months. In 1997, the coverage was 75 per cent for all 12 months. From 1998, the 75 per cent was changed to 80 per cent for all 12 months. This was also the compensation percentage in 1999.

The effect of the maternity leave benefit is shown for a couple (1.5 APW income) getting child no. 2 in relation to a couple (1.5 APW income) who already have 2 children. Two cases are calculated. In the first case all 360 days (but none of the 90 days) are used, and it is assumed that the father has 60 days and the mother 300 days. The system is very flexible so the benefit period can be divided between the parents in many ways. It is also possible to have $^3/_4$, $^1/_2$ or $^1/_4$ of the benefit and work on a part-time basis, and the leave period can be spread over time until the child is 8 years old. This is a quite remarkable scheme. In the other case the mother has 14 weeks of maternity leave. This is the 'standard' case from chapter 2. Table 3.9 contains the results.

Table 3.9. Impact on disposable income of maternity leave benefit. 1.5 APW-income level plus child allowance for 2 children, couple.

	1991	1992	1993	1994	1995	1996	1997	1998	1999[2]
Benefit in 360 days[1], Reduction in disposable income, %	3.5	3.4	3.6	3.6	6.5	8.5	9.3	7.3	7.1
Benefit in 98 days, Reduction in disposable income, %	0.9	0.8	0.9	0.9	1.5	2.0	2.3	1.7	1.6

1) 300 days for the mother. 60 days for the father.
2) Preliminary calculation. Note that the assumption in 'Elements' is now 330 days for the mother and 30 days for the father. Table 3.9 is based on the assumptions from 1) for reasons of comparability.

Until 1995, parents (with the assumed income and distribution of the leave) could have parental leave for one year with a modest reduction on disposable income of 3.5 per cent. That was changed significantly in 1995, 1996 and also in 1997, when the relative reduction was more than 2.5 times of what it was in 1991. In 1998, the higher compensation percentage implied that the factor of 2.5 was reduced to approximately 2. There was a slight decrease in the negative impact from 1998 to 1999.

Summary

It is beyond question that changes in the Swedish tax/benefit system during the period 1991 to 1999 have had significant impacts. For the schemes covered in this section, with the exception of injuries from work, the situation for recipients of benefits was relatively worse in 1999 than it was in 1991 based on the chosen reference family types. 1998 was a kind of turning point when child benefits returned to the 1995 level and the general gross compensation percentage was increased from 75 to 80. This improved the situation for 1998 compared to 1997 in cases where the new rates (children) and percentages were applied, but for pensioners and unemployed on maximum benefits the deterioration continued. The maximum effect of the 1998 improvements was to bring the situation 'in line' with that of 1995. In 1999, the situation improved in several cases. The tapered tax credit had a positive effect especially for relative low income cases. For pensioners the abolishment of the '98 per cent' of the basic rate as basis for pensions contributed to unchanged or only slightly decreased net replacement rates. The 'impact' calculations do not tell about the development in real disposable income over time for the family types, but it is evident, that this has been inferior to that of the reference families.

4

TIME SERIES OF APW-CALCULATIONS, FINLAND

Introductory note

This chapter has been revised comprehensively in this edition of Elements of Social Security. The revisions are related to tax rules, which were not implemented correctly in former editions. The tax rules involved include tax credits and allowances related to disability, allowances related to pensions, primarily old-age pensions, and the low income deduction in local taxation, which from 1997 was only for earned income.

Approach for Sweden

A 'time series' of APW-calculations has been established for Sweden, based on 'correct' data and covering the period from the start of 'Elements' in 1991, cf. chapter 3. The purposes were twofold. First, the purpose was to assess stability of the calculations when the projected APW income levels used in 'Elements' were more or less off the mark. Second, the purpose was to follow the impact of changes in the Swedish tax/benefit system in that period as accurately as possible. Other errors than projection errors were also corrected for in this process. These errors were, however, not very significant.

Parallel approach for Finland

A similar attempt has been made for Finland, which was included in 'Elements' from 1994. The reasons for the 'time series' construction for Finland are the same as for Sweden, but the 'other errors' for Finland were more serious than for Sweden. A separate purpose is therefore also to get more correct basic calculations for Finland than was obtained in the first place. This aspect is further emphasized by the mentioned revision of this chapter. Correct calculations are always important but in particular when the development is followed over time.

4.1. APW-calculations based on projected and 'correct' data

The APW-calculations for the single fully employed person based on 'Elements' and 'correct' data are contained in table 4.1, and the impact calculations in table 4.2.

Table 4.1. Finland, single APW.

	FIM				
Used in:	1994	1995	1996	1997	1998
'Elements'					
Gross wage	119,788	126,782	137,600	141,157	145,956
Tax and social contribution	44,171	47,364	51,823	50,708	52,489
Disposable income	75,617	79,418	85,777	90,449	93,467
'Correct' data					
Gross wage	121,916	132,533	137,046	140,619	141,732
Tax and social contribution.	45,338	50,419	51,495	50,435	50,357
Disposable income	76,578	82,114	85,551	90,184	91,375

Source: 1995 edition of 'The Tax/Benefit Position of Production Workers' and 1996, 1997 and 1998 editions of 'The Tax/Benefit Position of Employees', OECD. For 1998 the official Finnish APW gross wage is somewhat higher than the one published in the 1999 edition of the OECD publication, now called 'Taxing Wages'. The official Finnish data are used here.

'Correct' data for 1994 are defined as the published gross wage data in OECD's 'The Tax/Benefit Position of Production Workers', 1995 Edition, for 1995, 1996 and 1997 it is the gross wage data in 'The Tax/Benefit Position of Employees', 1996, 1997 and 1998 editions respectively. For 1998 it is the official Finnish APW data which have been used. The gross wage level is higher than the one published in the 1999 edition of the OECD publication.

Table 4.2 contains the results of the repeated calculations based on 'correct' data as well as the original calculations from 'Elements'. The deviations for each year are commented on in the following.

Table 4.2. Finland. Relative change in disposable income, per cent.

	1994		1995		1996	
	Elements	'Correct' data	Elements	'Correct' data	Elements	'Correct' data
Ill, 1 week	-1.4	-1.4	-1.4	-1.5	-1.5	-1.5
Unemployed 3 months, insured	-8.1	- 8.3	- 8.6	- 8.8	-9.3	-9.2
Unemployed 12 months, insured	- 34.7	- 36.0	- 36.2	- 36.3	- 37.9	- 37.4
Unemployed 3 months, non-insured	-14.3	-14.3	-14.5	-14.6	-14.9	-14.9
Unemployed 12 months, non-insured	- 68.1	- 68.5	- 68.8	- 69.8	-71.0	-70.9
Wife unemployed 12 months, insured	-9.1	- 9.7	- 9.9	-10.2	-10.6	-10.5
Injuries work, 100 % loss	- 8.2	-7.3	- 7.3	-6.6	-7.6	-6.9
Injuries work, 33 1/3 % loss	- 9.6	-2.0	- 9.4	- 1.9	-2.3	- 2.0
Pensioner, full working history	- 33.4	- 31.2	- 33.2	- 30.4	- 33.1	- 33.1
Pensioner, no working history	- 62.3	- 62.8	- 63.5	- 64.7	- 66.1	- 66.0
Pensioner, couple, full working history	- 27.9	- 25.3	- 30.6	- 25.8	- 28.9	- 28.0
Family						
1 child	+ 5.7	+ 5.6	+ 5.4	+ 5.2	+ 4.7	+ 4.7
2 children	+ 12.9	+ 12.8	+ 12.3	+ 11.9	+ 10.5	+ 10.5
3 children	+ 22.1	+ 21.7	+ 21.0	+ 20.3	+ 17.4	+ 17.4
Maternity,						
Maximum period	- 5.5	- 6.1	- 6.2	- 6.2	- 7.4	- 7.4
Common period	- 1.6	- 1.8	- 1.7	- 1.6	- 1.9	- 1.9

To be continued...

Table 4.2. Finland, Continued

	1997		1998		1999	
	Elements	'Correct' data	Elements	'Correct' data	Elements	'Correct' data
Ill, 1 week	-1.5	- 1.5	- 1.5	- 1.5	- 1.5	
Unemployed 3 months, insured	- 9.8	- 9.7	- 9.9	- 9.6	- 9.7	
Unemployed 12 months, insured	- 39.3	- 40.3	- 39.8	- 40.1	- 41.4	
Unemployed 3 months, non-insured	- 15.5	- 15.5	- 15.5	- 15.5	- 15.5	
Unemployed 12 months, non-insured	- 71.9	- 72.7	- 72.3	- 72.5	- 73.4	
Wife unemployed 12 months, insured	- 10.6	- 11.4	- 11.1	- 11.4	- 12.0	
Injuries work, 100 % loss	- 7.7	- 7.9	- 7.6	- 7.8	- 8.6	
Injuries work, 33 1/3 % loss	- 2.2	- 1.8	- 2.2	- 1.8	- 1.7	
Pensioner, full working history	- 34.2	- 34.2	- 33.8	- 33.8	- 34.3	
Pensioner, no working history	- 67.7	- 67.6	- 68.1	- 67.4	- 68.2	
Pensioner, couple, full working history	- 30.4	- 29.6	- 30.3	- 29.1	- 30.1	
Family						
1 child	+ 4.5	+ 4.5	+ 4.3	+ 4.4	+ 4.3	
2 children	+ 10.0	+ 10.0	+ 9.7	+ 9.9	+ 9.5	
3 children	+ 16.5	+ 16.6	+ 16.0	+ 16.4	+ 15.8	
Maternity,						
Maximum period	- 7.3	- 8.1	- 7.4	- 8.2	- 8.7	
Common period	- 2.0	- 2.0	- 1.9	- 2.0	- 2.2	
Disability pensioner, full working history	- 37.1	- 36.4	- 36.9	- 35.8	- 36.5	
Disability pensioner, no working history	- 67.7	- 67.6	- 68.1	- 67.4	- 68.2	
Wife disabled, husband works	- 9.3	- 8.4	- 9.4	- 8.2	- 8.8	

Comments on table 4.2

All years

All disabled, injured from work and disability pensioners, should have a tax credit (state tax) and a tax allowance (local taxation). This has been included in 'correct' data, the tax credit for injured from work (the tax allowance was there already), the tax credit and the tax allowance for disability pensioners.

The pension allowance in the state tax scheme has been implemented for all years. Its only effect is that the wife in the old-age pensioner couple does not pay state tax. The basic allowance in local taxation has also been implemented for pensioners. Its effect is that the local tax is lowered for the wife in the pensioner couples, disability and old-age.

The low income deduction in local taxation is only for earned income (wages) from 1997. The years 1997 and 1998 have been corrected accordingly.

1994

The estimate of the APW gross income was almost 2 per cent too low in 'Elements' compared to 'correct' data. This alone implies a projection error which will have an impact in all cases where the benefit includes a flat rate element. This is the case in situations with unemployment benefits, pensions and family allowances. There were, however, also other errors in the original calculations which interact with the projection errors.

The cases where the projection error is the only one to have an impact are the unemployment cases where the recipient is not eligible for the earnings-related component, the basic pension (no former work history) and the family allowances. Here 'correct' data result in a negative impact (unemployment and pensions), which is somewhat larger, and a positive impact (family allowances), which is somewhat smaller than in 'Elements', just as should be expected.

In the earnings-related U.B. cases the income base should have been reduced by 3.5 per cent before calculation of the benefit. This has been done in the 'correct' data cases. The result is a somewhat larger negative impact on disposable income in the 'correct' data calculation, both as a result of this correction and because the larger wage income in 'correct' data has an impact in the same direction on the flat rate component of the benefit. The 'correct' data calculation of U.B. is on a daily basis, implying a slightly smaller negative impact than from the short cut method used in 'Elements'.

The benefit related to injuries from work is income-related. The significant difference in the case of 1/3 loss of working capability is because the benefit was incorrectly reduced in 'Elements' (by 1/3 instead of no reduction). There is also the already mentioned error concerning the state tax credit.

In terms of pensions, the basic amount (FIM 437/month) was not allocated to the single pensioner with a full work record in 'Elements'. Correction for this error increases the net replacement rate by approx. 2 percentage points. This error was repeated for the pensioner couple, but was partly counteracted by too large a deduction in the tax calculation (local tax). The pension allowance in the state tax scheme and the basic allowance contribute to an increase in the net replacement rate. The net result is an increase of approx. 2.5 percentage points in the net replacement rate when 'correct' data are applied.

In the maternity leave cases, the income base for calculation of the benefits should have been reduced by 3.5 per cent, just as in the cases with earnings-related U.B. A counteracting error was made in 'Elements' in the tax calculation where the taxable income (for local taxation) of the mother was too high resulting in too high taxation. The overall effect of the corrections is a negative impact which is somewhat larger when based on 'correct' data than when based on projected data ('Elements').

1995

In 1995, the APW estimate in 'Elements' was more than 4 per cent below the 'correct' gross wage estimate. This again implies a projection error impact on benefits with flat rate elements, i.e. unemployment benefits, pensions and family allowances. There were also other errors in the original calculations, although fewer than in 1994.

The projection error is 'alone' in all cases of unemployment benefits, the basic pension (no former work record) and family allowances. Here the negative impact (unemployment benefits and basic pension) is somewhat larger in the calculations based on 'correct' data than in 'Elements', and the positive impact (family allowances) is somewhat lower, no surprises. The isolated effect of the U.B. calculation on a daily basis in 'correct' data has a slightly smaller negative impact than when the short cut method from 'Elements' is applied.

Concerning injuries from work, the benefits in the case with 1/3 loss of working capability were unduly reduced, just as in the 1994 calculations. The negative impact in this case is substantially smaller when based on 'correct' data. This impact is further reduced, when the state tax credit is also included.

For pensioners with a full former work record, the error from 1994 was repeated, the basic amount of the national pension (FIM 445/month) should have been added, but was not. The pension allowance in the state tax scheme and the basic allowance in the local tax scheme should also have been implemented for the old-age pensioner couple. The net replacement rates based on 'correct' data are 3-5 percentage points higher in these cases than in 'Elements'. There were no counteracting errors for the APW-couple in 1995.

There were no errors for maternity leave benefits, and the two sets of calculations are very close.

1996

The 1996 APW gross wage estimate in 'Elements' was slightly above the 'correct' data estimate, so there is no projection error of any significance. No other errors have been discovered, so the two sets of calculations should be almost identical (except for the injuries from work cases and the case for the old-age pensioner couple). This also turns out to be the case. Only the U.B. calculations on a daily basis in 'correct' data result in a somewhat smaller negative impact than when the short cut method from 'Elements' is applied.

1997

The 1997 APW estimate in Elements was slightly above the 'correct' data estimate implying only small projection errors.

Much more important is the correction for the low earned income deduction, which from 1997 is only for wage income. The general implication is that the negative impact increases in cases with income only from benefits, or if benefits constitute the major proportion of income. In cases where benefits only constitute a minor proportion of the income and where the deduction is being tapered, the correction results in decreasing negative impacts, the deduction is not tapered so much. If the deduction is in the build-up phase it will be decreased by the correction, and the negative impact increases. The low earned income deduction had as a mistake been applied to all benefits except pensions and child benefits. This has now been corrected for.

There were also errors for 'all the years' with implications for the injuries from work cases, the disability pension cases (new from 1997), and the old-age pensioner couple case.
From 1997, table 4.2 also contains results for the disability pension scheme. When a few more years are recorded, a separate text section on this scheme will be included.

1998

The 1998 gross wage in 'Elements' was almost 3 per cent too high, implying too high negative and too small positive impacts. Furthermore, the local tax allowance was not included in the case where the part-time working partner becomes unemployed. This results in a negative impact, which is approx. 0.3 per cent point too large. Finally, there were the same errors as mentioned for 1997 concerning the low earned income deduction and the errors for 'all the years'.

The calculations are documented in Appendix 3.

4.2. Changes in the Finnish tax/benefit system. 1994-1999

Introduction

In the time span covered, 1994-1999, there were few very substantial and 'visible' changes in the Finnish tax/benefit scheme, but there was a gradual development towards somewhat lower benefits (at least relative to the APW income level) and a change in the composition of the social contributions based on wages and total income (including most transfer payments) in the tax scheme. A quite considerable reduction in personal taxation was, however, implemented in 1997 and to a minor extent also in 1999.

Compared to the changes in the Swedish tax/benefit system the Finnish changes seem to be more gradual and less 'visible'. Reducing the base for calculation of U.B. instead of the compensation percentage might be one example.

Personal taxation

Compared to 1994 the maximum deduction for work related expenses was reduced in 1995. The social contributions based on wages (for unemployment benefits and public occupational pensions) were increased in 1995, while those based on 'all' income, including benefits (these contributions are for illness and national pensions) were lowered. This 'twist' will be of some importance for the impact on disposable income of some of the 'events', cf. the following sections.

In 1996, the mentioned 'twist' concerning social contributions continued, those based on 'all' income, including most benefits, were lowered again.

Considerable changes were implemented in 1997. The tax rates in the state tax schedule were lowered by 1 percentage point and the thresholds between the tax brackets increased significantly. The social contributions based on wage increased slightly. The average local government tax rate was somewhat lower in 1997 than in 1996. More importantly, the low income deduction in local taxable income was changed substantially, the build up is faster, the maximum is FIM 5,500 (against FIM 2,000 in 1996), and the tapering is more gradual, implying that the deduction is effective over a much wider span of income than before. From 1997, however, the deduction is only related to earned income, i.e. wages in this study. Finally, the 'twist' was continued also by reduction of the contribution for illness insurance based on 'all' income.

The changes in 1998 were relatively modest. The thresholds between the tax brackets in the state tax schedule increased and the 'twist' concerning social contributions continued in the same direction as earlier, i.e. a little higher on wage income and somewhat lower on 'all' income.

In 1999 the low earned income deduction was further improved, the maximum was increased to FIM 8,600 and the tapering starts later (FIM 75,000 against FIM 43,000) although at a higher rate (3 per cent against 2 per cent). The state tax rates were lowered by 0.5 percentage point.

The results of the changes and of the progression in the Finnish tax scheme is contained in table 4.3.

Table 4.3. Average tax for single APW, 1994-1998. Income at APW level.

	1994	1995	1996	1997	1998	1999 [1)]
Gross wage, FIM	121,916	132,533	137,046	140,619	141,732	145,417
Tax + social contribution, FIM	45,338	50,419	51,495	50,435	50,357	50,483
Average tax, %	37.2	38.0	37.6	35.9	35.5	34.7
Average local tax rate, %	18.83	18.83	18.81	18.73	18.85	18.925

1) Preliminary calculation ('Elements').

Increase in the tax burden from 1994 to 1995 is primarily because of the progression in the state tax schedule, the nominal income increase from 1994 to 1995 is quite high, close to 9 per cent. The slight fall in the average tax burden in 1996 is primarily because of the continued 'twist' already mentioned. The overall effect of this was a lowering of rates for social contributions compared to 1995. The changes in 1997, primarily tax rate cuts and an improved low earned income deduction, result in a significant reduction in the average tax burden. The tax burden in 1998 is a little lower than in 1997. In 1999, there is a significant reduction again, this time due to a further improvement in the low earned income deduction and somewhat lower tax rates

Sickness benefits

Due to the long waiting period in the Finnish scheme (9 week days after the first day of illness) there are no benefits in the insurance scheme for illness for 1 week. Therefore, there is no reason to present any calculations, which would only show the impact of losing wages for one week.

There have been changes in the 'stepwise' benefit formula, they will be mentioned under the maternity leave benefit scheme.

Unemployment benefits

A reduction in the base of 3.5 per cent was introduced in the earnings-related part of the scheme in 1994, implying that only 96.5 per cent of the lost income was included when benefits are calculated. This was a 'negative' compensation for the occupational pension contribution on earned income, introduced in 1994. This contribution is not levied upon unemployment benefits. The base reduction was increased to 4.5 per cent in 1995 and stayed at that level in 1996 and 1997, in 1998 the reduction was increased to 5 per cent, also valid for 1999. The waiting period was increased from 5 to 7 days in 1997.

The flat rate part of the scheme was FIM 116/day in 1994. This was increased to FIM 118/day in 1995, which was also the rate in 1996 and 1997. In 1998, it was increased to FIM 120/day, and in 1999 to FIM 121/day. The thresholds in the stepwise benefit formula were increased relatively little (they follow the increase in the flat rate part of the scheme, so there was an increase in 1995, 1998 and 1999) with the result that the share of the lost income, which is compensated with the high percentage (42), is declining, except in 1998 when the wage increase from 1997 is very modest and the threshold is also increased. The results of the changes are contained in table 4.4.

Table 4.4. **Impact on annual disposable income from unemployment (earnings-related scheme). APW- income level for single, 1.5 APW-income level for couple.**

	1994	1995	1996	1997	1998	1999[1)]
Single, 25 % unemployed. Reduction in disposable income, %	8.3	8.8	9.2	9.7	9.6	9.7
Single, 100 % unemployed. Reduction in disposable income, %	36.0	36.3	37.4	40.3	40.1	41.4
Net replacement rate, %	64.0	63.7	62.6	59.7	59.9	58.6
Couple, spouse with 0.5 APW income 100 % unemployed. Reduction in disposable income, %	9.7	10.2	10.5	11.4	11.4	12.0

1) Preliminary calculation ('Elements').

As expected, the result is a gradually increasing negative impact over time. From 1995 to 1996 it is especially the lowest compensation percentage in the stepwise benefit formula (20 per cent), covering the last part of the lost income, which causes the increased negative impact for singles. This low percentage is applied for the first time as a result of the very modest increase in the threshold between step 2 and 3 in the formula. The wife (0.5 APW income when working) does not reach the 20 per cent. The same effect is behind the changes from 1996 to 1997 as well as the longer waiting period, especially in the 25 per cent unemployment case. The strong increase in the negative impact from 1996 to 1997 in the cases of 100 per cent unemployment for the single and the 1/2 APW spouse in the couple is also because the low income deduction from 1997 is only for earned income (wages). The deduction is zero when unemployment benefits is the only income component.

From 1997 to 1998, it is primarily the increased flat rate benefit and the small wage increase that are responsible for the small decrease in negative impact in the cases for the single. For the couple, the reduced base and the increased flat rate benefit in 1998 counterbalance each other, the impact is the same as in 1997. In 1999, the negative impact increases in all cases primarily because the wage increase is substantial again. The change in impact is, however, small for the 25 per cent unemployment case, primarily because of the improved low earned income deduction, which has a major impact, especially in this case.

If the unemployed is not a member of the earnings-related U.B. scheme or the rights have expired, he or she will receive a flat rate benefit (minimum U.B.), which was FIM 116/day in 1994, FIM 118/day in 1995, 1996 and 1997, FIM 120/day in 1998 and FIM 121/day in 1999. The waiting period was increased from 5 to 7 days in 1997. The impact of receiving minimum U.B. is shown in table 4.5.

Table 4.5. Impact on annual disposable income from unemployment (minimum U.B.) APW-income level for single.

	1994	1995	1996	1997	1998	1999[1)]
Single, 25 % unemployed.						
Reduction in disposable income, %	14.3	14.6	14.9	15.5	15.5	15.5
Single, 100 % unemployed.						
Reduction in disposable income, %	68.5	69.8	70.9	72.7	72.5	73.4
Net replacement rate, %	31.5	30.2	29.1	27.3	27.5	26.6

1) Preliminary calculation ('Elements').

With an almost constant flat rate benefit and a relatively strong increase in nominal wages for most of the time, the result has an increasingly negative impact on disposable income from receiving the minimum U.B. The increased waiting period contributes in the same direction in 1997, especially in the 25 per cent unemployment case. The impact of the low income deduction being only for earned income from 1997 is seen in the 100 per cent unemployment case, the negative impact increases significantly. The rate increase in 1998 combined with the very small wage increase results in a modest decrease in negative impact in the 100 per cent case and no change in the 25 per cent case. In 1999, the wage increase more than outweighs the rate increase, and the negative impact increases again in the 100 per cent case. The 25 per cent case is unchanged, again primarily because of the improved low earned income deduction. The minimum U.B. is also a component of the earnings-related scheme presented in table 4.4.

Compensation for injuries from work

There were no changes in this compensation scheme in the period considered. 85 per cent of the lost income is compensated. Table 4.6 contains the result of the calculations.

Table 4.6. Impact on annual disposable income from injuries from work. APW-income level for single.

	1994	1995	1996	1997	1998	1999[1)]
Single, 100% injured.						
Reduction in disposable income, %	7.3	6.6	6.9	7.9	7.8	8.6
Net replacement rate, %	92.7	93.4	93.1	92.1	92.2	91.4
Single, 33 1/3 % injured.						
Reduction in disposable income, %	2.0	1.9	2.0	1.8	1.8	1.7

1) Preliminary calculation ('Elements').

The change from 1994 to 1995 (100 per cent injured) is due to the mentioned 'twist' (cf. Personal taxation) in the social contributions where the contribution percentage from wage was increased and the one from 'all' income (including compensation for industrial injuries) was lowered. The impact of the low income deduction being only for earned income from 1997 is seen clearly in the 100 per cent case, the negative impact increases significantly. In the 33 1/3 per cent case the change results in a smaller negative impact, the deduction is not tapered as much. The 1999 effects are primarily due to the improved low earned deduction.

Old-age pensions

The most significant change concerned the 'integration' of the public occupational pension scheme and the basic national pension. From 1996 the complete basic national pension was included in the 'integration', not just the supplementary amount, as had been the case before 1996. The implication is that there will be no national pension at all if the occupational pension is high enough. Before 1996, the pensioner always kept the basic amount of the national pension. The rates in the national pension scheme increased very slowly in the period 1994 to 1999. The result of the pension calculations for each of the years from 1994 to 1998 is contained in table 4.7.

Table 4.7. Net replacement rates (%) for pensioners (starting at 65 years). The reference for singles is the APW-income level, for the couple it is 1.5 times that level.

	1994	1995	1996	1997	1998	1999[1)]
Single, full working record	68.8	69.6	66.9	65.8	66.2	65.7
Single, no working record	37.2	35.3	34.0	32.4	32.6	31.8
Couple, full working record (1.5 APW income)	74.7	74.2	72.0	70.4	70.9	69.9

1) Preliminary calculation ('Elements').

The decreasing net replacement rate is as expected for the single pensioner with no former work record, who then only receives national pension. In 1998, there is a small increase because the net income of the APW grows even more slowly (1.3 per cent) than the pension rate (1.8 per cent) from 1997 to 1998.

The effect of the 'integration' change in 1996 is easily seen, the net replacement rates drop in both cases (single and couple) with a full work record.

The increase in net replacement rate for the single pensioner (full work record) from 1994 to 1995 is a result of the increased tax burden for the APW in full employment, cf. table 4.3, combined with a slight decrease in tax burden for the pensioner. The opposite movement from 1996 to 1997 is primarily due to the tax reduction in 1997, which is most important for non-pensioners. For 1998, it is the other way round (the social contribution for pensioners is reduced significantly). For 1999, there is a substantial tax reduction again for the APW resulting in a decrease in the net replacement rate.

The just mentioned increase for the single (1994 to 1995) is not found for the couple which experienced a minor decrease in net replacement rate from 1994 to 1995. This immediately surprising development is mainly because substantially more of the supplementary national pension for the wife (former $^1/_2$ APW) is tapered away in 1995 than in 1994. There was also a slight increase in the tax burden for the pensioner with former $^1/_2$ APW income primarily due to a more reduced local tax allowance in 1995 than in 1994. The tax allowance, which was not very different in either of the two years, is means-tested. In the case of the husband (former 1 APW), this allowance was tapered to zero in both years. In 1997 there was a further decline in the net replacement rate for the couple for the same reason as mentioned for the single pensioner. The situation in 1998 is improved compared to 1997 for the same reason as for a single with a full work record. The reduction in 1997 is primarily because of the substantial tax reductions for working people. This is repeated in 1999.

Child benefits

The family allowances in Finland were nominally unchanged from 1994 to 1995. In 1996, they were reduced significantly, from FIM 570/month to FIM 535/month for the first child, from FIM 720/month to FIM 657/month for child no. 2 and from FIM 910/month to FIM 779/month for child no. 3. These rates were unchanged in 1997, 1998 and 1999. The impact of this is contained in table 4.8.

Table 4.8. Impact on disposable income from allowance for children. 1.5 APW-income level for couple.

	1994	1995	1996	1997	1998	1999[1]
1 child. Increase in disposable income, %	5.6	5.2	4.7	4.5	4.4	4.3
2 children. Increase in disposable income, %	12.8	11.9	10.5	10.0	9.9	9.5
3 children. Increase in disposable income, %	21.7	20.3	17.4	16.6	16.4	15.8

1) Preliminary calculation ('Elements').

These changes here are probably the most 'visible' in the Finnish tax/benefit scheme in the period and the impact has a clearly reduced positive effect on disposable income from family allowances. However, in 1996 Finland still had the most generous child allowances among the 7 countries included in 'Elements' for that year if measured as in table 4.8.

Parental benefits

The base for calculation of parental benefits was reduced by 3.5 per cent in 1994, by 4.5 per cent in 1995, 1996, 1997 and by 5 per cent in 1998 and 1999 just as in the earnings-related U.B. scheme. In 1996, the stepwise scheme was changed in such a way that the benefits were reduced. The time series of impacts is contained in table 4.9.

Table 4.9. Impact on disposable income of maternity leave benefit.
1.5 APW-income level plus child allowance for 2 children, couple.

	1994	1995	1996	1997	1998	1999[2]
Benefit in 281 days[1]. Reduction in disposable income, %	6.1	6.2	7.4	8.1	8.2	8.7
Benefit in 14 weeks, mother alone. Reduction in disposable income, %	1.8	1.6	1.9	2.0	2.0	2.2

1) The father has 18 days and the mother has 263 days.
2) Preliminary calculation ('Elements').

The effect of the parental leave benefit is shown for a couple (1.5 APW income) getting child no. 2 in relation to a couple (1.5 APW income) already having 2 children. It is assumed that the father has 18 days of parental leave and the mother 263 days in the case with maximum duration. There are, however, many other possibilities for dividing the parental leave between the parents. The mentioned assumption reflects the minimum rights for the father. The second calculation reflects the common duration, 14 weeks, used in 'Elements', in which case only the mother participates.

The change in 1996 is clear. The change from 1994 to 1995 is, however, hard to detect. In the 281-day case, the situation for the husband is slightly inferior in 1995 compared to 1994 (ratio of disposable income as benefit recipient to disposable income as fully employed) whereas the situation for the wife is unchanged (a relatively strong increase in benefits for the wife is contributing to this result). In the 14-week case, the situation for the wife is slightly better in 1995 than in 1994 (measured by the same ratio as just mentioned) due to the benefit increase and taxation just at that income level. The effect of the low earned income deduction being 'removed' from benefits from 1997 is clear again.

Summary

In most cases there have been a deterioration in the situation of benefit recipients compared to persons with only earned income. Relatively strong declines have been experienced for pensions and child benefits, both areas where Finland had and still has (even after the reductions) a high standard. Also unemployment benefits have seen relatively strong reductions.

Of special interest is the change in 'coverage' for the low income deduction in local taxation. At the beginning of the period it covered all income components except pension income. Then from 1997 it became a 'make work pay' instrument, it was now only used in relation to earned income. It is evident that the change has had a significant impact in cases where benefits are the only or the dominating income components, the negative impacts in these cases have increased and made earned income relatively more attractive. This was further emphasized by the 1999 improvement of the low earned income deduction. It should also be noted that changes in taxation and social contributions often contribute significantly to the impact of the different benefit schemes.

5

TIME SERIES OF APW-CALCULATIONS, CANADA

Introductory note

Data for 1996, 1997 and 1998 in the last edition of this chapter have all been revised in accordance with new APW series from Statistics Canada.

Approach for Sweden and Finland

Corrected time series of APW-calculations are presented for Sweden and Finland in chapter 3 and 4 respectively. The purposes of these series are to assess the robustness of the calculations when the wage estimate is more or less off the mark, to correct mistakes in previous editions of 'Elements', and to follow the development of the tax/benefit schemes over time.

Parallel approach for Canada

The purposes of time series for Canada are the same as for Sweden and Finland. At present, however, it only includes calculations for 1996, 1997 and 1998 on a 'correct' data basis as well as for 1999 based on chapter 2.

5.1. APW-calculations based on projected and 'correct' data

The APW-calculations for the single fully employed person based on 'Elements' and 'correct' data are contained in table 5.1. 'Correct' data are defined as the revised APW series from Statistics Canada. These series have a higher gross wage level than contained in the OECD publications for Canada. The OECD data would usually be the 'correct' data.

Table 5.1. Canada, single APW.

	CAD		
Used in:	1996	1997	1998
'Elements'			
Gross Wage	35,000	34,412	34,545
Tax and social contribution	9,886	9,262	9,057
Disposable income	25,114	25,150	25,488
'Correct' data			
Gross Wage	34,304	35,322	35,299
Tax and social contribution	9,569	9,659	9,376
Disposable income	24,735	25,663	25,923

Note: In the tax calculations the local tax rate for Ontario has been applied. OECD uses a different local tax rate.

Table 5.2 contains the results of the repeated calculations based on 'correct' data as well as the original calculations from 'Elements'. The deviations are commented upon in the following.

Table 5.2. Canada. Relative change in disposable income, per cent.

	1996		1997		1998		1999
	Elements	'Correct' data	Elements	'Correct' data	Elements	'Correct' data	
Ill, 1 week	-1.5	-1.4	-1.5	-1.5	- 1.5	- 1.5	- 1.5
Unemployed 3 months, insured	- 9.5	- 9.4	- 9.6	- 9.7	- 9.7	- 9.8	- 9.9
Unemployed 12 months, insured	- 43.7	- 43.9	- 44.0	- 44.0	- 44.0	-44.2	- 44.1
Unemployed 3 months, non-insured	- 18.6	- 18.8	- 19.0	- 18.8	- 19.1	- 19.0	- 18.9
Unemployed 12 months, non-insured	- 90.7	- 90.5	- 90.7	- 90.9	- 90.8	- 91.0	- 91.2
Wife unemployed 12 months, insured	- 17.5	- 17.5	- 17.6	-17.5	- 17.5	- 17.5	- 17.6
Injuries work, 100 % loss	- 10.0	- 10.0	- 10.0	- 10.0	- 10.0	- 10.0	- 10.0
Injuries work, 33 1/3 % loss	+ 1.1	+ 0.9	+ 0,7	+ 0.9	+ 0.6	+ 0.8	+ 0.8
Pensioner, full working history	- 44.9	- 44.3	- 44.5	- 45.3	- 43.4	- 45.0	- 45.4
Pensioner, no working history	- 58.5	- 57.8	- 57.9	- 58.8	- 57.9	- 58.6	- 59.1
Pensioner couple, full working history	- 41.7	- 40.6	- 41.2	- 42.0	- 40.5	- 41.7	- 42.3
Family							
1 child	+ 1.5	+ 1.6	+ 1.5	+ 1.4	+ 1.5	+ 1.4	+ 1.3
2 children	+ 2.9	+ 3.1	+ 3.0	+ 2.8	+ 3.0	+ 2.8	+ 2.6
3 children	+ 6.3	+ 6.5	+ 6.4	+ 6.1	+ 6.8	+ 6.9	+ 7.5
Maternity							
Maximum period	- 6.6	- 6.6	- 6.6	- 6.7	-6.6	- 6.6	- 6.7
Common period	- 3.7	- 3.7	- 3.7	- 3.7	-3.7	- 3.7	- 3.8
Disability pensioner, full working history			- 58.9	- 59.5	- 58.9	- 59.3	- 59.9
Disability pensioner, no working history			- 75.4	- 75.9	- 75.7	- 76.1	- 76.7
Wife disabled, husband works			- 17.0	- 17.4	- 16.9	- 17.2	- 17.5

Comments on table 5.2.

1996

The estimate of the gross wage was approximately 2 per cent too high in 'Elements' compared to 'correct' data. This alone implies a projection error which will have an impact in all cases where the benefit includes a flat rate component. This is the case in situations regarding social assistance (unemployment), old-age pensions and child benefits. The negative impacts in 'Elements' will be overestimated and the positive ones will be underestimated. These effects are clearly seen i table 5.2 for old-age pensions and child benefits respectively. In other cases the taxation of a lower income ('correct' data) also plays a role.

In the case of illness for one week there is no compensation because of the waiting period. Removing 1/52 of the gross wage in 'correct' data (which are lower than in 'Elements') results in a slightly smaller reduction of 'correct' data disposable income than of 'Elements' disposable income. This is because the 1/52 removes a larger proportion of the highly taxed (2nd bracket) income in 'correct' data than in 'Elements'.

For unemployment (25 per cent non-insured case) one might expect the same, but here there is a slightly larger reduction in disposable income for 'correct' data than for 'Elements'. The reason is that in this case income below the second bracket is also reduced in 'correct' data and then a portion of the income reduction is 'wasted', because it only reduces income in the first bracket. In 'Elements' almost the whole reduction is in the second tax bracket. In the 100 per cent unemployment case (insured) the negative impact is also larger in the 'correct' data case than in 'Elements. The reason is that the reduction in disposible income from unemployment insurance is relatively larger than the reduction in disposable income from employment when going from 'Elements' to 'correct' data. The 'tax reduction' in the case of unemployment is taking place in bracket 1 and in the case of employment it takes place in bracket 2. In the 100 per cent case (non-insured), the projection error results in a smaller negative impact in the 'correct' data case, the compensation is flat rate.

The remaining unexplained deviations are caused by similar tax effects as those already mentioned. It should again be emphasized that taxation is very important for the outcome of impacts from changes in earned income and benefits.

The tax reductions for Ontario were not implemented in 'Elements', for 1996 they have effect for the case of an old-age pension (married couple), included in the 'correct' data calculation.

1997

'Correct' data APW gross wage was approximately 2.5 per cent higher than in 'Elements'. The negative impact for pensions is somewhat higher in 'correct' data than in 'Elements', and the positive impact (child benefits) a little smaller. For cases with unemployment the picture is more mixed. Higher negative impacts should be expected, at least in situations with flat rate social assistance benefits. This is the case for 12 months of unemployment but not the case for 3 months of unemployment. In the last case, a larger proportion of the wage income is 'released' from the higher tax rate in tax bracket 2, when 'correct' data are applied in the unemployment (non-insured) case, than when the lower 'Elements' gross wage is applied. From the year 1997 results from the disability pension scheme are also included in table 5.2.

1998

For 1998, the APW gross level in 'correct' data, according to the revised data series from Statistics Canada, was approximately 2 per cent higher than in 'Elements'. The result in most cases is a slightly higher negative impact and slightly smaller positive impact (child benefits) in 'correct' data when compared with 'Elements'. In the case of the married couple with 3 children, the 'correct' data impact from child benefits is slightly higher than in 'Elements'. This is because of the $^{1}/_{2}$ year effect from the 'Ontario child care supplement' scheme included in 'correct' data calculations, but not in 'Elements'. The means-tested tax allowance supplement was not reduced to its tax credit value for old-age pension calculations in 'Elements', resulting in too high net replacement rates.

The calculations are documented in Appendix 4.

5.2. Changes in the Canadian tax/benefit system. 1996-1998

Personal taxation

1996

The federal tax schedule is unchanged, at least from 1994. The reason for the constant thresholds between the 3 rate steps is that inflation is below 3 per cent year after year. The thresholds are only regulated when the annual inflation is above 3 per cent. For local taxation, the rules for the Province of Ontario was chosen for this study.

1997

The federal tax schedule stayed unchanged also in 1997. The CPP contribution increased from 2.8 per cent in 1996 to 3.0 per cent in 1997 (the exemption of CAD 3,500 was unchanged). The employment insurance (EI) contribution decreased from 2.95 per cent to 2.90 per cent. For the Province of Ontario the tax rate (for income at APW level) decreased from 56 per cent to 48 per cent of the federal tax before surtax. The Ontario tax reductions were changed in 1997 and had a small effect in the cases mentioned above, section 5.1, 1997.

1998

The federal tax schedule was also unchanged in 1998. A means-tested supplement to the basic allowance was, however, introduced and an unused supplement by one of the spouses can be transferred to the other spouse. The maximum tax value of the supplement is CAD 42.50. The contribution for the CPP increased to 3.2 per cent and the contribution for the EI was lowered to 2.7 per cent in 1998. The Ontario tax rate dropped further to 42.75 per cent. The Ontario tax scheme also contains surtaxes (not relevant at APW income level), which went up at the same time as the ordinary tax rate went down. The tax reductions in the Ontario tax scheme were modified again in 1998 as a consequence of the lowering of the ordinary tax rate.

1999

The federal tax schedule remained unchanged in 1999 also. The means-tested supplement to the basic allowance (1998) was abolished and the basic allowance was increased from CAD 1,098 to CAD 1,155 (tax credit value). The CPP contribution rate was increased to 3.5 per cent and the EI rate was lowered to 2.55 per cent. The Ontario tax rate fell to 39.50 per cent, surtax and tax reductions were also changed in accordance with the lower tax rate.

The results from the tax schemes for 1996 to 1999 at APW-income level are contained in table 5.3.

Table 5.3. Average tax for single APW, 1996-1999. Income at APW-level.

	1996	1997	1998	1999 [1]
Gross wages, CAD	34,304	35,322	35,299	35,868
Tax and social contribution, CAD	9,569	9,659	9,376	9,322
Average tax, %	27.9	27.3	26.6	26.0
Tax rate, local government, %	56	48	42.75	39.50

1) Preliminary calculation ('Elements').

The decrease in average taxation is due to the lower tax rate for Ontario in 1997, 1998 and again in 1999. The constant thresholds in the federal tax scheme and the overall increase in social contributions pull in the opposite direction. Note the very small decrease in gross wage from 1997 to 1998, and the modest increase in 1999.

Sickness benefits

Due to the 2-week waiting period there is no compensation in Canada for illness for one week. The calculations, cf. table 5.2, just show the effects of reducing the annual gross wage by 1/52. As explained in the comments for table 5.2, this may have some surprising effects caused by taxation. The access requirement to the scheme is 700 hours of work in the preceding year.

Insurance against sickness is part of the employment insurance in Canada.

Employment insurance (EI)

The Canadian unemployment insurance scheme was changed significantly in 1996 and 1997. In this study, the new rules were used for both years and there were neither changes from 1996 to 1997 nor to 1998 and 1999. The scheme was renamed from unemployment to employment insurance. The access to benefits is based on hours worked in the new EI scheme (not on weeks worked as it used to be in the old scheme). The minimum access requirement is 420 hours of work within the last year in high unemployment areas and 700 hours in low unemployment areas. The maximum benefit period, which varies with the regional level of unemployment, is shorter than before, now maximum 45 weeks in areas with the highest unemployment rates. The actual benefit period also depends on hours worked in the former working period. The benefit level is usually 55 per cent of the lost income up to a limit, which is somewhat higher than the APW income level. The reference period, on which the calculation of benefits is based, is income within the last 26 weeks before unemployment. If the number of weeks worked in the reference period is less than the minimum divisor (cf. later), the compensation will be less than 55 per cent of the average income of the weeks with work in the reference period. The minimum divisor varies regionally with the level of unemployment and is used to calculate the average weekly income from former income if the divisor is higher than the actual number of weeks worked in the reference period. There is a 'claw-back' clause. If earned income from employment after a spell of unemployment is higher than the mentioned limit, part of or all of (depending on income level) the benefits received will have to be paid back. Finally, if the scheme is used repeatedly the compensation percentage is gradually reduced down to a floor (50 per cent). There is a 2-week waiting period in the scheme.

Table 5.4. Impact on annual disposable income from unemployment (insured). APW-income level for single, 1.5 APW-income level for couple.

	1996	1997	1998	1999 [1]
Single, 25% unemployed Reduction in disposable income, %	9.4	9.7	9.8	9.9
Single, 100% unemployed				
Reduction in disposable income, %	43.9	44.0	44.2	44.1
Net replacement rate	56.1	56.0	55.8	55.9
Couple, spouse with 0.5 APW income 100% unemployed Reduction in disposable income, %	17.5	17.5	17.5	17.6

1) Preliminary calculation ('Elements').

There are only marginal differences from 1996 to 1998. The disposable income of the APW and of the unemployed develop at rates that are almost identical. The changes are also very small in 1999

Social assistance is an exit scheme from unemployment benefits and has also been applied accordingly in the EI case where the maximum benefit period is 45 weeks whereas the unemployment spell is a full year, the 100 per cent unemployment case for a single person in table 5.4. The social assistance rate for singles was CAD 195 per month in both 1996,1997, 1998 and 1999. This is a 'personal' rate, in addition a housing allowance can be obtained (not included here). The social assistance rates including housing allowances vary with size and composition of the family. There are also refundable tax credits both at the federal and local level, neither are included here.

Table 5.5 contains the results for this type of unemployment compensation.

Table 5.5. Impact on annual disposable income from unemployment (social assistance). APW-income level for single.

	1996	1997	1998	1999 [1]
Single, 25% unemployed				
Reduction in disposable income, %	18.8	18.8	19.0	18.9
Single, 100% unemployed				
Reduction in disposable income, %	90.5	90.9	91.0	91.2
Net replacement rate	9.5	9.1	9.0	8.8

1) Preliminary calculation ('Elements').
2) Including refundable tax credits, would increase the replacement rates by 2-2.5 percentage points.

The impact of the nominally constant rate from 1996 to 1999 is especially seen in the 100 per cent unemployment case.

Compensation for injuries from work

The compensation is 90 per cent of the lost income after tax and social contributions. Table 5.6 contains the impact calculation for compensation for industrial injuries.

Table 5.6. Impact on annual disposable income from injuries from work. APW-income level for single.

	1996	1997	1998	1999 [1]
Single, 100 % injured				
Reduction in disposable income, %	10.0	10.0	10.0	10.0
Net replacement rate, %	90.0	90.0	90.0	90.0
Single, 33 1/3 % injured				
Increase in disposable income, %	0.9	0.9	0.8	0.8

1) Temporary calculation ('Elements').

The case with 100 per cent loss of working capability is straight forward since the compensation is 90 per cent of the entire former net income. In the 1/3 loss of working capability case there is a small overcompensation. This is because the compensation is measured on the basis of the average tax of the former income whereas the reduction in earned income is taxed with higher marginal rates.

Old-age pension

Public Canadian old-age pension consists of 3 components. The first one is a flat rate basic residence based pension, the old-age security pension (OAS), the second one is a flat rate guaranteed income supplement (GIS), which is means-tested. The third component is the Canadian Pension Plan (or Quebec Pension Plan), which is a public occupational pension scheme depending on former contributions and income up to a ceiling.

In 1996, the OAS and GIS (GIS for a single pensioner) rates were CAD 4,764 and CAD 5,662 respectively. In 1997, these rates increased to CAD 4,836 (OAS) and CAD 5,747 (GIS), and in 1998, to CAD 4,902 (OAS) and CAD 5,825 (GIS). The Canadian Pension Plan component is calculated as 97 per cent (assumption, cf. later) of the maximum pension in each year. The maximum CPP was CAD 8,725 in 1996, in 1997 it was CAD 8,842, in 1998 CAD 8,938, and in 1999 CAD 9,020. In 1996 and 1997, the maximum pension is calculated as 25 per cent of the average of the maximum pensionable earnings (YMPE) in the current year and the two preceding years. In 1998, it is the current year and the three preceding years; in 1999, the current year and the four preceding years. The 97 per cent of the maximum pension used here is a simplification, indicating that the ratio of the APW-income and the YMPE is constant over time. This is not completely true, but it is consistent with the assumptions made for calculation of both Swedish and German public occupational pensions.

The results for the Canadian pensioners are included in table 5.7.

Table 5.7. Net replacement rates (per cent) for pensioners (starting at the age of 65). The reference for singles is the APW income level, for couples it is 1.5 times that level.

Table 5.7. Net replacement rates (%) for pensioners (starting at the age of 65). The reference for singles is the APW income level, for couples it is 1.5 times that level.

	1996	1997	1998	1999 [1]
Single, full working record	55.7	54.7	55.0	54.6
Single, no working record	42.2	41.2	41.4	40.9
Couple, full working record (1.5 APW income)	59.4	58.0	58.3	57.7

1) Preliminary calculation ('Elements').

The drop in replacement rates from 1996 to 1997 reflects a modest increase in pensions and a higher increase in disposable income for the 'in work' situation. From 1997 to 1998, the change in disposable income for the 'in work' situation is very small and there is a slight increase in the net replacement rates. From 1989 to 1999, the 'in work' disposable income again paces out the pensions, and the replacement rates decline.

Child benefits

Canada has two federal schemes for child benefits, an ordinary one, the child tax benefit (CTB), and another one replacing the working income supplement (WIS). From 1998, there is also a provincial component, which is used here for Ontario, and which is included in the results reported in table 5.8. The ordinary scheme will be mentioned first.

There is a basic flat rate benefit of CAD 1,020 per year per child (under 18 years). For children under the age of 7, there is a supplement of CAD 213 per child per year if there are no deductions for child care in the parents' taxable income. For the 3rd child and any additional children, there is an extra supplement of CAD 75 per year.

The Canadian child benefits are means-tested. The benefits are reduced by 2.5 per cent of income (special definition) above a threshold, which is CAD 25,921 on an annual basis, if there is one child in the family. The taper is 5 per cent if there are two or more children in the family. There is no minimum floor, the benefits can be tapered down to zero.

The benefits, the tapers and the income threshold were identical in 1996, 1997, 1998 and 1999.

The effects on disposable income of the child tax benefits for a couple with 1.5 APW-income and 1, 2 and 3 children are included in table 5.8. It is assumed that there are no deductions for child care in parents' taxable income.

Table 5.8. Impact on disposable income from allowance for children. 1.5 APW-income level for couple.

	1996	1997	1998	1999 [1)]
1 child increase in disposable income, %	1.6	1.4	1.4	1.3
2 children increase in disposable income, %	3.1	2.8	2.8	2.6
3 children increase in disposable income, %	6.5	6.1	6.9	7.5

1) Preliminary calculation ('Elements').

The positive impact from 1996 to 1997 is declining for two reasons. The nominally constant benefits will have a decreasing effect with increasing disposable income, and the reduction due to tapering will increase with increasing income and a nominally unchanged threshold. In terms of 1 and 2 children, the very small increase from 1997 to 1998 in a couple's disposable income is responsible for a constant impact. In terms of 3 children, the increased impact is mainly due to the provincial component introduced from July 1998. In 1999, the declining impact continues on a couple with 1 and 2 children. For a couple with 3 children, the provincial component has a full year effect and increases the impact.

From Working Income Supplement (WIS) to Canada Child Tax Benefit (CCTB), and National Child Benefit (NCB).

The original scheme the 'Working Income Supplement' (WIS) started in 1993 inspired by the 'Earned Income Tax Credit' scheme in the US. The scheme was for low income families with children. The maximum WIS (a refundable tax credit) was CAD 500 per year. The WIS started to build up after an income of CAD 3,750 was reached. The WIS was calculated as 8 per cent of income above CAD 3,750 until a limit of CAD 500 was reached. This limit corresponds to a cap of a 10,000 CAD income. The WIS then stayed constant in the income interval between CAD 10,000 and CAD 20,921. For income above CAD 20,921, the WIS was tapered by 10 per cent of that amount until it reached zero at an income level of CAD 25,921. This is the income level where the ordinary child benefit, the child tax benefit, cf. the former section, starts to be tapered.

From July 1997, the scheme was modified to child tax benefit supplements. The first child might receive a supplement of up to CAD 605, the second child up to CAD 405, and any additional children up to CAD 330 a year. The phase in, the maximum supplement and the tapering took place in the same income intervals as already mentioned, the thresholds stayed constant for all the years. The phase in was 9.7 per cent of income above CAD 3,750 for a family with 1 child, 16.2 per cent for a family with 2 children, and 21.4 per cent for families with 3 children. The tapers for the maximum supplements were 12.1 per cent, 20.2 per cent and 26.8 per cent for the respective family sizes.

In 1998, the scheme was further modified. The phase in was dropped, the supplements were given at the maximum level from the start independently of income source and level, but the tapering was not changed. The supplement is now called the 'National Child Benefit Supplement' and the scheme constitutes the 'Canada Child Tax Benefit' (CCTB) together with the 'Child Tax Benefit' (CTB). The WIS scheme was abolished from July 1998.

From July 1998, a provincial program along the same lines as the 'National Child Benefit Supplement' was introduced. The 'Canada Child Tax Benefit' and the provincial component now constitute the 'National Child Benefit' (NCB) program. The Ontario scheme is called the 'Ontario Child Care Supplement' and is used in this study.

From July 1999, the supplements ('National Child Benefit Supplement') were increased to CAD 785 (1st child), CAD 585 (2nd child), and CAD 510 for any additional children. The tapers were changed to 11.5 per cent, 20 per cent and 27.5 per cent for the 1, 2 and 3 children families respectively. The scheme will be enhanced in the years to come, replacing all child benefits from means-tested schemes, e.g. employment insurance and social assistance.

From July 1st, 1999, the 'Ontario Child Care Supplement' has a maximum supplement of CAD 1,100 per child. The build-up starts at a 5,000 CAD income, and the supplement is 21 per cent of income above that level for each child (up to and including child number 3). The tapering starts at a 20,000 CAD income; it is 8 per cent above this threshold.

The schemes mentioned here are not effective at income levels for couples with children used in this study except in the case with 3 children, in which case the 'Ontario Child Care Supplement' makes an impact.

Parental benefits

This scheme is part of the employment insurance scheme just as the sickness benefit scheme is. The maximum duration of the benefit period is 27 weeks, 17 weeks for the wife (including a 2-week waiting period) and 10 weeks to be shared between spouses. The benefits are calculated in the same way as sickness benefits and unemployment benefits, i.e. as 55 per cent of the lost income. It should be remembered that the 'tax back' or means-testing of the 'Child Tax Benefit' depends on parents' income, and this is lower when parental benefits are received instead of wages. The access requirement is 700 hours of work in the preceding year, reduced to 600 hours from 2000.

Table 5.9 contains the results when the mother uses the maximum benefit period and the common period, 14 weeks, in 'Elements'.

Table 5.9. Impact on disposable income of maternity leave benefit. 1.5 APW-income level plus child allowance for 2 children, couple.

	1996	1997	1998	1999[1]
Leave of 27 weeks, mother alone Reduction in disposable income, %	6.6	6.7	6.6	6.7
Leave of 14 weeks, mother alone Reduction in disposable income, %	3.7	3.7	3.7	3.8

1) Preliminary calculation ('Elements').

There are only marginal changes over time.

Summary

The Canadian tax/benefit scheme has something in common with the Nordic schemes, e.g. a residence based component of the old-age pension and the possibility for the father to participate in the 'ordinary' maternity leave. It also has some unique characteristics, one of them being the 'claw-back' clause for unemployment benefits and the decreasing unemployment benefits (down to a floor) by repeated use. Another is the waiting period in the maternity leave benefit scheme. By European standard, social assistance seems to be very low, especially the rates for 'personal' assistance.

6

TIME SERIES OF APW-CALCULATIONS, DENMARK

Approach as for Sweden, Finland and Canada

This chapter contains 'time series' of calculations based on 'correct' data for Denmark, just as the previous chapters contained series for Sweden, Finland and Canada. The purposes for the Danish series are the same as for the series of the other countries, i.e. error analyses (including projection errors) and impact analyses of changes in the Danish tax/benefit system.

Denmark is covered in 'Elements' from the first edition containing results for 1991, but the reference APW was calculated in a different way from 1994, why it was decided to start the series in 1994. This ensures that the impact calculations can refer to consistent series for the reference families, the single APW and the APW-couple with 1 $^1/_2$ APW income.

6.1. APW-calculations based on projected and 'correct' data

The APW-calculations for the single fully employed person based on 'Elements' and 'correct' data are contained in table 6.1, and the impact calculations in table 6.2.

Table 6.1. Denmark, single APW.

	DKK				
Used in:	1994	1995	1996	1997	1998
'Elements'					
Gross wage	222,000	235,000	244,000	257,000	263,300
Tax and social contribution	100,108	105,815	108,958	115,424	116,610
Disposable income	121,892	129,234	135,042	141,576	146,690
'Correct' data					
Gross wage	234,600	240,100	249,200	257,000	263,300
Tax and social contribution.	107,226	108,568	111,648	115,436	116,610
Disposable income	127,374	131,532	137,552	141,564	146,690

Source: The 'correct' Danish 1994 figure has probably not been published (the 1995 edition of OECD's 'The Tax/Benefit Position of Production Workers' has DKK 224,500 for 1994). 1995, 1996 and 1997 are from the 1996, 1997 and 1998 editions of 'The Tax/Benefit Position of Employees', 1998 is the official Danish figure for the 1999 edition of 'Taxing Wages' the successor to 'The Tax/Benefit Position of Employees'. The figure in 'Taxing Wages' is, however, DKK 268,600. DKK 263,300 is the official figure.

Table 6.2. Denmark. Relative change in disposable income, per cent.

	1994		1995		1996	
	Elements	'Correct' data	Elements	'Correct' data	Elements	'Correct' data
Ill, 1 week	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7
Unemployed 3 months, insured	-7.4	-8.1	-8.3	-8.5	-8.7	-9.0
Unemployed 12 months, insured	-31.2	-34.2	-34.0	-35.1	-35.0	-36.2
Unemployed 3 months, non-insured	-13.3	-13.8	-12.9	-13.1	-13.7	-13.9
Unemployed 12 months, non-insured	-59.7	-61.4	-55.9	-56.6	-56.6	-57.4
Wife unemployed 12 months, insured	-4.5	-5.8	-5.5	-6.0	-5.6	-6.1
Injuries work, 100 % loss	+26.6	-	+24.6	+23.7	+25.6	+24,6
Injuries work, 33 1/3 % loss	-4.7	-	-5.6	-3.9	-5.2	-4.2
Pensioner, full working history	-42.1	-44.5	-44.3	-45.0	-44.3	-45.6
Pensioner, no working history	-47.5	-49.8	-49.7	-50.6	-50.5	-51.4
Pensioner couple, full working history	-41.4	-45.0	-44.4	-45.1	-43.8	-45.0
Family						
1 child	+4.3	+4.1	+4.2	+4.1	+4.3	+4.2
2 children	+8.5	+8.1	+8.4	+8.2	+8.6	+8.4
3 children	+12.8	+12.2	+13.1	+12.8	+13.4	+13.2
Maternity						
Maximum period	-5.8	-6.4	-6.2	-6.5	-6.3	-6.5
Common period	-2.5	-2.8	-2.7	-2.8	-2.7	-2.8

To be continued...

Table 6.2. Denmark. Continued.

	1997		1998		1999	
	Elements	'Correct' data	Elements	'Correct' data	Elements	'Correct' data
Ill, 1 week	-0.7	-0.7	-0.7	-0.7	-0.7	
Unemployed 3 months, insured	-9.2	-9.3	-9.3	-9.3	-9.6	
Unemployed 12 months, insured	-37.0	-37.0	-37.4	-37.4	-38.6	
Unemployed 3 months, non-insured	-14.0	-14.0	-14.0	-14.0	-14.1	
Unemployed 12 months, non-insured	-58.2	-58.2	-58.6	-58.6	-59.1	
Wife unemployed 12 months, insured	-6.5	-6.5	-6.6	-6.6	-6.9	
Injuries work, 100 % loss	+23.7	+25.0	+28.6	+28.0	+28.4	
Injuries work, 33 1/3 % loss	-5.2	-3.8	-2.7	-3.3	-3.6	
Pensioner, full working history	-45.9	-45.9	-45.5	-45.5	-45.8	
Pensioner, no working history	-52.0	-52.0	-51.9	-51.9	-52.6	
Pensioner couple, full working history	-45.4	-45.4	-45.1	-45.1	-45.3	
Family						
1 child	+4.2	+4.2	+4.3	+4.3	+4.3	
2 children	+8.5	+8.5	+8.7	+8.7	+8.5	
3 children	+13.2	+13.2	+13.5	+13.5	+13.2	
Maternity						
Maximum period	-6.7	-6.7	-6.8	-6.8	-6.9	
Common period	-2.9	-2.9	-3.0	-3.0	-3.0	

To be continued...

Table 6.2. Denmark. Continued.

	1997		1998		1999	
	Elements	'Correct' data	Elements	'Correct' data	Elements	'Correct' data
Disability pensioner, full working history	- 25.2	- 25.2	- 25.2	-25.2	-26.2	
Disability pensioner, no working history	- 25.2	- 25.2	- 25.2	- 25.2	-26.2	
Wife disabled, husband works	+1.0	+1.0	+1.0	+1.0	+0.7	

Comments on table 6.2

All years

The most substantial change in 'correct' data calculations compared with 'Elements' is in the calculation of compensation for injuries from work. From 1994 to 1997 these benefits were calculated on the basis of current income reduced by the 'gross' tax (cf. the section on personal taxation). This is too small a base. There is no reduction, and the employer paid contribution for the supplementary pension scheme, ATP, should be added. This was corrected in 'Elements' for 1998, which was still using current income. However, the income of last year as a base is better in accordance with the rules than current income is, so it was decided to use the APW income of last year increased by the employer paid ATP contribution as the basis for benefit calculation. This change (partly) explains the differences between 'Elements' and 'correct' data for this scheme.

1994-1996

Furthermore, in 1994, 1995 and 1996 there were projection errors. In 1994 'Elements' was 5.4 per cent lower for APW gross wages than 'correct' data, and in 1995 and 1996 it was 2.1 per cent. The projection errors for all three years also have an impact on the differences just mentioned in terms of compensation for injuries from work. Besides that, all negative impacts are larger when based on 'correct' data than when based on 'Elements', and all positive impacts (child benefits) are smaller in each of these years. The results are quite sensitive to projection errors. All benefits in the cases included here are flat rates (except compensation for injuries from work).

Finally, the series for supplementary pensions were revised. That led to an increase of these pensions in 1994 and 1995, but a decrease in 1996 when 'correct' data is compared with 'Elements'. The adjustments proved only to be minor.

1997-1998

Except for injuries from work there are no differences between 'correct' data and 'Elements' for these two years. For 1997 there is a marginal difference in taxation because 'Elements' had a slightly too high middle state tax deduction. From 1997 results for the disability pension scheme are also included in table 6.2. When a few more years are recorded a separate text section for this scheme will be included.

The calculations based on 'correct' data are documented in appendix 5.

6.2. Changes in the Danish tax/benefit system. 1994-1999

Introduction

1994 was a reform year in the Danish system. It was the first year of the new tax reform, cf. the section on personal taxation, and there were reforms of both pension schemes and social assistance schemes. These basically went from a net basis or semi net basis (pensions for married couples) to a gross basis and at the same time became fully taxable. Furthermore, there was also in 1994 a major labour market reform where active labour market measures came in focus. There were, however, no major changes in benefit levels, except for young people, cf. the section on unemployment benefits. A 'mini tax reform' was implemented from 1999 as well as a major reform of the early retirement scheme (not covered here).

Personal taxation

1994 was the first year of the new tax reform, which was gradually introduced from 1994 to 1998. A new component in the scheme was a 'gross' tax (a general social contribution) levied on basically all earned income. The gross taxation rate increased from 5 per cent in 1994 to 8 per cent in 1998. The state personal tax scheme consists of 3 brackets, a 'bottom' tax, a 'middle' tax and a 'top' tax. In 1994 and 1995 there was also a 'temporary' tax, a component from the old scheme being phased out. The bottom tax started at 14.5 per cent in 1994, it was 8 per cent in 1998. The middle tax rate started at 4.5 per cent in 1994, in 1998 it was 6 per cent. The top tax rate started at 12.5 per cent, it was 15 per cent in

1998. Tax rates do not tell so much. Tax bases and allowances or deductions etc. are also very important. The bases were unchanged in the period 1994 to 1998 and the allowances were indexed according to an income related index.

From 1999 a new 'mini tax reform' was implemented. Its main objective was to reduce the tax value of deductible interest expenditures, and that had a substantial impact on the tax bases, but not for the APW who is assumed to have no capital income, positive or negative. At the same time it was decided to continue the reduction of the bottom tax rate. It was 7.5 per cent in 1999 and will decrease to 5.5 per cent in 2002. The allowance for the middle tax was also increased extraordinarily in 1999 and will continue to increase until 2002.

Social contributions were increased by 1 per cent for pension savings purposes from 1998 (in addition to the already existing 8 per cent), and for those who are insured against unemployment and have also opted for the new early retirement scheme, there was also a significant increase in the contributions for these two schemes from 1999.

The mentioned changes, or at least some of them, had an impact on taxation of the APW, the results are contained in table 6.3.

Table 6.5. Average tax for single APW, 1994-1999. Income at APW level.

	1994	1995	1996	1997	1998	1999 [1]
Gross wages, DKK	234,600	240,100	249,200	257,000	263,300	274,200
Tax + social contribution, DKK	107,226	108,568	111,648	115,436	116,610	121,276
Average tax, %	45.7	45.2	44.8	44.9	44.3	44.2
Average local tax rate, %	30.2	30.6	31.1	31.86	32.4	32.6

1) Preliminary calculation ('Elements').

The result for the APW is a gradually declining tax burden despite of increasing average local tax rates.

Sickness benefits

The rules for sickness insurance benefits have not changed substantially since 1994. From that year most blue-collar workers will receive ordinary wages during the first 2 weeks of illness, but that is a labour market agreement.

If the worker is not eligible for wages he or she will usually receive sickness benefits paid by the employer for the first 2 weeks, thereafter paid by the insurance (the municipality). The employer's obligation depends on the length of the employee's working period. If he or she has been with the same employer for at least 13 weeks (8 weeks from 2000) and has worked for at least 120 hours (74 hours from 2000), then the employer is obliged to pay benefits for 2 weeks (the employer period). The payment is to compensate for lost income on an hourly basis. The maximum hourly compensation is the maximum weekly benefit rate divided by a full week working hour norm (37 hours). If the person regularly has worked more than the norm (37 hours) he will be compensated for all lost hours for the first 2 weeks. When the municipality takes over he will as a maximum get the maximum weekly rate, which (except for some rounding) is identical to 5 times the daily maximum unemployment insurance benefits.

If the person has not worked long enough for the same employer he will usually receive insurance benefits from the municipality on the above mentioned conditions (only up to the maximum weekly rate). It requires some attachment to the labour market to be eligible for insurance benefits. The benefit rate is indexed according to the development in income but with a lag and not fully. Furthermore, the rate was adjusted downwards during the phase in of the gradually increasing 'gross' tax, which is not levied on benefits.

Table 6.4 contains the impact on the annual disposable income of the APW from 1 week of sickness.

Table 6.4. Impact on annual disposable income from 1 week of sickness. APW-income level for single.

	1994	1995	1996	1997	1998	1999 [1]
Reduction in disposable income, %	0.6	0.7	0.7	0.7	0.7	0.7

1) Preliminary calculation ('Elements').

The impact is quite small and stable over time. That does not rule out changes, which, however, have to be quite substantial to be seen when the basic impact is so small, cf. also other changes (social contributions) mentioned in the following section. Maximum sickness benefits and maximum unemployment insurance benefits are (except for some rounding) identical.

Unemployment benefits

The 1994 labour market reform was, as already mentioned, substantial, but the basic rules for calculation of unemployment insurance benefits (U.B.) have not changed. The access to the benefits have been tightened and the benefit period has been reduced. The benefits are, in the usual case, calculated as 90 per cent of the gross wage adjusted for the 'gross' tax or the general social contribution, which is not levied on benefits. There is a maximum benefit for a full-time insured, which is reached at a relatively low income, approx. 2/3 of that of the APW. From 1996 there is also a minimum benefit, 82 per cent of the maximum benefit, for most full-time insured. The maximum benefit for a part-time insured is 2/3 of the full time maximum, and there is no minimum. In 1996 there were some drastic changes in the benefit level for young unemployed people participating in educational activities (rights and duties related to activation). They could get student grants, or if that was not relevant, $^1/_2$ of the maximum insurance benefit (full-time or part-time insured) during their education.

Unemployment benefits are indexed in the same way as sickness benefits, i.e. according to income development, but with a lag and not fully. The maximum rate was also adjusted downwards during the phase in of the 'gross' tax.

There have, however, been some other changes, having an impact on the 'value' of the unemployment insurance benefits (and the sickness benefits). In 1997, the social contribution to the supplementary pension scheme (ATP) was increased to 1.5 times the ordinary rate and from 1998 to 2 times the ordinary level. In 1998 there was an introduction of a pension saving scheme also for benefit recipients. Finally, the combined contribution for unemployment insurance and early retirement (flat rates) increased substantially from 1999 for those who opted for both of these schemes.

Table 6.5 contains the impact on annual disposable income from unemployment spells of differing duration. Maximum unemployment benefits are received in all cases (for the unemployed wife it is maximum benefit for a part-time insured)

Table 6.5. Impact on annual disposable income from unemployment (insured). APW-income level for single, 1.5 APW-income level for couple.

	1994	1995	1996	1997	1998	1999 [1]
Single, 25 % unemployed						
Reduction in disposable income, %	8.1	8.5	9.0	9.3	9.3	9.6
Single, 100 % unemployed						
Reduction in disposable income, %	34.2	35.1	36.2	37.0	37.4	38.6
Net replacement rate, %	65.8	64.9	63.8	63.0	62.6	61.4
Couple, spouse with 0.5 APW income 100 % unemployed						
Reduction in disposable income, %	5.8	6.0	6.1	6.5	6.6	6.9

1) Preliminary calculation ('Elements').

In all cases unemployment has a gradually increasing negative impact over time. It is not dramatic, but without significant changes in the rules for unemployment insurance benefits, the net replacement rate has dropped by 4.4 percentage points from 1994 to 1999 for a fully unemployed. Indexing of benefits, other changes (increased social contributions) and the wage development for the reference APW all contribute to this result. If the APW represents an average full-time worker in the manufacturing industries, and that is the whole idea of the design of the APW, then it is fair to conclude that the relative position of the unemployed average worker in manufacturing industries has deteriorated from 1994 to 1999.

Unemployment insurance is voluntary in Denmark, which is the reason why social assistance (S.A.) is both an alternative scheme and an exit scheme for unemployment insurance. The social assistance scheme was changed fundamentally in 1994. New rates were introduced and S.A. became taxable income. There are two basic rates, one for providers in relation to children and one for non-providers (there are also special rates for other groups, e.g. young persons). The two basic rates are related to the unemployment insurance benefits (except for some roundings). The non-provider rate was 50 per cent of maximum U.B. in 1994, it increased to 60 per cent in 1995 and has been so since then. The provider rate has all the time been 80 per cent of maximum U.B. The social assistance scheme also covers expenditures for e.g. housing. Only the above mentioned 'personal' rates will be considered here.

Social contributions have also been introduced for social assistance recipients. In 1997, 50 per cent of the usual ATP contribution was paid but only for benefits received after the first 6 months. In 1998, the contribution was increased to the usual rate, but still only for benefits received after the first 6 months. The pension saving programme was also implemented for social assistance recipients from 1998. Social assistance recipients are here assumed to be non-insured for unemployment, so contributions for neither that scheme nor the early retirement scheme are paid.

The impact from receiving social assistance as unemployed is contained in table 6.6.

Table 6.6. Impact on annual disposable income from unemployment (social assistance). APW-income level for a single.

	1994	1995	1996	1997	1998	1999 [1)]
Single, 25 % unemployed						
Reduction in disposable income, %	13.8	13.1	13.9	14.0	14.0	14.1
Single, 100 % unemployed						
Reduction in disposable income, %	61.4	56.6	57.4	58.2	58.6	59.1
Net replacement rate, %	38.6	43.4	42.6	41.8	41.4	40.9

1) Preliminary calculation ('Elements').

The effect of the increase in the rate from 50 per cent in 1994 to 60 per cent in 1995 of maximum U.B. is clearly seen. Otherwise there is a gradual deterioration of the relative position of the S.A. recipient.

Compensation for injuries from work

This is the only true income-related scheme in Denmark. The compensation is 80 per cent of 'last year's annual income' up to a rather high limit. 'Last year's annual income' is the income in the year (12 months) prior to the accident. As the accident may have happened many years ago an indexing of 'last year's annual income' takes place in order to bring the income up to present value. In this study it is assumed that the accident happens on January 1st in year t, the relevant income is then income in year t-1. It is further assumed that benefits start to be paid immediately after the accident, which is a clear simplification.

The base for calculation of the compensation is unusual because it is the gross wage including pension contributions from the employer. If the loss of working capability is above 50 per cent the compensation will be combined with the public disability pension scheme. This may have a somewhat surprising effect, cf. later. For relatively small degrees of disability the compensation for injuries from work is often calculated as a 'once and for all' amount. In the 1/3 loss of working capability case here, it is assumed that the compensation is received on a current basis. The compensation is received until the age of 67 (65 years from 2004) when old-age pension will start, and then a lump sum equivalent to two years current compensation is paid.

Table 6.7 contains the results from receiving compensation for injuries from work when the whole working capability is lost and when 1/3 of it is lost. The series started in 1995, since last year's income is the basis for this year's compensation.

Table 6.7. Impact on annual disposable income from injuries from work. APW-income level for single.

	1994	1995	1996	1997	1998	1999 [1]
Single, 100 % injured						
Increase in disposable income, %	-	23.7	24.6	25.0	28.0	28.4
Net replacement rate, %	-	123.7	124.6	125.0	128.0	128.4
Single, 33 1/3 % injured						
Reduction in disposable income, %	-	3.9	4.2	3.8	3.3	3.6

1) Preliminary calculation ('Elements').

In the 100 per cent loss of working capability case the net replacement rate is increasing over time. This probably surprising result is generated by the interaction of the compensation for injuries from work and some of the components of the disability pension scheme. More specifically, it is because the special supplement for singles (not tapered) from the 1994 pension reform has gradually been included in the ordinary supplement, which is tapered against other income (e.g. compensation for injuries from work) with 30 per cent. In 1999 the special supplement was completely integrated with the ordinary supplement. The end point of the income interval for this tapering has therefore been increased by 3.33 times the size of the special supplement. This means that tapering of the basic disability pension amount, which follows tapering of the ordinary supplement to zero, the taper being 60 per cent, begins at a very high 'other income' level (DKK 117,200 1995, increasing to DKK 204,100 in 1999). The 'other income' (here the compensation for injuries from work, approx. DKK 200,000) has such a size that it implies a more modest tapering of the basic amount, which more than compensates for the lost (proportion of the) special supplement (which is integrated with the ordinary supplement and tapered to zero).

In the 33 1/3 per cent loss of working capability case there is some variation in the relatively small impact. This variation is primarily because the ratio between the compensation (based on last year's income) and the lost income (current year's income) changes slightly from year to year.

Old-age pensions

The public pension schemes (old-age and disability) were reformed in 1994. The aim of the reform was to bring the pensions from a net or semi-net basis to a gross basis and then make the pensions (with the exceptions of some components) fully taxable. That implied substantial increases in some of the rates, but the disposable income did not change considerably.

A new component was the 'special supplement' for single pensioners. It was taxable but not means-tested. From 1995 to 1999 this special supplement was gradually integrated with the ordinary pension supplement, whish is means-tested, the taper is 30 per cent. An implication has already been mentioned, cf. the section on compensation for injuries from work, the end point of the interval for tapering the ordinary supplement has increased very substantially.

The rules for tapering have changed during the period whereas pension rates have just developed according to the usual indexing. The basic amount of the minimum old-age pension became also subject to means-testing for pensioners 70 years or older (it used to be 67 to 70 years) from 1994, but only against own earned income (i.e. income from work). This was new in terms of old-age pension, at least for pensioners 70 years or older, but not in terms of disability pension, the basic amount of which was already means-tested and also against a broader income base. The taper was 60 per cent in both pension schemes. Another change came in 2000 when the taper for the basic amount was lowered from 60 per cent to 30 per cent (only for old-age pension). Now the entire minimum old-age pension (residence based) can be tapered off, but the basic amount only against income from work, which requires a quite substantial 'other income', approx. DKK 375,000 to taper the minimum pension to zero (2000). All this has no impact on the cases studied here, as there is no 'other income'.

There were no significant changes in the ordinary supplementary pension scheme (ATP) but two new schemes were implemented, a temporary pension savings scheme, where contributions were only levied in 1998, and a permanent scheme from 1999, the special pension savings scheme. The basis for both schemes is a 1 per cent contribution levied on the basis of the 'gross' tax (and also on non-pension benefits). The pensions from the temporary scheme are paid as lump sums at pension age (these amounts, which could be paid out from 1999, are not included here). The pensions from the special pension savings scheme will be paid out on a current basis (minor amounts probably as lump sums). Pensions from this scheme will have to be included in future (from 2000).

The pensions included in table 6.8 are (with full former working record) the minimum pension, ordinary ATP and a small personal supplement (means-tested). In the no former working record case it is just the minimum pension and the small personal supplement.

Table 6.8. Net replacement rates (per cent) for pensioners (starting at the age of 67). The reference for singles is the APW-income level, for couples it is 1.5 times that level.

	1994	1995	1996	1997	1998	1999 [1]
Single, full working record.	55.5	55.0	54.4	54.1	54.5	54.2
Single, no working record.	50.2	49.4	48.6	48.0	48.1	47.4
Couple, full working record. (1.5 APW income)	55.0	54.9	55.0	54.6	54.9	54.7

1) Preliminary calculation ('Elements').

The series for singles with no former working record reflects the case for the residence based basic or minimum pension (and a small personal supplement). There is a minor deterioration of the relative position in the period. For singles with a full former working record, the occupational pension (ATP) that he receives can partly counterbalance the situation. In the case of couples (full working record for both spouses and ATP accordingly) the relative position is almost unchanged over time.

Child benefits

The general child allowance scheme started in 1987 as a result of that year's tax reform. The scheme is also administered by the tax authorities. There were two rates, one for the age bracket 0 to 7 years and the other from 7 to 18 years. This was supplemented in 1995 by a special, higher, rate for infants, 0 to 3 years. The highest rate is for infants (0-3 years). It is somewhat lower for small children (3 to 7 years) and lower again for children at the age of 7 to 18 years. Age is the only criterion for differentiation, there is no supplement for child no. 2 or 3 or more. One consequence of the Danish scheme is that the youngest child gets the highest benefit. The benefits are indexed, sometimes favourably compared to other benefits, e.g. the case in 1996 and in 1998. The favourable indexation can be related to other child related conditions, e.g. increase in parents' payment for day care or less favourable rebates for siblings in day care institutions. The phase in of the tax reform from 1994 to 1998 had no influence on the ordinary indexation of this benefit which has always been tax free.

Table 6.9 contains the results over time for the impact of the general child allowance scheme on disposable income for the 1.5 APW-income couple.

Table 6.9. Impact on disposable income from allowance for children. 1.5 APW-income level for couple.

	1994	1995	1996	1997	1998	1999 [1]
1 child (6 years) Increase in disposable income, %	4.1	4.1	4.2	4.2	4.3	4.3
2 children (6 and 3 years) Increase in disposable income, %	8.1	8.2	8.4	8.5	8.7	8.5
3 children (6, 3 and 1 year) Increase in disposable income, %	12.2	12.8	13.2	13.2	13.5	13.2

1) Preliminary calculation ('Elements').

The impact from the introduction of the higher rates for infants in 1995 is seen in the case with three children. The favourable indexing in 1996 and 1998 is also reflected. From 1994 to 1998 there are either increasing or constant positive impacts. In 1999 there are slight decreases, but the relative impact in 1999 is still higher than or equal to the one in all other years, except 1998. Measured in this way, the situation has been improved during the period. This is different from for instance Finland and Sweden where the opposite situation was the case. A more comprehensive analysis should, however, include other children related items, e.g. the costs for child day care. That might change the picture.

Parental benefits

The benefits received during maternity leave are sickness benefits. The employer has, however, no obligations in this situation, with the exception of possible labour market agreements. Maternity benefits are paid by the municipality, when conditions for attachment to the labour market are met.

The time profile of leave with benefits is 18 weeks (4 before + 14 after delivery) for the mother alone with an additional 10 weeks for either the mother or the father plus 2 weeks (from 1997) for the father alone, in total 30 consecutive weeks. The father also has a 2-week leave with benefits immediately after the delivery. The two weeks after the delivery is the only time (in the ordinary scheme) both parents have leave (and benefits) together. It is possible to use the special parental leave scheme to obtain more time together, but then the benefits will usually be much lower.

The calculations in table 6.10 only include benefits from the ordinary maternity benefit scheme, 28 weeks for the mother and 2 weeks for the father (the extra 2 weeks from 1997 are not included).

Table 6.10. Impact on disposable income of maternity leave benefits. 1.5 APW-income level plus child allowance for 2 children, couple.

	1994	1995	1996	1997	1998	1999 [2)]
Benefits for 30 weeks [1)] Reduction in disposable income, %	6.4	6.5	6.5	6.7	6.8	6.9
Benefits for 14 weeks, mother alone. Reduction in disposable income, %	2.8	2.8	2.8	2.9	3.0	3.0

1) The father has 2 weeks the mother 28 weeks.
2) Preliminary calculation ('Elements').

The benefit is, as already mentioned, the same as the sickness benefit (and the maximum is with the exception of some rounding the same as the maximum unemployment insurance benefits). There is a modest increase in the negative impact over time for the two chosen cases, which can also be seen as further variations of the case for illness.

Summary

The general picture is that of a relatively modest decline in the relative position for recipients of basic benefits such as sickness benefits (also for maternity leave), unemployment insurance benefits, social assistance and minimum pensions. Groups with additional public pensions have only modest declines (singles) or close to an unchanged position (pensioner couples). Families with children have improved their relative position a little, when only the child benefits are considered. The case with injuries from work (100 per cent loss of working capability) is influenced by the changed tapering rules for the disability pension resulting in an improved relative position in the period. This improvement is permanent in the sense that the recipient will keep a larger proportion of the disability pension than at the beginning of the period.

APPENDIX 1

DOCUMENTATION OF FAMILY TYPE (APW) CALCULATIONS FOR THE 8 COUNTRIES STUDIED, 1999

The calculations of the effects of social security benefits and taxation are based on the OECD 'Taxing Wages', an annual publication showing disposable income for 'The Average Production Worker', the APW, in the member countries. The latest publication used in this study is the 2000 edition, covering the year of 1999.

Two APWs are used, one is the single worker just as in the OECD publication, the other is a couple where both spouses have an income (the husband has the income of the single APW, the wife has 50 per cent of that). The OECD now has a considerable variation in income, both for the single and the couple. In this study there is, as mentioned, only two income levels, one for the single person and another for the couple. In the cases of unemployment insurance and old-age pensions the calculations have been based on an income range, but these calculations are not included in this documentation. 'Our' APW-couple has a varying number of children, the OECD couple has none or two. The APW is thus a simplified, stylized family type. The basis for the calculations is 1999 data for the APW from the OECD publication. In some cases official national data have been used, e.g. for Canada where Statistics Canada recently revised the APW series, a revision not reflected in the OECD data. The countries covered are Denmark, Sweden, Finland, Austria, Germany, the Netherlands, Great Britain, and Canada.

'Standard' events

The APWs in the 8 countries are exposed to a series of 'standard' events. The events selected are:

1. Ill for one week. Single APW
2. Unemployed for 3 months during the year, eligible for unemployment insurance benefits. Single APW
3. Unemployed for the whole year, eligible for unemployment insurance benefits. Single APW
4. Unemployed for 3 months during the year, not eligible for unemployment insurance benefits. Single APW

5. Unemployed for the whole year, not eligible for unemployment insurance benefits. Single APW
6. Wife unemployed for the whole year, eligible for unemployment insurance. APW-couple
7. Injured from work - single APW, two cases:
   1. Working capability completely lost.
   2. Loss of $^1/_3$ of the working capability.
8. Disability pensioner with former work record. Single APW.
9. Disability pensioner without former work record. Single APW.
10. Wife, usually working part time, becomes a disability pensioner. APW-couple.
11. Old-age pensioner with maximum period of former occupation. Single APW.
12. Old-age pensioner without former occupation. Single APW.
13. Old-age pensioners with maximum period of former occupation. APW-couple.

'Standard' events in connection with children

1-3. The couple has 1, 2 or 3 children, 1 to 6 years old.
4. The couple gets the second child (at the beginning of the year).
   1. Calculation covering the maximum period of maternity leave in each country.
   2. Calculation covering a common period of maternity leave for all 8 countries.

Calculations

The calculations cover the gross compensation percentage for the transfers compensating the loss of working income (the net compensation percentage if the compensation is based on net income) and the change in disposable income caused by each 'standard' event. For pensioners it is the usual net compensation percentages or net replacement rates, which are calculated.

This is not relevant for all the events. E.g. the compensation percentage and the change in disposable income for the pensioner without former occupation have, strictly speaking, no meaning, since there is no loss of income at 'retirement'. The interpretation in this case is relative to the disposable income of the APW. The compensation percentage is also irrelevant where family allowances for children are concerned.

The 'maximum period of former occupation' is by itself not a well defined concept. In this study the maximum period is 45 years, unless the rules say otherwise (in Sweden the period is 30 years, and further years in occupation have no influence on the additional pensions in the present pension system, in Austria it is 40 years). This has the implication, that in some cases, e.g. for the Danish additional pension scheme, it is not possible to have had 45 years of membership when retiring in 1999. The interpretation of the calculation in this case is the maximum possible amount the pensioner can get, when he or she retires in 1999 at the official retirement age.

There is another 'timing-problem' in the case where the couple gets the second child. It is assumed that it is possible to get the child and have it for a whole year, and also to receive maternity leave benefits from some time before the birth, all within the same year. This is hardly possible, but it is, anyhow, the assumption.

The impact of the 'events' are with a few exeptions calculated based on current income, i.e. 1999 income, disregarding that former income is the proper basis in many cases. Special rules concerning payment for vacation have also been disregarded, all income is used as basis for calculation of income related benefits. This is a clear simplification.

Results

The results of the calculations are presented in a compressed form in the attached tables, cf. Chapter 2, section 2.3. There are, except for unemployment insurance and old-age pensions, only results for two points in the income distribution, those of the single APW and the APW-couple. It is the isolated effect of each event, which is shown. Many of the 'standard' events have the effect of reducing disposable income. Other means tested benefits, e.g. for housing, would then increase. These kinds of effects are not included in the results, which in this case can be interpreted as showing the maximum effects on disposable income. In future work the focus will be on analyses of 'combined' cases. The housing costs and day care payments for children as well as subsidies related to these schemes will be included.

Documentation

There is a short documentation of the calculations for each country, c.f. the following. The documentation is oriented towards the specific calculation of the effect of the 'standard' events selected, it is not a description of the rules in the social security and taxation systems of the 8 countries, although the tax calculation for the single APW is fully documented. The detailed calculations for each case are also documented and stored, but not published. They are available on request.

Ministries and organisations in Sweden, Finland, Austria, Germany, the Netherlands, Great Britain, and Canada have been very helpful in updating the information from 1998 to 1999 and in providing new information for 1999 for their respective countries. This effort is essential for the correctness of the results presented in the report. Any errors or misunderstandings are the sole responsibility of the author.

Outline of the APW

As already mentioned, the APW is contained in 'Taxing Wages', an annual publication from the OECD. Characteristics of the APW:

1. The APW is a worker in the manufacturing industry.
2. The wage income of the APW is the average (based on hourly wage and hours worked) in manufacturing industry.
3. Personal characteristics such as being single or married, with or without children, which decide the tax/benefit position of the person or family.

Cf.1. The share of employees in manufacturing (out of total employment) is approx. the same in DK, S, and GB, close to 1/5, while it is higher in FIN, A and D, highest in D, and lower in NL and CAN. The distribution below is based on 1997 figures.

	DK	S	FIN	A	D	NL	GB	CAN
Share of employees in manufacturing (%)	21	20	23	24	29	18	21	17

Cf.2. The average production worker is adult, working full time within manufacturing (ISIC division 3), is 'uni-sex', and is neither ill nor unemployed. Overtime payment and payment for vacation are included in the income. This is calculated as the average hourly wages per month or quarter (weighted after hours worked in these periods), multiplied by the average amount of hours worked during the year. Fringe benefits are not included in the income. The procedure described is followed by most countries, but there is some variation.

Cf.3. The tax calculation includes personal taxes of wage income and standard deductions. Using only standard deductions is a simplification and 'non-standard' deductions (e.g. for interest payments in the Danish case) would change the results considerably. Standard social contributions paid by the employee are also included in the calculation of disposable income. This concept is calculated in the following way:

Gross wage of APW
- Social Security contributions (paid by employees)
- Personal tax
+ Family allowances (cash)
= Disposable income

This concept of disposable income is 'simple' and does not catch all the variation of the real world, it is called 'take home pay' in OECD's publication.

The couple with children receives standard family allowances. Subsidies for housing or day care payments are not considered.

Limitations

Some of the limitations are evident from the procedures already described:
The calculation of disposable income is rather crude.
The calculations are for two points in the income distribution, those of the single APW and the APW-couple. These points are hardly the same in all the countries, which is, in itself, a problem .

It would be preferable also to calculate for incomes below and above that of the APW (and the $^1/_2$ APW), which would improve the foundation for the comparisons. This has been done in the cases of unemployment insurance and old-age pensions.

Even if some of the limitations concern the APW as such, it should not be forgotten that OECD's APW is still the only existing operational framework for this kind of international comparisons. The simple 'one scheme at a time' approach followed in 'Elements' is, however, becoming a little outdated. A 'standard of living' approach where all relevant schemes are considered together is more saticfactory and that will be the approach in the future. Calculations based upon representative data would be even better, and work in this direction is in progress. The Euromod project, when operational, will be a major step forward as a tool for comparative studies.

DOCUMENTATION OF APW CALCULATIONS FOR DENMARK, 1999

Single APW The gross wage of the APW in 1999 is the official Danish estimate for the 2000 edition of Taxing Wages, OECD.

	1999 Insured[1]	1999 Non-insured[1]
Gross wage	274,200 DKK	274,200 DKK
Tax and social security	121,276 DKK[2]	118,134 DKK
Disposable income	152,924 DKK	156,066 DKK

APW-couple The husband has the same gross wage as the single APW, the wife has 50 per cent of that income. The couple has no children.

	1999 Insured[1]
Gross wage	411,300 DKK
Tax and social security	171,506 DKK
Disposable income	239,794 DKK

1) The terms insured and non-insured refer to unemployment insurance.
2) Cf. the annex for a documentation.

'Standard' income events

1. Ill for one week. Single APW

The gross wage of the insured APW is reduced by 1/52 that is by 5,273 DKK. Compensation for illness in 1 week is 2,758 DKK (Rate for maximum compensation in 1999 for illness). Max. benefit is reached at an income of 155,809 DKK. The gross compensation percentage is 2,758 / 5,273 x 100 = 52. The disposable income of the APW is 151,799 DKK, when he or she is ill for one week during 1999.
The decrease in disposable income compared to the case with no illness is 152,924 - 151,799 = 1,125 DKK or 0.7 per cent. From 1994 nearly all employees have received the usual wage during short spells of illness according to labour market agreements.

2. Unemployed for 3 months during the year, insured. Single APW

The gross wage of the insured APW is reduced by 1/4 that is by 68,550 DKK. 3 months' compensation (13 weeks of 5 days each) is 13 x 5 x 552 = 35,880 DKK. The maximum compensation for unemployment in 1999 was 552 DKK a day. Max. benefit is reached at an income of 173,255 DKK. Minimum benefit (453 DKK/day) is reached at an income of 142,168 DKK and below.
The gross compensation percentage is 35,880 / 68,550 x 100 = 52. The disposable income of the APW is 138,316 DKK, when he or she is unemployed for 3 months during 1999.
The decrease in disposable income compared to the case with no unemployment is 152,924 - 138,316 = 14,608 DKK or 9.6 per cent.

3. Unemployed for the whole year, insured. Single APW

There is no gross wage. The compensation is 52 x 5 x 552 = 143,520 DKK. The maximum compensation for unemployment in 1999 was 552 DKK a day. Max. benefit is reached at an income of 173,255 DKK. Minimum benefit (453 DKK/day) is reached at an income of 142,168 DKK and below.
The gross compensation percentage is 143,520 / 274,200 x 100 = 52. The disposable income of the APW is 93,858 DKK, when he or she is unemployed for the whole of 1999.
The decrease in disposable income compared to the case with no unemployment is 152,924 - 93,858 = 59,066 DKK or 38.6 per cent.

4. Unemployed for 3 months during the year, non-insured. Single APW

The reduction in gross wage is 68,550 DKK as in case 2 (unemployed for 3 months). It is assumed that the non-insured APW receives social assistance during the unemployment period.
The rate is 7,180 DKK per month (equivalent to 60 per cent of the maximum unemployment benefit). This benefit is taxable. Just as in the 1997 and 1998-calculation, housing allowances are not included. This is done to make the Danish cases more comparable with those of the other countries. The housing allowance part of the social assistance is not taxable.
The total social assistance for 3 months is 21,540 DKK.
The gross compensation percentage is 21,540 / 68,550 x 100 = 31. Disposable income for an APW with 3 months of unemployment receiving social assistance is 134,047 DKK.
The decrease in disposable income compared to the case with no unemployment is 156,066 - 134,047 = 22,019 DKK or 14.1 per cent.

5. Unemployed for the whole year, non-insured. Single APW

There is no gross wage. The compensation is social assistance and the rate is 7,180 DKK a month, just as in case 4. The total assistance for 12 months is 86,160 DKK.
The gross compensation percentage is 86,160 / 274,200 x 100 = 31. Social assistance is as already mentioned taxable in 1999. Disposable income in this case is 63,781 DKK.
The decrease in disposable income compared to the case without unemployment is 156,066 - 63,781 = 92,285 DKK or 59.1 per cent.

6. Wife unemployed for the whole year, insured. APW-couple

There is no gross wage for the wife. The compensation is 52 x 5 x 368 = 95,680 DKK. The maximum compensation for unemployed (working part time and being insured accordingly) in 1999 was 368 DKK a day. Max. benefit (part time) is reached at an income of 115,503 DKK. There is no minimum benefit for part time insured.
The gross compensation percentage is 95,680 / 137,100 x 100 = 70. The disposable income of the APW-couple is 223,260 DKK, when the wife is unemployed for the whole year in 1999 and usually is working part time.
The decrease in disposable income compared to the situation with no unemployment is 239,794 - 223,260 = 16,534 DKK or 6.9 per cent.

7. Injured from work. Single APW

Transfer payments caused by injuries from work are studied in two cases, one where the working capability is completely lost and one where $^1/_3$ of the working capability is lost.

1. Working capability completely lost
   There is no gross wage. The compensation is 80 per cent of the 'annual income'. The 'annual income' is the income for the year before the accident, here assumed to be 1998 income adjusted for pension contributions from the employer and rounded to the closest amount divisible by 1000. For 1998 this will be the APW gross wage of 263,300 DKK plus the ATP contributions from the employer, 1,788 DKK, in total 265,088 DKK, rounded to 265,000 DKK. The compensation is 0.8 x 265,000 = 212,000 DKK or 212,004 DKK when rounded to the closest amount divisible by 12. On top of that there are three components from the ordinary disability pension scheme that is an 'invalidity' amount of 23,364 DKK ('invaliditetsbeløb') and a 'no working capability' amount of 32,244 DKK ('erhvervsudygtighedsbeløb') and the basic amount, which, however, is tapered from 48,024 DKK to 43,282 DKK. The total compensation amounts to 310,894 DKK. All components except the 'invalidity' amount are taxable.

The gross compensation percentage is 310,894 / 274,200 x 100 = 113. The disposable income for an APW losing the working capability is 196,393 DKK.
The increase in disposable income compared to the situation without injuries is 196,393 - 152,924 = 43,469 DKK or 28.4 per cent.

2. Loss of 1/3 of the working capability
The gross wage is reduced by a, i.e. 91,400 DKK. The compensation is 80 per cent of the wage reduction or a of that in the former case, i.e. 70,668 DKK (rounded). Loss of a of the working capability does not make the APW eligible for disability pension.
The gross compensation percentage is 70,668 / 91,400 x 100 = 77. The disposable income for an APW with b of the former gross wage and compensation for loss of a of his or her working capability is 147,377 DKK.
The decrease in disposable income compared to the situation with no injuries is 152,924 - 147,377 = 5,547 DKK or 3.6 per cent.

8. Disability pensioner with former working record and income at APW-level. Single APW

It is assumed that the pensioner receives the highest level of disability pension, which is comparable to a 'full' pension in the other countries.
The Danish disability pension for a single at the highest level consists of 4 components, basic amount 48,024 DKK in 1999, supplement 47,616 DKK, 'invalidity' amount 23,364 DKK and a 'no working capability' amount of 32.244 DKK, in total 151,248 DKK in 1999. All components are flat-rate benefits and all are taxable, except the invalidity amount. The former work record is of no relevance, there are no additional public pension schemes which are income or work related.
The disposable income for the pensioner with the highest disability pension is 151,248 DKK minus 38,329 DKK in personal tax, in total 112,919 DKK.
The net compensation percentage is 112,919 / 152,924 x 100 = 73.8.
The decrease in disposable income is 26.2 per cent.

9. Disability pensioner without former working record. 'Single APW'

The working record is, as already mentioned, of no relevance for the benefits in the Danish disability pension scheme. If a person is accepted for the highest level of the pension (full loss of working capability) he or she will receive the amounts mentioned in case 8, disregarding earlier income or work. The disposale income is 112,919 DKK.

The 'net compensation percentage' (relative to the APW) is 112,919 / 152,924 x 100 = 73.8. The 'decrease' in disposable income, relative to that of the APW, is 26.2 per cent.

10. Wife disability pensioner. APW-couple

It is assumed that the wife in the APW-couple becomes a disability pensioner (highest level) while the husband continues to work (APW income level). Her former working record is of no relevance for the pension.

The disability pension, highest level, consists of 4 components for the married person, basic amount 48,024 DKK in 1999, supplement 21,468 DKK, 'invalidity' amount 23,364 DKK and a 'no working capability' amount of 32,244 DKK, in total 125,100 DKK. The basic amount is means-tested, but only against own income. The supplement is means-tested against own income as well as income of the spouse. None of the other components are means-tested. In the case here the supplement is means-tested to 0 against the income of the spouse. The total gross pension is 125,100 - 21,468 = 103,632 DKK.

The gross compensation percentage is 103,632 / 137,100 x 100 = 75.5. The disposable income of the couple is 241,563 DKK in the case where the wife receives the highest disability pension and the husband continues to work.

The increase in disposable income compared to the situation with no disability is 241,563 - 239,794 = 1,769 DKK or 0.7 per cent.

11. Pensioner with maximum period of former occupation. Single APW Retirement at 'usual' age, here 67 years

The public pension for the single former APW consists of the following components in 1999 level. A basic amount ('grundbeløb') of 48,024 DKK, a 'supplement' ('pensionstillæg') of 47,616 DKK , and a 'personal supplement' ('personligt tillæg') of 2,300 DKK, in total 97,940 DKK. The 'personal supplement' varies according to economic needs, it is non-taxable and means tested.

On top of the public pension there is an additional pension scheme. The benefit from that is 17,976 DKK in 1999 on the assumption of full membership since April 1964.

The disposable income for the APW-pensioner is 97,457 DKK in public pension (the 'personal supplement' is reduced by 483 DKK, due to means testing), plus 17,976 DKK in additional pension minus 32,608 DKK in personal tax, in total 82,825 DKK.

The net compensation percentage is 82,825 / 152,924 x 100 = 54.2.

The decrease in disposable income compared to the APW is 45.8 per cent.

12. Pensioner without former occupation. 'Single APW'
'Retirement' at 'usual' age, here 67 years

The public pension is the same as in the former case, i.e. 97,940 DKK. This pension (including the 'personal supplement' of 2,300 DKK) results in a disposable income of 72,540 DKK.
The 'net compensation percentage' (relative to the APW) is 72,540 / 152,924 x 100 = 47.4.
The 'decrease' in disposable income, relative to that of the APW, is 52.6 per cent by this kind of retirement.

13. Pensioners with maximum period of former occupation. APW-couple
The two pensioners have the same age, and both retire 67 years old

The public pension for the APW-couple is twice the basic amount for the single pensioner and twice the 'supplement' for married pensioners that is 2 x 48,024 + 2 x 21,468 = 138,984 DKK. The 'personal supplement' is received according to economic needs. Here it is assumed that this is the double amount of what the single pensioner receives, in total 4,600 DKK.
It is assumed that the couple has been members of the additional pension scheme as long as possible (since April 1964), the husband on full time working basis, the wife on part time working basis. The combined pension from this source is 29,964 DKK in 1999, 17,976 DKK for the husband and 11,988 DKK for the wife.
The disposable income for the APW-couple as pensioners is 143,124 DKK in public pensions (the 'personal supplement' is reduced by 460 DKK, due to means testing) plus 29,964 DKK in additional pension minus 41,845 DKK in personal tax, in total 131,243 DKK.
The net compensation percentage is 131,243 / 239,794 x 100 = 54.7.
The decrease in disposable income compared to the APW-couple is 45.3 per cent.

'Standard' income events in connection with children

1-3. The APW-couple has 1, 2 or 3 children

Child no. 1 (6 years old). The family allowance is 10,200 DKK in 1999. Compared to the situation without children the increase in disposable income is 10,200 / 239,794 x 100 = 4.3 per cent with 1 child (6 years old).
Child no. 2 (3 years old). The family allowance is 10,200 DKK in 1999. Compared to the situation without children the increase in disposable income is (10,200 + 10,200) / 239,794 x 100 = 8.5 per cent with 2 children (6 and 3 years old).
Child no. 3 (1 year old). The family allowance is 11,300 DKK for infants (0-2 years) in 1999.

Compared to the situation without children the increase in disposable income is (10,200 + 10,200 + 11,300) / 239,794 x 100 = 13.2 per cent with 3 children (6, 3 and 1 year old).

4. The couple gets child no. 2 and has 2 children

Even if it is not possible to get 1 child and have 2 children for a whole year and within the same year receive benefits from 4 weeks prior to delivery, this is assumed to be the case in the following.

1. The couple has 30 weeks of maternity leave, 28 weeks for the wife and 2 weeks for the husband (2 extra weeks for the husband are not used). The husband has a loss of income of 2/52 of the gross wage that is 10,546 DKK. He receives 2 x 2,758 = 5,516 DKK in compensation (the rate is the maximum compensation for illness, weekly basis, in 1999). Max. benefit is reached at an income of 155,809 DKK. The wife has a gross wage reduction of 28/52 that is 73,823 DKK. She receives 28 x 2,758 / 2 = 38,612 DKK in compensation (the rate is 50 per cent of the maximum compensation for illness in 1999).
   Together the couple loses 84,369 DKK in gross wages and receives 44,128 DKK in compensation.
   The gross compensation percentage is 44,128 / 84,369 x 100 = 52. 30 weeks of maternity leave results in a disposable income of 243,255 DKK including allowance for 2 children for the couple (1 child 3 years of age and 1 born in 1999).
   The decrease in disposable income compared to the situation with 2 children (3 and 1 year) is 261,294 - 243,255 = 18,039 DKK or 6.9 per cent.
   This calculation reflects the effect of using the maximum maternity leave.

2. In the alternative calculation the length of the maternity leave is 14 weeks for the wife alone, this period is used for all countries in the alternative calculation.
   The gross wage of the wife is reduced by 14/52 that is 36,912 She receives (14 x 2,758) / 2 = 19,306 DKK in compensation.
   The gross compensation percentage is 19,306 / 36,912 x 100 = 52. The disposable income is 253,398 DKK for the couple with 2 children where the wife has 14 weeks of maternity leave.
   The decrease in disposable income compared to the situation, where the couple has 2 children is 261,294 - 253,398 = 7,896 DKK or 3.0 per cent.

Annex Tax and social contribution calculation for single APW, 1999. DKK.

Gross wage income	274,200
– Contribution for supplementary pension	894
Base for 8+1 per cent contribution	273,306
Social contributions:	
8+1 per cent social contribution 0.09 x 273,306 =	24,598
Other social contributions:	
Contribution for supplementary pension	894
Contribution for unemployment insurance	5,247 [1)]
All social contributions	30,739
Taxable income:	
Gross wage	274,200
– Social contributions	30,739
Taxable income	243,461
Personal income:	
Gross wage	274,200
– 8+1 per cent social contribution	24,598
– Contribution for supplementary pension	894
Personal income	248,708
State tax:	
Bottom tax: 0.075 (243,461 - 32,300) =	15,837
Middle tax: 0.06 (248,708 - 151,000) =	5,862
Total state tax:	21,699
Local tax: 0.326 (243,461 - 32,300) =	68,838
Tax and social contributions:	
State tax	21,699
Local tax	68,838
Social contributions	30,739
Tax and social contributions	121,276

1) 7.24 x 552 x 0.25 =	999	(insurance first 3 months)
+ 6.00 x 552 x 0.75 =	2,484	(insurance last 9 months)
+ 4.00 x 552 x 0.75 =	1,656	(early retirement from 1/4-99)
	5,139	
+ 12 x 9 =	108	(contribution for ATP for unemployed)
Total =	5,247	

DOCUMENTATION OF APW CALCULATIONS FOR SWEDEN, 1999

Single APW

The gross wage of the APW in 1999 is the official Swedish figure calculated by Statistics Sweden for OECD.

	1999 Non-insured[1)]
Gross wage	220,644 SEK
Tax and social security[2)]	77,096 SEK
Disposable income	143,548 SEK

APW-couple

The husband has the same wage as the single APW, the wife has 50 per cent of that. The couple has no children.

	1999 Insured[1)]
Gross wage	330,966 SEK
Tax and social security	110,276 SEK
Disposable income	220,690 SEK

1) Income related unemployment insurance is voluntary in Sweden and there is a membership fee. This should be deducted from the gross wage income but has not been so, and neither has it in the calculations for the Swedish APW in OECD's 'Taxing Wages'. The fee is approx. 1,000 to 1,200 SEK a year and is deductible in taxable income, if a threshold together with other deductions of 1,000 SEK is passed. Social contributions paid by the employers (approximately 33 per cent of the wage bill) is the major financing source for Swedish social security. The employee paid contributions have increased to 6.95 per cent of income (up to a ceiling) in 1999.

2) Cf. the annex for documentation.

'Standard' income events

1. Ill for one week. Single APW

The gross wage is reduced by 1/52, i.e. 4,243 SEK. Compensation for illness in one week is nothing for the first day (waiting period) and 80 per cent of the gross income on a daily basis (0.80 x 220,644 = 176,515.20 / 260 = 678.90, rounded: 679 SEK) for the next 4 days. The compensation is 4 x 679 = 2,716 SEK. The first 2 weeks of illness are covered by the employer and there are no central rules for how the 80 per cent in compensation should be calculated. The rules applied here are from before 1992, when the insurance also cove-

red the first 2 weeks. Other methods may give slightly different results. There is no maximum benefit level for the first 2 weeks, but when the insurance takes over from the 3rd week of illness, max benefit is reached at an income level of 7.5 x 36,400 = 273,000 SEK. The gross compensation percentage is 2,716 / 4,243 x 100 = 64. When the APW is ill for one week his or her disposable income is 142,580 SEK.
The decrease in disposable income compared to the situation without illness is 143,548 - 142,580 = 968 SEK or 0.7 per cent.

2. Unemployed for 3 months during the year, insured. Single APW

The loss of income is 1/4 of the gross wage, i.e. 55,161 SEK. Unemployment compensation is 80 per cent of the lost income with a maximum of 580 SEK a day. 80 per cent of the lost income on a daily basis is 0.80 x 220,644 = 176,515.20 / 260 = 678.90, rounded: 679 SEK, which is above the maximum of 580 SEK a day which is reached at an income level of 260 x 580 / 0.80 = 188,500 SEK. There is a minimum, 240 SEK a day, which is reached at an income level below 260 x 240 / 0.80 = 78,000 SEK. For 13 weeks (5 days each) with a waiting period of 5 days the compensation is 60 x 580 = 34,800 SEK.
The gross compensation percentage is 34,800 / 55,161 x 100 = 63. The disposable income of the APW with 25 per cent unemployment is 130,939 SEK.
The decrease in disposable income compared to the situation with no unemployment is 143,548 - 130,939 = 12,609 SEK or 8.8 per cent.

3. Unemployed for the whole year, insured. Single APW

There is no gross wage. The compensation is 255 x 580 = 147,900 SEK in the 'standard' year used here. Max. benefit (580 SEK/day) is reached at an income level of 188,500 SEK, min. benefit (240 SEK/day) is reached below 78,000 SEK.
The gross compensation percentage is 147,900 / 220,644 x 100 = 67. The disposable income of the APW is 99,750 SEK, when he or she is unemployed for the whole of 1999.
The decrease in disposable income compared to the situation with no unemployment is 143,548 - 99,750 = 43,798 SEK or 30.5 per cent.

4. Unemployed for 3 months during the year, non-insured. Single APW

The reduction of the gross wage is 55,161 SEK as in case 2. The compensation for the non-insured APW is 60 x 240 = 14,400 SEK. There is a waiting period of 5 days also in this scheme. The 240 SEK/day is a 'pure' flat rate benefit.
The gross compensation percentage is 14,400 / 55,161 x 100 = 26. The disposable income is 118,794 SEK in this situation.
The decrease in disposable income compared to the situation with no unemployment is

143,548 - 118,794 = 24,754 SEK or 17.2 per cent.
This scheme, the general part of Swedish unemployment insurance, is new from 1998. It replaces the old 'KAS' scheme. The benefit rate is equal to the minimum unemployment insurance benefit.

5. Unemployed for the whole year, non-insured. Single APW

There is no gross wage. The compensation is 255 x 240 = 61,200 SEK. The 240 SEK/day is a 'pure' flat rate benefit.
The gross compensation percentage is 61,200 / 220,644 x 100 = 28. The disposable income is 42,847 SEK in this situation.
The decrease in disposable income compared to the situation with no unemployment is 143,548 - 42,847 = 100,701 SEK or 70.2 per cent.
Recipients of the benefit from this scheme would, in many cases also be eligible for social assistance to supplement the income.
As already mentioned, this scheme is new from 1998.

6. Wife unemployed for the whole year, insured. APW-couple

There is no gross wage for the wife. The compensation is 255 x 339 = 86,445 SEK. The daily compensation of 339 SEK is calculated as 0.80 x 110,322 = 88,257.60 / 260 = 339.45 SEK, rounded: 339 SEK. The maximum benefit, 580 SEK a day, is not reached, that happens at an income level of 188,500 SEK. The minimum benefit in 1999 is 240 SEK/day, it is reached when the income falls below 78,000 SEK.
The gross compensation percentage is 86,445 / 110,322 x 100 = 78.5. The disposable income of the APW-couple is 204,022 SEK, when the wife is unemployed for the whole year in 1999 and usually is working part time (x APW income).
The decrease in disposable income compared to the situation with no unemployment is 220,690 - 204,022 = 16,668 SEK or 7.6 per cent.

7. Injured from work. Single APW

The effects of injuries from work are investigated in two cases. In the first there is a complete loss of working capability. In the second, the working capability is reduced by 33.3 per cent.

1. Working capability completely lost.
   In Sweden there is full compensation for the loss of income caused by injuries from work (if the income is within 7.5 x 36,400 = 273,000 SEK in 1999, the income level where the max. benefit is reached).
   There is no change in the disposable income of the APW in this situation.

2. Loss of 1/3 of the working capability.
There is, also in this situation with partial loss of the working capability, full compensation for the lost wage income.
There is no change in disposable income.

8. Disability pensioner with former working record and income at APW level. Single APW

It is assumed that the pensioner has a former working record with income at APW level. In this case he or she will get 'anticipated' pension points on that basis. It is further assumed that this will result in 4.03 pension points, just as in case 11 for the old age pensioner. On these assumptions the 'ATP' pension will be 88,015 SEK. The max. number of 'pension points' which can be earned is 6.5, resulting in a max. additional pension of 141,960 SEK.
The basic pension consists of a basic amount of 36,400 x .90 = 32,760 SEK and a supplement of 36,400 x (5 x 1.115 + 7 x 1.129) / 12 = 40,883 SEK. The supplement is means-tested against 'ATP' (100 per cent), so in the case here there is no supplement.
The disposable income for the 'APW-disability pensioner' (full pension) is 32,760 SEK in basic pension plus 88,015 SEK in 'ATP' minus 32,813 SEK in personal taxation, in total 87,962 SEK.
The net compensation percentage is 87,962 / 143,548 x 100 = 61.3.
The decrease in disposable income is 38.7 per cent in this situation.

9. Disability pensioner without former working record. 'Single APW'

The disability pensioner receives basic pension, cf. case 8. The basic pension consists of a basic amount of 36,400 x .90 = 32,760 SEK plus a supplement of 36,400 x (5 x 1.115 + 7 x 1.129) / 12 = 40,883 SEK, in total 73,643 SEK (full pension). The disposable income is 63,999 SEK. The basic pension consists of flat rate components.
The 'net compensation percentage' (relative to the APW) is 63,999 / 143,548 x 100 = 44.6.
The 'decrease' in disposable income, relative to that of the APW, is 55.4 per cent.
It should be noted that 88,000 SEK in ATP is reduced to a difference of approx. 23,000 SEK in disposable income between case 8 and 9 due to means testing and taxation.

10. Wife disability pensioner. APW-couple

It is assumed that the wife in the APW couple becomes a disability pensioner while the husband continues to work (APW income level). The wife has a working record earning 1/2 APW income. On this assumption she has 1.515 'anticipated' pension points, resulting in a supplementary pension of 33,088 SEK.

The basic pension for a married disability pensioner consists of a basic amount of 36,400 x .725 = 26,390 SEK and a supplement of 36,400 x (5 x 1.115 + 7 x 1.129) / 12 = 40,883 SEK. The supplement is means tested against the ATP pension leaving 7,795 SEK of the supplement. The total gross pension for the disability pensioner is 26,390 + 33,088 + 7,795 = 67,273 SEK (= 26,390 + 40,883).
The gross compensation percentage for the wife is 67,273 / 110,322 x 100 = 61. The disposable income for the couple is 143,548 SEK for the husband (APW income) and 57,629 SEK for the wife receiving disability pension, in total 201,177 SEK.
The decrease in disposable income compared to the situation without disability pension is 220,690 - 201,177= 19,513 SEK or 8.8 per cent.

11. Pensioner with maximum period of former occupation. Single APW Retirement at 'usual' age, here 65 years

It is assumed, that the APW has gained pension rights for 30 years (that is a 'full' period in the present Swedish additional pension scheme). This is also feasible, since the system started in 1960. It is further assumed, that the average number of 'pension-points' is 4.03 (the actual number in 1989). This average is slightly increasing over time.
On these assumptions the additional pension (ATP) will be 88,015 SEK in 1999.
The max. number of 'pension-points' which can be earned is 6.5, resulting in a max. additional pension of 141,960 SEK in 1999.
The basic pension in the Swedish system is based on the basic rate ('basbeloppet') which in 1999 was 36,400 SEK. The basic pension consists of two components, a basic amount which equals 36,400 x .96 = 34,944 SEK (single pensioner) and a supplementary amount, 36,400 x (5 x 0.555 + 7 x 0.569) / 12 = 20,499 SEK. The basic pension is then 55,443 SEK for a single pensioner. If the pensioner has no additional income he or she pays no taxes. When the pensioner has income from the additional pension scheme the supplementary amount in the basic pension is means tested and reduced by 1 SEK for each SEK in additional pension.
The disposable income for the 'APW-pensioner' is 34,944 SEK in basic pension plus 88,015 SEK in 'ATP' minus 33,600 SEK in personal tax, in total 89,359 SEK.
The net compensation percentage is 89,359 / 143,548 x 100 = 62.3.
The decrease in disposable income by retirement is 37.7 per cent in this situation.

12. Pensioner without former occupation. 'Single APW' 'Retirement' at 'usual' age, here 65 years

The pensioner receives basic pension, i.e. 55,443 SEK, cf. the former case. The basic pension is not taxed (there is a standard deduction designed in such a way, that single and

married pensioners, only receiving the basic pension do not pay personal tax). The basic pension consists of flat rate components. The disposable income is 55,443 SEK.
The 'net compensation percentage' (relative to the APW) is 55,443 / 143,548 x 100 = 38.6.
The 'decrease' in disposable income, relative to that of the APW, is 61.4 per cent by this kind of 'retirement'.

13. Pensioners with maximum period of former occupation. APW-couple The two pensioners have the same age, and both retire at the age of 65

It is assumed, that the wife and husband have gained pension rights for 30 years each. The husband is 'identical' to the single pensioner in case 11. The wife is assumed to have had half the income of her husband all the time, that will result in 1.515 'pension points' when the husband has 4.03 according to the Swedish 'ATP' scheme. On these assumptions the additional pension (ATP) will be 88,015 SEK for the husband and 33,088 SEK for the wife, in total 121,103 SEK in 1999. The max. additional pension is 141,960 SEK for each spouse in 1999.
The basic pension is equal to the basic amount, i.e. 36,400 x .785 = 28,574 SEK for each of the pensioners, in total 57,148 SEK. The couple will not receive any supplementary amount.
The disposable income for the APW-couple as pensioners is 57,148 SEK in public pensions plus 121,103 SEK in additional pension minus 38,081 SEK in personal tax, in total 140,170 SEK.
The net compensation percentage is 140,170 / 220,690 x 100 = 63.5.
The decrease in disposable income compared to the APW-couple is 36.5 per cent.

'Standard' income events in connection with children

1-3. The couple has 1, 2 or 3 children

For child no. 1 (6 years old) there is a family allowance of 9,000 SEK in 1999. Compared to the situation without children the increase in disposable income is (9,000 / 220,690) x 100 = 4.1 per cent with 1 child (6 years old). The family allowance is a flat rate benefit.
For child no. 2 (3 years old) the allowance is also 9,000 SEK. Compared to the situation without children the increase is (18,000 / 220,690) x 100 = 8.2 per cent with 2 children (6 and 3 years old).
For child no. 3 (1 year old, assumed born in 1999) the allowance is 9,000 SEK + 2,400 SEK = 11,400 SEK. Compared to the situation without children the increase is (29,400 / 220,690) x 100 = 13.3 per cent with 3 children (6, 3 and 1 year old).

4. The couple gets their second child and has 2 children

There are the same 'timing-problems' as mentioned in the documentation for Denmark.

1. The couple has a combined maternity leave for 360 days during the year, with 330 days for the wife and 30 days for the husband. The distribution between the two can be changed, but 30 days for each is the minimum. The 360 days cover the maximum period for which the compensation is based upon income. The compensation is (1999) 80 per cent.

   The husband has a wage reduction of (220,644 / 365) x 30 = 18,135 SEK. He receives 220,644 x .80 / 365 = 484 SEK per day for 30 days, resulting in a 'parents allowance' of 30 x 484 = 14,520 SEK. Max. daily benefit is reached at an income level of 7.5 x 36,400 = 273,000 SEK.
   The wife has a wage reduction of (110,322 / 365) x 330 = 99,743 SEK. She receives 110,322 x .80 / 365 = 242 SEK per day for 330 days, resulting in a 'parents allowance' of 79,860 SEK. Max. daily benefit is reached at an income level of 7.5 x 36,400 = 273,000 SEK.
   Combined the wage reduction is 117,878 SEK and the received compensation is 94,380 SEK.
   The gross compensation percentage is 94,380 / 117,878 x 100 = 80. 360 days of maternity leave results in a disposable income of 222,564 SEK for the couple including allowance for 2 children (1 child 3 years of age and 1 born i 1999).
   The decrease in disposable income compared to the situation where the couple has two children (3 and 1 year) is 238,690 - 222,564 = 16,126 SEK or 6.8 per cent.

2. In this calculation the common period of 14 weeks maternity leave for the wife is used. Her wage reduction is (110,322 / 365) x 98 = 29,621 SEK. She receives 110,322 x .80 / 365 = 242 SEK per day in 98 days that is 23,716 SEK in compensation. Max. benefit is reached at an income level of 7.5 x 36,400 = 273,000 SEK.
   The gross compensation percentage is 23,716 / 29,621 x 100 = 80. 14 weeks of maternity leave results in a disposable income of 234,853 SEK.
   The decrease in disposable income compared to the situation, where the couple has two children is 238,690 - 234,853 = 3,837 SEK or 1.6 per cent.

Annex Tax and social contribution calculation for single APW, 1999. SEK.

Gross wage income:	220,644
'Taxerad' income:	220,600
(Rounded gross wage income) 'Taxerad' income is the basis for calculation of taxes and social contributions.	
Standard deduction:	
'Taxerad' income is in the bracket above 5.615 x B (B = 36,400 SEK), the standard deduction is then calculated in this way:	
0.24 x B	8,736
The standard deduction is rounded down to	8,700
Social contributions:	
General contribution: 0.0695 x 220,600 = 15,332 - rounded to	15,300
Taxable income:	
'Taxerad' income	220,600
– Standard deduction	8,700
– General contribution	15,300
Taxable income	196,600
Tax and social contributions:	
State	200
Local tax: 0.3148 x 196,600	61,889
Total tax	62,089
Tax credit:	
Max.	1,320
- 0.012 (220,600 - 135,000)	1,027
Tax reduction	293
Total tax	62,089
- tax reduction	293
Actual tax	61,796
Social contributions:	
General contribution	15,300
Tax and social contributions	77,096

DOCUMENTATION OF APW CALCULATIONS FOR FINLAND, 1999

Single APW

The information on the gross wage of the APW in 1999 has been provided by the 'Government Institute for Economic Research' in Finland.

	1999 Non-insured[1]
Gross wage	145,417 FIM
Tax and social security[2]	50,483 FIM
Disposable income	94,934 FIM

APW-couple

The husband has the same gross wage as the single APW, the wife has 50 per cent of that income. There are no children.

	1999 Insured[1]
Gross wage	218,126 FIM
Tax and social security	68,077 FIM
Disposable income	150,049 FIM

1) Unemployment insurance (the earnings related component) is voluntary in Finland. In the official APW calculation for Finland in 'The Tax/Benefit Position of Production Workers' there is no deduc-tion in the disposable income for member-ship fees. This is also the case for the Swedish APW. This procedure has been continued in this study even if it is not strictly correct. The error is, howev-er, marginal.

2) Cf. the annex for a documentation.

1. Ill for one week. Single APW

The gross wage is reduced by 1/52, i.e. 2,796 FIM. In Finland there is a wait-ing period of 9 week-days (after the first day of illness), so there is no compensation at all from the insurance scheme for the first week of illness. The benefit has no maximum, the minimum is 0. The gross compensation percentage is 0. When the APW is ill for one week his or her disposable income is 93,531 FIM.

The decrease in disposable income compared to the situation without illness is 94,934 - 93,531 = 1,403 FIM or 1.5 per cent.

In Finland labour market agreements are covering the relatively long waiting period. In the usual situation the employee therefore receives wages during short term illness. In some agreements wages will be paid during illness for 1 to 2 months.

2. Unemployed for 3 months during the year, insured. Single APW

The loss of income is 1/4 of the gross wage, i.e. 36,354 FIM. The compensation on a daily basis is: Basic benefit of 121 FIM/day plus 42 per cent of the difference between 506.51 and 121 = 161.91 FIM/day plus 20 per cent of the difference between 535.45 and 506.51 = 5.79 FIM/day, in total 288.70 FIM/day. The ceiling of the 42 per cent bracket is calculated as 90 x 121 = 10,890 FIM/month or on a daily basis 10,890 : 21.5 = 506.51 FIM. The base for the calculation is 95.0 per cent of the actual monthly wage, i.e. 145,417:12 x 0.95 = 11,512.18 FIM/month or on a daily basis 11,512.18: 21.5 = 535.45 FIM, the entry in the 20 per cent bracket. The calculated daily benefit is paid for 5 days per week. There is a waiting period of 7 days (1 2/5 week), so the compensation is 65-7 = 58 days x 288.70 FIM/day = 16,745 FIM. There is no maximum benefit, the minimum is 121 FIM/day.

The gross compensation percentage is 16,745 / 36,354 x 100 = 46. The disposable income of the APW is 85,743 FIM when he or she is unemployed 25 per cent of the year.

The decrease in disposable income compared to the situation without unemploy-ment is 94,934 - 85,743 = 9,191 FIM or 9.7 per cent.

3. Unemployed for the whole year, insured. Single APW

There is no gross wage. The compensation is 260-7 = 253 days x 288.70 FIM/day = 73,041 FIM. There is no maximum benefit, the minimum is 121 FIM/day.

The gross compensation percentage is 73,041 / 145,417 x 100 = 50. The disposable income of the APW is 55,636 FIM when he or she is unemployed for the whole year.

The decrease in disposable income compared to the situation without unemployment is 94,934 - 55,636 = 39,298 FIM or 41.4 per cent.

4. Unemployed for 3 months during the year, non-insured. Single APW

The reduction of the gross wage is 36,354 FIM as in case 2. The compensation for an APW, who is not a member of the voluntary earnings related unemployment insurance scheme, is 65 - 7 = 58 days x 121 FIM/day = 7,018 FIM, there is also a waiting period of 7 days in this scheme. The benefit is flat-rate.

The gross compensation percentage is 7,018 / 36,354 x 100 = 19. The dispos-able income is 80,205 FIM in this situation.

The decrease in disposable income compared to the situation without unemployment is 94,934 - 80,205 = 14,729 FIM or 15.5 per cent.

5. Unemployed for the whole year, non-insured. Single APW

There is no gross wage. The compensation is 260 - 7 = 253 days x 121 FIM/day = 30,613 FIM for a whole year when the unemployed APW is not insured. The benefit is flat-rate.

The gross compensation percentage is 30,613 / 145,417 x 100 = 21. The disposable income is 25,266 FIM in this situation.

The decrease in disposable income compared to the situation without unemployment is 94,934 - 25,266 = 69,668 FIM or 73.4 per cent.

The recipient is eligible to receive additional support for housing costs, either from the housing benefit scheme or from social assistance.

6. Wife unemployed for the whole year, insured. APW-couple

There is no gross wage for the wife. The compensation on a daily basis is: Basic benefit of 121 FIM/day plus 42 per cent of the difference between 267.73 and 121 = 61.63 FIM/day, in total 182.63 FIM/day. The entry of 267.73 FIM/day is calculated as 95.0 per cent of the actu-al monthly wage, i.e. 5,756.13 FIM or on a daily basis 5,756.13 : 21.5 = 267.73 FIM/day. There is no 20 per cent component. The calculated daily benefit is paid for 5 days a week. There is a waiting pediod of 7 days (1 2/5 week), so the compensation is 260 - 7 = 253 days x 182.63 FIM/day = 46,205 FIM. There is no maximum benefit, the minimum is 121 FIM/day.

The gross compensation percentage is 46,205 / 72,709 x 100 = 63.5. The disposable inco-me of the APW-couple is 131,971 FIM, when the wife is unemployed for the whole year in 1999 and usually is working part time ($^{1}/_{2}$ APW income).

The decrease in disposable income compared to the situation without unemployment is 150,049 - 131,971 = 18,078 FIM or 12.0 per cent.

7. Injured from work. Single APW

The effects of injuries from work are investigated in two cases. In the first there is a complete loss of working capability. In the second, the working capability is reduced by 33.3 per cent.

1. Working capability completely lost
   There is no gross wage. In Finland the compensation ('full pension') is 85 per cent of the lost income (70 per cent if the recipient is 65 or older), i.e. 123,604 FIM.
   The gross compensation percentage is thus 85. The disposable income in this case is 86,785 FIM.
   The decrease in disposable income compared to the situation without injuries is 94,934 - 86,785 = 8,149 FIM or 8.6 per cent.

2. Loss of 1/3 of the working capability
   The loss of income is 48,472 FIM. The compensation is 1/3 of the 'full pension', i.e. equivalent to 85 per cent of the lost income assuming 2/3 of the wage is maintained. The compensation is 0.85 x 48,472 = 41,201 FIM.
   The gross compensation percentage is thus 85. The disposable income is 93,282 FIM, when the APW has lost 1/3 of the working capability.
   The decrease in dispoable income compared to the situation without injuries is 94,934 - 93,282 = 1,652 FIM or 1.7 per cent.

8. Disability pensioner with former working record and income at APW level. Single APW

It is assumed that the pensioner has a former working record with income at APW level. In this case he or she will get 'anticipated' pension rights on that basis. How much also depends on the age at the pension time. The usual old age pension accrual rate is 1.5 per cent per year of the wage from the 23rd year to 60th and then 2.5 per cent to the 65th year. In case of disability pension the 'anticipated' accrual rate is 1.5 per cent per year of the wage until the 50th year, then 1.2 per cent to the 60th and finally 0.8 per cent to the 65th. The maximum pension right is 60 per cent of the former income. A person who is 50 years (or younger) when he or she receives a disability pension can as a maximum receive 56.5 per cent of the former income. An age of max. 50 years is assumed here. The income related pension is 82,161 FIM. The basic pension is 30,156 FIM a year when the pensioner is living in the low cost part of the country. The basic pension is 'integrated' with the income related pension in this way: basic pension - 0.5 (income related pension - 3,030). In this case the basic pension is reduced to zero.

The disposable income for the 'APW-disability pensioner' (full pension) is 82,161 FIM in

income related pension minus 21,859 FIM in personal taxation, in total 60,302 FIM.
The net compensation percentage is 60,302 / 94,934 x 100 = 63.5.
The decrease in disposable income is 36.5 per cent in this situation.

9. Disability pensioner without former working record. 'Single APW'

The disability pensioner receives the basic pension which for a single person in the low cost part of the country is 30,156 FIM a year (it is the same as basic old age pension). There is no taxation of this basic pension. The disposable income is 30,156 FIM.
The 'net compensation percentage' (relative to the APW) is 30,156 / 94,934 x 100 = 31.8.
The 'decrease' in disposable income, relative to that of the APW, is 68.2 per cent.

10. Wife disability pensioner. APW-couple

It is assumed that the wife in the APW couple becomes a disability pensioner, while the husband continues to work (APW income level). The wife has a working record earning $^1/_2$ APW income. If she becomes a disability pensioner at the age of 50 years (or earlier) she will as a maximum receive an earningsrelated pension of 56.5 per cent of the former income, i.e. 41,081 FIM in this case.
The basic pension is 26,472 FIM a year for a married person living in the low cost part of the country. The basic pension is 'integrated' with the earningsrelated pension, cf. case 8. This leaves 7,446 FIM of the basic pension. The total gross pension for the disability pensioner is 41,081 + 7,446 = 48,527 FIM.
The gross compensation percentage for the wife is 48,527 / 72,709 x 100 = 67. The disposable income of the couple is 94,934 FIM for the husband (APW income) and 41,891 FIM for the wife receiving disability pension, in total 136,825 FIM.
The decrease in disposable income compared to the situation without disability pension is 150,049 - 136,825 = 13,224 FIM or 8.8 per cent.

11. Pensioner with maximum period of former occupation. Single APW Retirement at 'usual' age, here 65 years

The old age pension scheme in Finland consists of a basic part and an income related part. In the case where the APW has been working 'all the time' the income related pension will be 60 per cent of the gross income at retirement. The basic pension will in 1999 be means tested down to 0, cf. case 13 for a factual calculation for the spouse in the APW-couple. On these assumptions an APW with a full working record from the age of 23 years to 65 years will have a pension equal to 0.6 x 145,417 = 87,250 FIM.
The disposable income of the pensioner is 87,250 FIM in income related pension minus 24,894 FIM in personal tax, in total 62,356 FIM.

The net compensation percentage is 62,356 / 94,934 x 100 = 65.7.
The decrease in disposable income by retirement is 34.3 per cent.

12. Pensioner without former occupation. 'Single APW' 'Retirement' at 'usual' age, here 65 years

The 'basic' pension in the Finnish old age pension system now consists of one amount, 2,513 FIM/month (for a single pensioner in the 'low' cost part of the country), in total 30,156 FIM a year. There is no taxation of any kind of this minimum pension. The disposable income is 30,156 FIM.
The 'net compensation percentage' (relative to the APW) is 30,156 / 94,934 x 100 = 31.8.
The 'decrease' in disposable income, relative to that of the APW, is 68.2 by this kind of 'retirement'.

13. Pensioners with maximum period of former occupation. APW-couple The two pensioners have the same age, and both retire 65 years old

It is assumed, that both had a 'full' working record. In this case the income related pension is 60 per cent of the gross wage income at retirement, i.e. 0.6 x 145,417 = 87,250 FIM plus 0.6 x 72,709 = 43,625 FIM, in total 130,875 FIM. For the former part time working spouse, there will be an additional 6,174 FIM left from the means testing of the basic pension (26,472 - 0.5 x (43,625 - 3,030) = 6,174). The total pension is 130,875 + 6,174 = 137,049 FIM. 26,472 FIM is the annual basic pension for a spouse in the 'low' cost part of the country.
The disposable income of the pensioner couple is 130,875 FIM in income related pension plus 6,174 FIM basic pension minus 32,122 FIM in personal tax, in total 104,927 FIM.
The net compensation percentage is 104,927 / 150,049 x 100 = 69.9.
The decrease in disposable income is 30.1 per cent compared to the APW-couple.

'Standard' income events in connection with children

1-3. The couple has 1, 2 or 3 children

For child no. 1 (6 years old) there is a family allowance of 535 FIM/month in 1999, i.e. 6,420 FIM on an annual basis. Compared to the situation without children the increase in disposable income is (6,420 / 150,049) x 100 = 4.3 per cent when there is one child (6 years old).
For child no. 2 (3 years old) the allowance is 657 FIM/ month, i.e. 7,884 FIM on an annual basis. Compared to the situation without children the increase is (6,420 + 7,884) / 150,049 x 100 = 9.5 per cent when there are two children (6 and 3 years).

For child no. 3 (1 year old) the allowance is 779 FIM/month, i.e. 9,348 FIM on an annual basis. Compared to the situation without children the increase is (6,420 + 7,884 + 9,348) / 150,049 x 100 = 15.8 per cent when there are 3 children (6, 3 and 1 year).

4. The couple gets the second child and has 2 children

There are the same 'timing-problems' as mentioned in the docu-mentation for Den-mark.

1. The couple has a combined maternity and paternity leave of 281 weekdays. There are 105 days for the mother and 18 days for the father and 158 days which can be shared or taken by either the mother or the father. In this case it is assumed that the mother has 263 days and the father 18 days.
   The husband has a wage reduction of (145,417 / 312) x 18 = 8,389 FIM. He receives 5,799 FIM [1] in compensation. The benefit has no maximum. There is a minimum of 60 FIM/day.
   The wife has a wage reduction of (72,709 / 312) x 263 = 61,290 FIM. The benefit for this period is 42,388 FIM [2].
   Combined the wage reduction is 69,679 FIM and the compensation received is 48,187 FIM.
   The gross compensation percentage is 48,187 / 69,679 x 100 = 69. The dis-posable income of the couple with a combined leave of 281 days is 150,134 FIM inclu-ding family allowance for 2 children (1 child 3 years of age and 1 born in 1999).
   The decrease in disposable income compared to the situation where the couple has two children (3 and 1 year) is 164,353 - 150,134 = 14,219 FIM or 8.7 per cent.

2. In this calculation the common period of 14 weeks maternity leave for the wife is used. Her wage reduction is (72,709 / 312) x 84 = 19,575 FIM. She receives 13,538 FIM in compensation. The benefit has no maximum. There is a minimum of 60 FIM/day.
   The gross compensation percentage is 13,538 / 19,575 x 100 = 69. 14 weeks of maternity leave results in a disposable income of 160,750 FIM.
   The decrease in disposable income compared to the situation, where the couple has two children is 164,353 - 160,750 = 3,603 FIM or 2.2 per cent.

1) In the husband's income bracket the daily allowance is calculated in this way: 321.93 + 0.4 (0.95 x 145,417 - 137,978) / 300 = 321.93 + 0.23 = 322.16 FIM. For 18 days the compensa-tion is 18 x 322.16 = 5,799 FIM.
2) In the wife's income bracket the daily allowance is calculated in this way: 0.7 x (0.95 x 72,709) / 300 = 161.17 FIM. For 263 days the compensation is 263 x 161.17 = 42,388 FIM.

Annex Tax and social contribution calculation for single APW, 1999. FIM

Gross wage income:	145,417
Standard deduction:	
Work related expenses, 3.0 per cent max.	2,100
Social contr. unemployment, 1.35 per cent	1,963
Social contr. occupational pension, 4.7 per cent	6,835
Total	10,898
State taxable income:	
Gross wage income	145,417
Total standard deductions	10,898
State taxable income	134,519
State tax:	
State taxable income is in the bracket 112,000 - 176,000 FIM.	
Then the state tax is calculated this way:	
Fixed amount:	9,805
+ .255 x (134,519 - 112,000)	5,742
State tax	15,547
Local Government taxable income:	
1. Calculation of 'low income deduction'	
Gross wage income	145,417
Work related expenses	2,100
Basis for calculation of deduction	143,317
Full deduction is 20 per cent of income above 15,000 FIM, max. 8,600 FIM.	
The deduction is reduced with 3 per cent of the income above 75,000 FIM.	
The reduction is 0.03 x (143,317 - 75,000) = 2,050 FIM.	
The deduction is:	
Full deduction	8,600
- reduction	2,050
Low income deduction	6,550
2. Calculation of Local Government taxable income:	
State taxable income	134,519
- low income deduction	6,550
Local Government taxable income	127,969
Local tax:	
Aver-age Local Gover-nment plus church tax rate:	18.925
Local tax: 0.18925 x (127,969)	24,218

Annex Continued.

Social contributions:	
Contributions for ill-ness: 1.5 per cent	
0.015 x (127,969) =	1,920
+ Soc. contr. unemployment	1,963
+ Soc. contr. occupational pension	6,835
All social contributions	10,718
Tax and social contributions:	
State tax	15,547
Local tax	24,218
Social contributions	10,718
Tax and social contributions	50,483

DOCUMENTATION OF APW CALCULATIONS FOR AUSTRIA, 1999

Single APW The gross wage of the APW in 1999 is from the 2000 edition of Taxing Wages, OECD.

	1999 Insured[1]
Gross wage	311,179 ATS
Tax and social security[2]	92,000 ATS
Disposable income	219,179 ATS

APW-couple The husband has the same wage as the single APW, the wife has 50 per cent of that. The couple has no children.

	1999 Insured[1]
Gross wage	466,769 ATS
Tax and social security	123,185 ATS
Disposable income	343,584 ATS

1) Unemployment insurance is mandatory in Austria.
2) Cf. the annex for a documentation.

‘Standard’ income events

1. Ill for one week. Single APW

In case of illness the employer in Austria has an obligation to continue wage payments for some time, depending on former work record. In these cases there are no changes in disposable income during illness.

In the case where the employee does not qualify for continued wage payment (has not been with the firm long enough or the rights to continued wage payments have expired) there will be compensation from the insurance. This will be 50 per cent of the former gross wage (60 per cent from the 43rd day of illness).

The loss of income is 1/52 of 311,179 ATS, i.e. 5,984 ATS. The compensation is 50 per cent or 2,992 ATS.

The gross compensation percentage is then 50. The disposable income of the APW after 1 week of illness is 217,482 ATS.
The decrease in disposable income compared to the situation without illness is 219,179 - 217,482 = 1,697 ATS or 0.8 per cent.

2. Unemployed for 3 months during the year, insured. Single APW

The loss of income is 1/4 of 311,179 ATS, i.e. 77,795 ATS. The weekly income is 5,984 ATS which corresponds to a daily compensation of 336 ATS, close to 56 per cent of the net income on a daily basis. Compensation is paid for all calendar days in the year so the annual compensation is 365x336 = 122,640 ATS. The compensation here is 1/4 of 122,640 ATS or 30,660 ATS.
The net compensation percentage is, as already mentioned, close to 56. The compensation is non taxable, but it leads via the 'progressionsvorbehalt' to higher taxation of other income. The disposable income of the APW with 25 per cent unemployment is 202,359 ATS.
The decrease in disposable income compared to the situation without unemployment is 219,179 - 202,359 = 16,820 ATS or 7.7 per cent.

3. Unemployed for the whole year, insured. Single APW

There is no gross wage. The compensation is calculated as explained in case 2, it is 122,640 ATS on an annual basis when the income during work is at APW level.
The net compensation percentage is close to 56. The compensation is on a net basis so the disposable income is 122,640 ATS when the APW is unemployed for the whole of 1999.
The decrease in disposable income compared to the situation without unemployment is 219,179 - 122,640 = 96,539 ATS or 44.0 per cent.

4. Unemployed for 3 months during the year, not eligible for insurance. Single APW

This case is preceded by 1 year for the APW as a recipient of U.B. After 3 months on 'notstandhilfe', the unemployed is assumed to get back to work receiving APW income for the rest of the year. The compensation will then be 92 per cent of the U.B. (here assumed to be calculated on basis of APW income in 1999), i.e. 28,207 ATS.
The net compensation percentage is close to 0.92 x 56 = 51.5. The compensation is tax and contribution free, but leads via the 'progressionsvorbehalt' to higher taxation of other income. The disposable income of the APW receiving 'notstandhilfe' for 3 months in 1999 is 200,138 ATS.
The decrease in disposable income compared to the situation without unemployment is 219,179 - 200,138 = 19,041 ATS or 8.7 per cent.

5. Unemployed for the whole year, not eligible for insurance. Single APW

This case is preceded by 1 year for the APW as a recipient of U.B. If so, the compensation will be 92 per cent of the U.B. (here assumed to be calculated on basis of the APW income in 1999).
The net compensation percentage is close to 0.92 x 56 = 51.5. The compensation is tax and contribution free so the disposable income in this case is 0.92 x 122,640 = 112,829 ATS.
The decrease in disposable income compared to the situation without unemployment is 219,179 - 112,829 = 106,350 ATS or 48.5 per cent.

6. Wife unemployed for the whole year, insured. APW couple

There is no gross wage for the wife. The working income is equivalent to a weekly income of 2,992 ATS, which corresponds to a daily compensation of 192 ATS or 70,080 ATS on an annual basis.
The net compensation percentage is again close to 56. The compensation is on a net basis so the disposable income of the couple is 70,080 + 219,179 = 289,259 ATS when the wife is unemployed for the whole year in 1999 and usually is working part time ($^1/_2$ APW income).
The decrease in disposable income compared to the situation with no unemployment is 343,584 - 289,259 = 54,325 ATS or 15.8 per cent.

7. Injured from work. Single APW

The effects of injuries from work are investigated in two cases. In the first there is a complete loss of working capability. In the second, the working capability is reduced by 33 1/3 per cent.

1. Working capability completely lost
   There is no gross income. The compensation is 2/3 of the former gross wage, i.e. 207,453 ATS. In this case of severe disability there is a supplement of 20 per cent of the basis compensation, i.e. 41,491 ATS. The total compensation is 248,944 ATS. The gross compensation percentage is 66.67 + 0.2 x 66.67 = 80. The compensation is non-taxable, but there is a social contribution of 3.75 per cent, so disposable income is 248,944 - 9,335 = 239,609 ATS.
   The increase in disposable income compared to the situation without injuries is 239,609 - 219,179 = 20,430 ATS or 9.3 per cent.

2. Loss of 1/3 of the working capability
The gross wage is reduced by 1/3, i.e. 103,726 ATS. The compensation in this case is 1/3 of the basic compensation in the former case, that is 69,151 ATS.
The gross compensation percentage is 66.67. The disposable income of the APW losing 1/3 of his or her working capability is 225,475 ATS.
The increase in disposable income compared to the situation without injuries is 225,475 - 219,179 = 6,296 ATS or 2.9 per cent.

8. Disability pensioner with former working record and income at APW level. Single APW

If a person becomes a disability pensioner before he or she is 57 years old, fictitious insurance years until that age will be credited in addition to the real insurance years, the person has obtained before he or she became a pensioner. The number of insurance years, actual and credited, will as a maximum - usually - result in a right to 60 per cent of the assessment base in pension, which is assumed to be the case here. The assessment base is the average of the income in the last 15 years indexed to a common base. As a proxy for the assessment base, 90 per cent of last years' income is used. The disability pension is then calculated as 60 per cent of the assessment base or 54 per cent of the APW income of the previous year, i.e. 0.54 x 305,637 = 165,044 ATS. If the person has no former work record he or she will receive social assistance, cf. case 9.
The disposable income for the person with former APW income will be 165,044 ATS in disability pension minus 15,624 ATS in personal tax and social contributions, in total 149,420 ATS.
The net compensation percentage is 149,420 / 219,179 x 100 = 68.2.
The decrease in disposable income by becoming a disability pensioner is 31.8 per cent.

9. Disability pensioner without former working record. 'Single APW'

In this case the person will not receive disability pension but social assistance. This varies across Austria, but 70 per cent of the minimum pension, cf. case 12 would be a reasonable proxy. The amount received would then be 0.7 x 113.568 ATS = 79,498 ATS. The benefit is not taxed. The disposable income is 79,498 ATS.
The 'net compensation percentage' (relative to the APW) is 79,498 / 219,179 x 100 = 36.3.
The 'decrease' in disposable income, relative to that of the APW, is 63.7 per cent.

10. Wife disability pensioner. APW-couple

It is assumed that the wife in the APW-couple becomes a disability pensioner while her husband continues to work (APW income level). The former income of the wife is assumed to have been at $^{1}/_{2}$ APW income level.

Just as in case 8, it is assumed that the wife can obtain a max. disability pension, i.e. 60 per cent of the assessment base. 90 per cent of the previous years' income is again used as a proxy for the assessment base. On these assumpsions the total disability pension is 0.54 x 152,819 = 82,522 ATS.
The gross compensation percentage is 82,522 / 155,590 x 100 = 53. The disposable income of the couple is 298,606 ATS when the wife becomes a disability pensioner in 1999.
The decrease in disposable income compared to the situation with no disability is 343,584 - 298,606 = 44,978 ATS or 13.1 per cent.

11. Pensioner with maximum period of former occupation. Single APW Retirement at 'usual' age, here 65 years

It is assumed that the APW has gained pension rights for 40 years that is for a 'full' pension. On this assumption the pension is calculated as 80 per cent of the average of the income over the last 15 years (indexed to a common base). As a good proxy for this assessment base, 90 per cent of the APW income in the previous year has been used. The full pension is then 80 per cent of the assessment base or 72 per cent of the APW income of the previous year, i.e. 0.72 x 305,637 = 220,059 ATS. There is no basic residence based pension in Austria, but there is a minimum pension, cf. case 12.
The disposable income for the 'APW-pensioner' is 220,059 ATS in pension minus 30,736 ATS in personal tax and social contributions, in total 189,323 ATS.
The net compensation percentage is 189,323 / 219,179 x 100 = 86.4.
The decrease in disposable income by retirement is 13.6 per cent in this situation.

12. Pensioner without former occupation. 'Single APW' 'Retirement' at 'usual' age, here 60 years

The pensioner (here assumed to be a woman) receives minimum pension which is 113,568 ATS in 1999. This income is means tested against other income (in a couple also against the income of the spouse), so it has the characteristics of social assistance. The minimum pension will not be taxed (tax liability is less than tax credits) and there are no social contributions. Disposable income is 113,568 ATS, the same as the gross pension.
The 'net compensation percentage' (relative to the APW)is 113,568 / 219,179 x 100 = 51.8.
The 'decrease' in disposable income, relative to that of the APW, is 48.2 per cent by this kind of retirement.

13. Pensioners with maximum period of former occupation. APW-couple The two pensioners have the same age, the wife retired in 1994 at the age of 60 years, the husband in 1999 at the age of 65 years.

It is assumed that both spouses have gained pension rights for 40 years each. The husband is 'identical' to the pensioner in case 11, i.e. he has a pension of 220,059 ATS in 1999. The wife retired in 1994. Her pension was then 72 per cent of the x APW income in 1993, i.e. 0.72 x 134,067 = 96,528 ATS. This pension is indexed to 1999 level by a factor of 1.079, resulting in a pension of 104,154 ATS.
The disposable income for the pensioner couple is 324,213 ATS in pension minus 34,642 ATS in personal tax and social contributions, in total 289,571 ATS.
The net compensation percentage is 289,571 / 343,584 x 100 = 84.3.
The decrease in disposable income compared to the APW-couple is 15.7 per cent.

'Standard' income events in connection with children

1-3. The couple has 1, 2 or 3 children

For child no. 1 (6 years old) there is a refundable tax credit of 5,700 ATS and a cash benefit of 17,100 ATS, in total 22,800 ATS. Compared to the situation without children the increase in disposable income is ((22,800)/343,584) x 100 = 6.6 per cent with one child (6 years old).
For child no. 2 (3 years old) there is a refundable tax credit of 7,800 ATS and a cash benefit of 17,100 ATS, in total 24,900 ATS. Compared to the situation without children the increase is ((22,800 + 24,900)/343,584) x 100 = 13.9 per cent with two children (6 and 3 years old).
For child no. 3 (1 year old, assumed born in 1999) the refundable tax credit is 9,900 ATS and the cash benefit is again 17,100 ATS plus a 'large family' supplement of 2,400 ATS, in total 29,400 ATS. Compared to the situation without children the increase is ((22,800 + 24,900 + 29,400)/343,584) x 100 = 22.4 per cent with 3 children (6, 3 and 1 year old).

4. The couple gets their second child and has 2 children

In Austria the wife receives full compensation for 16 weeks in connection with birth, so there is no change in the disposable income - whether it is maximum duration (16 weeks) or common duration (14 weeks) for the maternity leave. There are supplementary leave possibilities where the father can also participate, but the compensation is lower.

Annex Tax and social contribution calculation for single APW, 1999. ATS.

Gross wage income	311,179
of which for 12 months	266,725
of which for 2 months (13 and 14)	44,454
Social contributions	
For 12 months: (0.0395 + 0.0300 + 0.1025 + 0,01) x 266,725	48,544
For 2 months: (0.0395 + 0.0300 + 0.1025) x 44,454	7,646
Total	56,190
Taxable income (12 months)	
Gross wage income	266,725
- Basic allowance	819
- Work related allowance	1,800
- Social contributions (12 months)	48,544
Total	215,562
Rounded	215,600
Gross tax liability (12 months)	
10 per cent of 50,000	5,000
+ 22 per cent of 100,000	22,000
+ 32 per cent of 65,600	20,992
Total	47,992
Net tax liability (12 months)	
Gross liability	47,992
- General tax credit[1]	8,380
- Wage related tax credit	1,500
- Transportation related tax credit	4,000
Total	34,112
Taxable income (2 months)	
Gross wage income	44,454
- Social contributions (2 months)	7,646
- Tax free amount	8,500
Total	28,308
Tax from 2 months income	
6 per cent of 28,308	1,698
Tax and social contributions	
Social contributions	56,190
+ Tax (12 months)	34,112
+ Tax (2 months)	1,698
Total	92,000

1) The general tax credit of 8,840 ATS is tapered to 0 for income (taxable, 12 months) between 200,000 ATS and 500,000 ATS, i.e 29.47 ATS per 1,000 ATS in this range. Here there are 15.6 thousand so the reduction is 15.6 x 29.47 = 460 ATS. The tax credit is 8,840 - 460 = 8,380 ATS.

DOCUMENTATION OF APW CALCULATIONS FOR GERMANY, 1999

Single APW The German Ministry of Finance has provided the information on the 1999 gross wage level.

	1999 Insured[1]
Gross wage	60,856 DEM
Tax and social security[2]	25,869 DEM
Disposable income	34,987 DEM

APW-couple The husband has the same gross wage as the single APW, the wife has 50 per cent of that income. There are no children.

	1999 Insured[1]
Gross wage	91,284 DEM
Tax and social security	34,880 DEM
Disposable income	56,404 DEM

1) Unemployment insurance is mandatory in Germany.
2) Cf. the annex for a documentation. The standard deduction has been applied instead of church tax paid.

'Standard' income events

1. Ill for one week. Single APW

Most employees in Germany still received their usual wages for the first 6 weeks of illness in 1999, even after the legal requirement has been reduced to 80 per cent of the former wage.

For those (few) not eligible for wages, the compensation from the insurance scheme is 70 per cent of the gross wage, with a maximum limit equal to 90 per cent of the net wage (disposable income). At APW income level, here is almost no change in disposable income in 1999, for illness in one week. This is because the remaining wage income for 51 weeks is taxed a little milder.

2. Unemployed for 3 months during the year, insured. Single APW

The gross wage is reduced by 1/4, i.e. 15,214 DEM. 3 months compensation equals 60 per cent of the lost net wage for the single APW with no children. The compensation is 5,093.40 DEM.

The net compensation percentage is, as mentioned, 60, cf. also case 3. It should be noted that the compensation is non-taxable income, but it has the effect that the remaining income is taxed harder via the 'Progressionsvorbehalt'. With 3 months of unemployment the disposable income of the APW is 32,689 DEM.

The decrease in disposable income compared to the situation with no unemployment is 34,987 - 32,689 = 2,298 DEM or 6.6 per cent.

3. Unemployed for the whole year, insured. Single APW

There is no gross wage. The compensation is 60 per cent of the lost net income for the single APW with no children, in this case 4 times the level from case 2, i.e. 4 x 5,093.40 = 20,373.60 DEM.

The net compensation percentage is, as mentioned, 60. The compensation is nontaxable income. The disposable income is 20,374 DEM, when the APW is unemployed for the whole year.

The decrease in disposable income compared to the situation with no unemployment is 34,987 - 20,374 = 14,613 DEM or 41.8 per cent.

4. Unemployed for 3 months during the year, not eligible for insurance. Single APW

The gross wage is reduced by 15,214 DEM as in case 2. Compensation for 3 months unemployment is 53 per cent of the lost net wages for the APW without children. The compensation is 4,500.60 DEM.

The net compensation percentage is, as mentioned, 53, cf. also case 5. The compensation is non-taxable income, but the remaining income is taxed harder via the 'Progressionsvorbehalt'. With 3 months of this kind of compensation the disposable income of the APW is 32,160 DEM.

The decrease in disposable income compared to the situation with no unemployment is 34,987 - 32,160 = 2,827 DEM or 8.1 per cent.

The usual sequence will be the following: When the APW becomes unemployed he or she will first receive the insurance compensation and then (after e.g. one year) the lower compensation. Finally the APW again enters occupation.

The case covered here is then the last part of the sequence and will not be an alternative to the insurance compensation from the first part. There will, however, also be situations when employees are not eligible for insurance in the first place, and they will then receive the lower compensation instead, this part of the scheme was, however, abolished as of 2000.

5. Unemployed for the whole year, not eligible for insurance. Single APW

There is no gross wage. The compensation is 53 per cent of the lost net income for the single APW with no children, in this case 4 times the level from case 4, i.e. 4 x 4,500.60 DEM = 18,002.40 DEM.

The net compensation percentage is, as mentioned, 53. The compensation is non-taxable income. The disposable income is 18,002.40 DEM, when the APW is unemployed for the whole year on these conditions.

The decrease in disposable income compared to the situation with no unemployment is 34,987 - 18,002 = 16,985 DEM or 48.5 per cent.

6. Wife unemployed for the whole year, insured. APW-couple, no children

There is no gross wage for the wife. The compensation is 60 per cent of the lost net income for the employee, when there are no children in the family. The compensation is 8,830 DEM.

The net compensation percentage is, as mentioned 60, cf. also case 3. The compensation is non-taxable income. The disposable income is 49,453 DEM for the couple, when the wife is unemployed for the whole year.

The decrease in disposable income compared to the situation with no unemployment is 56,404 - 49,453 = 6,951 DEM or 12.3 per cent.

7. Injured from work. Single APW

Compensation for injuries from work is investigated in two cases, one where the working capability is completely lost, and one where 1/3 of the working capability is lost.

1. Working capability completely lost

   There is no gross wage. The compensation is 2/3 of the former gross wage, i.e. 40,571 DEM in this case.

   The gross compensation percentage is then 66.67. The compensation is non-taxable income. The disposable income is then 40,571 DEM.

   The increase in disposable income compared to the situation without injuries is 40,571 - 34,987 = 5,584 DEM or 16.0 per cent.

2. Loss of 1/3 of the working capability

The gross wage is reduced by 1/3, i.e. 20,285 DEM. The compensation in this case is 1/3 of that in the former case, i.e. 13,524 DEM.

The gross compensation percentage is again 66.67. The disposable income of the APW losing 1/3 of his or her working capability is 39,354 DEM.

The increase in disposable income compared to the situation with no injuries is 39,354 - 34,987 = 4,367 DEM or 12.5 per cent.

8. Disability pensioner with former working record and income at APW-level. Single APW

Germany has (1999) two schemes for disability, one due to 'Erwerbsunfähigkeit' and another due to 'Berufsfähigkeit'. The 'Erwerbsunfähigkeit' scheme has the highest benefit (Rentenfaktor) and has been assumed for this case.

The pension is in principle calculated as an old-age pension, but using 'anticipated' years from the time of the pension case until the age of 60 years. The years until the age of 55 years have full weight, those from the age of 55 to 60 have 1/3 weight. Assuming a case which is parallel to the old-age pension case, cf. case 11, where the working period is 45 years, from the age of 20 to 65, the disability case will have 35 'full' years (from the age of 20 to 55), some of them 'anticipated', and 5 years (from 55 to 60) with a weight of 1/3 (all 'anticipated'), in total 36 2/3 years going into the pension calculation. Assuming the same personal factor as in the old-age pension case, 1.0795, cf. case 11, the pension will be 22,785 DEM in 1999. The health and care insurance will be 7.65 per cent of the pension, i.e. 1,743 DEM. Only the interest component of the pension is taxed (this is higher the younger the person is) and it is assumed here that no tax is paid.

The disposable income of the pensioner is 22,785 - 1,743 = 21,042 DEM.

The net compensation percentage is 21,042 / 34,987 x 100 = 60.1.

The decrease in disposable income for an APW becoming a disability pensioner is 39.9

9. Disability pensioner without former working record. 'Single APW'

The minimum insurance period for pensions in Germany is 5 years (with 3 years of paid contributions), so without former working penod there is no pension.

Disability pensioners without a former work record and without other means will receive social assistance. The basic rate is 542.50 DEM (average of 539 for 1st half year and 546 for 2nd half year 'alte länder') per month. There is a supplement of 20 per cent of the basic rate for persons who are 'Erwerbsunfähig' in the sense of the disability pension law. The total benefit is 651 DEM per month or 7,812 DEM in 1999. This is also the disposable income.

The 'net compensation percentage' (relative to the APW) is 7,812 / 34,987 x 100 = 22.3. The 'decrease' in disposable income, relative to that of the APW, is 77.7 per cent for the disability pensioner.

10. Wife disability pensioner. APW couple

It is assumed that the wife in the APW couple becomes a disability pensioner ('Erwerbsunfähigkeit') while the husband continues to work (APW income level). It is assumed that her former income has been precisely $^1/_2$ of her husband's income. On that assumption she will receive 50 per cent of the disability pension from case 8, i.e. 11,393 DEM. The health and care insurance is 7.65 per cent of the pension or 872 DEM. The taxable part of her pension depends on the age when she became a disability pensioner. On the assumption that her age was 35 when she became a disability pensioner 47 per cent of the pension is taxable. If she was alone there would be no taxation but the amount is taxed together with the income of her husband. The pension is 11,393 DEM and 47 per cent is taxable, i.e. 5,355 DEM. The social contribution is deductible together with that of her husband.
The gross compensation percentage is 11,393 / 30,428 x 100 = 37. The disposable income of the couple is 50,315 DEM, when the wife receives disability pension and the husband continues to work.
The decrease in disposable income compared to the situation with no disability is 56,404 - 50,315 = 6,089 DEM or 10.8 per cent.

11. Pensioner with maximum period of former occupation. Single APW Retirement at 'usual' age, here 65 years

In Germany, there is no pension based upon age alone, neither is there any number of years giving right to a 'full' pension (in Sweden, e.g. 30 years give that right). Some assumptions have to be made. It is assumed that the former occupation (including education) has lasted for 45 years, and that the 'personal income factor' is 107.95 (and has been that for all the years). On these assumptions the pension in 1999 is 27,963 DEM. The German pensioner has to pay for health and care insurance, half premium, i.e. 7.65 per cent of the pension, i.e. 2.139 DEM.
The pension is only 'partly' taxed. Retiring at the age of 65 years, 27 per cent of the pension is taxable, after deduction of health and care insurance payment. In this case the taxable pension is lower than the minimum pension for which taxes are paid, and no tax has to be paid.

Disposable income for the pensioner is 27,963 - 2,139 = 25,824 DEM.
The net compensation percentage is 25,824 / 34,987 x 100 = 73.8.
The decrease in disposable income for the APW retiring at the age of 65 years is 26.2 per cent.

12. Pensioner without former occupation. 'Single APW' 'Retirement' at 'usual' age, here 65 years

As already mentioned, there is no pension alone based upon age in Germany.
For persons without former occupation there is no pension. This is, of course, an extreme situation, but it reflects the substantial factual difference between pensions for men and women in Germany. Pensioners without a former work record and without other means will receive social assistance. The basic rate is 542.50 DEM (average, cf. item 9) per month plus 20 per cent for a single pensioner, in total 651 DEM per month or 7,812 DEM in 1999. This is also the disposable income.
The 'net compensation percentage' (relative to the APW) is 7,812 / 34,987 x 100 = 22.3.
The 'decrease' in disposable income, relative to that of the APW, is 77.7 per cent by this kind of retirement.

13. Pensioners with maximum period of former occupation. APW-couple The two pensioners have the same age, and both retire 65 years old

It is assumed that the wife and husband have gained pension rights for 45 years each. The husband is 'identical' to the single pensioner in case 11. The wife is assumed to have had half the income of her husband all the time. That has the implication that she will receive half the pension of her husband, i.e. 13,982 DEM. On these assumptions the combined pension for the couple will be 41,945 DEM in 1999. The contribution to health and care insurance will be 7.65 per cent of the pension, i.e. 3,209 DEM.
The pension is only 'partly' taxed. Retiring at the age af 65 years, 27 per cent of the pension is taxable, after deduction of health and care insurance payment. In this case the taxable pension is lower than the minimum pension for which taxes are paid, and no tax has to be paid.
Disposable income for the pensioner couple is 41,945 - 3,209 = 38,736 DEM.
The net compensation percentage is 38,736 / 56,404 x 100 = 68.7.
The decrease in disposable income for the APW-couple retiring when both are 65 years is 31.3 per cent.

'Standard' income events in connection with children

1-3. The couple has 1, 2 or 3 children

In Germany there is a tax credit (refundable) for each child, or a tax deduction (deduction in taxable income).
For the 1st child (6 years old) the tax credit is 3,000 DEM and the deduction in taxable income is 6,912 DEM (for each child). The family gets what is most advantageous.
Taxes for the couple without children are 15,108 DEM (before sol. tax). For the couple with one child they are 12,970 DEM (before sol. tax) when the deduction is applied. The difference is 2,138 DEM, which is less than the tax credit of 3,000 DEM.
The increase in disposable income compared to the situation without children, where the disposable income is 56,404 DEM, is 3,000 + 118 = 3,118 DEM (118 is a reduction in the sol. tax) or 5.5 per cent, when there is i child (6 years old).

For the 2nd child (3 years old) the tax credit is also 3,000 DEM.
Taxes for the couple without children are 15,108 DEM (before sol. tax). For the couple with two children they are 10,882 (before sol. tax) when the deduction is applied. The difference is 4,226 DEM, which is less than the tax credit of 6,000 DEM.
The increase in disposable income compared to the situation without children, where the disposable income is 56,404 DEM, is 6,000 + 232 = 6,232 DEM (232 is a reduction in the sol. tax) or 11.0 per cent, when there are 2 children (6 and 3 years old).

For the 3rd child (1 year old) the tax credit is 3,600 DEM.
Taxes for the couple without children are 15,108 DEM (before sol. tax). For the couple with three children they are 8,840 (before sol. tax) when the deduction is applied. The difference is 6,268 DEM, which is less than the tax credit of 9,600 DEM.
The increase in disposable income compared to the situation with no children, where the disposable income is 56,404 DEM, is 9,600 + 345 = 9,945 DEM (345 is a reduction in the sol. tax) or 17.6 per cent, when there are 3 children (6, 3 and 1 year old).

4. The couple gets the second child and has 2 children

The 'timing' problems are the same as mentioned in the documentation for Den-mark.
Germany has the shortest ordinary maternity leave (14 weeks for the wife) of the 8 countries studied.
This penod has been used as the common period of maternity leave, for Germany it is also the maximum duration.
The wife loses 14/52 of her gross wage, i.e. 8.192 DEM.

The net compensation percentage is 100 and the disposabie income is approx. unchanged compared to the situation with no maternity leave.
In Germany it is possible to receive 'erziehungsgeld' for up to 2 years for children born in 1999. The benefit is 600 DEM per month to the mother or the father. The benefit is means-tested after six months according to former income, for high income earners the means-testing will start immediately. This rule was implemented as of January 1994. It is a condition that the recipient does not work or as a maximum has part time work.

Annex Tax and social contribution calculation for single APW, 1999. DEM.

Gross wage income:	60,856
Social contributions: 20.75 per cent of gross wage income	12,628
Deductions: Social contributions	
1ST STEP:	
Default	6,000
– 16 per cent	9,737
Deduction 1st step	0
2ND STEP:	
Social contributions	12,628
– Deduction 1st step	0
Basis for deduction 2nd step	12,628
Deduction 2nd step: basis	12,628
Maximum deduction 2nd step	2,610
3RD STEP:	
Social contributions	12,628
– Deduction 1st and 2nd step	2,610
Basis for deduction 3rd step	10,018
Deduction 3rd step: 50 per cent of basis	5,009
Maximum deduction 3rd step	1,305
Deduction for social contributions: 2,610 + 1,305	3,915
Workrelated deduction (standard)	2,000
Standard deduction instead of church tax	108
Total deductions	6,023
Taxable income:	
Gross wage	60,856
– Deductions	6,023
Taxable income (unrounded)	54,833
Taxable income (rounded)	54,810
Taxes: (Application of the formula)	
x = Taxable income, $z = \frac{x - 17{,}010}{10{,}000} = 3.7800$	
Tax: (101.31 * z + 2,670) * z + 1,011	12,551
Tax and social contributions:	
Tax	12,551
Solidarity tax (5.5 per cent of tax)	690
Social contributions	12,628
Tax, solidarity tax and social contributions	25,869

DOCUMENTATION OF APW CALCULATIONS FOR NETHERLANDS, 1999

Single APW

In connection with the Dutch tax reform in 1990 some of the social contributions for general social security, which until then had been paid by the employer, were 'transferred' to the wage earner. As compensation the employer pays a 'Compensation Allowance' or 'Transfer Allowance' to the employees. This 'Allowance' is taxable income for the wage earner. The basis for the calculation of this 'Allowance' is the gross wage plus the employers contribution to health insurance, minus the wage earners deductible social contribution and expenditures connected to the acquisition of income. The 'compensation' rate was 10.4 per cent in 1990, 11 per cent in 1991, 11.5 per cent in 1992, 11.4 per cent in 1993, 11.6 per cent in 1994, 11.75 per cent in 1995, 10 per cent in 1996, 9.9 per cent in 1997, 1.7 per cent in 1998, and 2.2 per cent in 1999.
The system is briefly described in OECD's 'The Tax/Benefit Position of Production Workers 1987-90', section IV, on the Netherlands.
The Dutch Ministry of Social Affairs and Employment has provided information on the 1999 wage level.

	1999 Insured[1]
Gross wage incl. compensation allowance	59,237 NLG
Of this:	
Compensation allowance abbreviated C.A.	1,237 NLG
Gross wage excl. of C.A.	58,000 NLG
Tax and social security[2]	20,955 NLG
Disposable income	38,282 NLG

APW-couple

The husband has the same gross wage as the single APW, the wife has 50 per cent of that income. There are no children.

	1999 Insured[1]
Gross wage incl. C.A.	88,840 NLG
C.A.	1,840 NLG
Gross wage excl. of C.A.	87,000 NLG
Tax and social security	28,768 NLG
Disposable income	60,072 NLG

1) Unemployment insurance is mandatory in the Netherlands.
2) Cf. the annex for a documentation.

'Standard' income events

1. Ill for one week. Single APW

The gross wage excl. of C.A. is reduced by 1/52, that is by 1,115.38 NLG. Calculated per day (5 days in a week) the reduction is 223.08 NLG. Compensation for illness is 70 per cent of the daily gross wage. There is a waiting period of 2 days. Compensation for 1 week of illness is 223.08 x 3 x 0.7 = 468.47 NLG.

The gross compensation percentage is 468.47 / 1,115.38 x 100 = 42. The disposable income of the APW is 37,952 NLG, when he or she is ill for one week during 1999.

The decrease in disposable income compared to the case with no illness is 38,282 - 37,952 = 330 NLG or 0.9 per cent.

In the Netherlands it is usual that the employer pays full wage during up to 1 year of illness, also covering the waiting period of 2 days.

2. Unemployed for 3 months during the year, insured. Single APW

The gross wage excl. of C.A. is reduced by 1/4, that is by 14,500.00 NLG. The compensation is 70 per cent of the gross wage, that is 10,150 NLG.

The gross compensation percentage is therefore 70. The disposable income of the APW is 35,758 NLG when he or she is unemployed for 3 months during 1999.

The decrease in disposable income compared to the case with no unemployment is 38,282 - 35,758 = 2,524 NLG or 6.6 per cent.

3. Unemployed for the whole year, insured. Single APW

There is no gross wage. The compensation is 70 per cent of the lost income, i.e. 40,600 NLG.

The gross compensation percentage is therefore 70. The disposable income is 27,594 NLG, when he or she is unemployed for the whole of 1999.

The decrease in disposable income compared to the situation without unemployment is 38,282 - 27,594 = 10,688 NLG or 27.9 per cent.

4. Unemployed for 3 months during the year, not eligible for insurance. Single APW

The reduction in gross wage is 14,500 NLG as in case 2. The compensation used here is in the form of social assistance. The rate used is that for a single person (over 21 years old) living alone, that is 17,860 NLG per year incl. holiday pay and after tax has been paid (the received amount can be looked upon as non-taxable). Social assistance for 3 months is 4,465 NLG.

The gross compensation percentage is 4,465 / 14,500 x 100 = 31. The disposable income of the APW is 34,461 NLG when he or she is unemployed for 3 months and the compensation is social assistance.
The decrease in disposable income compared to the case with no unemployment is 38,282 - 34,461 = 3,821 NLG or 10.0 per cent.
If the compensation alternatively had been that from the 3rd step of the unemployment insurance system, the rate would have been 70 per cent of the minimum wage (annual gross rate).

5. Unemployed for the whole year, not eligible for insurance. Single APW

There is no gross wage. The compensation used here is in the form of social assistance, the same rate as in case 4, i.e. 17,860 NLG per year, after tax.
The gross compensation percentage is 17,860 / 58,000 x 100 = 31. The disposable income of the APW is 17,860 NLG when he or she is unemployed for the whole of 1999 and the compensation is social assistance.
The decrease in disposable income compared to the situation with no unemployment is 38,282 - 17,860 = 20,422 NLG or 53.3 per cent.
If the compensation alternatively had been that from the 3rd step of the unemployment insurance system, the rate would have been 70 per cent of the minimum wage (annual gross rate).

6. Wife unemployed for the whole year, insured. APW-couple

There is no gross wage for the wife. The compensation is 70 per cent of the lost income, i.e. 20,300 NLG.
The gross compensation percentage is therefore 70. The disposable income of the APW-couple is 54,003 NLG, when the wife is unemployed for the whole year in 1999 and usually is working part time.
The decrease in disposable income compared to the situation without unemployment is 60,072 - 54,003 = 6,069 NLG or 10.1 per cent.

7. Injured from work. Single APW

Transfer payments caused by injuries from work are investigated in two cases, one where the working capability is completely lost and one where $^1/_3$ of the working capability is lost.

1. Working capability completely lost
   There is no gross wage. The compensation is 70 per cent of the lost gross wage excl. of C.A., that is 58,000 x 0.7 = 40,600 NLG, cf. also case 8, which is identical.

The gross compensation percentage is therefore 70. The disposable income for an APW losing the working capability is 27,594 NLG.
The decrease in disposable income compared to the initial position is 38,282 - 27,594 = 10,688 NLG or 27.9 per cent, exactly as in case 3.

2. Loss of 1/3 of the working capability
The gross wage excl. of C.A. is reduced by a, that is by 19,333 NLG. The compensation in this case is 21 per cent of the total gross wage (excl. of C.A.), it is 12,180 NLG. The gross compensation percentage is 12,180 / 19,333 x 100 = 63. The dispos-able income with compensation for loss of a of his or her working capability is 34,167 NLG. The decrease in disposable income compared to the initial position is 38,282 - 34,167 = 4,115 NLG or 10.7 per cent.

8. Disability pensioner with former working record at APW-level. Single APW

The compensation for a 'new' disability pensioner (full disability) is in most cases 70 per cent of the former wage. The duration of this benefit level depends on age (when the disability occured), after some time (when phase 1 expires) it will be reduced for most recipients. Here it is assumed that the duration of phase 1 is at least 1 year. At the highest level the benefit is 58,000 x 0.7 = 40,600 NLG.
The disposable income for an APW at full disability pension is 40,600 NLG minus 13,912 NLG in personal taxation plus 906 NLG in compensation allowance, in total 27,594 NLG.
The net compensation percentage is 27,594 / 38,282 x 100 = 72.1.
The decrease in disposable income is 27.9 per cent, exactly as in case 7.1 and 3. The duration of this benefit level will, however, be different in case 3 (U.B.)

9. Disability pensioner without former working record. 'Single APW'

In this case the person will not receive disability pension but social assistance. The compensation is as in case 5, i.e. 17,860 NLG per year, after tax.
The 'net compensation percentage' (relative to the APW) is 17,860 / 38,282 x 100 = 46.7.
The 'decrease' in disposable income, relative to that of the APW, is 53.3 per cent.

10. Wife disability pensioner. APW couple

It is assumed that the wife in the APW-couple becomes a disability pensioner (fully disabled) while the husband continues to work. The wife has a former work record with $^1/_2$ APW income.
A full pension is 70 per cent of the former wage for most 'new' recipients. The duration depends on the age when the person became disabled and after the initial phase 1 most

recipients will experience a reduction in benefits during phase 2. Here it is assumed that phase 1 has a duration of at least 1 year. The compensation is 29,000 x 0.7 = 20,300 NLG. The gross compensation pencentage is therefore 70 (lower for lower degrees of disability). The disposable income of the APW-couple is 54,003 NLG, when the wife becomes fully disabled in 1999 and is eligible for a full pension.
The decrease in disposable income compared to the initial situation is 60,072 - 54,003 = 6,069 or 10.1 per cent, just as in case 6.

11. Pensioner with maximum period of former occupation. Single APW Retirement at 'usual' age, here 65 years

In the Netherlands public pension is not conditional on preceding occupation, as it is in Germany and partly in Austria, Great Britain, Sweden, Finland, Canada and Denmark. The pension in 1999 is 21,448 NLG. The disposable income is 18,730 NLG.
The net compensation percentage is 18,730 / 38,282 x 100 = 48.9.
The decrease in disposable income is 51.1 per cent by retirement.

12. Pensioner without former occupation. 'Single APW' 'Retirement' at 'usual' age, here at 65 years

As mentioned, the public pension is not conditional on preceding occupation, so there is not any difference between this case and the former one.

13. Pensioners with maximum period of former occupation. APW-couple The two pensioners have the same age, and both retire 65 years old

The pension to a pensioner living alone, cf. case 11 and 12, is 21,448 NLG in 1999. For a couple (both pensioners) each pensioner will receive 14,822 NLG. The combined gross pension for the couple is 29,643 NLG. The disposable income is 25,428 NLG.
The net compensation percentage is 25,428 / 60,072 x 100 = 42.3.
The decrease in disposable income is 57.7 per cent when the APW-couple retires.

'Standard' income events in connection with children

1-3. The couple has 1, 2 or 3 children

1 child. (6 years old). The family allowance is 1,570 NLG.
Compared to the initial position the increase in disposable income is 1,570 / 60,072 x 100 = 2.6 per cent, when the family has 1 child (6 years old).
2 children. (6 and 3 years old). The family allowance for 2 children is 3,088 NLG. Compared

to the initial position the increase is 3,088 / 60,072 x 100 = 5.1 per cent, when the family has 2 children (6 and 3 years old).
3 children. (6, 3 and 1 year old). The family allowance for 3 children is 4,456 NLG. Compared to the initial position the increase is 4,456 / 60,072 x 100 = 7.4 per cent, when the family has 3 children (6, 3 and 1 year old).

4. The couple gets child no. 2 and has 2 children

In the Netherlands the wife receives compensation for lost wages for 16 weeks in connection with birth. In the Netherlands the compensation is 100 per cent, so there is not any change in disposable income - whether it is max. duration or common duration for the maternity leave.

Annex Tax and social contribution calculation for single APW, 1999. NLG

1. Gross wage income:	58,000
Social contributions and compensation allowance:	
2. ZFW, 1.55 per cent of 54,810	850
3. WW, 6,10 per cent of (58,000 - 28,188)	1,819
4. ZFW (employer) 5.85 per cent of 54,810	3,206
5. 1 - 3 + 4	59,387
6. Standard deduction, work related. 12 per cent max.	3,174
7. 5 - 6, basis for compensation allowance	56,213
8. Compensation allowance, 2.2 per cent of 7	1,237
Taxable income:	
9. 5 + 8	60,624
10. Standard deduction, work related. Max.	3,174
11. Basic allowance	8,799
12. 9 - 10 - 11, taxable income	48,651
Taxes and social contributions:	
13. 1st slice, 35.75 per cent of 15,000	5,363
14. 2nd slice, 37.05 per cent of (48,175 - 15,000)	12,291
15. 3rd slice, 50 per cent of (48,651 - 48,175)	238
16. Nominal ZFW	394
17. 2 + 3, other social contributions.	2,669
18. 13 + 14 + 15 + 16 + 17, tax and social contributions	20,955

DOCUMENTATION OF APW CALCULATIONS FOR GREAT BRITAIN, 1999

Single APW The wage income is the official figure for 1999 from Inland Revenue.

	1999 Insured[1]
Gross wage	17,780 GBP
Tax and social security[2]	4,332 GBP
Disposable income	13,448 GBP

APW-couple The husband has the same wage as the single APW, the wife has 50 per cent of that. The couple has no children.

	1999 Insured[1]
Gross wage	26,670 GBP
Tax and social security	5,534 GBP
Disposable income	21,136 GBP

1) Unemployment insurance is mandatory in Great Britain.
2) Cf. the annex for a documentation.

The benefit rates are usually changed around April 1st in Great Britain, which means that weighted average rates should be used for calculations covering the calendar year. An alternative interpretation is that the year for Britain runs from the second quarter this year to the second quarter next year. It is this alternative interpretation which has been applied in the calculations presented in the following, and this is also how the APW calculations for Britain are made in OECD's publication 'Taxing Wages'. When the wage level projection is performed it is the development in the average wage level for the second quarter 1998 until the second quarter 1999 to the estimated average wage level for the second quarter 1999 until the second quarter 2000 which is used.

'Standard' income events

1. Ill for one week. Single APW

The gross wage is reduced by 1/52, i.e. by 342 GBP. The maximum rate for compensation for illness in one week is 59.55 GBP (the rate for Statutory Sick Pay, SSP, in 1999 for weekly gross wages above 66 GBP. SSP can be paid for maximum 28 weeks). It is assumed that the person has 5 qualifying days in a week (this may vary), and there is a waiting period of 3 days during the first week of illness. The compensation for the first week of illness will then be 23.82 GBP (2/5 x 59.55).

The employer can pay Occupational Sick Pay (OSP) as a supplement, cf. later.

The gross compensation percentage is 23.82 / 342 x 100 = 7.0. The disposable income of the APW is 13,231 GBP, when he or she is ill for one week during 1999.

The decrease in disposable income compared to the situation without illness is 13,448 - 13,231 = 217 GBP or 1.6 per cent.

Many British workers receive a supplement (OSP) to the SSP-benefit, when they are ill. The variation in OSP-payments is considerable (it is a labour market agreement). A net compensation percentage of 80 is quite usual. For that coverage the decrease in disposable income is approx. 0.4 per cent.

2. Unemployed for 3 months during the year, JSA (C). Single APW

The gross wage is reduced by 1/4, that is by 4,445 GBP. The compensation is 51.40 GBP a week (rate for persons 25 years or more) and is paid for a 7-day week. There is a waiting period of 3 days during the first week. Compensation for 13 weeks (3 months) is 13 x 51.40 - 3/7 x 51.40 = 646.17 GBP.

The gross compensation percentage is 646.17 / 4,445 x 100 = 14.5. The disposable income of the APW is 10,881 GBP, when he or she is unemployed for 3 months during 1999.

The decrease in disposable income compared to the situation without unemployment is 13,448 - 10,881 = 2,567 GBP or 19.1 per cent.

3. Unemployed for the whole year, JSA (C) and JSA (IB). Single APW

There is no gross wage. The compensation is 52 x 51.40 - 3/7 x 51.40 = 2,650.77 GBP. In this case (no net wealth and no other income) there is no difference between JSA (C) and JSA (IB), cf. case 4.

The gross compensation percentage is 2,650.77 / 17,780 x 100 = 14.9. The disposable income of the APW is 2,651 GBP (the personal allowance is larger than the income), when he or she is unemployed for the whole year of 1999.

The decrease in disposable income compared to the situation with no unemployment is 13,448 - 2,651 = 10,797 GBP or 80.3 per cent. The insurance benefit can be supplemented with other benefits, e.g. compensation for housing expenditures.

4. Unemployed for 3 months during the year, not eligible for JSA (C) but for JSA (IB). Single APW

The reduction in gross wage is 4,445 GBP as in case 2. The compensation is calculated for a person 25 years old (or more). The rate is 51.40 GBP a week (waiting period of 3 days during the first week). Compensation for 13 weeks (3 months) is 13 x 51.40 - 3/7 x 51.40 = 646.17 GBP, just as in case 2. The difference is that the income based (IB) allowance is means-tested, which is not the case for the contribution based (C). With no net wealth and no other income there is no means-testing.
The gross compensation percentage is 646.17 / 4,445 x 100 = 14.5 The disposable income of the APW is 10,881 GBP, when he or she is unemployed for 3 months during 1999.
The decrease in disposable income compared to the case with no unemployment is 13,448 - 10,881 = 2,567 GBP or 19.1 per cent.

5.Unemployed for the whole year, not eligible for JSA (C) but for JSA (IB) Single APW

There is no gross wage. The compensation is 52 x 51.40 - 3/7 x 51.40 = 2,650.77 GBP. With no net wealth and no other income JSA (C) and JSA (IB) are identical.
The gross compensation percentage is 2,650.77 / 17,780 x 100 = 14.9. The disposable income is 2,651 GBP in this situation, just as in case 3.
The decrease in disposable income compared to the situation without unemployment is 13,448 - 2,651 = 10,797 GBP or 80.3 per cent. It is possible to supplement e.g. with compensation for housing expenditures.

6. Wife unemployed for the whole year, JSA (C). APW-couple

There is no gross wage for the wife. The compensation is 26 x 51.40 = 1,336,40 GBP.
The gross compensation percentage is 1,336,40 / 8,890 x 100 = 15.0. The disposable income of the APW-couple is 14,981 GBP, when the wife is unemployed for the whole year of 1999 and usually is working part time. JSA (IB) is tapered to 0.
The decrease in disposable income compared to the situation with no unemployment is 21,136 - 14,981 = 6,155 GBP or 29.1 per cent.

7. Injured from work. Single APW

Transfer payments caused by injuries from work are investigated in two cases, one where the working capability is completely lost,and one where 1/3 of the working capability is lost.

1. Working capability completely lost
   There is no gross wage. The compensation is 108.10 GBP a week or 5,621 GBP 1/3 year. It is also possible to receive long term Incapacity Benefit plus an age related addition (here assumed to be lower rate) of 66.75 + 7.05 GBP per week, 3,838 GBP a year. Total compensation is 9,459 GBP.
   The gross compensation percentage is 9,459 / 17,780 x 100 = 53.2. The disposable income for an APW losing the working capability completely is 9,459 GBP, the Industrial Injuries Disablement Benefit is tax free and the Incapacity Benefit is smaller than the personal allowance in the tax scheme.
   The decrease in disposable income compared to the initial position is 13,448 - 9,459 = 3,989 GBP or 29.7 per cent.

2. Loss of 1/3 of the working capability
   The gross wage is reduced by 1/3, i.e. 5,927 GBP. The compensation is 32.43 GBP a week or 52 x 32.43 = 1,686.36 GBP a year, tax free.
   The gross compensation percentage is 1,686 / 5,927 x 100 = 28.4. The disposable income for an APW losing a of the working capability is 11,163 GBP.
   The decrease in disposable income compared to the initial position is 13,448 - 11,163 = 2,285 GBP or 17.0 per cent.

8. Disability pensioner with former working record. Single APW

The disability pensioner in Great Britain, with a sufficient contribution record, will receive Incapacity Benefit long term basic rate as the permanent benefit. In addition there will be an age dependent supplement, which is largest for young people. It is also possible to receive additional benefits from the Disability Living Allowance according to need. This is disregarded here. A 35-year-old person will, in 1999, receive 66.75 GBP/week in Incapacity Benefit and 7.05 GBP/week in age addition, in total 73.80 GBP/week or 3,838 GBP a year. This will also be the disposable income.
The net compensation percentage is 3,838 / 13,448 x 100 = 28.5.
The decrease in disposable income compared to the situation without disability is 71.5 per cent. There might be ‘topping-up’ from Income Support. If the case is severe disability the ‘applicable’ amount from IS would be 4,740 GBP, 4,699 GPB after tax, resulting in a net compensation percentage of 34.9.

9. Disability pensioner without former working record. 'Single APW'

If there is no former work or an insufficient contribution record the disabled person would be eligible for Severe Disablement Allowance, a non contribution based tax free benefit of 40.35 GBP per week. There is also an age dependent supplement, which is largest for young people. At the age of 35 years this addition is 14.05 GBP/week. In total the disability pensioner can receive 54.40 GBP/week or 2,829 GBP a year from Severe Disablement Allowance. This will also be the disposable income.
The 'net compensation percentage' (relative to the APW) is 2,829 / 13,448 x 100 = 21.0.
The 'decrease' in disposable income, relative to that of the APW, is 79.0 per cent. The Severe Disablement Allowance can be 'topped-up' from Income Support. In the 'ordinary' disability case the applicable amount would be 3,812 GBP and in the 'severe disability' case it would be 4,740 GBP, cf. case 8.

10. Wife disability pensioner. APW couple

It is assumed that the wife in the APW couple becomes a disability pensioner while the husband continues to work (APW income level). The wife has a former working record earning $^1/_2$ APW income. She is eligible for Incapacity Benefit. She will receive 66.75 GBP/week plus the age supplement of 7.05 GBP/week (assumed age is 35 years), in total 73,80 GBP/week or 3,838 GBP a year.
The gross compensation percentage for the wife is 3,838 / 8,890 x 100 = 43.2. The disposable income of the couple will be 3,838 GBP for the wife and 13,645 GBP for the husband, in total 17,483 GBP.
The decrease in disposable income compared to the situation without disability is 21,136 - 17,483 = 3,653 GBP or 17.3 per cent.

11. Pensioner with maximum period of former occupation. Single APW
Retirement at 'usual' age, here 65 years

The public pension consists of 3 components:

a) A 'flat rate' pension of 66.75 GBP a week.
b) A 'graduated pension', based upon a savings arrangement in existence from 1961 to 1975. The pension for a typical worker in manufacturing was 4.51 GBP a week in April 1999. (Information from the Department of Social Security.)
c) A SERPS pension introduced in 1978. According to calculations from the Department of Social Security, SERPS for the APW was 64.30 GBP a week, in 1999.

The pension after the maximum period of former occupation is:

	Week GBP	Year GBP
Flat rate	66.75	3,471.00
Graduated pension	4.51	234.52
Serps pension	64.30	3,343.60
Total	135.56	7,049.12

The disposable income for the APW-pensioner is 6,916 GBP.
The net compensation percentage is 6,916 / 13,448 x 100 = 51.4.
The decrease in disposable income is 48.6 per cent by retirement.

12. Pensioner without former occupation. Single APW Retirement at 'usual' age, here 60 years

A pensioner without former occupation can receive either a survivor's pension, e.g. the wife can obtain via her deceased husband's contribution to SERPS and graduated pension or Income Support of 75.00 GBP a week (51.40 + 23.60). In this calculation the income support is used, it is 3,900 GBP a year.
The 'net compensation percentage' (relative to the APW) is 3,900 / 13,448 x 100 = 29.0.
The 'decrease' in disposable income, relative to that of the APW, is 71.0 per cent by this kind of 'retirement'. It is the applicable amount, which has been used.

13. Pensioners with maximum period of former occupation. APW-couple. The two pensioners have the same age, the wife retired in 1994 at the age of 60, the husband in 1999 at the age of 65.

The husband is 'identical' to the single pensioner in case 11. Based upon information and calculations from the Department of Social Security the wife (and the couple) has the following pensions in 1999 (the wife has had x of her husband's earned income in her working life):

	Wife Week GBP	Husband Week GBP	Couple Week GBP	Couple Year GBP
Flat rate	66.75	66.75	133.50	6,942.00
Graduated pension	0.83	4.51	5.34	277.68
Serps pension	19.71	64.30	84.01	4,368.52
Total	87.29	135.56	222.85	11,588.20

The disposable income for the APW-couple is 11,588 GBP.
The net compensation percentage is 11,588 / 21,136 x 100 = 54.8.
The decrease in disposable income compared to the APW-couple is 45.2 per cent.

'Standard' income events in connection with children

1-3. The couple has 1, 2 or 3 children

The family allowance is 14.40 GBP a week for the first child and 9.60 GBP for each of the following children.
Child no 1 (6 years old). The family allowance is 14.40 GBP a week or 14.40 x 52 = 748.80 GBP a year. Compared to the situation without children the increase in disposable income is 748.80 / 21,136 x 100 = 3.5 per cent, when the family has 1 child (6 years old).
Child no 2 (3 years old). The family allowance is 9.60 x 52 = 499.20 GBP a year for this child. Compared to the situation without children the increase in disposable income is (748.80 + 499.20) / 21,136 x 100 = 5.9 per cent, when the family has 2 children (6 and 3 years old).
Child no 3 (1 year old). The family allowance is the same as for child no. 2, i.e. 499.20 GBP a year. Compared to the situation without children the increase in disposable income is (748.80 + 499.20 + 499.20) / 21,136 x 100 = 8.3 per cent, when the family has 3 children (6, 3 and 1 year old).

4. The couple gets the second child and has 2 children

The 'timing-problem' is the same as mentioned in the documentation for Denmark.

1. In Great Britain the husband has no maternity leave. Women have a possibility of 18 weeks of maternity leave. The compensation during maternity leave is 90 per cent of the weekly wage for the first 6 weeks and after this a Maternity Allowance the following 12 weeks.
   The wife has a gross wage reduction of 18/52, that is 3,077 GBP.
   In compensation she receives:

   The first 6 weeks:
   6/52 of the gross wage x .9 = 923 GBP.

   The last 12 weeks:
   In this period the compensation is 59.55 GBP a week, in total 715 GBP.

The compensation for the whole period is 1,638 GBP.
The gross compensation percentage is 1,638 / 3,077 x 100 = 53.2. Eighteen weeks of maternity leave during 1999 results in a disposable income of 21.412 GBP for the couple including allowance for 2 children (1 child 3 years of age and 1 born in 1999). The decrease in disposable income compared to the situation where the couple has 2 children (3 and 1 year) is 22,384 - 21,412 = 972 GBP or 4.3 per cent. The calculation reflects the maximum duration of the compensation.

2. In the alternative calculation the length of the maternity leave is 14 weeks for the wife alone, this period is used for all countries in the alternative calculation.
The gross wage of the wife is reduced by 14/52, that is 2,393 GBP. She receives (923 + 476) = 1,399 GBP in compensation.
The gross compensation percentage is 1,399 / 2,393 x 100 = 58.5. The disposable income is 21,713 GBP for the couple when the wife has 14 weeks of maternity leave. The decrease in disposable income compared to the situation, where the couple has 2 children is 22,384 - 21,713 = 671 GBP or 3.0 per cent.

Annex Tax and social contribution calculation for single APW, 1999. GBP

Taxable income:	
Gross wage income	17,780
- Personal allowance	4,335
Taxable income	13,445
Tax:	
10 per cent of 1,500 GBP	150
23 per cent of (13,445 - 1,500)	2,747
Total tax	2,897
Social contributions:	
10 per cent of (17,780 / 52 - 66) GBP/week in 52 weeks	1,435
Tax and social contributions:	
Tax	2,897
Social contributions	1,435
Tax and social contributions	4,332

DOCUMENTATION OF APW CALCULATIONS FOR CANADA, 1999

Single APW The gross wage of the APW (or AE) in 1999 was calculated by Statistics Canada.

	1999 Insured[1]
Gross wage	35,868 CAD
Tax and social security[2]	9,322 CAD
Disposable income	26,546 CAD

APW-couple The husband has the same wage as the single APW, the wife has 50 per cent of that. The couple has no children.

	1999 Insured[1]
Gross wage	53,802 CAD
Tax and social security contribution	12,723 CAD
Disposable income	41,079 CAD

1) Unemployment insurance is mandatory in Canada.
2) Cf. the annex for a documentation.

'Standard' income events

1. Ill for one week during the year. Single APW

The gross wage is reduced by 1/52, i.e. 690 CAD. The compensation is 55 per cent of the lost income, but with a waiting period of 2 weeks in the scheme there is no compensation. The rules are contained in the Employment Insurance scheme. Maximum insurable earnings were 39,000 CAD in 1999.
The gross compensation percentage is 0. The disposable income of the APW who is ill for one week is 26,140 CAD in 1999.
The decrease in disposable income compared to the situation with no illness is 26,546 - 26,140 = 406 CAD or 1.5 per cent.
There are no general labour market agreements in terms of coverage in case of illness, but there are supplementary benefits from some large corporations.

2. Unemployed for 3 months during the year, insured. Single APW

The gross wage of the insured APW is reduced by 1/4, i.e. 8,967 CAD. The compensation is 55 per cent of the lost income according to the Employment Insurance scheme. For 13 weeks with a waiting period of 2 weeks the compensation is 11/13 x 0.55 x 8,967 = 4,173 CAD. Maximum insurable earnings were 39,000 CAD in 1999.
The gross compensation percentage is 4,173 / 8,967 x 100 = 46.5. The disposable income of the APW with 25 per cent unemployment is 23,922 CAD in 1999.
The decrease in disposable income compared to the situation with no unemployment is 26,546 - 23,922 = 2,624 CAD or 9.9 per cent.

3. Unemployed for the whole year, insured. Single APW

There is no gross wage. The maximum benefit period is 45 weeks (varies across the provinces according to the unemployment level), but 45 weeks is the longest benefit period. The compensation is 55 per cent of the lost income in 45 weeks, i.e. 45/52 x 0.55 x 35,868 = 17,072 CAD. There are first 2 weeks (waiting period) with no compensation, then 45 weeks with compensation from the Employment Insurance scheme, and in the end 5 weeks with social assistance. Possible minor refundable tax credits are not taken into account. Social assistance is 195 CAD/month (rate for the province of Ontario) for a single person (not including housing coverage), i.e. 225 CAD for 5 weeks. Social assistance (S.A.) is not taxable (this is the case in all provinces except Quebec). The total compensation is 17,072 CAD from the employment insurance and 225 CAD from S.A., in total 17,297 CAD.
The gross compensation percentage is 17,297 / 35,868 x 100 = 48. The disposable income of the APW who is unemployed for the entire year is 14,834 CAD in 1999.
The decrease in disposable income compared to the situation with no unemployment is 26,546 - 14,834 = 11,712 CAD or 44.1 per cent.

4. Unemployed for 3 months during the year, not eligible for insurance. Single APW

The reduction of the gross wage is 8,967 CAD just as in case 2 (3 months of unemployment). It is assumed that the unemployed receives social assistance during the unemployment period.
The monthly rate for a single person is 195 CAD (cf. also case 3), i.e. 585 CAD in compensation for three months (housing allowances are not included).
The gross compensation percentage is 585 / 8,967 x 100 = 6.5. Disposable for an APW with 3 months of unemployment receiving social assistance is 21,523 CAD.
The decrease in disposable income compared to the situation with no unemployment is 26,546 - 21,523 = 5,023 CAD or 18.9 per cent.

5. Unemployed for the whole year, not eligible for insurance. Single APW

There is no gross wage. The compensation is 12 x 195 = 2,340 CAD on the assumption that the unemployed single person receives social assistance during the unemployment period.
The gross compensation percentage is 2,340 / 35,868 x 100 = 6.5. Social assistance is not taxable so the disposable income is 2,340 CAD (excluding housing allowances).
The decrease in disposable income compared to the situation with no unemployment is 26,546 - 2,340 = 24,206 or 91.2 per cent. The decrease would be approx. 2.5 percentage points smaller when refundable tax credits are included.
The single unemployed recipient of social assistance would also be eligible for a (non taxable) housing allowance of 325 CAD/month. The personal as well as the housing allowance increase with family size. A couple (no children) receives 390 CAD/month in personal allowances and 511 CAD/month in housing allowance as well as refundable tax credits.

6. Wife unemployed for the whole year, insured. APW couple

There is no gross wage for the wife. The maximum benefit period for a person working half time (as assumed here) is 39 weeks (varies across the provinces according to the unemployment level), but 39 weeks is the longest benefit period in this situation. The compensation is 55 per cent of the lost income and will be received for 39 weeks, i.e. 39/52 x 0.55 x 17,934 = 7,398 CAD. There are first 2 weeks (waiting period) with no compensation, then 39 weeks with compensation from the Employment Insurance scheme. There is no compensation from social assistance for the remaining 11 weeks because it is means-tested to 0 against the husband's income from work. Total compensation is 7,398 CAD.
The gross compensation percentage is 7,398 / 17,934 x 100 = 41. The disposable income for the APW-couple is 33,839 CAD, when the wife was unemployed for the entire year in 1999 and usually is working part time.
The decrease in disposable income compared to the situation with no unemployment is 41,079 - 33,839 = 7,240 CAD or 17.6 per cent.

7. Injured from work. Single APW

The effects of injuries from work are studied in two cases. In the first case there is a complete loss of working capability. In the second case the working capability is reduced by 33.3 per cent. Only current benefits are considered. The Canadian cases are based on the Ontario Province legislation.

1. Working capability completely lost
   There is no gross wage. The compensation is 90 per cent of the lost income after tax and social contributions up to a ceiling, which in 1999 corresponded to a gross wage of 59,200 CAD. The compensation (in Ontario) is .9 x 26,546 = 23,891 CAD which is also the disposable income.
   The net compensation percentage is thus 90.
   The decrease in disposable income is 26,546 - 23,891 = 2,655 CAD or 10.0 per cent compared to the situation with no injuries.

2. Loss of 1/3 of the working capability
   The gross wage is reduced by 1/3, i.e. 11,956 CAD. The compensation would be approx. 1/3 of that in case 7.1, i.e. 7,964 CAD.
   The net compensation percentage is thus 90. The disposable income is 26,766 CAD in case of loss of 1/3 of the working capability (disregarding lump sum payments). The increase in disposable income is 26,766-26,546 = 220 CAD or 0.8 per cent compared to the situation with no injuries. The positive effect is because of the progression in the Canadian tax scheme.

8. Disability pensioner with former working record and income at APW-level. Single APW

The Canadian disability pensioner who is eligible for benefits from the CPP will receive a benefit with two components, an earnings related and a flat rate. The earnings related component is 75 per cent of the 'corresponding' retirement pension. The retirement pension for the APW was estimated to 97 per cent of the maximum pension in 1999, i.e. 0.97 x 9,020 = 8,749 CAD, cf. case 11. The earnings related component will be .75 x 8,749 = 6,562 CAD. The flat rate component was 4,078 CAD in 1999, in total 10,640 CAD. This is also the disposable income, because the tax credits more than outweigh the gross tax liability.
The net compensation percentage is 10,640 / 26,546 x 100 = 40.1.
The decrease in disposable income compared with the situation without disability is 59.9 per cent.

9. Disability pensioner without former working record. ' Single APW'

A disabled person in Canada with no former working record would not be eligible for the CPP. Instead he would receive a monthly social assistance benefit of 516 CAD. On top of this a benefit for shelter would be added. The total benefit (excluding shelter) would be 6,192 CAD in 1999. The benefit is taxfree, so the disposable income is also 6,192 CAD, not including relatively small refundable tax credits.

The 'net compensation percentage' (relative to the APW) is 6,192 / 26,546 x 100 = 23.3. The 'decrease' in disposable income, relative to that of the APW, would be 76.7 per cent.

10. Wife disability pensioner. APW-couple

It is assumed that the wife in the APW-couple becomes a disability pensioner while the husband continues to work (APW income level). The wife has a working record earning $^1/_2$ APW income. There are, cf. case 8, two components in the CPP for disability pensioners, an earnings related and a flat rate. The earnings related component is 75 per cent of the 'corresponding' retirement pension, i.e. 50 per cent of the disability pension in case 8: 3,281 CAD. The flat rate component is 4,078 CAD, in total 7,359 CAD, which will also be the disposable income of the wife.
The gross compensation percentage is 7,359 / 17,934 x 100 = 41. The disposable income of the APW-couple is 33,905 CAD, when the wife became a disability pensioner in 1999.
The decrease in income compared to the situation with no disability is 41,079 - 33,905 = 7,174 CAD or 17.5 per cent.

11. Pensioner with maximum period of former occupation. Single APW Retirement at 'usual' age, here 65 years

The public pension for the former APW consists of 3 components, the Old Age Security Pension (OAS), which in 1999 was 4,959 CAD (annual basis), the Guaranteed Income Supplement (GIS), which in 1999 was 5,900 CAD and the Canadian Pension Plan (CPP), where the maximum pension was 9,020 CAD in 1999. The CPP aims for a gross replacement rate of 25 per cent up to the Maximum Pensionable Earnings (YMPE) which in 1999 was 37,400 CAD. This is close to, but not identical to the APW income level. Assuming that the APW-income YMPE ratio is 97 per cent (average of 96-99) and that this ratio is also valid for the past, the pensioner will receive 97 per cent of the maximum pension in 1999, i.e. 8,749 CAD. The maximum CPP pension in 1999 is calculated as 25 per cent of the average of YMPE in 1995, 1996, 1997, 1998 and 1999.
The OAS and CPP pensions are taxable, GIS is not, but this component is means-tested against other income (here CPP) with a taper of 50 per cent. In addition there might be a provincial 'top-up', not included here.
The disposable income for the APW pensioner is 4,959 CAD (OAS) plus 1,525 (GIS) plus 8,749 CAD (CPP) minus 732 CAD in personal tax, in total 14,501 CAD.
The net compensation percentage is 14,501 / 26,546 x 100 = 54.6.
The decrease in disposable income compared to the APW is 45.4 per cent.

12. Pensioner without former occupation. 'Single APW' 'Retirement' at 'usual' age, here 65 years

In this case the public pension consists of 2 components, the OAS of 4,959 CAD and GIS of 5,900 CAD, in total 10,859 CAD in 1999. The OAS is taxable but the non refundable tax credits are larger than the tax liability, so there is no personal taxation in this case. The disposable income is 10,859 CAD.

The 'net compensation percentage' (relative to the APW) is 10,859 / 26,546 x 100 = 40.9.

The 'decrease' in disposable income is 59.1 per cent relative to that of the APW by this kind of 'retirement'.

13. Pensioners with maximum period of former occupation. APW couple The two pensioners have the same age, and both retire 65 years old

The OAS rate is the same for singles and spouses, 4,959 CAD, but the GIS rate is 3,839 CAD for each spouse in the pensioner couple. 97 per cent of the maximum CPP rate, 8,749 CAD, is used for the husband, and the wife having a long working record earning 1/2 APW income receives half of that, i.e. 4,375 CAD in CPP pension. The combined GIS, 7,678 CAD, is means-tested against the combined CPP pension for the couple, 13,124 CAD, leaving 1,116 CAD in GIS for the couple.

The disposable income for the pensioner couple is 9,918 (OAS) plus 1,116 (GIS) plus 13,124 (CPP) minus 443 in personal tax in total 23,715 CAD. The reason for a lower personal tax for the couple than for the single is a transferable old age tax credit for each of the spouses.

The net compensation percentage is 23,715 / 41,079 x 100 = 57.7.

The decrease in disposable income at retirement is 42.3 per cent for the APW couple.

'Standard' income events in connection with children

1-3. The APW-couple has 1, 2 or 3 children

Child no. 1 (6 years old). The basic child tax benefit is 1,020 CAD plus 213 CAD if there are no tax deductions for child care and the child is in the age bracket 0-7 years. The benefit is 'taxed back' at a rate of 2.5 per cent of net income above 25,921 CAD (net income here is equivalent to the gross wage income of the couple).

'Tax back': 0.025 x (53,802 - 25,921) = 697 CAD, child benefit : 1,020 + 213 - 697 = 536 CAD.

Compared to the situation without children the increase in disposable income is 536 / 41,079 x 100 = 1.3 per cent with 1 child (6 years old).

Child no. 2 (3 years old). The basic child tax benefit is 1,020 CAD plus 213 CAD just as for child no. 1. The benefit is 'taxed back' at a rate of 5 per cent of net income when there are 2 or more children.
'Tax back': 0.05 x (53,802 - 25,921) = 1,394 CAD, child benefits: 2,040 + 426 - 1,394 = 1,072 CAD. Compared to the situation without children the increase in disposable income is 1,072 / 41,079 x 100 = 2.6 per cent with 2 children (6 and 3 years old).

Child no. 3 (1 year old). The basic child tax benefit is 1,020 CAD plus 213 CAD just as for child no. 1 and 2, but there is a supplement of 75 CAD for child no. 3 and more. The 'tax back' rate is 5 per cent of net income, that is 1,394 CAD just as in the case with 2 children. There is also a tax reduction in this case (3 children) of 232 CAD and a provincial (Ontario) supplement of 476 CAD. Child benefits: 3,060 + 639 + 75 + 232 + 476 - 1,394 = 3,088 CAD. Compared to the situation without children the increase in disposable income is 3,088 / 41,079 x 100 = 7.5 per cent with 3 children (6, 3 and 1 year old).

4. The couple gets their second child and has two children

There are the same 'timing-problems' as mentioned in the documentation for Denmark.

1. The couple has a combined parental leave of 27 weeks, 17 for the wife (including a waiting period of 2 weeks) and 10 weeks which can be shared. If the husband participates there will also be a waiting period of 2 weeks for him. It is assumed in the following that the wife has the entire leave period. The compensation is 55 per cent of the lost income up to a ceiling, which was 39,000 CAD in 1999. The scheme is a part of the 'Employment Insurance' scheme.
   The wife has a wage reduction of 27/52, i.e. 9,312 CAD. The compensation is 25/27 x 9,312 x 0.55 = 4,742 CAD. This compensation leaves the couple with a gross income (disregarding the family allowance) of 49,232 CAD which is the basis for calculation of the 'tax back' of the family allowance. The 'tax back' here is 0.05 x (49,232 - 25,921) = 1,166 CAD, where it in the full employment case was 1,394 CAD, a difference of 228 CAD which is added to the benefit of 4,742 CAD, in total 4,970 CAD. This is only to illustrate the full gross impact of the maternity benefit. The difference in 'Tax Back' is allocated to the family allowance when disposable income is calculated.
   The gross compensation percentage is 4,970 / 9,312 x 100 = 53. 27 weeks of maternity leave (for the wife alone) results in a disposable income of 39,332 CAD for the couple including allowance for 2 children (1 child 3 years old and 1 born in 1999).
   The decrease in disposable income compared to the situation where the couple has two children (3 and 1 year) is 42,151-39,332 = 2,819 CAD or 6.7 per cent.

2. In this calculation the common period of 14 weeks is used. Her wage reduction is 14/52, i.e. 4,828 CAD. The compensation is 12/14 x 4,828 x 0.55 = 2,276 CAD. The difference in 'tax back' of the family allowance is 128 CAD in this case. The result is a total benefit of 2,404 CAD.
The gross compensation percentage is 2,404 / 4,828 x 100 = 50. 14 weeks of maternity leave results in a disposable income of 40,562 CAD.
The decrease in disposable income compared to the situation, where the couple has two children is 42,151 - 40,562 = 1,589 CAD or 3.8 per cent.

Annex Tax and social contribution calculation for single APW, 1999. CAD.

Gross wage income:	35,868
Taxable income:	35,868
Basic federal tax liability:	
17 per cent of 29,590 CAD	5,030
26 per cent of (35,868 - 29,590)	1,632
Total basic liability	6,662
Social contributions:	
Pensions (CPP): 0,035 x (35,868 - 3,500)	1,133
Unemployment (E.I.): 0.0255 x 35,868	915
Total social contributions	2,048
Associated tax credit: 0.17 x 2,048	348
Federal taxes:	
Basic tax liability	6,662
– Basic personal tax credit	1,155
– Social contribution tax credit	348
Basic federal tax	5,159
+ Surtax: 0.015 x 5,159	77
Total federal taxes	5,236
Local taxes[1]:	
39.50 per cent of 5,159, total local taxes	2,038
Tax and social contributions:	
Federal taxes	5,236
Local taxes	2,038
Social contributions	2,048
Total tax and social contributions	9,322

1) The tax rate of Ontario has been selected.

APPENDIX 2

DOCUMENTATION OF FAMILY TYPE (APW) CALCULATIONS FOR SWEDEN 1991–1998, ‘CORRECT’ DATA

DOCUMENTATION OF APW CALCULATIONS FOR SWEDEN 1991, 'CORRECT' DATA

Single APW The gross wage of the APW in 1991 is from 'The Tax/Benefit Position of Production Workers', OECD, 1995 edition.

	1991 Non-insured[1)]
Gross wage	162,400 SEK
Tax and social security	45,548 SEK
Disposable income	116,852 SEK

APW-couple The husband has the same gross wage as the single APW, the wife has 50 per cent of that income. There are no children.

	1991 Insured[1)]
Gross wage	243,600 SEK
Tax and social security	65,148 SEK
Disposable income	178,452 SEK

1) Non-insured refers to unemployment insurance. This is voluntary in Sweden (in 1991) as it is in Denmark. A case for the insured should, therefore, also be included. The direct contribution for membership is, however, relatively low in Sweden, about 300 SEK on an annual basis in 1991, and it is deductible in taxable income. It was, therefore, decided that the case for the 'non-insured' was sufficient. It is also identical then to the APW for Sweden in OECD's publication 'The Tax/Benefit Position of Production Workers'. In Sweden the contributions for social security are primarily paid by the employer, they amounted to about 38 per cent of the gross wage in 1991.

'Standard' income events

1. Ill for one week. Single APW

The gross wage is reduced by 1/52, i.e. 3,123 SEK. Compensation for illness in one week is 65 per cent of the gross income (on a daily basis that is 162,400 x .65 = 105,560 / 260 = 406 SEK) for the first 3 days and 80 per cent for the remaining 2 (on a daily basis that is 162,400 x .80 = 129,920 / 260 = 499.69 SEK, rounded 500 SEK). The compensation is (3 x 406) + (2 x 500) = 2,218 SEK.
The gross compensation percentage is 2,218 / 3,123 x 100 = 71. When the APW is ill for one week his or her disposable income is 116,290 SEK.
The decrease in Disposable income compared to the situation without illness is 116,852 - 116,290 = 562 SEK or 0.5 per cent.

2. Unemployed for 3 months during the year, insured. Single APW

The loss of income is 1/4 of the gross wage, i.e. 40,600 SEK. Unemployment compensation is 90 per cent of the lost income with a maximum of 543 SEK a day, which for 13 weeks (5 days each) is 13 x 5 x 543 = 35,295 SEK.
The gross compensation percentage is 35,295 / 40,600 x 100 = 87. The Disposable income of the APW with 25 per cent unemployment is 113,385 SEK.
The decrease in disposable income compared to the situation with no unemployment is 116,852 - 113,385 = 3,467 SEK or 3.0 per cent.

3. Unemployed for the whole year, insured. Single APW

There is no gross wage. The compensation is 52 x 5 x 543 = 141,180 SEK.
The gross compensation percentage is 141,180 / 162,400 x 100 = 87. The disposable income of the APW is 102,921 SEK, when he or she is unemployed for the whole year of 1991.
The decrease in disposable income compared to the situation with no unemployment is 116,852 - 102,921 = 13,931 SEK or 11.9 per cent.

4. Unemployed for 3 months during the year, non-insured. Single APW

The reduction of the gross wage is 40,600 SEK as in case 2. The compensation for the non-insured APW is 13 x 5 x 191 = 12,415 SEK.
The gross compensation percentage is 12,415 / 40,600 x 100 = 31. The disposable income is 98,324 SEK in this situation.
The decrease in disposable income compared to the situation with no unemployment is 116,852 - 98,324 = 18,528 SEK or 15.9 per cent.

5. Unemployed for the whole year, non-insured. Single APW

There is no gross wage. The compensation is 52 x 5 x 191 = 49,660 SEK interpreted as an annual rate. (The maximum period for which this compensation can be received is in general not more than 30 weeks).

The gross compensation percentage is 49,660 / 162,400 x 100 = 31. The disposable income is 38,564 SEK in this situation.

The decrease in disposable income compared to the situation with no unemployment is 116,852 - 38,564 = 78,288 SEK or 67.0 per cent.

It should be mentioned that the recommended minimum standard for a single person in 1991 is 1.007 times the basic rate ('basbeloppet') in the Swedish Social Security System, i.e. 32,425 SEK excluding housing costs. Recipients of the benefit from this scheme will, in many cases, be eligible for social assistance to supplement their income.

6. Wife unemployed for the whole year, insured. APW-couple

There is no gross wage for the wife. The compensation is 90 per cent of the lost income, i.e. 81,200 x 0.9 = 73,080 / 260 = 281.08 SEK, rounded to 281 SEK on a daily basis. Total compensation is 73,060 SEK. The gross compensation percentage is then 90. The disposable income of the APW-couple is 172,212 SEK, when the wife is unemployed for the whole year of 1991 and usually is working part time.

The decrease in disposable income compared to the situation with no unemployment is 178,452 - 172,212 = 6,240 SEK or 3.5 per cent.

7. Injured from work. Single APW

The effects of injuries from work are investigated in two cases. In the first case there is a complete loss of working capability. In the second case, the working capability is reduced by 33.3 per cent.

1. Working capability completely lost
   In Sweden there is full compensation for the loss of income caused by injuries from work (if the income is within 7.5 x 'basbeloppet', i.e. 241,500 SEK in 1991).
   There is no change in the disposable income of the APW in this situation.

2. Loss of 1/3 of the working capability
   There is, also in this situation with partial loss of the working capability, full compensation for the lost wage income.
   There is no change in disposable income.

8. Pensioner with maximum period of former occupation. Single APW Retirement at 'usual' age, here 65 years

It is assumed that the APW has gained pension rights for 30 years (that is a 'full' period in the Swedish additional pension scheme). This is also feasible, since the system started in 1960. It is further assumed that the average number of 'pension-points' is 4.03 (the actual number in 1989). This average is slightly increasing over time. On these assumptions the additional pension (ATP) will be 77,860 SEK in 1991.

The basic pension in the Swedish system is based upon the basic rate ('basbeloppet'), which in 1991 was 32,200 SEK. The basic pension consists of two components, a basic amount which equals 32,200 x .96 = 30,912 SEK (single pensioner) and a supplementary amount, 32,200 x .54 = 17,388 SEK. The basic pension is then 48,300 SEK for a single pensioner. If the pensioner has no additional income he or she pays no taxes. When the pensioner has income from the additional pension scheme the supplementary amount in the basic pension is means-tested and reduced by 1 SEK for each SEK in additional pension.

The disposable income for the 'APW-pensioner' is 30,912 SEK in basic pension plus 77,860 SEK in 'ATP' minus 28,509 SEK in personal tax, in total 80,263 SEK.

The net compensation percentage is 80,263 / 116,852 x 100 = 68.7.

The decrease in disposable income by retirement is 31.3 per cent in this situation.

9. Pensioner without former occupation. 'Single APW' 'Retirement' at 'usual' age, here 65 years

The pensioner receives basic pension, i.e. 48,300 SEK, cf. the former case. The basic pension is not taxed (there is a standard deduction designed in such a way that single and married pensioners, only receiving the basic pension, do not pay personal tax).

The 'net compensation percentage' relative to the APW is 48,300 / 116,852 x 100 = 41.3.

The 'decrease' in disposable income, relative to that of the APW, is 58.7 per cent by this kind of 'retirement'.

10. Pensioners with maximum period of former occupation. APW-couple The two pensioners have the same age, and both retire at the age of 65

It is assumed that wife and husband have gained pension rights for 30 years each. The husband is 'identical' to the single pensioner in case 8. The wife is assumed to have had half the income of her husband all the time, which will result in 1.515 'pension points' according to the Swedish 'ATP' scheme. On these assumptions the additional pension (ATP) will be 77,860 SEK for the husband and 29,270 SEK for the wife, in total 107,130 SEK in 1991.

The basic pension is equal to the basic amount, i.e. 32,200 x .785 = 25,277 SEK for each of the pensioners, in total 50,554 SEK. The couple will not receive any supplementary amount. The disposable income for the APW-couple as pensioners is 50,554 SEK in public pensions plus 107,130 SEK in additional pension minus 32,814 SEK in personal tax, in total 124,870 SEK.

The net compensation percentage is 124,870 / 178,452 x 100 = 70.0.

The decrease in disposable income compared to the APW-couple is 30.0 per cent.

'Standard' income events in connection with children

1-3. The couple has 1, 2 or 3 children

For child no. 1 (6 years old) there is a family allowance of 9,000 SEK in 1991. Compared to the situation without children the increase in disposable income is (9,000 / 178,452) x 100 = 5.0 per cent with one child (6 years old).

For child no. 2 (3 years old) the allowance is also 9,000 SEK. Compared to the situation without children the increase is (18,000 / 178,452) x 100 = 10.1 per cent with two children (6 and 3 years old).

For child no. 3 (1 year old) the allowance is 1.5 x 9,000 = 13,500 SEK. Compared to the situation without children the increase is (31,500 / 178,452) x 100 = 17.7 per cent with three children (6, 3 and 1 year old).

4. The couple gets the second child and has 2 children

There are the same 'timing-problems' as mentioned in the documentation for Denmark, cf. Appendix 1.

1. The couple has a combined maternity leave for 360 days during the year, with 300 days for the wife and 60 days for the husband. The distribution between the two can be changed. The 360 days cover the maximum period for which the compensation is based upon income (90 per cent). The compensation for the remaining 90 days of the leave period is considerably lower.

   The husband has a wage reduction of (162,400 / 365) x 60 = 26,696 SEK. He receives 162,400 x .9 / 365 = 400 SEK per day. For 60 days the 'parents allowance' is 60 x 400 =24,000 SEK.

   The wife has a wage reduction of (81,200 / 365) x 300 = 66,740 SEK. She receives 81,200 x .9 /365 = 200 SEK per day. For 300 days the 'parents allowance' is 300 x 200 = 60,000 SEK.

Combined, the wage reduction is 93,436 SEK and the received compensation is 84,000 SEK.
The gross compensation percentage is 90 (some variation due to rounding). 360 days of maternity leave result in a disposable income of 189,540 SEK for the couple including allowance for 2 children (1 child 3 years of age and 1 born in 1991).
The decrease in disposable income compared to the situation where the couple has two children (3 and 1 year) is 196,452 - 189,540 = 6,912 SEK or 3.5 per cent.

2. In this calculation the common period of 14 weeks maternity leave for the wife is used. Her wage reduction is (81,200 / 365) x 98 = 21,802 SEK. She receives 98 x 200 = 19,600 SEK in compensation.
The gross compensation percentage is again 90. 14 weeks maternity leave results in a disposable income of 194,780 SEK.
The decrease in disposable income compared to the situation, where the couple has two children, is 196,452 - 194,780 = 1,672 SEK or 0.9 per cent.

DOCUMENTATION OF APW CALCULATIONS FOR SWEDEN 1992, 'CORRECT' DATA

Single APW The gross wage of the APW in 1992 is from 'The Tax/Benefit Position of Production Workers', OECD, 1995 edition.

	1992 Non-insured[1)]
Gross wage	171,000SEK
Tax and social security	47,901SEK
Disposable income	123,099SEK

APW-couple The husband has the same wage as the single APW, the wife has 50 per cent of that. The couple has no children.

	1992 Non-insured[1)]
Gross wage	256,500SEK
Tax and social security	68,518SEK
Disposable income	187,982SEK

1) Non-insured refers to unemployment insurance. This is voluntary in Sweden (in 1992) as it is in Denmark. A case for the insured should, therefore, also be included. The direct contribution for membership is, however, relatively low in Sweden, about 500 SEK on an annual basis in 1992, and it is deductible in taxable income. It was, therefore, decided that the case for the 'non-insured' was sufficient. It is also identical then to the APW for Sweden in OECD's publication 'The Tax/Benefit Position of Production Workers'. In Sweden, the contributions for social security are primarily paid by the employer, they amounted to about 35 per cent of the gross wage in 1992.

'Standard' income events

1. Ill for one week. Single APW

The gross wage is reduced by 1/52, i.e. 3,288 SEK. Compensation for illness in one week is 75 per cent of the gross income (on a daily basis that is 171,000 x .75 = 128,250 / 260 = 493.27 SEK, rounded to 493 SEK) for the first 3 days and 90 per cent for the remaining 2 (on a daily basis that is 171,000 x .90 = 153,900 / 260 = 591.92 SEK, rounded to 592 SEK). The compensation is (3 x 493) + (2 x 592) = 2,663 SEK.
The gross compensation percentage is 2,663 / 3,288 x 100 = 81. When the APW is ill for one week his or her disposable income is 122,691 SEK.
The decrease in disposable income compared to the situation without illness is 123,099 - 122,691 = 408 SEK or 0.3 per cent.

2. Unemployed for 3 months during the year, insured. Single APW

The loss of income is 1/4 of the gross wage, i.e. 42,750 SEK. Unemployment compensation is 90 per cent of the lost income with a maximum of 564 SEK a day, which for 13 weeks (5 days each) is 13 x 5 x 564 = 36,660 SEK.

The gross compensation percentage is 36,660 / 42,750 x 100 = 86. The disposable income of the APW with 25 per cent unemployment is 119,089 SEK.

The decrease in disposable income compared to the situation with no unemployment is 123,099 - 119,089 = 4,010 SEK or 3.3 per cent.

3.Unemployed for the whole year, insured. Single APW

There is no gross wage. The compensation is 52 x 5 x 564 = 146,640 SEK.

The gross compensation percentage is 146,640 / 171,000 x 100 = 86. The disposable income of the APW is 107,058 SEK, when he or she is unemployed for the whole year of 1992.

The decrease in disposable income compared to the situation with no unemployment is 123,099 - 107,058 = 16,041 SEK or 13.0 per cent.

4. Unemployed for 3 months during the year, non-insured. Single APW

The reduction of the gross wage is 42,750 SEK as in case 2. The compensation for the non-insured APW is 13 x 5 x 198 = 12,870 SEK.

The gross compensation percentage is 12,870 / 42,750 x 100 = 30. The disposable income is 103,400 SEK in this situation.

The decrease in disposable income compared to the situation with no unemployment is 123,099 - 103,400 = 19,699 SEK or 16.0 per cent.

5. Unemployed for the whole year, non-insured. Single APW

There is no gross wage. The compensation is 52 x 5 x 198 = 51,480 SEK interpreted as an annual rate. (The maximum period for which this compensation can be received is in general not more than 30 weeks.)

The gross compensation percentage is 51,480 / 171,000 x 100 = 30. The disposable income is 39,989 SEK in this situation.

The decrease in disposable income compared to the situation with no unemployment is 123,099 - 39,989 = 83,110 SEK or 67.5 per cent.

It should be mentioned that the recommended minimum standard for a single person in 1992 is 1.16 times the basic rate ('basbeloppet') in the Swedish Social Security System, i.e. 39,092 SEK excluding housing costs. Recipients of the benefit from this scheme will, in many cases, be eligible for social assistance to supplement the income.

6. Wife unemployed for the whole year, insured. APW-couple

There is no gross wage for the wife. The compensation is 90 per cent of the lost income, i.e. 85,500 x 0.9 = 76,950 / 260 = 295.96 SEK, rounded to 296 SEK on a daily basis. Total compensation is 76,960 SEK.

The gross compensation percentage is then 90. The disposable income of the APW-couple is 181,460 SEK, when the wife is unemployed for the whole year in 1992 and usually is working part time.

The decrease in disposable income is 187,982 - 181,460 = 6,522 SEK or 3.5 per cent.

7. Injured from work. Single APW

The effects of injuries from work are investigated in two cases. In the first case there is a complete loss of working capability. In the second case, the working capability is reduced by 33.3 per cent.

1. Working capability completely lost
   In Sweden there is full compensation for the loss of income caused by injuries from work (if the income is within 7.5 x 'basbeloppet', i.e. 252,750 SEK in 1992).
   There is no change in the disposable income of the APW in this situation.

2. Loss of 1/3 of the working capability
   There is, also in this situation with partial loss of the working capability, full compensation for the lost wage income.
   There is no change in disposable income.

8. Pensioner with maximum period of former occupation. Single APW Retirement at 'usual' age, here 65 years

It is assumed that the APW has gained pension rights for 30 years (that is a 'full' period in the Swedish additional pension scheme). This is also feasible, since the system started in 1960. It is further assumed that the average number of 'pension-points' is 4.03 (the actual number in 1989). This average is slightly increasing over time. On these assumptions the additional pension (ATP) will be 81,487 SEK in 1992.

The basic pension in the Swedish system is based upon the basic rate ('basbeloppet'), which in 1992 was 33,700 SEK. The basic pension consists of two components, a basic amount, which equals 33,700 x .96 = 32,352 SEK (single pensioner), and a supplementary amount, 33,700 x .54 = 18,198 SEK. The basic pension is then 50,550 SEK for a single pensioner. If the pensioner has no additional income he or she pays no taxes. When the pen-

sioner has income from the additional pension scheme the supplementary amount in the basic pension is means-tested and reduced by 1 SEK for each SEK in additional pension. The disposable income for the 'APW-pensioner' is 32,352 SEK in basic pension plus 81,487 SEK in 'ATP' minus 29,743 SEK in personal tax, in total 84,096 SEK.
The net compensation percentage is 84,096 / 123,099 x 100 = 68.3.
The decrease in disposable income by retirement is 31.7 per cent in this situation.

9. Pensioner without former occupation. 'Single APW' 'Retirement' at 'usual' age, here 65 years

The pensioner receives basic pension, i.e. 50,550 SEK, cf. the former case. The basic pension is not taxed (there is a standard deduction designed in such a way that single and married pensioners, only receiving the basic pension, do not pay personal tax).
The 'net compensation percentage' relative to the APW is 50,550 / 123,099 x 100 = 41.1.
The 'decrease' in disposable income, relative to that of the APW, is 58.9 per cent by this kind of 'retirement'.

10. Pensioners with maximum period of former occupation. APW-couple The two pensioners have the same age, and both retire at the age of 65

It is assumed that wife and husband have gained pension rights for 30 years each. The husband is 'identical' to the single pensioner in case 8. The wife is assumed to have had half the income of her husband all the time, which will result in 1.515 'pension points' according to the Swedish 'ATP' scheme. On these assumptions the additional pension (ATP) will be 81,487 SEK for the husband and 30,633 SEK for the wife, in total 112,120 SEK in 1992.
The basic pension is equal to the basic amount, i.e. 33,700 x .785 = 26,454.5 SEK for each of the pensioners, in total 52,909 SEK. The couple will not receive any supplementary amount. The disposable income for the APW-couple as pensioners is 52,909 SEK in public pensions plus 112,120 SEK in additional pension minus 34,157 SEK in personal tax, in total 130,872 SEK.
The net compensation percentage is 130,872 / 187,982 x 100 = 69.6.
The decrease in disposable income compared to the APW-couple is 30.4 per cent.

'Standard' income events in connection with children

1-3. The couple has 1, 2 or 3 children

For child no. 1 (6 years old) there is a family allowance of 9,000 SEK in 1992. Compared to the situation without children the increase in disposable income is (9,000 / 187,982) x 100 = 4.8 per cent with one child (6 years old).

For child no. 2 (3 years old) the allowance is also 9,000 SEK. Compared to the situation without children the increase is (18,000 / 187,982) x 100 = 9.6 per cent with two children (6 and 3 years old).

For child no. 3 (1 year old) the allowance is 1.5 x 9,000 = 13,500 SEK. Compared to the situation without children the increase is (31,500 / 187,982) x 100 = 16.8 per cent with three children (6, 3 and 1 year old).

4. The couple gets the second child and has 2 children

There are the same 'timing-problems' as mentioned in the documentation for Denmark, cf. Appendix1,

1. The couple has a combined maternity leave for 360 days during the year, with 300 days for the wife and 60 days for the husband. The distribution between the two can be changed. The 360 days cover the maximum period for which the compensation is based upon income (90 per cent). The compensation for the remaining 90 days of the leave period is considerably lower.

   The husband has a wage reduction of (171,000 / 365) x 60 = 28,110 SEK. He receives 171,000 x .9 / 365 = 422 SEK per day. For 60 days the 'parents allowance' is 60 x 422 = 25,320 SEK.

   The wife has a wage reduction of (85,500 / 365) x 300 = 70,274 SEK. She receives 85,500 x .9 /365 = 211 SEK per day. For 300 days the 'parents allowance' is 300 x 211 = 63,300 SEK.

   Combined, the wage reduction is 98,384 SEK and the received compensation is 88,620 SEK.

   The gross compensation percentage is 90 (some variation due to rounding). 360 days of maternity leave result in a disposable income of 198,894 SEK for the couple including allowance for 2 children (1 child 3 years of age and 1 born in 1992).

   The decrease in disposable income compared to the situation where the couple has two children (3 and 1 year) is 205,982 - 198,894 = 7,088 SEK or 3.4 per cent.

2. In this calculation the common period of 14 weeks maternity leave for the wife is used. Her wage reduction is (85,500 / 365) x 98 = 22,956 SEK. She receives 98 x 211 = 20,678 SEK in compensation.
The gross compensation percentage is again 90. 14 weeks maternity leave results in a disposable income of 204,363 SEK.
The decrease in disposable income compared to the situation, where the couple has two children, is 205,982 - 204,363 = 1,619 SEK or 0.8 per cent.

DOCUMENTATION OF APW CALCULATIONS FOR SWEDEN 1993, 'CORRECT' DATA

Single APW The gross wage of the APW in 1993 is from 'The Tax/Benefit Position of Production Workers', OECD, 1995 edition.

	1993 Non-insured[1)]
Gross wage	173,900 SEK
Tax and social security	51,246 SEK
Disposable income	122,654 SEK

APW-couple The husband has the same wage as the single APW, the wife has 50 per cent of that. The couple has no children.

	1993 Insured[1)]
Gross wage	260,850 SEK
Tax and social security	73,687 SEK
Disposable income	187,163 SEK

1) Non-insured refers to unemployment insurance. This is voluntary in Sweden (in 1993) as it is in Denmark. A case for the insured should, therefore, also be included. The direct contribution for membership is, however, relatively low in Sweden, about 500 SEK on an annual basis in 1993, and it is deductible in taxable income if a threshold together with other deductions of 1,000 SEK is passed. It was, therefore, decided that the case for the 'non-insured' was sufficient. It is also identical then to the APW for Sweden in OECD's publication 'The Tax/Benefit Position of Production Workers'. In Sweden, the contributions for social security are primarily paid by the employer, they amounted to about 31 per cent of the gross wage in 1993. Only a contribution to health insurance was paid directly by the employees (0.95 per cent of gross income) in 1993.

'Standard' income events

1. Ill for one week. Single APW

The gross wage is reduced by 1/52, i.e. 3,344 SEK. Compensation for illness in one week is nothing for the first day (waiting period), 75 per cent of the gross income (on a daily basis that is 173,900 x .75 = 130,425 / 260 = 501.63 SEK, rounded to 502 SEK) for the next 2 days and 90 per cent for the remaining 2 (on a daily basis that is 173,900 x .90 = 156,510 / 260 = 601.96 SEK, rounded to 602 SEK). The compensation is (2 x 502) + (2 x 602) = 2,208 SEK.
The gross compensation percentage is 2,208 / 3,344 x 100 = 66. When the APW is ill for one week his or her disposable income is 121,990 SEK.
The decrease in disposable income compared to the situation without illness is 122,654 - 121,990 = 664 SEK or 0.5 per cent.

2. Unemployed for 3 months during the year, insured. Single APW

The loss of income is 1/4 of the gross wage, i.e. 43,475 SEK. Unemployment compensation is 80 per cent of the lost income with a maximum of 564 SEK a day. 80 per cent of the lost income on a daily basis is 0.8 x 173,900 = 139,120 / 260 = 535.08, rounded to 535 SEK. For 13 weeks (5 days each) with a waiting period of 5 days the compensation is 12 x 5 x 535 = 32,100 SEK.
The gross compensation percentage is 32,100 / 43,475 x 100 = 74. The disposable income of the APW with 25 per cent unemployment is 115,297 SEK.
The decrease in disposable income compared to the situation with no unemployment is 122,654 - 115,297 = 7,357 SEK or 6.0 per cent.

3. Unemployed for the whole year, insured. Single APW

There is no gross wage. The compensation is 255 x 535 = 136,425 SEK.
The gross compensation percentage is 136,425 / 173,900 x 100 = 78.5. The disposable income of the APW is 98,243 SEK, when he or she is unemployed for the whole year of 1993.
The decrease in disposable income compared to the situation with no unemployment is 122,654 - 98,243 = 24,411 SEK or 19.9 per cent.

4. Unemployed for 3 months during the year, non-insured. Single APW

The reduction of the gross wage is 43,475 SEK as in case 2. The compensation for the non-insured APW is 12 x 5 x 198 = 11,880 SEK. There is a waiting period of 5 days also in this scheme.
The gross compensation percentage is 11,880 / 43,475 x 100 = 27. The disposable income is 102,037 SEK in this situation.
The decrease in disposable income compared to the situation with no unemployment is 122,654 - 102,037 = 20,617 SEK or 16.8 per cent.

5. Unemployed for the whole year, non-insured. Single APW

There is no gross wage. The compensation is 255 x 198 = 50,490 SEK interpreted as an annual rate. (The maximum period for which this compensation can be received is in general not more than 30 weeks.)
The gross compensation percentage is 50,490 / 173,900 x 100 = 29. The disposable income is 37,816 SEK in this situation.
The decrease in disposable income compared to the situation with no unemployment is 122,654 - 37,816 = 84,838 SEK or 69.2 per cent.
It should be mentioned that the recommended minimum standard for a single person in 1993 is 1.16 times the basic rate ('basbeloppet') in the Swedish Social Security System, i.e.

39,904 SEK excluding housing costs. Recipients of the benefit from this scheme will, in many cases, be eligible for social assistance to supplement the income.

6. Wife unemployed for the whole year, insured. APW-couple

There is no gross wage for the wife. The compensation is 80 per cent of the lost income, i.e. 86,950 x 0.8 = 69,565 / 260 = 267.54 SEK, rounded to 268 SEK on a daily basis. Total compensation is 68,340 SEK.

The gross compensation percentage is then 80. The disposable income of the APW-couple is 173,005 SEK, when the wife is unemployed for the whole year in 1993 and usually is working part time.

The decrease in disposable income compared to the situation with no unemployment is 187,163 - 173,005 = 14,158 SEK or 7.6 per cent.

7. Injured from work. Single APW

The effects of injuries from work are investigated in two cases. In the first case there is a complete loss of working capability. In the second case, the working capability is reduced by 33.3 per cent.

1. Working capability completely lost

   In Sweden, there is full compensation for the loss of income caused by injuries from work (if the income is within 7.5 x 'basbeloppet', i.e. 258,000 SEK in 1993).

   There is no change in the disposable income of the APW in this situation.

2. Loss of 1/3 of the working capability

   There is, also in this situation with partial loss of the working capability, full compensation for the lost wage income.

   There is no change in disposable income.

8. Pensioner with maximum period of former occupation. Single APW Retirement at 'usual' age, here 65 years

It is assumed that the APW has gained pension rights for 30 years (that is a 'full' period in the Swedish additional pension scheme). This is also feasible, since the system started in 1960. It is further assumed that the average number of 'pension-points' is 4.03 (the actual number in 1989). This average is slightly increasing over time. On these assumptions the additional pension (ATP) will be 81,516 SEK in 1993.

The basic pension in the Swedish system is based upon the basic rate ('basbeloppet'), which in 1993 was 34,400 SEK. The basic pension consists of two components, a basic

amount, which equals 34,400 x .96 x .98 = 32,364 SEK (single pensioner) and a supplementary amount, 34,400 x .555 x .98 = 18,710 SEK. The basic pension is then 51,074 SEK for a single pensioner. If the pensioner has no additional income he or she pays no taxes. When the pensioner has income from the additional pension scheme the supplementary amount in the basic pension is means-tested and reduced by 1 SEK for each SEK in additional pension. The disposable income for the 'APW-pensioner' is 32,364 SEK in basic pension plus 81,516 SEK in 'ATP' minus 29,556 SEK in personal tax, in total 84,324 SEK.
The net compensation percentage is 84,324 / 122,654 x 100 = 68.7.
The decrease in disposable income by retirement is 31.3 per cent in this situation.

9. Pensioner without former occupation. 'Single APW' 'Retirement' at 'usual' age, here 65 years

The pensioner receives basic pension, i.e. 51,074 SEK, cf. the former case. The basic pension is not taxed (there is a standard deduction designed in such a way that single and married pensioners, only receiving the basic pension, do not pay personal tax).
The 'net compensation percentage' relative to the APW is 51,074 / 122,654 x 100 = 41.6.
The 'decrease' in disposable income, relative to that of the APW, is 58.4 per cent by this kind of 'retirement'.

10. Pensioners with maximum period of former occupation. APW-couple The two pensioners have the same age, and both retire at the age of 65

It is assumed that wife and husband have gained pension rights for 30 years each. The husband is 'identical' to the single pensioner in case 8. The wife is assumed to have had half the income of her husband all the time, which will result in 1.515 'pension points' according to the Swedish 'ATP' scheme. On these assumptions the additional pension (ATP) will be 81,516 SEK for the husband and 30,644 SEK for the wife, in total 112,160 SEK in 1993.
The basic pension is equal to the basic amount, i.e. 34,400 x .785 x .98 = 26,464 SEK for each of the pensioners, in total 52,928 SEK. The couple will not receive any supplementary amount. The disposable income for the APW-couple as pensioners is 52,928 SEK in public pensions plus 112,160 SEK in additional pension minus 33,753 SEK in personal tax, in total 131,335 SEK.
The net compensation percentage is 131,335 / 187,163 x 100 = 70.2.
The decrease in disposable income compared to the APW-couple is 29.8 per cent.

'Standard' income events in connection with children

1-3. The couple has 1, 2 or 3 children

For child no. 1 (6 years old) there is a family allowance of 9,000 SEK in 1993. Compared to the situation without children the increase in disposable income is (9,000 / 187,163) x 100 = 4.8 per cent with one child (6 years old).
For child no. 2 (3 years old) the allowance is also 9,000 SEK. Compared to the situation without children the increase is (18,000 / 187,163) x 100 = 9.6 per cent with two children (6 and 3 years old).
For child no. 3 (1 year old) the allowance is 1.5 x 9,000 = 13,500 SEK. Compared to the situation without children the increase is (31,500 / 187,163) x 100 = 16.8 per cent with three children (6, 3 and 1 year old).

4. The couple gets the second child and has 2 children

There are the same 'timing-problems' as mentioned in the documentation for Denmark, cf. Appendix 1.

1. The couple has a combined maternity leave for 360 days during the year, with 300 days for the wife and 60 days for the husband. The distribution between the two can be changed. The 360 days cover the maximum period for which the compensation is based upon income (90 per cent). The compensation for the remaining 90 days of the leave period is considerably lower.
   The husband has a wage reduction of (173,900 / 365) x 60 = 28,586 SEK. He receives 173,900 x .9 / 365 = 429 SEK per day. For 60 days the 'parents allowance' is 60 x 429 = 25,740 SEK.
   The wife has a wage reduction of (86,950 / 365) x 300 = 71,466 SEK. She receives 86,950 x .9 /365 = 214 SEK per day. For 300 days the 'parents allowance' is 300 x 214 = 64,200 SEK.
   Combined, the wage reduction is 100,052 SEK and the received compensation is 89,940 SEK.
   The gross compensation percentage is 90 (some variation due to rounding). 360 days of maternity leave result in a disposable income of 197,820 SEK for the couple including allowance for 2 children (1 child 3 years of age and 1 born in 1993).
   The decrease in disposable income compared to the situation where the couple has two children (3 and 1 year) is 205,163 - 197,820 = 7,343 SEK or 3.6 per cent.

2. In this calculation the common period of 14 weeks maternity leave for the wife is used. Her wage reduction is (86,950 / 365) x 98 = 23,345 SEK. She receives 98 x 214 = 20,972 SEK in compensation.
The gross compensation percentage is again 90. 14 weeks maternity leave results in a disposable income of 203,348 SEK.
The decrease in disposable income compared to the situation, where the couple has two children, is 205,163 - 203,348 = 1,815 SEK or 0.9 per cent.

DOCUMENTATION OF APW CALCULATIONS FOR SWEDEN 1994, 'CORRECT' DATA

Single APW The gross wage of the APW in 1993 is from 'The Tax/Benefit Position of Production Workers', OECD, 1995 edition.

	1994 Insured[1)]
Gross wage	183,100 SEK
Tax and social security	56,198 SEK
Disposable income	126,902 SEK

APW-couple The husband has the same wage as the single APW, the wife has 50 per cent of that. The couple has no children.

	1994 Insured[1)]
Gross wage	274,650 SEK
Tax and social security	81,199 SEK
Disposable income	193,451 SEK

1) From July 1994 the Swedish unemployment insurance scheme became mandatory. The first step was taken in January 1994 when a special social contribution of 1 per cent of the income of the employees was implemented. This social contribution replaced most of the former 'membership fee' to the voluntary insurance scheme. The major part of the unemployment insurance is still financed by social contributions paid by the employer and by 'deficit' financing. Social contributions paid by the employer (approx. 31 per cent of the wage bill) is the major financing source for Swedish social security, but social contributions from the employees are increasing. A contribution of 0.95 per cent of the income was introduced in 1993 for health insurance, the mentioned 1 per cent contribution in 1994 and when the new pension reform is introduced from 1995, the contributions from employees will be further increased, and the employer paid contributions lowered.

'Standard' income events

1. Ill for one week. Single APW

The gross wage is reduced by 1/52, i.e. 3,521 SEK. Compensation for illness in one week is nothing for the first day (waiting period), 75 per cent of the gross income (on a daily basis that is 183,100 x .75 = 137,325 / 260 = 528.17 SEK, rounded to 528 SEK) for the next 2 days and 90 per cent for the remaining 2 (on a daily basis that is 183,100 x .90 = 164,790 / 260 = 633.81 SEK, rounded to 634 SEK). The compensation is (2 x 528) + (2 x 634) = 2,324 SEK.

The gross compensation percentage is 2,324 / 3,521 x 100 = 66. When the APW is ill for one week his or her disposable income is 126,108 SEK.
The decrease in disposable income compared to the situation without illness is 126,902 - 126,108 = 794 SEK or 0.6 per cent.

2. Unemployed for 3 months during the year, insured. Single APW

The loss of income is 1/4 of the gross wage, i.e. 45,775 SEK. Unemployment compensation is 80 per cent of the lost income with a maximum of 564 SEK a day. 80 per cent of the lost income on a daily basis is 0.8 x 183,100 = 146,480 / 62260 = 563.38, rounded to 563 SEK. For 13 weeks (5 days each) with a waiting period of 5 days the compensation is 12 x 5 x 563 = 33,780 SEK.
The gross compensation percentage is 33,780 / 45,775 x 100 = 74. The disposable income of the APW with 25 per cent unemployment is 119,143 SEK.
The decrease in disposable income compared to the situation with no unemployment is 126,902 - 119,143 = 7,759 SEK or 6.1 per cent.

3. Unemployed for the whole year, insured. Single APW

There is no gross wage. The compensation is 255 x 563 = 143,565 SEK.
The gross compensation percentage is 143,565 / 183,100 x 100 = 78. The disposable income of the APW is 101,387 SEK, when he or she is unemployed for the whole year of 1994.
The decrease in disposable income compared to the situation with no unemployment is 126,902 - 101,387 = 25,515 SEK or 20.1 per cent.

4. Unemployed for 3 months during the year, non-insured. Single APW

The reduction of the gross wage is 45,775 SEK as in case 2. The compensation for the non-insured APW is 12 x 5 x 245 = 14,700 SEK. There is a waiting period of 5 days also in this scheme.
The gross compensation percentage is 14,700 / 45,775 x 100 = 32. The disposable income is 106,860 SEK in this situation.
The decrease in disposable income compared to the situation with no unemployment is 126,902 - 106,860 = 20,042 SEK or 15.8 per cent.

5. Unemployed for the whole year, non-insured. Single APW

There is no gross wage. The compensation is 255 x 245 = 62,475 SEK interpreted as an annual rate. (The maximum period for which this compensation can be received is in general not more than 30 weeks.)

The gross compensation percentage is 62,475 / 183,100 x 100 = 34. The disposable income is 44,905 SEK in this situation.
The decrease in disposable income compared to the situation with no unemployment is 126,902 - 44,905 = 81,997 SEK or 64.6 per cent.
It should be mentioned that the recommended minimum standard for a single person in 1994 is 1.16 times the basic rate ('basbeloppet') in the Swedish Social Security System, i.e. 40,832 SEK excluding housing costs. Recipients of the benefit from this scheme will, in many cases, be eligible for social assistance to supplement the income.

6. Wife unemployed for the whole year, insured. APW-couple

There is no gross wage for the wife. The compensation is 80 per cent of the lost income, i.e. 91,550 x 0.8 = 73,240 / 260 = 281.69 SEK, rounded to 282 SEK on a daily basis. Total compensation is 71,910 SEK.
The gross compensation percentage is then 80. The disposable income of the APW-couple is 178,651 SEK, when the wife is unemployed for the whole year in 1994 and usually is working part time.
The decrease in disposable income compared to the situation with no unemployment is 193,451 - 178,651 = 14,800 SEK or 7.7 per cent.

7. Injured from work. Single APW

The effects of injuries from work are investigated in two cases. In the first case there is a complete loss of working capability. In the second case, the working capability is reduced by 33.3 per cent.

1. Working capability completely lost.
   In Sweden, there is full compensation for the loss of income caused by injuries from work (if the income is within 7.5 x 'basbeloppet', i.e. 264,000 SEK in 1994).
   There is no change in the disposable income of the APW in this situation.

2. Loss of 1/3 of the working capability.
   There is, also in this situation with partial loss of the working capability, full compensation for the lost wage income.
   There is no change in disposable income.

8. Pensioner with maximum period of former occupation. Single APW Retirement at 'usual' age, here 65 years

It is assumed that the APW has gained pension rights for 30 years (that is a 'full' period in the Swedish additional pension scheme). This is also feasible, since the system started in 1960. It is further assumed that the average number of 'pension-points' is 4.03 (the actual number in 1989). This average is slightly increasing over time. On these assumptions the additional pension (ATP) will be 83,411 SEK in 1994.
The basic pension in the Swedish system is based upon the basic rate ('basbeloppet'), which in 1994 was 35,200 SEK. The basic pension consists of two components, a basic amount, which equals 35,200 x .96 x .98 = 33,116 SEK (single pensioner), and a supplementary amount, 35,200 x .555 x .98 = 19,145 SEK. The basic pension is then 52,261 SEK for a single pensioner. If the pensioner has no additional income he or she pays no taxes. When the pensioner has income from the additional pension scheme the supplementary amount in the basic pension is means-tested and reduced by 1 SEK for each SEK in additional pension. The disposable income for the 'APW-pensioner' is 33,116 SEK in basic pension plus 83,411 SEK in 'ATP' minus 31,025 SEK in personal tax, in total 85,502 SEK.
The net compensation percentage is 85,502 / 126,902 x 100 = 67.4.
The decrease in disposable income by retirement is 32.6 per cent in this situation.

9. Pensioner without former occupation. 'Single APW' 'Retirement' at 'usual' age, here 65 years

The pensioner receives basic pension, i.e. 52,261 SEK, cf. the former case. The basic pension is not taxed (there is a standard deduction designed in such a way that single and married pensioners, only receiving the basic pension, do not pay personal tax).
The 'net compensation percentage' relative to the APW is 52,261 / 126,902 x 100 = 41.2.
The 'decrease' in disposable income, relative to that of the APW, is 58.8 per cent by this kind of 'retirement'.

10. Pensioners with maximum period of former occupation. APW-couple The two pensioners have the same age, and both retire at the age of 65

It is assumed that wife and husband have gained pension rights for 30 years each. The husband is 'identical' to the single pensioner in case 8. The wife is assumed to have had half the income of her husband all the time, which will result in 1.515 'pension points' according to the Swedish 'ATP' scheme. On these assumptions the additional pension (ATP) will be 83,411 SEK for the husband and 31,357 SEK for the wife, in total 114,768 SEK in 1994.
The basic pension is equal to the basic amount, i.e. 35,200 x .785 x .98 = 27,079 SEK for each of the pensioners, in total 54,158 SEK. The couple will not receive any supplementa-

ry amount. The disposable income for the APW-couple as pensioners is 54,158 SEK in public pensions plus 114,768 SEK in additional pension minus 35,286 SEK in personal tax, in total 133,640 SEK.
The net compensation percentage is 133,640 / 193,451 x 100 = 69.1.
The decrease in disposable income compared to the APW-couple is 30.9 per cent.

'Standard' income events in connection with children

1-3. The couple has 1, 2 or 3 children

For child no. 1 (6 years old) there is a family allowance of 9,000 SEK in 1994. Compared to the situation without children the increase in disposable income is (9,000 / 193,451) x 100 = 4.7 per cent with one child (6 years old).
For child no. 2 (3 years old) the allowance is also 9,000 SEK. Compared to the situation without children the increase is (18,000 / 193,451) x 100 = 9.3 per cent with two children (6 and 3 years old).
For child no. 3 (1 year old) the allowance is 1.5 x 9,000 = 13,500 SEK. Compared to the situation without children the increase is (31,500 / 193,451) x 100 = 16.3 per cent with three children (6, 3 and 1 year old).

4. The couple gets the second child and has 2 children

There are the same 'timing-problems' as mentioned in the documentation for Denmark, cf. Appendix 1.

1. The couple has a combined maternity leave for 360 days during the year, with 300 days for the wife and 60 days for the husband. The distribution between the two can be changed. The 360 days cover the maximum period for which the compensation is based upon income (90 per cent). The compensation for the remaining 90 days of the leave period is considerably lower.
   The husband has a wage reduction of (183,100 / 365) x 60 = 30,099 SEK. He receives 183,100 x .9 / 365 = 451 SEK per day. For 60 days the 'parents allowance' is 60 x 451 = 27,060 SEK.
   The wife has a wage reduction of (91,550 / 365) x 300 = 75,247 SEK. She receives 91,550 x .9 /365 = 226 SEK per day. For 300 days the 'parents allowance' is 300 x 226 = 67,800 SEK.
   Combined, the wage reduction is 105,346 SEK and the received compensation is 94,860 SEK.

The gross compensation percentage is 90 (some variation due to rounding). 360 days of maternity leave results in a disposable income of 203,866 SEK for the couple including allowance for 2 children (1 child 3 years of age and 1 born in 1994).
The decrease in disposable income compared to the situation where the couple has two children (3 and 1 year) is 211,451 - 203,866 = 7,585 SEK or 3.6 per cent.

2. In this calculation the common period of 14 weeks maternity leave for the wife is used. Her wage reduction is (91,550 / 365) x 98 = 24,581 SEK. She receives 98 x 226 = 22,148 SEK in compensation.
The gross compensation percentage is again 90. 14 weeks maternity leave result in a disposable income of 209,646 SEK.
The decrease in disposable income compared to the situation, where the couple has two children, is 211,451 - 209,646 = 1,805 SEK or 0.9 per cent.

DOCUMENTATION OF APW CALCULATIONS FOR SWEDEN 1995, 'CORRECT' DATA

Single APW

The gross wage of the APW in 1995 is from 'The Tax/Benefit Position of Employees', OECD, 1996 edition.

	1995 Non-insured[1)]
Gross wage	190,260 SEK
Tax and social security	62,032 SEK
Disposable income	128,228 SEK

APW-couple

The husband has the same gross wage as the single APW, the wife has 50 per cent of that income. There are no children.

	1995 Non-insured[1)]
Gross wage	285,390 SEK
Tax and social security	89,620 SEK
Disposable income	195,770 SEK

1) After half a year with a mandatory unemployment insurance system, the scheme was changed back to a voluntary basis from January 1995. The social contribution for unemployment insurance of 1 per cent of income (up to a ceiling) was cancelled, and another social contribution for pensions was introduced, this was also 1 per cent of income. The membership fee for unemployment insurance was reintroduced. It should be deducted from the gross wage income but has not been so, and neither has it in the calculations for the Swedish APW in OECD's 'The Tax/Benefit Position of Employees'. The fee is approx. 500 SEK a year and is deductible in taxable income, if a threshold together with other deductions of 1000 SEK is passed. Social contributions paid by the employers (approx. 33 per cent of the wage bill) is the major financing source for Swedish social security. The employee paid contribution of 0.95 per cent of income for health insurance was increased to 2.95 per cent in 1995. The total employee paid contributions have increased to 3.95 per cent of income (up to a ceiling) in 1995, and will increase further in the coming years.

'Standard' income events

1. Ill for one week. Single APW

The gross wage is reduced by 1/52, i.e. 3,659 SEK. Compensation for illness in one week is nothing for the first day (waiting period), 75 per cent of the gross income on a daily basis (0.75 x 190,260 = 142,695 / 260 = 548.83, rounded to 549 SEK) for the next 2 days and 90 per cent for the remaining 2 days (0.90 x 190,260 = 171,234 / 260 = 658.59, rounded to 659 SEK). The compensation is (2 x 549) + (2 x 659) = 2,416 SEK.

The gross compensation percentage is 2,416 / 3,659 x 100 = 66. When the APW is ill for one week his or her disposable income is 127,395 SEK.

The decrease in disposable income compared to the situation without illness is 128,228 - 127,395 = 833 SEK or 0.6 per cent.

2. Unemployed for 3 months during the year, insured. Single APW

The loss of income is 1/4 of the gross wage, i.e. 47,565 SEK. Unemployment compensation is 80 per cent of the lost income with a maximum of 564 SEK a day. 80 per cent of the lost income on a daily basis is 0.80 x 190,260 = 152,208 / 260 = 585.42, rounded to 585 SEK, which is above the maximum of 564 SEK a day. For 13 weeks (5 days each) with a waiting period of 5 days the compensation is 60 x 564 = 33,840 SEK.
The gross compensation percentage is 33,840 / 47,565 x 100 = 71. The disposable income of the APW with 25 per cent unemployment is 119,602 SEK.
The decrease in disposable income compared to the situation with no unemployment is 128,228 - 119,602 = 8,626 SEK or 6.7 per cent.

3. Unemployed for the whole year, insured. Single APW

There is no gross wage. The compensation is 255 x 564 = 143,820 SEK in the 'standard' year used here.
The gross compensation percentage is 143,820 / 190,260 x 100 = 76. The disposable income of the APW is 99,155 SEK, when he or she is unemployed for the whole year of 1995.
The decrease in disposable income compared to the situation with no unemployment is 128,228 - 99,155 = 29,073 SEK or 22.7 per cent.

4. Unemployed for 3 months during the year, non-insured. Single APW

The reduction of the gross wage is 47,565 SEK as in case 2. The compensation for the non-insured APW is 60 x 245 = 14,700 SEK. There is a waiting period of 5 days also in this scheme.
The gross compensation percentage is 14,700 / 47,565 x 100 = 31. The disposable income is 107,657 SEK in this situation.
The decrease in disposable income compared to the situation with no unemployment is 128,228 - 107,657 = 20,571 SEK or 16.0 per cent.
This scheme was 'reintroduced' in January 1995 after having been 'out of operation' in the 2nd half of 1994, when the unemployment insurance scheme was mandatory. The rate (245 SEK/day) is also the minimum rate in the voluntary insurance scheme.

5. Unemployed for the whole year, non-insured. Single APW

There is no gross wage. The compensation is 255 x 245 = 62,475 SEK interpreted as an annual rate. (The maximum period for which this compensation can be received is in general not more than 30 weeks.)

The gross compensation percentage is 62,475 / 190,260 x 100 = 33. The disposable income is 43,879 SEK in this situation.

The decrease in disposable income compared to the situation with no unemployment is 128,228 - 43,879 = 84,349 SEK or 65.8 per cent.

It should be mentioned that the recommended minimum standard for a single person in 1995 is 1.16 times the basic rate ('basbeloppet') in the Swedish Social Security System, i.e. 41,412 SEK excluding housing costs. Recipients of the benefit from this scheme would, in many cases, also be eligible for social assistance to supplement the income.

As already mentioned, this scheme was 'reintroduced' in January 1995.

6. Wife unemployed for the whole year, insured. APW-couple

There is no gross wage for the wife. The compensation is 255 x 293 = 74,715 SEK. The daily compensation of 293 SEK is calculated as 0.8 x 95,130 = 76,104 / 260 = 292.71 SEK, rounded to 293 SEK. The maximum benefit, 564 SEK a day, is not reached. The minimum benefit in 1995 is 245 SEK/day.

The gross compensation percentage is 74,715 / 95,130 x 100 = 78.5. The disposable income of the APW-couple is 180,854 SEK, when the wife is unemployed for the whole year in 1995 and usually is working part time (x APW income).

The decrease in disposable income compared to the situation with no unemployment is 195,770 - 180,791 = 14,979 SEK or 7.7 per cent.

7. Injured from work. Single APW

The effects of injuries from work are studied in two cases. In the first case there is a complete loss of working capability. In the second case, the working capability is reduced by 33.3 per cent.

1. Working capability completely lost

   In Sweden, there is full compensation for the loss of income caused by injuries from work (if the income is within 7.5 x 'basbeloppet', i.e. 267,750 SEK in 1995). There is no change in the disposable income of the APW in this situation.

2. Loss of 1/3 of the working capability
   There is, also in this situation with partial loss of the working capability, full compensation for the lost wage income within the usual income limit of 7.5 x 'basbeloppet'.
   There is no change in disposable income.

8. Pensioner with maximum period of former occupation. Single APW Retirement at 'usual' age, here 65 years

It is assumed that the APW has gained pension rights for 30 years (that is a 'full' period in the present Swedish additional pension scheme). This is also feasible, since the system started in 1960. It is further assumed that the average number of 'pension-points' is 4.03 (the actual number in 1989). This average is slightly increasing over time. On these assumptions the additional pension (ATP) will be 84,596 SEK in 1995.
The basic pension in the Swedish system is based upon the basic rate ('basbeloppet'), which in 1995 was 35,700 SEK. The basic pension consists of two components, a basic amount which equals 35,700 x .96 x .98 = 33,587 SEK (single pensioner) and a supplementary amount, 35,700 x .555 x .98 = 19,417 SEK. The basic pension is then 53,004 SEK for a single pensioner. If the pensioner has no additional income he or she pays no taxes. When the pensioner has income from the additional pension scheme the supplementary amount in the basic pension is means-tested and reduced by 1 SEK for each SEK in additional pension. The disposable income for the 'APW-pensioner' is 33,587 SEK in basic pension plus 84,596 SEK in 'ATP' minus 31,820 SEK in personal tax, in total 86,363 SEK.
The net compensation percentage is 86,363 / 128,228 x 100 = 67.4.
The decrease in disposable income by retirement is 32.6 per cent in this situation.

9. Pensioner without former occupation. 'Single APW' 'Retirement' at 'usual' age, here 65 years

The pensioner receives basic pension, i.e. 53,004 SEK, cf. the former case. The basic pension is not taxed (there is a standard deduction designed in such a way that single and married pensioners, only receiving the basic pension, do not pay personal tax).
The 'net compensation percentage' relative to the APW is 53,004 / 128,228 x 100 = 41.3.
The 'decrease' in disposable income, relative to that of the APW, is 58.7 per cent by this kind of 'retirement'.

10. Pensioners with maximum period of former occupation. APW-couple
The two pensioners have the same age, and both retire at the age of 65

It is assumed that wife and husband have gained pension rights for 30 years each. The husband is 'identical' to the single pensioner in case 8. The wife is assumed to have had half the income of her husband all the time, which will result in 1.515 'pension points' according to the Swedish 'ATP' scheme. On these assumptions the additional pension (ATP) will be 84,596 SEK for the husband and 31,802 SEK for the wife, in total 116,398 SEK in 1995.

The basic pension is equal to the basic amount, i.e. 35,700 x .785 x .98 = 27,464 SEK for each of the pensioners, in total 54,928 SEK. The couple will not receive any supplementary amount. The disposable income for the APW-couple as pensioners is 54,928 SEK in public pensions plus 116,398 SEK in additional pension minus 36,236 SEK in personal tax, in total 135,090 SEK.

The net compensation percentage is 135,090 / 195,770 x 100 = 69.0.

The decrease in disposable income compared to the APW-couple is 31.0 per cent.

'Standard' income events in connection with children

1-3. The couple has 1, 2 or 3 children

For child no. 1 (6 years old) there is a family allowance of 9,000 SEK in 1995. Compared to the situation without children the increase in disposable income is (9,000 / 195,770) x 100 = 4.6 per cent with one child (6 years old).

For child no. 2 (3 years old) the allowance is also 9,000 SEK. Compared to the situation without children the increase is (18,000 / 195,770) x 100 = 9.2 per cent with two children (6 and 3 years old).

For child no. 3 (1 year old) the allowance is 2,400 + 9,000 = 11,400 SEK. Compared to the situation without children the increase is (29,400 / 195,770) x 100 = 15.0 per cent with three children (6, 3 and 1 year old).

4. The couple gets the second child and has 2 children

There are the same 'timing-problems' as mentioned in the documentation for Denmark, cf. Appendix 1.

1. The couple has a combined maternity leave for 360 days during the year, with 300 days for the wife and 60 days for the husband. The distribution between the two can be changed. The 360 days cover the maximum period for which the compensation is based upon income (90 per cent for 60 days (30 days for each spouse), 80 per cent for 300 days).
   The husband has a wage reduction of (190,260 / 365) x 60 = 31,276 SEK. He receives 190,260 x .9 / 365 = 469 SEK per day for 30 days, resulting in a 'parents allowance' of 30 x 469 = 14,070 SEK. For the remaining 30 days he receives 190,260 x .8 / 365 = 417 SEK per day, resulting in a 'parents allowance' of 12,510 SEK. In total he receives 26,580 SEK.
   The wife has a wage reduction of (95,130 / 365) x 300 = 78,189 SEK. She receives 95,130 x .9 / 365 = 235 SEK per day for 30 days, resulting in a 'parents allowance' of 30 * 235 = 7,050 SEK. For the remaining 270 days she receives 95,130 x .8 / 365 = 209 SEK per day, resulting in a 'parents allowance' of 56,430 SEK. In total she receives 63,480 SEK.
   Combined, the wage reduction is 109,465 SEK and the received compensation is 90,060 SEK.
   The gross compensation percentage is 90,060/109,465 x 100 = 82. 360 days of maternity leave results in a disposable income of 199,948 SEK for the couple including allowance for 2 children (1 child 3 years of age and 1 born in 1995).
   The decrease in disposable income compared to the situation where the couple has two children (3 and 1 year) is 213,770 - 199,948 = 13,822 SEK or 6.5 per cent.

2. In this calculation the common period of 14 weeks maternity leave for the wife is used. Her wage reduction is (95,130 / 365) x 98 = 25,542 SEK. She receives 95,130 x .9 / 365 = 235 SEK per day in 30 days, i.e. 7,050 SEK plus 209 SEK per day in 68 days, i.e. 14,212 SEK, in total 21,262 SEK in compensation.
   The gross compensation percentage is 21,262 / 25,542 x 100 = 83. 14 weeks maternity leave result in a disposable income of 210,698 SEK.
   The decrease in disposable income compared to the situation, where the couple has two children, is 213,770 - 210,635 = 3,135 SEK or 1.5 per cent.

DOCUMENTATION OF APW CALCULATIONS FOR SWEDEN 1996, 'CORRECT' DATA

Single APW **The gross wage of the APW in 1996 is from 'The Tax/Benefit Position of Employees', OECD, 1997 edition.**

	1996 Non-insured[1)]
Gross wage	204,714 SEK
Tax and social security	69,069 SEK
Disposable income	135.645 SEK

APW-couple **The husband has the same wage as the single APW, the wife has 50 per cent of that. The couple has no children.**

	1996 Non-insured[1)]
Gross wage	307,071 SEK
Tax and social security	99,457 SEK
Disposable income	207,614 SEK

1) After half a year with a mandatory unemployment insurance system, the scheme was changed back to a voluntary basis from January 1995. The social contribution for unemployment insurance of 1 per cent of income (up to a ceiling) was cancelled, and another social contribution for pensions was introduced, this was also 1 per cent of income. The membership fee for unemployment insurance was reintroduced. It should be deducted from the gross wage income but has not been so, and neither has it in the calculations for the Swedish APW in OECD's 'The Tax/Benefit Position of Employees'. The fee is approx. 500 SEK a year and is deductible in taxable income if a threshold together with other deductions of 1000 SEK is passed. Social contributions paid by the employers (approx. 33 per cent of the wage bill) is the major financing source for Swedish social security. The employee paid contribution of 0.95 per cent of income for health insurance was increased to 3.95 per cent in 1996. The total employee paid contributions have increased to 4.95 per cent of income (up to a ceiling) in 1996, and will increase further in the coming years.

'Standard' income events

1. Ill for one week. Single APW

The gross wage is reduced by 1/52, i.e. 3,937 SEK. Compensation for illness in one week is nothing for the first day (waiting period) and 75 per cent of the gross income on a daily basis (0.75 x 204,714 = 153,536 / 260 = 590.52, rounded to 591 SEK) for the next 4 days. The compensation is 4 x 591 = 2,364 SEK.

The gross compensation percentage is 2,364 / 3,937 x 100 = 60. When the APW is ill for one week his or her disposable income is 134,679 SEK.

The decrease in disposable income compared to the situation without illness is 135,645 - 134,679 = 966 SEK or 0.7 per cent.

2. Unemployed for 3 months during the year, insured. Single APW

The loss of income is 1/4 of the gross wage, i.e. 51,179 SEK. Unemployment compensation is 75 per cent of the lost income with a maximum of 564 SEK a day. 75 per cent of the lost income on a daily basis is 0.75 x 204,714 = 153,536 / 260 = 590.52, rounded to 591 SEK, which is above the maximum of 564 SEK a day. For 13 weeks (5 days each) with a waiting period of 5 days the compensation is 60 x 564 = 33,840 SEK.
The gross compensation percentage is 33,840 / 51,179 x 100 = 66. The disposable income of the APW with 25 per cent unemployment is 124,867 SEK.
The decrease in disposable income compared to the situation with no unemployment is 135,645 - 124,867 = 10,778 SEK or 7.9 per cent.

3. Unemployed for the whole year, insured. Single APW

There is no gross wage. The compensation is 255 x 564 = 143,820 SEK in the 'standard' year used here.
The gross compensation percentage is 143,820 / 204,714 x 100 = 70. The disposable income of the APW is 97,976 SEK, when he or she is unemployed for the whole year of 1996.
The decrease in disposable income compared to the situation with no unemployment is 135,645 - 97,976 = 37,669 SEK or 27.8 per cent.

4. Unemployed for 3 months during the year, non-insured. Single APW

The reduction of the gross wage is 51,179 SEK as in case 2. The compensation for the non-insured APW is 60 x 230 = 13,800 SEK. There is a waiting period of 5 days also in this scheme.
The gross compensation percentage is 13,800 / 51,179 x 100 = 27. The disposable income is 112,473 SEK in this situation.
The decrease in disposable income compared to the situation with no unemployment is 135,645 - 112,473 = 23,172 SEK or 17.1 per cent.
This scheme was 'reintroduced' in January 1995 after having been 'out of operation' in the 2nd half of 1994, when the unemployment insurance scheme was mandatory. The rate (230 SEK/day) is also the minimum rate in the voluntary insurance scheme.

5. Unemployed for the whole year, non-insured. Single APW

There is no gross wage. The compensation is 255 x 230 = 58,650 SEK interpreted as an annual rate. (The maximum period for which this compensation can be received is in general not more than 30 weeks.)
The gross compensation percentage is 58,650 / 204,714 x 100 = 29. The disposable income is 40,743 SEK in this situation.
The decrease in disposable income compared to the situation with no unemployment is 135,645 - 40,743 = 94,902 SEK or 70.0 per cent.
It should be mentioned that the recommended minimum standard for a single person in 1996 is 1.16 times the basic rate ('basbeloppet') in the Swedish Social Security System, i.e. 41,992 SEK excluding housing costs. Recipients of the benefit from this scheme would, in many cases, also be eligible for social assistance to supplement the income.
As already mentioned, this scheme was 'reintroduced' in January 1995.

6. Wife unemployed for the whole year, insured. APW-couple

There is no gross wage for the wife. The compensation is 255 x 295 = 75,225 SEK. The daily compensation of 293 SEK is calculated as 0.75 x 102,357 = 76,768 / 260 = 295.26 SEK, rounded to 295 SEK. The maximum benefit, 564 SEK a day, is not reached. The minimum benefit in 1996 is 230 SEK/day.
The gross compensation percentage is 75,225 / 102,357 x 100 = 73.5. The disposable income of the APW-couple is 187,727 SEK, when the wife is unemployed for the whole year in 1996 and usually is working part time (x APW income).
The decrease in disposable income compared to the situation with no unemployment is 207,614 - 187,727 = 19,887 SEK or 9.6 per cent.

7. Injured from work. Single APW

The effects of injuries from work are studied in two cases. In the first case there is a complete loss of working capability. In the second case, the working capability is reduced by 33.3 per cent.

1. Working capability completely lost
   In Sweden, there is full compensation for the loss of income caused by injuries from work (if the income is within 7.5 x 'basbeloppet', i.e. 271,500 SEK in 1996).
   There is no change in the disposable income of the APW in this situation.

2. Loss of 1/3 of the working capability
There is, also in this situation with partial loss of the working capability, full compensation for the lost wage income within the usual income limit of 7.5 x 'basbeloppet'.
There is no change in disposable income.

8. Pensioner with maximum period of former occupation. Single APW Retirement at 'usual' age, here 65 years

It is assumed that the APW has gained pension rights for 30 years (that is a 'full' period in the present Swedish additional pension scheme). This is also feasible, since the system started in 1960. It is further assumed that the average number of 'pension-points' is 4.03 (the actual number in 1989). This average is slightly increasing over time. On these assumptions the additional pension (ATP) will be 85,781 SEK in 1996.
The basic pension in the Swedish system is based upon the basic rate ('basbeloppet'), which in 1996 was 36,200 SEK. The basic pension consists of two components, a basic amount which equals 36,200 x .96 x .98 = 34,057 SEK (single pensioner) and a supplementary amount, 36,200 x .555 x .98 = 19,689 SEK. The basic pension is then 53,746 SEK for a single pensioner. If the pensioner has no additional income he or she pays no taxes. When the pensioner has income from the additional pension scheme the supplementary amount in the basic pension is means-tested and reduced by 1 SEK for each SEK in additional pension. The disposable income for the 'APW-pensioner' is 34,057 SEK in basic pension plus 85,781 SEK in 'ATP' minus 32,636 SEK in personal tax, in total 87,202 SEK.
The net compensation percentage is 87,202 / 135,645 x 100 = 64.3.
The decrease in disposable income by retirement is 35.7 per cent in this situation.

9. Pensioner without former occupation. 'Single APW' 'Retirement' at 'usual' age, here 65 years

The pensioner receives basic pension, i.e. 53,746 SEK, cf. the former case. The basic pension is not taxed (there is a standard deduction designed in such a way that single and married pensioners, only receiving the basic pension, do not pay personal tax).
The 'net compensation percentage' relative to the APW is 53,746 / 135,645 x 100 = 39.6.
The 'decrease' in disposable income, relative to that of the APW, is 60,4 per cent by this kind of 'retirement'.

10. Pensioners with maximum period of former occupation. APW-couple

The two pensioners have the same age, and both retire at the age of 65

It is assumed that wife and husband have gained pension rights for 30 years each. The husband is 'identical' to the single pensioner in case 8. The wife is assumed to have had half the income of her husband all the time, which will result in 1.515 'pension points' according to the Swedish 'ATP' scheme. On these assumptions the additional pension (ATP) will be 85,781 SEK for the husband and 32,248 SEK for the wife, in total 118,029 SEK in 1996.

The basic pension is equal to the basic amount, i.e. 36,200 x .785 x .98 = 27,849 SEK for each of the pensioners, in total 55,698 SEK. The couple will not receive any supplementary amount. The disposable income for the APW-couple as pensioners is 55,698 SEK in public pensions plus 118,029 SEK in additional pension minus 37,103 SEK in personal tax, in total 136,624 SEK.

The net compensation percentage is 136,624 / 207,614 x 100 = 65.8.

The decrease in disposable income compared to the APW-couple is 34.2 per cent.

'Standard' income events in connection with children

1-3. The couple has 1, 2 or 3 children

For child no. 1 (6 years old) there is a family allowance of 7,680 SEK in 1996. Compared to the situation without children the increase in disposable income is (7,680 / 207,614) x 100 = 3.7 per cent with one child (6 years old).

For child no. 2 (3 years old) the allowance is also 7,680 SEK. Compared to the situation without children the increase is (15,360 / 207,614) x 100 = 7.4 per cent with two children (6 and 3 years old).

For child no. 3 (1 year old, assumed born in 1996) the allowance is also 7,680 SEK. Compared to the situation without children the increase is (23,040 / 207,614) x 100 = 11.1 per cent with three children (6, 3 and 1 year old).

4. The couple gets the second child and has 2 children

There are the same 'timing-problems' as mentioned in the documentation for Denmark, cf. Appendix 1.

1. The couple has a combined maternity leave for 360 days during the year, with 300 days for the wife and 60 days for the husband. The distribution between the two can be changed. The 360 days cover the maximum period for which the compensation is based upon income (85 per cent for 60 days (30 days for each spouse), 75 per cent for 300 days).
   The husband has a wage reduction of (204,714 / 365) x 60 = 33,652 SEK. He receives 204,714 x .85 / 365 = 477 SEK per day for 30 days, resulting in a 'parents allowance' of 30 x 477 = 14,310 SEK. For the remaining 30 days he receives 204,714 x .75 / 365 = 421 SEK per day, resulting in a 'parents allowance' of 12,630 SEK. In total he receives 26,940 SEK.
   The wife has a wage reduction of (102,357 / 365) x 300 = 84,129 SEK. She receives 102,357 x .85 / 365 = 238 SEK per day for 30 days, resulting in a 'parents allowance' of 30 * 238 = 7,140 SEK. For the remaining 270 days she receives 102,357 x .75 / 365 = 210 SEK per day, resulting in a 'parents allowance' of 56,700 SEK. In total she receives 63,840 SEK.
   Combined, the wage reduction is 117,781SEK and the received compensation is 90,780 SEK.
   The gross compensation percentage is 90,780/117,781 x 100 = 77. 360 days of maternity leave results in a disposable income of 203,983 SEK for the couple including allowance for 2 children (1 child 3 years of age and 1 born in 1996).
   The decrease in disposable income compared to the situation where the couple has two children (3 and 1 year) is 222,974 - 203,983 = 18,991 SEK or 8.5 per cent.

2. In this calculation the common period of 14 weeks maternity leave for the wife is used. Her wage reduction is (102,357 / 365) x 98 = 27,482 SEK. She receives 102,357 x .85 / 365 = 238 SEK per day in 30 days, i.e. 7,140 SEK plus 210 SEK per day in 68 days, i.e. 14,280 SEK, in total 21,420 SEK in compensation.
   The gross compensation percentage is 21,420 / 27,482 x 100 = 78. 14 weeks maternity leave result in a disposable income of 218,505 SEK.
   The decrease in disposable income compared to the situation, where the couple has two children, is 222,974 - 218,505 = 4,469 SEK or 2.0 per cent.

DOCUMENTATION OF APW CALCULATIONS FOR SWEDEN 1997, 'CORRECT' DATA

Single APW The gross wage of the APW in 1997 is the official Swedish figure calculated by statistics Sweden for OECD.

	1997 Non-insured[1]
Gross wage	209,214 SEK
Tax and social security[2]	72,220 SEK
Disposable income	136,994 SEK

APW-couple The husband has the same wage as the single APW, the wife has 50 per cent of that. The couple has no children.

	1997 Non-insured[1]
Gross wage	313,821 SEK
Tax and social security	104,074 SEK
Disposable income	209,747 SEK

1) After half a year with a mandatory unemployment insurance system, the scheme was changed back to a voluntary basis from January 1995. The social contribution for unemployment insurance of 1 per cent of income (up to a ceiling) was cancelled, and another social contribution for pensions was introduced, this was also 1 per cent of income (also in 1996). The membership fee for unemployment insurance was reintroduced. It should be deducted from the gross wage income but has not been so, and neither has it in the calculations for the Swedish APW in OECD's 'The Tax/Benefit Position of Employees. The fee is approx. 500 SEK a year and is deductible in taxable income, if a threshold together with other deductions of 1,000 SEK is passed. Social contributions paid by the employers (approx. 33 per cent of the wage bill) is the major financing source for Swedish social security. The employee paid contribution for health insurance was increased to 4.95 per cent in 1997. The total employee paid contributions have increased to 5.95 per cent of income (up to a ceiling) in 1997.

2) Cf. the annex for documentation.

'Standard' income events

1. Ill for one week. Single APW

The gross wage is reduced by 1/52, i.e. 4,023 SEK. Compensation for illness in one week is nothing for the first day (waiting period) and 75 per cent of the gross income on a daily basis (0.75 x 209,214 = 156,911 / 260 = 603.50, rounded up: 604 SEK) for the next 4 days. The compensation is 4 x 604 = 2,416 SEK. The first 4 weeks of illness are covered by the employer and there are no central rules for how the 75 per cent in compensation should be calculated. The rules applied here are from before 1992, when the insurance also cove-

red the first 4 weeks. Other methods may give slightly different results. There is no maximum benefit level for the first 4 weeks, but when the insurance takes over from the 5th week of illness, maximum benefit is reached at an income level of 7.5 x 36,300 = 272,250 SEK.
The gross compensation percentage is 2,416 / 4,023 x 100 = 60. When the APW is ill for one week his or her disposable income is 135,962 SEK.
The decrease in disposable income compared to the situation without illness is 136,994 - 135,962 = 1,032 SEK or 0.8 per cent.

2. Unemployed for 3 months during the year, insured. Single APW

The loss of income is 1/4 of the gross wage, i.e. 52,304 SEK. Unemployment compensation is 75 per cent of the lost income for the first 9 months of the year, 80 per cent for the last 3 months with a maximum of 564 SEK a day. 75 per cent of the lost income on a daily basis is 0.75 x 209,214 = 136,911 / 260 = 603.50, rounded up: 604 SEK, which is above the maximum of 564 SEK a day, which is reached at an income level of 260 x 564 / 0.75 = 195,520 SEK. 80 per cent of the lost income on a daily basis is 0.80 x 209,214 = 167,371 / 260 = 643.74, rounded up: 644 SEK, which is above the maximum of 564 SEK a day, which is reached at an income level of 260 x 564 / 0.80 = 183,300 SEK. There is a minimum, 230 SEK a day, which is reached at an income level below 260 x 230 / 0.75 = 79,733 SEK (75 per cent), 260 x 230 / 0.80 = 74,750 SEK (80 per cent).
For 13 weeks (5 days each) with a waiting period of 5 days the compensation is 60 x 564 = 33,840 SEK.
The gross compensation percentage is 33,840 / 52,304 x 100 = 65. The disposable income of the APW with 25 per cent unemployment is 125,618 SEK.
The decrease in disposable income compared to the situation with no unemployment is 136,994 - 125,618 = 11,376 SEK or 8.3 per cent.

3. Unemployed for the whole year, insured. Single APW

There is no gross wage. The compensation is 255 x 564 = 143,820 SEK in the 'standard' year used here. Maximum benefit (564 SEK/day) is reached at an income level of 195,520 SEK (75 per cent), 183,300 SEK (80 per cent), minimum benefit (230 SEK/day) is reached below 79,733 SEK (75 per cent), 74,750 SEK (80 per cent).
The gross compensation percentage is 143,820 / 209,214 x 100 = 69. The disposable income of the APW is 96,939 SEK, when he or she is unemployed for the whole year of 1997.
The decrease in disposable income compared to the situation with no unemployment is 136,994 - 96,939 = 40,055 SEK or 29.2 per cent.

4. Unemployed for 3 months during the year, non-insured. Single APW

The reduction of the gross wage is 52,304 SEK as in case 2. The compensation for the non-insured APW is 60 x 230 = 13,800 SEK. There is a waiting period of 5 days also in this scheme. The 230 SEK/day is a 'pure' flat rate benefit.

The gross compensation percentage is 13,800 / 52,304 x 100 = 26. The disposable income is 113,364 SEK in this situation.

The decrease in disposable income compared to the situation with no unemployment is 136,994 - 113,364 = 23,630 SEK or 17.2 per cent.

This scheme was 'reintroduced' in January 1995 after having been 'out of operation' in the 2nd half of 1994, when the unemployment insurance scheme was mandatory. The rate (230 SEK/day) is also the minimum rate in the voluntary insurance scheme.

5. Unemployed for the whole year, non-insured. Single APW

There is no gross wage. The compensation is 255 x 230 = 58,650 SEK interpreted as an annual rate. (The maximum period for which this compensation can be received is in general not more than 30 weeks.) The 230 SEK/day is a 'pure' flat rate benefit.

The gross compensation percentage is 58,650 / 209,214 x 100 = 28. The disposable income is 40,260 SEK in this situation.

The decrease in disposable income compared to the situation with no unemployment is 136,974 - 40,260 = 96,734 SEK or 70.6 per cent.

Recipients of the benefit from this scheme would, in many cases, also be eligible for social assistance to supplement the income.

As already mentioned, this scheme was 'reintroduced' in January 1995.

6. Wife unemployed for the whole year, insured. APW-couple

There is no gross wage for the wife. The compensation is 255 x 307 = 78,285 SEK. The daily compensation of 307 SEK is calculated as 0.7625 x 104,607 = 79,763 / 260 = 306,78 SEK, rounded up: 307 SEK. The maximum benefit, 564 SEK a day, is not reached. That happens at an income level of 195,520 SEK, where the compensation is 75 per cent, and 183,300 SEK, where the compensation is 80 per cent. The minimum benefit in 1997 is 230 SEK/day. It is reached when the income falls below 79,733 SEK (75 per cent), 74,750 SEK (80 per cent).

The gross compensation percentage is 78,285 / 104,607 x 100 = 75. The disposable income of the APW-couple is 190,687 SEK, when the wife is unemployed for the whole year in 1997 and usually is working part time (x APW income).

The decrease in disposable income compared to the situation with no unemployment is 209,747 - 190,687 = 19,060 SEK or 9.1 per cent.

7. Injured from work. Single APW

The effects of injuries from work are investigated in two cases. In the first case there is a complete loss of working capability. In the second case, the working capability is reduced by 33.3 per cent.

1. Working capability completely lost.
   In Sweden, there is full compensation for the loss of income caused by injuries from work (if the income is within 7.5 x 36,300 = 272,250 SEK in 1997, the income level where the maximum benefit is reached).
   There is no change in the disposable income of the APW in this situation.

2. Loss of 1/3 of the working capability.
   There is, also in this situation with partial loss of the working capability, full compensation for the lost wage income.
   There is no change in disposable income.

8. Disability pensioner with former working record and income at APW level. Single APW

It is assumed that the pensioner has a former working record with income at APW level. In this case he or she will get 'anticipated' pension points on that basis. It is further assumed that this will result in 4.03 pension points, just as in case 11 for the old age pensioner. On these assumptions the 'ATP' pension will be 86,018 SEK. The maximum number of 'pension points', which can be earned, is 6.5, resulting in a maximum additional pension of 138,739 SEK.
The basic pension consists of a basic amount of 36,300 x .98 x .90 = 32,017 SEK and a supplement of 36,300 x .98 x 1.115 = 39,665 SEK. The supplement is means-tested against 'ATP' (100 per cent), so in this case there is no supplement.
The disposable income for the 'APW-disability pensioner' (full pension) is 32,017 SEK in basic pension plus 86,018 SEK in 'ATP' minus 32,113 SEK in personal taxation, in total 85,922 SEK.
The net compensation percentage is 85,922 / 136,994 x 100 = 62.7.
The decrease in disposable income is 37.3 per cent in this situation.

9. Disability pensioner without former working record. 'Single APW'

The disability pensioner receives basic pension, cf. case 8. The basic pension consists of a basic amount of 36,300 x .98 x .90 = 32,017 SEK plus a supplement of 36,300 x .98 x 1.115 = 39,665 SEK, in total 71,682 SEK (full pension). The disposable income is 62,206 SEK. The basic pension consists of flat rate components.

The 'net compensation percentage' (relative to the APW) is 62,206 / 136,994 x 100 = 45.4. The 'decrease' in disposable income, relative to that of the APW, is 54.6 per cent.

It should be noted that 86,000 SEK in ATP is reduced to a difference of approx. 24,000 SEK in disposable income between case 8 and 9 due to means-testing and taxation.

10. Wife disability pensioner. APW-couple

It is assumed that the wife in the APW couple becomes a disability pensioner while the husband continues to work (APW income level). The wife has a working record earning x APW income. On this assumption she has 1.515 'anticipated' pension points, resulting in a supplementary pension of 32,337 SEK.

The basic pension for a married disability pensioner consists of a basic amount of 36,300 x .98 x .725 = 25,791 SEK and a supplement of 36,300 x.98 x 1.115 = 39,665 SEK. The supplement is means-tested against the ATP pension leaving 7,328 SEK of the supplement.

The total gross pension for the disability pensioner is 25,791 + 32,337 + 7,328 = 65,456 SEK.

The gross compensation percentage for the wife is 65,456 / 104,607 x 100 = 63. The disposable income for the couple is 136,994 SEK for the husband (APW income) and 55,980 for the wife receiving disability pension, in total 192,974 SEK.

The decrease in disposable income compared to the situation without disability pension is 209,747 - 192,974 = 16,773 SEK or 8.0 per cent.

11. Pensioner with maximum period of former occupation. Single APW Retirement at 'usual' age, here 65 years

It is assumed that the APW has gained pension rights for 30 years (that is a 'full' period in the present Swedish additional pension scheme). This is also feasible, since the system started in 1960. It is further assumed that the average number of 'pension-points' is 4.03 (the actual number in 1989). This average is slightly increasing over time.

On these assumptions the additional pension (ATP) will be 86,018 SEK in 1997.

The maximum number of 'pension-points', which can be earned, is 6.5, resulting in a maximum additional pension of 138,739 SEK in 1997.

The basic pension in the Swedish system is based on the basic rate ('basbeloppet'), which in 1997 was 36,300 SEK. The basic pension consists of two components, a basic amount, which equals 36,300 x .96 x .98 = 34,151 SEK (single pensioner), and a supplementary

amount, 36,300 x .555 x .98 = 19,744 SEK. The basic pension is then 53,895 SEK for a single pensioner. If the pensioner has no additional income, he or she pays no taxes. When the pensioner has income from the additional pension scheme, the supplementary amount in the basic pension is means-tested and reduced by 1 SEK for each SEK in additional pension. The disposable income for the 'APW-pensioner' is 34,151 SEK in basic pension plus 86,018 SEK in 'ATP' minus 32,841 SEK in personal tax, in total 87,328 SEK.
The net compensation percentage is 87,328 / 136,994 x 100 = 63.7.
The decrease in disposable income by retirement is 36.3 per cent in this situation.

12. Pensioner without former occupation. 'Single APW' 'Retirement' at 'usual' age, here 65 years

The pensioner receives basic pension, i.e. 53,895 SEK, cf. the former case. The basic pension is not taxed (there is a standard deduction designed in such a way that single and married pensioners, only receiving the basic pension, do not pay personal tax). The basic pension consists of flat rate components. The disposable income is 53,895 SEK.
The 'net compensation percentage' (relative to the APW) is 53,895 / 136,994 x 100 = 39.3.
The 'decrease' in disposable income, relative to that of the APW, is 60.7 per cent by this kind of 'retirement'.

13. Pensioners with maximum period of former occupation. APW-couple The two pensioners have the same age, and both retire at the age of 65

It is assumed that wife and husband have gained pension rights for 30 years each. The husband is 'identical' to the single pensioner in case 11. The wife is assumed to have had half the income of her husband all the time, which will result in 1.515 'pension points' when the husband has 4.03 according to the Swedish 'ATP' scheme. On these assumptions the additional pension (ATP) will be 86,018 SEK for the husband and 32,337 SEK for the wife, in total 118,355 SEK in 1997. The maximum additional pension is 138,739 SEK for each spouse in 1997.
The basic pension is equal to the basic amount, i.e. 36,300 x .785 x .98 = 27,926 SEK for each of the pensioners, in total 55,852 SEK. The couple will not receive any supplementary amount.
The disposable income for the APW-couple as pensioners is 55,852 SEK in public pensions plus 118,355 SEK in additional pension minus 37,411 SEK in personal tax, in total 136,796 SEK.
The net compensation percentage is 136,796 / 209,747 x 100 = 65.2.
The decrease in disposable income compared to the APW-couple is 34.8 per cent.

'Standard' income events in connection with children

1-3. The couple has 1, 2 or 3 children

For child no. 1 (6 years old) there is a family allowance of 7,680 SEK in 1997. Compared to the situation without children the increase in disposable income is (7,680 / 209,747) x 100 = 3.7 per cent with 1 child (6 years old). The family allowance is a flat rate benefit.
For child no. 2 (3 years old) the allowance is also 7,680 SEK. Compared to the situation without children the increase is (15,360 / 209,747) x 100 = 7.3 per cent with 2 children (6 and 3 years old).
For child no. 3 (1 year old, assumed born in 1997) the allowance is also 7,680 SEK. Compared to the situation without children the increase is (23,040 / 209,747) x 100 = 11.0 per cent with 3 children (6, 3 and 1 year old).

4. The couple gets their second child and has 2 children

There are the same 'timing-problems' as mentioned in the documentation for Denmark, cf. Appendix 1.

1. The couple has a combined maternity leave for 360 days during the year, with 300 days for the wife and 60 days for the husband. The distribution between the two can be changed, but 30 days for each is the minimum. The 360 days cover the maximum period for which the compensation is based upon income. The compensation is (1997) 75 per cent.

   The husband has a wage reduction of (209,214 / 365) x 30 = 34,391 SEK. He receives 209,214 x .75 / 365 = 430 SEK per day for 60 days, resulting in a 'parents allowance' of 60 x 430 = 25,800 SEK. Maximum daily benefit is reached at an income level of 7.5 x 36,300 = 272,250 SEK.

   The wife has a wage reduction of (104,607 / 365) x 300 = 85,978 SEK. She receives 104,607 x .75 / 365 = 215 SEK per day for 300 days, resulting in a 'parents allowance' of 64,500 SEK. Maximum daily benefit is reached at an income level of 7.5 x 36,300 = 272,250 SEK.

   Combined, the wage reduction is 120,369 SEK and the received compensation is 90,300 SEK.

   The gross compensation percentage is 90,300 / 120,369 x 100 = 75. 360 days of maternity leave results in a disposable income of 204,250 SEK for the couple including allowance for 2 children (1 child 3 years of age and 1 born i 1997).

   The decrease in disposable income compared to the situation where the couple has two children (3 and 1 year) is 225,107 - 204,250 = 20,857 SEK or 9.3 per cent.

2. In this calculation the common period of 14 weeks maternity leave for the wife is used. Her wage reduction is (104,607 / 365) x 98 = 28,086 SEK. She receives 104,607 x .75 / 365 = 215 SEK per day in 98 days, i.e.21,070 SEK in compensation. Maximum benefit is reached at an income level of 7.5 x 36,300 = 272,250 SEK.
   The gross compensation percentage is 21,070 / 28,086 x 100 = 75. 14 weeks of maternity leave result in a disposable income of 220,042 SEK.
   The decrease in disposable income compared to the situation, where the couple has two children, is 225,107 - 220,042 = 5,065 SEK or 2.3 per cent.

Annex Tax and social contribution calculation for single APW, 1997. SEK.

Gross wage income:	209,214
'Taxerad' income:	209,200
(Rounded gross wage income) 'Taxerad' income is the basis for calculation of taxes and social contributions.	
Standard deduction:	
'Taxerad' income is in the bracket above 5.615 x B (B = 36,300 SEK), the standard deduction is then calculated in this way:	
0.24 x B	8,712
The standard deduction is rounded down to	8,700
Social contributions:	
Health insurance contribution: 0.0495 x 209,200 = 10,355 - rounded to	10,400
Pension insurance contribution: 0.01 x 209,200 = 2,092 - rounded to	2,100
All social contributions:	12,500
Taxable income:	
'Taxerad' income	209,200
– Standard deduction	8,700
– Health insurance	10,400
– Pension insurance	2,100
Taxable income	188,000
Tax and social contributions:	
State	200
Local tax: 0,3166 x 188,000	59,520
Total tax	59,720
Social contributions:	
Health insurance	10,400
Pension insurance	2,100
Tax and social contributions	72,220

DOCUMENTATION OF APW CALCULATIONS FOR SWEDEN 1998, 'CORRECT' DATA

Single APW The gross wage of the APW in 1998 is the official Swedish figure calculated by Statistics Sweden for OECD.

	1998 Non-insured[1)]
Gross wage	216,216 SEK
Tax and social security[2)]	76,126 SEK
Disposable income	140,090 SEK

APW-couple The husband has the same wage as the single APW, the wife has 50 per cent of that. The couple has no children.

	1998 Non-insured[1)]
Gross wage	324,324 SEK
Tax and social security	109,937 SEK
Disposable income	214,387 SEK

1) After half a year with a mandatory unemployment insurance system, the scheme was changed back to a voluntary basis from January 1995. The social contribution for unemployment insurance of 1 per cent of income (up to a ceiling) was cancelled, and another social contribution for pensions was introduced, this was also 1 per cent of income (also in 1996). The membership fee for unemployment insurance was reintroduced. It should be deducted from the gross wage income but has not been so, and neither has it in the calculations for the Swedish APW in OECD's 'The Tax/Benefit Position of Employees. The fee is approx. 500 SEK a year and is deductible in taxable income, if a threshold together with other deductions of 1,000 SEK is passed. Social contributions paid by the employers (approx. 33 per cent of the wage bill) is the major financing source for Swedish social security. The employee paid contributions have increased to 6.95 per cent of income (up to a ceiling) in 1998.

2) Cf. the annex for documentation.

'Standard' income events

1. Ill for one week. Single APW

The gross wage is reduced by 1/52, i.e. 4,158 SEK. Compensation for illness in one week is nothing for the first day (waiting period) and 80 per cent of the gross income on a daily basis (0.80 x 216,216 = 172,973 / 260 = 665.28, rounded: 665 SEK) for the next 4 days. The compensation is 4 x 665 = 2,660 SEK. The first 2 weeks of illness are covered by the employer and there are no central rules for how the 80 per cent in compensation should be calculated. The rules applied here are from before 1992, when the insurance also covered the first 2 weeks. Other methods may give slightly different results. There is no maximum benefit level for the first 2 weeks, but when the insurance takes over from the 3rd week of illness, maximum benefit is reached at an income level of 7.5 x 36,400 = 273,000 SEK.

The gross compensation percentage is 2,660 / 4,158 x 100 = 64. When the APW is ill for one week his or her disposable income is 139,135 SEK.

The decrease in disposable income compared to the situation without illness is 140,090 - 139,135 = 955 SEK or 0.7 per cent.

2. Unemployed for 3 months during the year, insured. Single APW

The loss of income is 1/4 of the gross wage, i.e. 54,054 SEK. Unemployment compensation is 80 per cent of the lost income with a maximum of 580 SEK a day. 80 per cent of the lost income on a daily basis is 0.80 x 216,216 = 172,973 / 260 = 665.28, rounded: 665 SEK, which is above the maximum of 580 SEK a day which is reached at an income level of 260 x 580 / 0.80 = 188,500 SEK. There is a minimum, 240 SEK a day, which is reached at an income level below 260 x 240 / 0.80 = 78,000 SEK.

For 13 weeks (5 days each) with a waiting period of 5 days the compensation is 60 x 580 = 34,800 SEK.

The gross compensation percentage is 34,800 / 54,054 x 100 = 64. The disposable income of the APW with 25 per cent unemployment is 128,055 SEK.

The decrease in disposable income compared to the situation with no unemployment is 140,090 - 128,055 = 12,035 SEK or 8.6 per cent.

3. Unemployed for the whole year, insured. Single APW

There is no gross wage. The compensation is 255 x 580 = 147,900 SEK in the 'standard' year used here. Maximum benefit (580 SEK/day) is reached at an income level of 188,500 SEK, minimum benefit (240 SEK/day) is reached below 78,000 SEK.

The gross compensation percentage is 147,900 / 216,216 x 100 = 68. The disposable income of the APW is 98,376 SEK, when he or she is unemployed for the whole year of 1998.

The decrease in disposable income compared to the situation with no unemployment is 140,090 - 98,376 = 41,714 SEK or 29.8 per cent.

4. Unemployed for 3 months during the year, non-insured. Single APW

The reduction of the gross wage is 54,054 SEK as in case 2. The compensation for the non-insured APW is 60 x 240 = 14,400 SEK. There is a waiting period of 5 days also in this scheme. The 240 SEK/day is a 'pure' flat rate benefit.

The gross compensation percentage is 14,400 / 54,054 x 100 = 27. The disposable income is 115,733 SEK in this situation.
The decrease in disposable income compared to the situation with no unemployment is 140,090 - 115,733 = 24,357 SEK or 17.4 per cent.
This scheme, the general part of Swedish unemployment insurance, is new from 1998. It replaces the old 'KAS' scheme. The benefit rate is equal to the minimum unemployment insurance benefit.

5. Unemployed for the whole year, non-insured. Single APW

There is no gross wage. The compensation is 255 x 240 = 61,200 SEK. The 240 SEK/day is a 'pure' flat rate benefit.
The gross compensation percentage is 61,200 / 216,216 x 100 = 28. The disposable income is 41,445 SEK in this situation.
The decrease in disposable income compared to the situation with no unemployment is 140,090 - 41,445 = 98,645 SEK or 70.4 per cent.
Recipients of the benefit from this scheme would, in many cases, also be eligible for social assistance to supplement the income.
As already mentioned, this scheme is new from 1998.

6. Wife unemployed for the whole year, insured. APW-couple

There is no gross wage for the wife. The compensation is 255 x 333 = 84,915 SEK. The daily compensation of 333 SEK is calculated as 0.80 x 108,108 = 86,486 / 260 = 332.64 SEK, rounded up: 333 SEK. The maximum benefit, 580 SEK a day, is not reached, which happens at an income level of 188,500 SEK. The minimum benefit in 1998 is 240 SEK/day, and it is reached when the income falls below 78,000 SEK.
The gross compensation percentage is 84,915 / 108,108 x 100 = 78.5. The disposable income of the APW-couple is 198,016 SEK, when the wife is unemployed for the whole year in 1998 and usually is working part time (x APW income).
The decrease in disposable income compared to the situation with no unemployment is 214,387 - 198,016 = 16,371 SEK or 7.6 per cent.

7. Injured from work. Single APW

The effects of injuries from work are investigated in two cases. In the first case there is a complete loss of working capability. In the second case, the working capability is reduced by 33.3 per cent.

1. Working capability completely lost.
   In Sweden, there is full compensation for the loss of income caused by injuries from work (if the income is within 7.5 x 36,400 = 273,000 SEK in 1998, the income level where the maximum benefit is reached).
   There is no change in the disposable income of the APW in this situation.

2. Loss of 1/3 of the working capability.
   There is, also in this situation with partial loss of the working capability, full compensation for the lost wage income.
   There is no change in disposable income.

8. Disability pensioner with former working record and income at APW level. Single APW

It is assumed that the pensioner has a former working record with income at APW level. In this case he or she will get 'anticipated' pension points on that basis. It is further assumed that this will result in 4.03 pension points, just as in case 11 for the old age pensioner. On these assumptions the 'ATP' pension will be 86,255 SEK. The maximum number of 'pension points', which can be earned, is 6.5, resulting in a maximum additional pension of 139,121 SEK.
The basic pension consists of a basic amount of 36,400 x .98 x .90 = 32,105 SEK and a supplement of 36,400 x .98 x 1.115 = 39,774 SEK. The supplement is means-tested against 'ATP' (100 per cent), so in this case there is no supplement.
The disposable income for the 'APW-disability pensioner' (full pension) is 32,105 SEK in basic pension plus 86,255 SEK in 'ATP' minus 32,166 SEK in personal taxation, in total 86,194 SEK.
The net compensation percentage is 86,194 / 140,090 x 100 = 61.5.
The decrease in disposable income is 38.5 per cent in this situation.

9. Disability pensioner without former working record. 'Single APW'

The disability pensioner receives basic pension, cf. case 8. The basic pension consists of a basic amount of 36,400 x .98 x .90 = 32,105 SEK plus a supplement of 36,400 x .98 x 1.115 = 39,774 SEK, in total 71,879 SEK (full pension). The disposable income is 62,406 SEK. The basic pension consists of flat rate components.
The 'net compensation percentage' (relative to the APW) is 62,406 / 140,090 x 100 = 44.5.
The 'decrease' in disposable income, relative to that of the APW, is 55.5 per cent.
It should be noted that 86,000 SEK in ATP is reduced to a difference of approx. 24,000 SEK in disposable income between case 8 and 9 due to means testing and taxation.

10. Wife disability pensioner. APW-couple

It is assumed that the wife in the APW couple becomes a disability pensioner while the husband continues to work (APW income level). The wife has a working record earning x APW income. On this assumption she has 1.515 'anticipated' pension points, resulting in a supplementary pension of 32,426 SEK.
The basic pension for a married disability pensioner consists of a basic amount of 36,400 x .98 x .725 = 25,862 SEK and a supplement of 36,400 x.98 x 1.115 = 39,774 SEK. The supplement is means-tested against the ATP pension leaving 7,348 SEK of the supplement. The total gross pension for the disability pensioner is 25,862 + 32,426 + 7,348 = 65,636 SEK (= 25,862 + 39,774).
The gross compensation percentage for the wife is 65,636 / 108,108 x 100 = 61. The disposable income for the couple is 140,090 SEK for the husband (APW income) and 56,131 SEK for the wife receiving disability pension, in total 196,221 SEK.
The decrease in disposable income compared to the situation without disability pension is 214,387 - 196,221 = 18,166 SEK or 8.5 per cent.

11. Pensioner with maximum period of former occupation. Single APW Retirement at 'usual' age, here 65 years

It is assumed that the APW has gained pension rights for 30 years (that is a 'full' period in the present Swedish additional pension scheme). This is also feasible, since the system started in 1960. It is further assumed that the average number of 'pension-points' is 4.03 (the actual number in 1989). This average is slightly increasing over time.
On these assumptions the additional pension (ATP) will be 86,255 SEK in 1998.
The maximum number of 'pension-points', which can be earned, is 6.5, resulting in a maximum additional pension of 139,121 SEK in 1998.
The basic pension in the Swedish system is based on the basic rate ('basbeloppet'), which in 1998 was 36,400 SEK. The basic pension consists of two components, a basic amount, which equals 36,400 x .96 x .98 = 34,245 SEK (single pensioner) and a supplementary amount, 36,400 x .555 x .98 = 19,798 SEK. The basic pension is then 54,043 SEK for a single pensioner. If the pensioner has no additional income, he or she pays no taxes. When the pensioner has income from the additional pension scheme, the supplementary amount in the basic pension is means-tested and reduced by 1 SEK for each SEK in additional pension.
The disposable income for the 'APW-pensioner' is 34,245 SEK in basic pension plus 86,255 SEK in 'ATP' minus 32,926 SEK in personal tax, in total 87,574 SEK.
The net compensation percentage is 87,574 / 140,090 x 100 = 62.5.
The decrease in disposable income by retirement is 37.5 per cent in this situation.

12. Pensioner without former occupation. 'Single APW' 'Retirement' at 'usual' age, here 65 years

The pensioner receives basic pension, i.e. 54,043 SEK, cf. the former case. The basic pension is not taxed (there is a standard deduction designed in such a way that single and married pensioners, only receiving the basic pension, do not pay personal tax). The basic pension consists of flat rate components. The disposable income is 54,043 SEK.
The 'net compensation percentage' (relative to the APW) is 54,043 / 140,090 x 100 = 38.6.
The 'decrease' in disposable income, relative to that of the APW, is 61.4 per cent by this kind of 'retirement'.

13. Pensioners with maximum period of former occupation. APW-couple The two pensioners have the same age, and both retire at the age of 65

It is assumed that the wife and husband have gained pension rights for 30 years each. The husband is 'identical' to the single pensioner in case 11. The wife is assumed to have had half the income of her husband all the time, which will result in 1.515 'pension points' when the husband has 4.03 according to the Swedish 'ATP' scheme. On these assumptions the additional pension (ATP) will be 86,255 SEK for the husband and 32,426 SEK for the wife, in total 118,681 SEK in 1998. The maximum additional pension is 139,121 SEK for each spouse in 1998.
The basic pension is equal to the basic amount, i.e. 36,400 x .785 x .98 = 28,003 SEK for each of the pensioners, in total 56,006 SEK. The couple will not receive any supplementary amount.
The disposable income for the APW-couple as pensioners is 56,006 SEK in public pensions plus 118,681 SEK in additional pension minus 37,525 SEK in personal tax, in total 137,162 SEK.
The net compensation percentage is 137,162 / 214,387 x 100 = 64.0.
The decrease in disposable income compared to the APW-couple is 36.0 per cent.

'Standard' income events in connection with children

1-3. The couple has 1, 2 or 3 children

For child no. 1 (6 years old) there is a family allowance of 9,000 SEK in 1998. Compared to the situation without children the increase in disposable income is (9,000 / 214,387) x 100 = 4.2 per cent with 1 child (6 years old). The family allowance is a flat rate benefit.
For child no. 2 (3 years old) the allowance is also 9,000 SEK. Compared to the situation without children the increase is (18,000 / 214,387) x 100 = 8.4 per cent with 2 children (6 and 3 years old).

For child no. 3 (1 year old, assumed born in 1998) the allowance is 9,000 SEK + 2,400 SEK = 11,400 SEK. Compared to the situation without children the increase is (29,400 / 214,387) x 100 = 13.7 per cent with 3 children (6, 3 and 1 year old).

4. The couple gets their second child and has 2 children

There are the same 'timing-problems' as mentioned in the documentation for Denmark, cf. appendix 1.

1. The couple has a combined maternity leave for 360 days during the year, with 300 days for the wife and 60 days for the husband. The distribution between the two can be changed, but 30 days for each is the minimum. The 360 days cover the maximum period for which the compensation is based upon income. The compensation is (1998) 80 per cent.

   The husband has a wage reduction of (216,216 / 365) x 60 = 35,542 SEK. He receives 216,216 x .80 / 365 = 474 SEK per day for 60 days, resulting in a 'parents allowance' of 60 x 474 = 28,440 SEK. Maximum daily benefit is reached at an income level of 7.5 x 36,400 = 273,000 SEK.
   The wife has a wage reduction of (108,108 / 365) x 300 = 88,856 SEK. She receives 108,108 x .80 / 365 = 237 SEK per day for 300 days, resulting in a 'parents allowance' of 71,100 SEK. Maximum daily benefit is reached at an income level of 7.5 x 36,400 = 273,000 SEK.
   Combined, the wage reduction is 124,398 SEK and the received compensation is 99,540 SEK.
   The gross compensation percentage is 99,540 / 124,398 x 100 = 80. 360 days of maternity leave results in a disposable income of 215,369 SEK for the couple including allowance for 2 children (1 child 3 years of age and 1 born i 1998).
   The decrease in disposable income compared to the situation where the couple has two children (3 and 1 year) is 232,387 - 215,369 = 17,018 SEK or 7.3 per cent.

2. In this calculation the common period of 14 weeks maternity leave for the wife is used. Her wage reduction is (108,108 / 365) x 98 = 29,026 SEK. She receives 108,108 x .80 / 365 = 237 SEK per day in 98 days, i.e. 23,226 SEK in compensation. Maximum benefit is reached at an income level of 7.5 x 36,400 = 273,000 SEK.
The gross compensation percentage is 23,226 / 29,026 x 100 = 80. 14 weeks of maternity leave result in a disposable income of 228,443 SEK.
The decrease in disposable income compared to the situation, where the couple has two children, is 232,387 - 228,443 = 3,944 SEK or 1.7 per cent.

Annex Tax and social contribution calculation for single APW, 1998. SEK.

Gross wage income:	216,216
'Taxerad' income:	
(Rounded gross wage income)	
'Taxerad' income is the basis for calculation of taxes and social contributions.	216,200
Standard deduction:	
'Taxerad' income is in the bracket above 5.615 x B (B = 36,400 SEK),	
the standard deduction is then calculated in this way:	
0.24 x B	8,736
The standard deduction is rounded down to	8,700
Social contributions:	
General contribution:	
0.0695 x 216,200 = 15,026 - rounded to	15,000
Taxable income:	
'Taxerad' income	216,200
– Standard deduction	8,700
– General contribution	15,000
Taxable income	192,500
Tax and social contributions:	
State	200
Local tax: 0.3165 x 192,500	60,926
Total tax	61,126
Social contributions:	
General contribution	15,000
Tax and social contributions	76,126

APPENDIX 3

DOCUMENTATION OF FAMILY TYPE (APW) CALCULATIONS FOR FINLAND 1994-1998, 'CORRECT' DATA

1) Compared to earlier editions there are sereral changes, cf. the introductory note to chapter 4.

DOCUMENTATION OF APW CALCULATIONS FOR FINLAND, 1994, 'CORRECT' DATA

Single APW The gross wage of the APW in 1994 is from 'The Tax/Benefit Position of Production Workers', OECD, 1995 edition.

	1994 Non-insured[1)]
Gross wage	121,916 FIM
Tax and social security [2)]	45,338 FIM
Disposable income	76,578 FIM

APW-couple The husband has the same gross wage as the single APW, the wife has 50 per cent of that income. There are no children.

	1994 Non-insured[1)]
Gross wage	182,874 FIM
Tax and social security	61,485 FIM
Disposable income	121,389 FIM

1) Unemployment insurance (the earningsrelated component) is voluntary in Finland. In the official APW calculation for Finland in 'The Tax/Benefit Position of Production Workers' there is no deduction in the disposable income for membership fees. This was also the case for the Swedish APW, when unemployment insurance was voluntary in Sweden. This procedure has been continued in this study even if it is not strictly correct. The error is, however, marginal.
2) Cf. the annex for a documentation.

'Standard' income events

1. Ill for one week. Single APW

The gross wage is reduced by 1/52, i.e. 2,345 FIM. In Finland there is a waiting period of 9 weekdays, so there is no compensation at all from the insurance scheme for the first week of illness.
The gross compensation percentage is 0. When the APW is ill for one week his or her disposable income is 75,517 FIM.
The decrease in disposable income compared to the situation without illness is 76,578 - 75,517 = 1,061 FIM or 1.4 per cent.
In Finland labour market agreements are covering the relatively long waiting period. In the usual situation the employee therefore receives wages during short term illness. In some agreements wages will be paid during illness for 1 to 2 months.

2. Unemployed for 3 months during the year, insured. Single APW

The loss of income is 1/4 of the gross wage, i.e. 30,479 FIM. The compensation on a daily basis is: Basic benefit of 116 FIM/day plus 42 per cent of the difference between 456 and 116 = 142.80 FIM/day, in total 258.80 FIM/day. The entry in the 42 per cent bracket is calculated as 121,916:12 = 10,160 FIM. The daily basis is 96.5 per cent of 10,160 FIM:21.5 = 456 FIM. This is lower than the ceiling which is 90 x 116:21.5 = 485.58 FIM/day, so there is no 20 per cent component. The calculated daily benefit is paid for 5 days a week. There is a waiting period of 5 days (1 week), so the compensation is 65 - 5 = 60 days x 258.80 FIM/day = 15,528 FIM.
The gross compensation percentage is 15,528 / 30,479 x 100 = 51. The disposable income of the APW is 70,184 FIM when he or she is unemployed 25 per cent of the year.
The decrease in disposable income is 76,578 - 70,184 = 6,394 FIM or 8.3 per cent.

3. Unemployed for the whole year, insured. Single APW

There is no gross wage. The compensation is 260 - 5 = 255 days x 258.80 FIM/day = 65,994 FIM.
The gross compensation percentage is 65,994 / 121,916 x 100 = 54. The disposable income of the APW is 49,037 FIM when he or she is unemployed for the whole year.
The decrease in disposable income is 76,578 - 49,037 = 27,541 FIM or 36.0 per cent.

4. Unemployed for 3 months during the year, non-insured. Single APW

The reduction of the gross wage is 30,479 FIM as in case 2. The compensation for an APW, who is not a member of the voluntary unemployment insurance scheme, is 12 x 5 x 116 = 6,960 FIM, there is also a waiting period of 5 days in this scheme.

The gross compensation percentage is 6,960 / 30,479 x 100 = 23. The disposable income is 65,615 FIM in this situation.

The decrease in disposable income is 76,578 - 65,615 = 10,963 FIM or 14.3 per cent.

5. Unemployed for the whole year, non-insured. Single APW

There is no gross wage. The compensation is 51 x 5 x 116 = 29,580 FIM for a whole year when the unemployed APW is not insured.

The gross compensation percentage is 29,580 / 121,916 x 100 = 24. The disposable income is 24,153 FIM in this situation.

The decrease in disposable income is 76,578 - 24,153 = 52,425 FIM or 68.5 per cent.

The recipient is eligible to receive additional support for housing costs, either from the housing benefit scheme or from social assistance.

6. Wife unemployed for the whole year, insured. APW-couple

There is no gross wage for the wife. The compensation on a daily basis is: Basic benefit of 116 FIM/day plus 42 per cent of the difference between 228 and 116 = 47.04 FIM/day, in total 163.04 FIM/day. The entry of 228 FIM/day is calculated as 96.5 per cent of the actual monthly wage, i.e. 4,902 FIM or on a daily basis 4,902: 21.5 = 228 FIM/day. There is no 20 per cent component. The calculated daily benefit is paid for 5 days a week. There is a waiting period of 5 days (1 week) so the compensation is 260-5 = 255 days x 163.04 FIM/day = 41,575 FIM.

The gross compensation percentage is 41,575 / 60,958 x 100 = 68. The disposable income of the APW-couple is 109,589 FIM, when the wife is unemployed for the whole year in 1994 and usually is working part time ($^1/_2$ APW income).

The decrease in disposable is 121,389 - 109,589 = 11,800 FIM or 9.7 per cent.

7. Injured from work. Single APW

The effects of injuries from work are investigated in two cases. In the first there is a complete loss of working capability. In the second, the working capability is reduced by 33.3 per cent.

1. Working capability completely lost
   There is no gross wage. In Finland the compensation ('full pension') is 85 per cent of the lost income (70 per cent if the recipient is 65 or older), i.e. 103,629 FIM.
   The gross compensation percentage is thus 85. The disposable income in this case is 70,958 FIM.
   The decrease in disposable income is 76,578 - 70,958 = 5,620 FIM or 7.3 per cent.

2. Loss of $^1/_3$ of the working capability
   The loss of income is 40,639 FIM. The compensation is 1/3 of the 'full pension', i.e. equivalent to 85 per cent of the lost income assuming 2/3 of the wage is maintained. The compensation is 0.85 x 40,639 = 34,543 FIM.
   The gross compensation percentage is thus 85. The disposable income is 75,071 FIM, when the APW has lost $^1/_3$ of the working capability.
   The decrease in dispoable income is 76,578 - 75,071 = 1,507 FIM or 2.0 per cent.

8. Pensioner with maximum period of former occupation. Single APW
Retirement at 'usual' age, here 65 years

The old age pension scheme in Finland consists of a basic part and an income related part. The basic pension consists of a basic amount which for a single in the 'low' cost part of the country is 437 FIM / month and a supplementary amount which is 1,936 FIM / month in 1994. The supplementary amount is means tested (taper of 50 per cent) against the income related pension. In the case where the APW has been working 'all the time' the income related pension will be 60 per cent of the gross income at retirement. On these assumptions an APW with a full working record from the age of 23 years to 65 years will have a pension equal to 12 x 437 = 5,244 FIM plus 0.6 x 121,916 = 73,150, in total 78,394 FIM (the supplementary amount is means tested to zero).
The gross compensation percentage is 78,394 / 121,916 x 100 = 64. The disposable income of the pensioner is 52,689 FIM.
The net compensation percentage is 52,689 / 76,578 x 100 = 68.8.
The decrease in disposable income by retirement is 31.2 per cent.

9. Pensioner without former occupation. 'Single APW'
'Retirement' at 'usual' age, here 65 years

The basic pension in the Finnish old age pension system consists, cf. case 8, of a basic amount of 437 FIM/month and a supplementary amount of 1,936 FIM/month (for a single pensioner in the 'low' cost part of the country in 1994), in total 28,476 FIM a year. There is no taxation of any kind of this minimum pension.

The 'net compensation percentage' is 28,476 / 76,578 x 100 = 37.2.

The 'decrease' in disposable income, relative to that of the APW, is 62.8 by this kind of 'retirement'.

10. Pensioners with maximum period of former occupation. APW-couple
The two pensioners have the same age, and both retire 65 years old.

It is assumed, that both had a 'full' working record. In this case the income related pension is 60 per cent of the gross wage income at retirement, i.e. 0.6 x 121,916 = 73,150 FIM for the husband plus 0.6 x 60,958 = 36,575 FIM for the wife as well as the basic amount in the basic pension scheme, i.e. 5,244 FIM for each of the spouses. For the former part time working spouse, there will be an additional 2,894 FIM left from the means testing of the pension supplement, which in 1994 is 1,646 FIM per month for each spouse. The total pension is 73,150 + 5,244 + 36,575 + 5,244 + 2,894 = 123,107 FIM.

The gross compensation percentage is 123,107 / 182,874 x 100 = 67. The disposable income of the pensioner couple is 90,681 FIM.

The net compensation percentage is 90,681 / 121,389 x 100 = 74.7.

The decrease in disposable income is 25.3 per cent compared to the APW-couple.

'Standard' income events in connection with children

1-3. The couple has 1, 2 or 3 children

For child no. 1 (6 years old) there is a family allowance of 570 FIM/month in 1994, i.e. 6,840 FIM on an annual basis. Compared to the situation without children the increase in disposable income is (6,840 / 121,389) x 100 = 5.6 per cent when the family has one child (6 years old).

For child no. 2 (3 years old) the allowance is 720 FIM/ month, i.e. 8,640FIM on an annual basis. Compared to the situation without children the increase is (6,840 + 8,640) / 121,389 x 100 = 12.8 per cent when the family has two children (6 and 3 years old).

For child no. 3 (1 year old) the allowance is 910 FIM/month, i.e. 10,920 FIM on an annual basis. Compared to the situation without children the increase is (6,840 + 8,640 + 10,920) / 121,389 x 100 = 21.7 per cent when the family has 3 children (6, 3 and 1 year old).

4. The couple gets the second child and has 2 children

There are the same 'timing-problems' as mentioned in the documentation for Denmark, cf. Appendix 1.

1. The couple has a combined maternity and paternity leave of 281 weekdays. There are 105 days for the mother and 18 days for the father and 158 days which can be shared or taken by either the mother or the father. In this case it is assumed that the mother has 263 days and the father 18 days.
   The husband has a wage reduction of (121,916 / 312) x 18 = 7,034 FIM. He receives 4,925 FIM [1)] in compensation.
   The wife has a wage reduction of (60,958 / 312) x 263 = 51,384 FIM. The benefit for this period is 38,687 [2)] FIM .
   Combined the wage reduction is 58,418 FIM and the compensation received is 43,612 FIM.
   The gross compensation percentage is 43,612 / 58,418 x 100 = 75. The disposable income of the couple with two children (1 child 3 years of age and 1 born in 1994) and a combined leave of 281 days is 128,539 FIM.
   The decrease in disposable income compared to the situation where the couple has two children (3 and 1 year) is 136,869 - 128,539 = 8,330 FIM or 6.1 per cent.

2. In this calculation the common period of 14 weeks maternity leave for the wife is used. Her wage reduction is (60,958 / 312) x 84 = 16,412 FIM. She receives 14 H 6 H 147.10 = 12,356 FIM in compensation.
   The gross compensation percentage is 12,356 / 16,412 x 100 = 75. 14 weeks of maternity leave results in a disposable income of 134,425 FIM.
   The decrease in disposable income compared to the situation, where the couple has two children is 136,869 - 134,443 = 2,426 FIM or 1.8 per cent.

1) In the husband's income bracket the daily allowance is calculated in this way: 269.13 + 0.4 (0.965 x 121,916 - 114,290) / 300 = 269.13 + 4.48 = 273.61 FIM. For 18 days the compensation is 18 x 273.61 = 4,925 FIM.
2) In the wife's income bracket the daily allowance is calculated in this way: 101.13 + 0.66 (0.965 x 60,958 - 37,930) / 300 = 101.13 + 45.97 = 147.10 FIM. For 263 days the compensation is 263 x 147.10 = 38,687 FIM.

Annex Tax and social contribution calculation for single APW, 1994. FIM

Gross wage income:	121,916
Standard deduction:	
Work related expenses, 3.0 per cent max.	2,280
Social contr. unemployment, 1.87 per cent	1,963
Social contr. occupational pension, 3.0 per cent	3,657
Total	8,037
State taxable income:	
Gross wage income	121,916
Total standard deductions	8,037
State taxable income	113,879
State tax:	
State taxable income is in the bracket 100,000 - 157,000 FIM.	
Then the state tax is calculated this way:	
Fixed amount:	9,640
+ .27 x (113,879 - 100,000)	3,747
State tax	13,387
Local Government taxable income:	
1. Calculation of 'low income deduction'	
Gross wage income	121,916
Work related expenses	2,100
Basis for calculation of deduction	119,816
Full deduction is 5 per cent of income above 20,000 FIM, max. 2,000 FIM.	
The full deduction is reduced with 5 per cent of the income above 80,000 FIM.	
The reduction is 0.05 x (119,816 - 80,000) = 1,991 FIM.	
The deduction is:	
Full deduction	2,000
- reduction	1,991
Low income deduction	9
2. Calculation of Local Government taxable income:	
State taxable income	113,879
- low income deduction	9
Local Government taxable income	113,870
Local tax:	
Average Local Government plus church tax rate: 18.83	
Local tax: 0.1883 x (113,870)	21,442

Annex Continued.

Social contributions:	
Contributions for illness:	
1.9 per cent (+ 1.9 per cent for income above 80,000 FIM).	
National pension: 1.55 per cent.	
1.9 + 1.55 per cent = 3.45 per cent, 0.0345 x (80,000) =	2,760
1.9 + 3.45 = 5.35 per cent, 0.0535 x (113.870 - 80,000) =	1,812
+ Soc. contr. unemployment	2,280
+ Soc. contr. occupational pension	3,657
All social contributions	10,509
Tax and social contributions:	
State tax	13,387
Local tax	21,442
Social contributions	10,507
Tax and social contributions	45,338

DOCUMENTATION OF APW CALCULATIONS FOR FINLAND, 1995, 'CORRECT' DATA

Single APW

The gross wage of the APW in 1995 is from 'The Tax/Benefit Position of Employees', OECD, 1996 edition.

	1995 Non-insured[1)]
Gross wage	132,533 FIM
Tax and social security[2)]	50,419 FIM
Disposable income	82,114 FIM

APW-couple

The husband has the same gross wage as the single APW, the wife has 50 per cent of that income. There are no children.

	1995 Non-insured[1)]
Gross wage	198,800 FIM
Tax and social security	68,495 FIM
Disposable income	130,305 FIM

1) Unemployment insurance (the earningsrelated component) is voluntary in Finland. In the official APW calculation for Finland in 'The Tax/Benefit Position of Production Workers' there is no deduction in the disposable income for membership fees. This was also the case for the Swedish APW, when unemployment insurance was voluntary in Sweden. This procedure has been continued in this study even if it is not strictly correct. The error is, however, marginal.
2) Cf. the annex for a documentation.

'Standard' income events

1. Ill for one week. Single APW

The gross wage is reduced by 1/52, i.e. 2,549 FIM. In Finland there is a waiting period of 9 weekdays, so there is no compensation at all from the insurance scheme for the first week of illness.
The gross compensation percentage is 0. When the APW is ill for one week his or her disposable income is 80,919 FIM.
The decrease in disposable income compared to the situation without illness is 82,114 - 80,919 = 1,195 FIM or 1.5 per cent.
In Finland labour market agreements are covering the relatively long waiting period. In the usual situation the employee therefore receives wages during short term illness. In some agreements wages will be paid during illness for 1 to 2 months.

2. Unemployed for 3 months during the year, insured. Single APW

The loss of income is 1/4 of the gross wage, i.e. 33,133 FIM. The compensation on a daily basis is: Basic benefit of 118 FIM/day plus 42 per cent of the difference between 490.56 and 118 = 156.48 FIM/day, in total 274.48 FIM/day. The entry in the 42 per cent bracket is calculated as 132,533:12 = 11,044 FIM. The daily basis is 95.5 per cent of 11,044 FIM:21.5 = 490.56 FIM. This is lower than the ceiling which is 90 x 118: 21.5 = 493.95 FIM/day, so there is no 20 per cent component. The calculated daily compensation is paid for 5 days a week. There is a waiting period of 5 days (1 week), so the compensation is 65 - 5 = 60 days x 274.48 FIM/day = 16,469 FIM.
The gross compensation percentage is 16,469 / 33,133 x 100 = 50. The disposable income of the APW is 74,847 FIM when he or she is unemployed 25 per cent of the year.
The decrease in disposable income is 82,114 - 74,847 = 7,267 FIM or 8.8 per cent.

3. Unemployed for the whole year, insured. Single APW

There is no gross wage. The compensation is 260 - 5 = 255 days x 274.48 FIM/day = 69,992 FIM.
The gross compensation percentage is 69,992 / 132,533 x 100 = 53. The disposable in-come of the APW is 52,314 FIM when he or she is unemployed for the whole year.
The decrease in disposable income is 82,114 - 52,314 = 29,800 FIM or 36.3 per cent.

4. Unemployed for 3 months during the year, non-insured. Single APW

The reduction of the gross wage is 33,133 FIM as in case 2. The compensation for an APW, who is not a member of the voluntary unemployment insurance scheme, is 12 x 5 x 118 = 7,080 FIM, there is also a waiting period of 5 days in this scheme.

The gross compensation percentage is 7,080 / 33,133 x 100 = 21. The disposable income is 70,107 FIM in this situation.

The decrease in disposable income is 82,114 - 70,107 = 12,007 FIM or 14.6 per cent.

5. Unemployed for the whole year, non-insured. Single APW

There is no gross wage. The compensation is 51 x 5 x 118 = 30,090 FIM for a whole year when the unemployed APW is not insured.

The gross compensation percentage is 30,090 / 132,533 x 100 = 23. The disposable income is 24,782 FIM in this situation.

The decrease in disposable income is 82,114 - 24,782 = 57,332 FIM or 69.8 per cent.

The recipient is eligible to receive additional support for housing costs, either from the housing benefit scheme or from social assistance.

6. Wife unemployed for the whole year, insured. APW-couple

There is no gross wage for the wife. The compensation on a daily basis is: Basic benefit of 118 FIM/day plus 42 per cent of the difference between 245.30 and 118 = 53.47 FIM/day, in total 171.47 FIM/day. The entry of 245.30 FIM/day is calculated as 95.5 per cent of the actual monthly wage, i.e. 5,274 FIM or on a daily basis 5,274:21.5 = 245.30 FIM/day. There is no 20 per cent component. The calculated daily benefit is paid for 5 days a week. There is a waiting period of 5 days (1week), so the compensation is 260 - 5 = 255 days x 171.47 FIM/day = 43,725 FIM.

The gross compensation percentage is 43,725 / 66,267 x 100 = 66. The disposable income of the APW-couple is 117,052 FIM, when the wife is unemployed for the whole year in 1995 and usually is working part time (1/2 APW income).

The decrease in disposable is 130,305- 117,052 = 13,253 FIM or 10.2 per cent.

7. Injured from work. Single APW

The effects of injuries from work are investigated in two cases. In the first there is a complete loss of working capability. In the second, the working capability is reduced by 33.3 per cent.

1. Working capability completely lost
   There is no gross wage. In Finland the compensation ('full pension') is 85 per cent of the lost income (70 per cent if the recipient is 65 or older), i.e. 112,653 FIM.
   The gross compensation percentage is thus 85. The disposable income in this case is 76,682 FIM.
   The decrease in disposable income is 82,114 - 76,682 = 5,432 FIM or 6.6 per cent.

2. Loss of $^{1}/_{3}$ of the working capability
   The loss of income is 44,178 FIM. The compensation is 1/3 of the 'full pension', i.e. equivalent to 85 per cent of the lost income assuming 2/3 of the wage is maintained. The compensation is 0.85 x 44,178 = 37,551 FIM.
   The gross compensation percentage is thus 85. The disposable income is 80,527 FIM, when the APW has lost 1/3 of the working capability.
   The decrease in dispoable income is 82,114 - 80,527 = 1,587 FIM or 1.9 per cent.

8. Pensioner with maximum period of former occupation. Single APW
Retirement at 'usual' age, here 65 years

The old age pension scheme in Finland consists of a basic part and an income related part. The basic pension consists of a basic amount which for a single in the 'low' cost part of the country is 445 FIM / month and a supplementary amount which is 1,973 FIM / month in 1995. The supplementary amount is means tested (taper of 50 per cent) against the income related pension. In the case where the APW has been working 'all the time' the income related pension will be 60 per cent of the gross income at retirement. On these assumptions an APW with a full working record from the age of 23 years to 65 years will have a pension equal to 12 x 445 = 5,340 FIM plus 0.6 x 132,533 = 79,520, in total 84,860 FIM (the supplementary amount is means tested to zero).
The gross compensation percentage is 84,860 / 132,533 x 100 = 64. The disposable income of the pensioner is 57,157 FIM.
The net compensation percentage is 57,157 / 82,114 x 100 = 69.6.
The decrease in disposable income by retirement is 30.4 per cent.

9. Pensioner without former occupation. 'Single APW'
'Retirement' at 'usual' age, here 65 years

The basic pension in the Finnish old age pension system consists, cf. case 8, of a basic amount of 445 FIM/month and a supplementary amount of 1,973 FIM/month (for a single pensioner in the 'low' cost part of the country in 1995), in total 29,016 FIM a year. There is no taxation of any kind of this minimum pension.
The 'net compensation percentage' is 29,016 / 82,114 x 100 = 35.3.
The 'decrease' in disposable income, relative to that of the APW, is 64.7 by this kind of 'retirement'.

10. Pensioners with maximum period of former occupation. APW-couple
The two pensioners have the same age, and both retire 65 years old.

It is assumed, that both had a 'full' working record. In this case the income related pension is 60 per cent of the gross wage income at retirement, i.e. 0.6 x 132,533 = 79,520 FIM for the husband plus 0.6 x 66,267 = 39,760 FIM for the wife as well as the basic amount in the basic pension scheme, i.e. 5,340 FIM for each of the spouses. For the former part time working spouse, there will be an additional 1,699FIM left from the means testing of the pension supplement, which in 1995 is 1,677 FIM per month for each spouse. The total pension is 79,520 + 5,340 + 39,760 + 5,340 + 1,699 = 131,659 FIM.
The gross compensation percentage is 131,659 / 198,800 x 100 = 66. The disposable income of the pensioner couple is 96,724 FIM.
The net compensation percentage is 96,724 / 130,305 x 100 = 74.2.
The decrease in disposable income is 25.8 per cent compared to the APW-couple.

'Standard' income events in connection with children

1-3. The couple has 1, 2 or 3 children

For child no. 1 (6 years old) there is a family allowance of 570 FIM/month in 1995, i.e. 6,840 FIM on an annual basis. Compared to the situation without children the increase in disposable income is (6,840 / 130,305) x 100 = 5.2 per cent when the family has one child (6 years old).
For child no. 2 (3 years old) the allowance is 720 FIM/ month, i.e. 8,640FIM on an annual basis. Compared to the situation without children the increase is (6,840 + 8,640) / 130,305 x 100 = 11.9 per cent when the family has two children (6 and 3 years old).
For child no. 3 (1 year old) the allowance is 910 FIM/month, i.e. 10,920 FIM on an annual basis. Compared to the situation without children the increase is (6,840 + 8,640 + 10,920) / 130,305 x 100 = 20.3 per cent when the family has 3 children (6, 3 and 1 year old).

4. The couple gets the second child and has 2 children

There are the same 'timing-problems' as mentioned in the documentation for Denmark, cf. Appendix 1.

1. The couple has a combined maternity and paternity leave of 281 weekdays. There are 105 days for the mother and 18 days for the father and 158 days which can be shared or taken by either the mother or the father. In this case it is assumed that the mother has 263 days and the father 18 days.
   The husband has a wage reduction of (132,533 / 312) x 18 = 7,646 FIM. He receives 5,169 FIM [1] in compensation.
   The wife has a wage reduction of (66,267 / 312) x 263 = 55,860 FIM. The benefit for this period is 41,333 [2] FIM .
   Combined the wage reduction is 63,506 FIM and the compensation received is 46,502 FIM.
   The gross compensation percentage is 46,502 / 63,506 x 100 = 73. The disposable income of the couple with two children (1 child 3 years of age and 1 born in 1995) and a combined leave of 281 days is 136,722 FIM.
   The decrease in disposable income compared to the situation where the couple has two children (3 and 1 year) is 145,785 - 136,722 = 9,063 FIM or 6.2 per cent.

2. In this calculation the common period of 14 weeks maternity leave for the wife is used. Her wage reduction is (66,267 / 312) x 84 = 17,841 FIM. She receives 14 H 6 x 157,16 = 13,201 FIM in compensation.
   The gross compensation percentage is 13,201 / 17,841 x 100 = 74. 14 weeks of maternity leave results in a disposable income of 143,575 FIM.
   The decrease in disposable income compared to the situation, where the couple has two children is 145,785 - 143,525 = 2,260 FIM or 1.6 per cent.

1) In the husband's income bracket the daily allowance is calculated in this way: 272.96 + 0.4 (0.955 x 132,533 - 115,920) / 300 = 272,96 + 14,20 = 287.16 FIM. For 18 days the compensation is 18 x 287.16 = 5,169 FIM.
2) In the wife's income bracket the daily allowance is calculated in this way: 102.57 + 0.66 (0.955 x 66,267 - 38,470) / 300 = 102.57 + 54.59 = 157.16 FIM. For 263 days the compensation is 263 x 157.16 = 41,333 FIM.

Annex Tax and social contribution calculation for single APW, 1995. FIM

Gross wage income:	132,533
Standard deduction:	
Work related expenses, 3.0 per cent max.	1,500
Social contr. unemployment, 1.87 per cent	2,478
Social contr. occupational pension, 4.0 per cent	5,301
Total	9,279
State taxable income:	
Gross wage income	132,533
Total standard deductions	9,279
State taxable income	123,254
State tax:	
State taxable income is in the bracket 102,000 - 160,000 FIM.	
Then the state tax is calculated this way:	
Fixed amount:	9,850
+ .27 x (123,254 - 102,000)	5,739
State tax	15,589
Local Government taxable income:	
1. Calculation of 'low income deduction'	
Gross wage income	132,533
Work related expenses	1,500
Basis for calculation of deduction	131,033
Full deduction is 5 per cent of income above 20,000 FIM, max. 2,000 FIM.	
The full deduction is reduced with 5 per cent of the income above 80,000 FIM.	
The reduction is 0.05 x (131,033 - 80,000) = 2,552 FIM.	
The deduction is:	
Full deduction	2,000
- reduction	2,552
Low income deduction	0
2. Calculation of Local Government taxable income:	
State taxable income	123,254
- low income deduction	0
Local Government taxable income	123,254
Local tax:	
Average Local Government plus church tax rate: 18.83	
Local tax: 0.1883 x (123,254)	23,209

Annex Continued.

Social contributions:	
Contributions for illness:	
1.9 per cent (+ 1.9 per cent for income above 80,000 FIM).	
National pension: 0.55 per cent.	
1.9 + 0.55 per cent = 2.45 per cent, 0.0245 x (80,000) =	1,960
1.9 + 2.45 = 4.35 per cent, 0.0435 x (123,254 - 80,000) =	1,882
+ Soc. contr. unemployment	2,478
+ Soc. contr. occupational pension	5,301
All social contributions	11,621
Tax and social contributions:	
State tax	15,589
Local tax	23,209
Social contributions	11,621
Tax and social contributions	50,419

DOCUMENTATION OF APW CALCULATIONS FOR FINLAND, 1996, 'CORRECT' DATA

Single APW The gross wage of the APW in 1996 is from 'The Tax/Benefit Position of Employees', OECD, 1997 edition.

	1996 Non-insured[1)]
Gross wage	137,046 FIM
Tax and social security[2)]	51,495 FIM
Disposable income	85,551 FIM

APW-couple The husband has the same gross wage as the single APW, the wife has 50 per cent of that income. There are no children.

	1996 Non-insured[1)]
Gross wage	205,569 FIM
Tax and social security	69,970 FIM
Disposable income	135,599 FIM

1) Unemployment insurance (the earnings related component) is voluntary in Finland. In the official APW calculation for Finland in 'The Tax/Benefit Position of Production Workers' there is no deduction in the disposable income for membership fees. This was also the case for the Swedish APW, when unemployment insurance was voluntary in Sweden. This procedure has been continued in this study even if it is not strictly correct. The error is, however, marginal.
2) Cf. the annex for a documentation.

'Standard' income events

1. Ill for one week. Single APW

The gross wage is reduced by 1/52, i.e. 2,636 FIM. In Finland there is a waiting period of 9 weekdays, so there is no compensation at all from the insurance scheme for the first week of illness.
The gross compensation percentage is 0. When the APW is ill for one week his or her disposable income is 84,288 FIM.
The decrease in disposable income compared to the situation without illness is 85,551 - 84,288 = 1,263 FIM or 1.5 per cent.
In Finland labour market agreements are covering the relatively long waiting period. In the usual situation the employee therefore receives wages during short term illness. In some agreements wages will be paid during illness for 1 to 2 months.

2. Unemployed for 3 months during the year, insured. Single APW

The loss of income is 1/4 of the gross wage, i.e. 34, 262 FIM. The compensation on a daily basis is: Basic benefit of 118 FIM/day plus 42 per cent of the difference between 493.95 and 118 = 157.90 FIM/day plus 20 per cent of the difference between 507.30 and 493.95 = 2.67 FIM/day, in total 278.57 FIM/day. The ceiling of the 42 per cent bracket is calculated as 90 x 118 = 10,620 FIM/month or on a daily basis 10,620 : 21.5 = 493.95 FIM. The base for the calculation is 95.5 per cent of the actual monthly wage, i.e. 137,046 : 12 x 0.955 = 10,907 FIM/month or on a daily basis 10,907 : 21.5 = 507.30 FIM, the entry in the 20 per cent bracket. The calculated daily benefit is paid for 5 days a week. There is a waiting period of 5 days (1 week), so the compensation is 65 - 5 = 60 days x 278.57 FIM/day = 16,714 FIM.
The gross compensation percentage is 16,714 / 34,262 x 100 = 49. The disposable income of the APW is 77,661 FIM when he or she is unemployed 25 per cent of the year.
The decrease in disposable income is 85,551 - 77,661 = 7,890 FIM or 9.2 per cent.

3. Unemployed for the whole year, insured. Single APW

There is no gross wage. The compensation is 260 - 5 = 255 days x 278.57 FIM/day = 71,035 FIM.
The gross compensation percentage is 71,035 / 137,046 x 100 = 52. The disposable in-come of the APW is 53,522 FIM when he or she is unemployed for the whole year.
The decrease in disposable income is 85,551 - 53,522 = 32,029 FIM or 37.4 per cent.

4. Unemployed for 3 months during the year, non-insured. Single APW

The reduction of the gross wage is 34,262 FIM as in case 2. The compensation for an APW, who is not a member of the voluntary unemployment insurance scheme, is 12 x 5 x 118 = 7,080 FIM, there is also a waiting period of 5 days in this scheme.

The gross compensation percentage is 7,080 / 34,262 x 100 = 21. The disposable income is 72,775 FIM in this situation.

The decrease in disposable income is 85,551 - 72,775 = 12,776 FIM or 14.9 per cent.

5. Unemployed for the whole year, non-insured. Single APW

There is no gross wage. The compensation is 51 x 5 x 118 = 30,090 FIM for a whole year when the unemployed APW is not insured.

The gross compensation percentage is 30,090 / 137,046 x 100 = 22. The disposable income is 24,924 FIM in this situation.

The decrease in disposable income is 85,551 - 24,924 = 60,627 FIM or 70.9 per cent.

The recipient is eligible to receive additional support for housing costs, either from the housing benefit scheme or from social assistance.

6. Wife unemployed for the whole year, insured. APW-couple

There is no gross wage for the wife. The compensation on a daily basis is: Basic benefit of 118 FIM/day plus 42 per cent of the difference between 253.63 and 118 = 56.96 FIM/day, in total 174.96 FIM/day. The entry of 253.63 FIM/day is calculated as 95.5 per cent of the actual monthly wage, i.e. 5,453 FIM or on a daily basis 5,453 : 21.5 = 253.63 FIM/day. There is no 20 per cent component. The calculated daily benefit is paid for 5 days a week. There is a waiting period of 5 days (1 week), so the compensation is 260 - 5 = 255 days x 174.96 FIM/day = 44,615 FIM.

The gross compensation percentage is 44,615 / 68,523 x 100 = 65. The disposable income of the APW-couple is 121,408 FIM, when the wife is unemployed for the whole year in 1996 and usually is working part time ($^1/_2$ APW income).

The decrease in disposable is 135,599 - 121,408 = 14,191 FIM or 10.5 per cent.

7. Injured from work. Single APW

The effects of injuries from work are investigated in two cases. In the first there is a complete loss of working capability. In the second, the working capability is reduced by 33.3 per cent.

1. Working capability completely lost
There is no gross wage. In Finland the compensation ('full pension') is 85 per cent of the lost income (70 per cent if the recipient is 65 or older), i.e. 116,489 FIM.
The gross compensation percentage is thus 85. The disposable income in this case is 79,679 FIM.
The decrease in disposable income is 85,551 - 79,679 = 5,872 FIM or 6.9 per cent.

2. Loss of $^{1}/_{3}$ of the working capability
The loss of income is 45,682 FIM. The compensation is 1/3 of the 'full pension', i.e. equivalent to 85 per cent of the lost income assuming 2/3 of the wage is maintained. The compensation is 0.85 x 45,682 = 38,830 FIM.
The gross compensation percentage is thus 85. The disposable income is 83,825 FIM, when the APW has lost 1/3 of the working capability.
The decrease in disposable income is 85,551 - 83,825 = 1,726 FIM or 2.0 per cent.

8. Pensioner with maximum period of former occupation. Single APW
Retirement at 'usual' age, here 65 years

The old age pension scheme in Finland consists of a basic part and an income related part. The basic pension consists of a basic amount, which for a single in the 'low' cost part of the country is 446 FIM / month and a supplementary amount, which is 1,978 FIM / month in 1996. The whole basic pension (1996) is means tested (taper of 50 per cent) against the income related pension. In the case where the APW has been working 'all the time' the income related pension will be 60 per cent of the gross income at retirement. On these assumptions an APW with a full working record from the age of 23 years to 65 years will have a pension equal to 0.6 x 137,046 = 82,228 FIM (the basic pension is means tested to zero).
The gross compensation percentage is 82,228 / 137,046 x 100 = 60. The disposable income of the pensioner is 57,244 FIM.
The net compensation percentage is 57,244 / 85,551 x 100 = 66.9.
The decrease in disposable income by retirement is 33.1 per cent.

9. Pensioner without former occupation. 'Single APW'
'Retirement' at 'usual' age, here 65 years

The basic pension in the Finnish old age pension system consists, cf. case 8, of a basic amount of 446 FIM/month and a supplementary amount of 1,978 FIM/month (for a single pensioner in the 'low' cost part of the country in 1994), in total 29,088 FIM a year. There is no taxation of any kind of this minimum pension.
The 'net compensation percentage' is 29,088 / 85,551 x 100 = 34.0.
The 'decrease' in disposable income, relative to that of the APW, is 66.0 by this kind of 'retirement'.

10. Pensioners with maximum period of former occupation. APW-couple
The two pensioners have the same age, and both retire 65 years old.

It is assumed, that both had a 'full' working record. In this case the income related pension is 60 per cent of the gross wage income at retirement, i.e. 0.6 x 137,046 = 82,228 FIM for the husband plus 0.6 x 68,523 = 41,114 FIM for the wife. There will be no national pension for the husband. The national pension for the wife, 12 x 446 = 5,352 FIM and 12 x 1,681 = 20,172 FIM, in total 25,524 FIM, will be means tested to 6,427 FIM. The total pension is 82,228 + 41,114 + 6,427 = 129,769 FIM.
The gross compensation percentage is 129,769 / 205,569 x 100 = 63. The disposable income of the pensioner couple is 97,692 FIM.
The net compensation percentage is 97,692 / 135,599 x 100 = 72.0.
The decrease in disposable income is 28.0 per cent compared to the APW-couple.

'Standard' income events in connection with children

1-3. The couple has 1, 2 or 3 children

For child no. 1 (6 years old) there is a family allowance of 535 FIM/month in 1996, i.e. 6,420 FIM on an annual basis. Compared to the situation without children the increase in disposable income is (6,420 / 135,599) x 100 = 4.7 per cent when the family has one child (6 years old).
For child no. 2 (3 years old) the allowance is 657 FIM/ month, i.e. 7,884 FIM on an annual basis. Compared to the situation without children the increase is (6,420 + 7,884) / 135,599 x 100 = 10.5 per cent when the family has two children (6 and 3 years old).
For child no. 3 (1 year old) the allowance is 779 FIM/month, i.e. 9,348 FIM on an annual basis. Compared to the situation without children the increase is (6,420 + 7,884 + 9,348) / 135,599 x 100 = 17.4 per cent when the family has 3 children (6, 3 and 1 year old).

4. The couple gets the second child and has 2 children

There are the same 'timing-problems' as mentioned in the documentation for Denmark, cf. Appendix 1.

1. The couple has a combined maternity and paternity leave of 281 weekdays. There are 105 days for the mother and 18 days for the father and 158 days which can be shared or taken by either the mother or the father. In this case it is assumed that the mother has 263 days and the father 18 days.
   The husband has a wage reduction of (137,046 / 312) x 18 = 7,907 FIM. He receives 5,481 FIM [1)] in compensation.
   The wife has a wage reduction of (68,523 / 312) x 263 = 57,761 FIM. The benefit for this period is 40,157 FIM [2)].
   Combined the wage reduction is 65,668FIM and the compensation received is 45,638 FIM.
   The gross compensation percentage is 45,638 / 65,668 x 100 = 69.5. The disposable income of the couple with two children (1 child 3 years of age and 1 born in 1996) and a combined leave of 281 days is 138,764 FIM.
   The decrease in disposable income compared to the situation where the couple has two children (3 and 1 year) is 149,903 - 138,764 = 11,139 FIM or 7.4 per cent.

2. In this calculation the common period of 14 weeks maternity leave for the wife is used. Her wage reduction is (68,523 / 312) x 84 = 18,449 FIM. She receives 14 H 6 x 152.69 = 12,826 FIM in compensation.
   The gross compensation percentage is 12,826 / 18,449 x 100 = 69.5. 14 weeks of maternity leave results in a disposable income of 147,016 FIM.
   The decrease in disposable income compared to the situation, where the couple has two children is 149,903 - 147,016 = 2,887 FIM or 1.9 per cent.

1) In the husband's income bracket the daily allowance is calculated in this way: 303.33 + 0.4 (0.955 x 137,046 - 130,000) / 300 = 303.33 + 1.17 = 304.50 FIM. For 18 days the compensation is 18 x 304.50 = 5,481 FIM.
2) In the wife's income bracket the daily allowance is calculated in this way: 0.7 x (0.955 x 68,523) / 300 = 152.69 FIM. For 263 days the compensation is 263 x 152.69 = 40,157 FIM.

Annex Tax and social contribution calculation for single APW, 1996. FIM

Gross wage income:	137,046
Standard deduction:	
Work related expenses, 3.0 per cent max.	1,500
Social contr. unemployment, 1.5 per cent	2,056
Social contr. occupational pension, 4.3 per cent	5,893
Total	9,449
State taxable income:	
Gross wage income	137,046
Total standard deductions	9,449
State taxable income	127,597
State tax:	
State taxable income is in the bracket 104,000 - 163,000 FIM.	
Then the state tax is calculated this way:	
Fixed amount:	10,060
+ .27 x (127,597 - 104,000)	6,371
State tax	16,431
Local Government taxable income:	
1. Calculation of 'low income deduction'	
Gross wage income	137,046
Work related expenses	1,500
Basis for calculation of deduction	135,546
Full deduction is 5 per cent of income above 20,000 FIM, max. 2,000 FIM.	
The full deduction is reduced with 5 per cent of the income above 80,000 FIM.	
The reduction is 0.05 x (135,546 - 80,000) = 2,777 FIM.	
The deduction is:	
Full deduction	2,000
- reduction	2,777
Low income deduction	0
2. Calculation of Local Government taxable income:	
State taxable income	127,597
- low income deduction	0
Local Government taxable income	127,597
Local tax:	
Average Local Government plus church tax rate: 18.81	
Local tax: 0.1881 x (127,597)	24,001

Annex Continued.

Social contributions:	
Contributions for illness:	
1.9 per cent (+ 1.45 per cent for income above 80,000 FIM).	
0.019 x (80,000) =	1,520
0.0335 x (127,597 - 80,000)	1,594
+ Soc. contr. unemployment	2,056
+ Soc. contr. occupational pension	5,893
All social contributions	11,063
Tax and social contributions:	
State tax	16,431
Local tax	24,011
Social contributions	11,063
Tax and social contributions	51,495

DOCUMENTATION OF APW CALCULATIONS FOR FINLAND, 1997, 'CORRECT' DATA

Single APW

The information on the gross wage of the APW in 1997 has been provided by the 'Government Institute for Economic Research' in Finland.

	1997 Non-insured[1)]
Gross wage	140,619 FIM
Tax and social security [2)]	50,435 FIM
Disposable income	90,184 FIM

APW-couple

The husband has the same gross wage as the single APW, the wife has 50 per cent of that income. There are no children.

	1997 Non-insured[1)]
Gross wage	210,929 FIM
Tax and social security	68,425 FIM
Disposable income	142,504 FIM

1) Unemployment insurance (the earnings related component) is voluntary in Finland. In the official APW calculation for Finland in 'The Tax/Benefit Position of Production Workers' there is no deduction in the disposable income for membership fees. This is also the case for the Swedish APW. This procedure has been continued in this study even if it is not strictly correct. The error is, however, marginal.

2) Cf. the annex for a documentation.

'Standard' income events

1. Ill for one week. Single APW

The gross wage is reduced by 1/52, i.e. 2,704 FIM. In Finland there is a waiting period of 9 weekdays (after the first day of illness), so there is no compensation at all from the insurance scheme for the first week of illness. The benefit has no maximum, the minimum is 0. The gross compensation percentage is 0. When the APW is ill for one week his or her disposable income is 88,850 FIM.
The decrease in disposable income compared to the situation without illness is 90,184 - 88,850 = 1,334 FIM or 1.5 per cent.
In Finland labour market agreements are covering the relatively long waiting period. In the usual situation the employee therefore receives wages during short term illness. In some agreements wages will be paid during illness for 1 to 2 months.

2. Unemployed for 3 months during the year, insured. Single APW

The loss of income is 1/4 of the gross wage, i.e. 35,155 FIM. The compensation on a daily basis is: Basic benefit of 118 FIM/day plus 42 per cent of the difference between 493.95 and 118 = 157.90 FIM/day plus 20 per cent of the difference between 520.51 and 493.95 = 5.31 FIM/day, in total 281.21 FIM/day. The ceiling of the 42 per cent bracket is calculated as 90 x 118 = 10,620 FIM/month or on a daily basis 10,620 : 21.5 = 493.95 FIM. The base for the calculation is 95.5 per cent of the actual monthly wage, i.e. 140,619:12 x 0.955 = 11,191 FIM/month or on a daily basis 11,191 : 21.5 = 520.51 FIM, the entry in the 20 per cent bracket. The calculated daily benefit is paid for 5 days per week. There is a waiting period of 7 days (1 2/5 week), so the compensation is 65-7 = 58 days x 281.21 FIM/day = 16,310 FIM. There is no maximum benefit, the minimum is 118 FIM/day.
The gross compensation percentage is 16,310 / 35,155 x 100 = 46. The disposable income of the APW is 81,475 FIM when he or she is unemployed 25 per cent of the year.
The decrease in disposable income compared to the situation without unemployment is 90,184 - 81,475 = 8,709 FIM or 9.7 per cent.

3. Unemployed for the whole year, insured. Single APW

There is no gross wage. The compensation is 260-7 = 253 days x 281.21 FIM/day = 71,146 FIM. There is no maximum benefit, the minimum is 118 FIM/day.
The gross compensation percentage is 71,146 / 140,619 x 100 = 51. The disposable income of the APW is 53,835 FIM when he or she is unemployed for the whole year.
The decrease in disposable income compared to the situation without unemployment is 90,184 - 53,835 = 36,349 FIM or 40.3 per cent.

4. Unemployed for 3 months during the year, non-insured. Single APW

The reduction of the gross wage is 35,155 FIM as in case 2. The compensation for an APW, who is not a member of the voluntary unemployment insurance scheme, is 65 - 7 = 58 days x 118 FIM/day = 6,844 FIM, there is also a waiting period of 7 days in this scheme. The benefit is flat-rate.

The gross compensation percentage is 6,844 / 35,155 x 100 = 19. The disposable income is 76,237 FIM in this situation.

The decrease in disposable income compared to the situation without unemployment is 90,184 - 76,237 = 13,947 FIM or 15.5 per cent.

5. Unemployed for the whole year, non-insured. Single APW

There is no gross wage. The compensation is 260 - 7 = 253 days x 118 FIM/day = 29,854 FIM for a whole year when the unemployed APW is not insured. The benefit is flat-rate.

The gross compensation percentage is 29,854 / 140,619 x 100 = 21. The disposable income is 24,642 FIM in this situation.

The decrease in disposable income compared to the situation without unemployment is 90,184 - 24,642 = 65,542 FIM or 72.7 per cent.

The recipient is eligible to receive additional support for housing costs, either from the housing benefit scheme or from social assistance.

6. Wife unemployed for the whole year, insured. APW-couple

There is no gross wage for the wife. The compensation on a daily basis is: Basic benefit of 118 FIM/day plus 42 per cent of the difference between 260.26 and 118 = 59.75 FIM/day, in total 177.75 FIM/day. The entry of 260.26 FIM/day is calculated as 95.5 per cent of the actual monthly wage, i.e. 5,596 FIM or on a daily basis 5,596 : 21.5 = 260.26 FIM/day. There is no 20 per cent component. The calculated daily benefit is paid for 5 days a week. There is a waiting pediod of 7 days (1 2/5 week), so the compensation is 260 - 7 = 253 days x 177.75 FIM/day = 44,971 FIM. There is no maximum benefit, the minimum is 118 FIM/day.

The gross compensation percentage is 44,971 / 70,310 x 100 = 64. The disposable income of the APW-couple is 126,200 FIM, when the wife is unemployed for the whole year in 1997 and usually is working part time ($^1/_2$ APW income).

The decrease in disposable income compared to the situation without unemployment is 142,504 - 126,200 = 16,304 FIM or 11.4 per cent.

7. Injured from work. Single APW

The effects of injuries from work are investigated in two cases. In the first there is a complete loss of working capability. In the second, the working capability is reduced by 33.3 per cent.

1. Working capability completely lost
   There is no gross wage. In Finland the compensation ('full pension') is 85 per cent of the lost income (70 per cent if the recipient is 65 or older), i.e. 119,526 FIM.
   The gross compensation percentage is thus 85. The disposable income in this case is 83,091 FIM.
   The decrease in disposable income compared to the situation without injuries is 90,184 - 83,091 = 7,093 FIM or 7.9 per cent.

2. Loss of 1/3 of the working capability
   The loss of income is 46,873 FIM. The compensation is 1/3 of the 'full pension', i.e. equivalent to 85 per cent of the lost income assuming 2/3 of the wage is maintained. The compensation is 0.85 x 46,873 = 39,842 FIM.
   The gross compensation percentage is thus 85. The disposable income is 88,552 FIM, when the APW has lost a of the working capability.
   The decrease in dispoable income compared to the situation without injuries is 90,184 - 88,552 = 1,632 FIM or 1.8 per cent.

8. Disability pensioner with former working record and income at APW level. Single APW

It is assumed that the pensioner has a former working record with income at APW level. In this case he or she will get 'anticipated' pension rights on that basis. How much also depends on the age at the pension time. The usual old age pension accrual rate is 1.5 per cent per year of the wage from the 23rd year to 60th and then 2.5 per cent to the 65th year. In case of disability pension the 'anticipated' accrual rate is 1.5 per cent per year of the wage until the 50th year, then 1.2 per cent to the 60th and finally 0.8 per cent to the 65th. The maximum pension right is 60 per cent of the former income. A person who is 50 years (or younger) when he or she receives a disability pension can as a maximum receive 56.5 per cent of the former income. An age of max. 50 years is assumed here. The income related pension is 79,450 FIM. The basic pension is 29,256 FIM a year when the pensioner is living in the low cost part of the country. The basic pension is 'integrated' with the income related pension in this way: basic pension - 0.5 (income related pension - 2,940). In this case the basic pension is reduced to zero.

The disposable income for the 'APW-disability pensioner' (full pension) is 79,450 FIM in income related pension minus 22,059 FIM in personal taxation, in total 57,391 FIM.
The net compensation percentage is 57,391 / 90,184 x 100 = 63.6.
The decrease in disposable income is 36.4 per cent in this situation.

9. Disability pensioner without former working record. 'Single APW'

The disability pensioner receives the basic pension which for a single person in the low cost part of the country is 29,256 FIM a year (it is the same as basic old age pension).
There is no taxation of this basic pension. The disposable income is 29,256 FIM.
The 'net compensation percentage' (relative to the APW) is 29,256 / 90,184 x 100 = 32.4.
The 'decrease' in disposable income, relative to that of the APW, is 67.6 per cent.

10. Wife disability pensioner. APW-couple

It is assumed that the wife in the APW couple becomes a disability pensioner, while the husband continues to work (APW income level). The wife has a working record earning $^1/_2$ APW income. If she becomes a disability pensioner at the age of 50 years (or earlier) she will as a maximum receive an earningsrelated pension of 56.5 per cent of the former income, i.e. 39,725 FIM in this case.
The basic pension is 25,680 FIM a year for a married person living in the low cost part of the country. The basic pension is 'integrated' with the earningsrelated pension, cf. case 8. This leaves 7,287 FIM of the basic pension. The total gross pension for the disability pensioner is 39,725 + 7,287 = 47,012 FIM.
The gross compensation percentage for the wife is 47,012 / 70,310 x 100 = 67. The disposable income of the couple is 90,184 FIM for the husband (APW income) and 40,343 FIM for the wife receiving disability pension, in total 130,527 FIM.
The decrease in disposable income compared to the situation without disability pension is 142,504 - 130,527 = 11,977 FIM or 8.4 per cent.

11. Pensioner with maximum period of former occupation. Single APW
Retirement at 'usual' age, here 65 years

The old age pension scheme in Finland consists of a basic part and an income related part. In the case where the APW has been working 'all the time' the income related pension will be 60 per cent of the gross income at retirement. The basic pension will in 1997 be means tested down to 0, cf. case 13 for a factual calculation for the spouse in the APW-couple. On these assumptions an APW with a full working record from the age of 23 years to 65 years will have a pension equal to 0.6 x 140,619 = 84,371 FIM.
The disposable income of the pensioner is 84,371 FIM in income related pension minus 25,021 FIM in personal tax, in total 59,350 FIM.

The net compensation percentage is 59,350 / 90,184 x 100 = 65.8.
The decrease in disposable income by retirement is 34.2 per cent.

12. Pensioner without former occupation. Single APW 'Retirement' at 'usual' age, here 65 years

The 'basic' pension in the Finnish old age pension system now consists of one amount, 2,438 FIM/month (for a single pensioner in the 'low' cost part of the country), in total 29,256 FIM a year. There is no taxation of any kind of this minimum pension. The disposable income is 29,256 FIM.
The 'net compensation percentage' (relative to the APW) is 29,256 / 90,184 x 100 = 32.4.
The 'decrease' in disposable income, relative to that of the APW, is 67.6 by this kind of 'retirement'.

13. Pensioners with maximum period of former occupation. APW-couple. The two pensioners have the same age, and both retire 65 years old

It is assumed, that both had a 'full' working record. In this case the income related pension is 60 per cent of the gross wage income at retirement, i.e. 0.6 x 140,619 = 84,371 FIM plus 0.6 x 70,310 = 42,186 FIM, in total 126,557 FIM. For the former part time working spouse, there will be an additional 6,057 FIM left from the means testing of the basic pension (25,680 - 0.5 x (42,186 - 2,940) = 6,057). The total pension is 126,557 + 6,057 = 132,614 FIM.
25,680 FIM is the annual basic pension for a spouse in the 'low' cost part of the country.
The disposable income of the pensioner couple is 126,557 FIM in income related pension plus 6,057 FIM basic pension minus 33,284 FIM in personal tax, in total 100,330 FIM.
The net compensation percentage is 100,330 / 142,504 x 100 = 70.4.
The decrease in disposable income is 29.6 per cent compared to the APW-couple.

'Standard' income events in connection with children

1-3. The couple has 1, 2 or 3 children

For child no. 1 (6 years old) there is a family allowance of 535 FIM/month in 1997, i.e. 6,420 FIM on an annual basis. Compared to the situation without children the increase in disposable income is (6,420 / 142,504) x 100 = 4.5 per cent when there is one child (6 years old).
For child no. 2 (3 years old) the allowance is 657 FIM/ month, i.e. 7,884 FIM on an annual basis. Compared to the situation without children the increase is (6,420 + 7,884) / 142,504 x 100 = 10.0 per cent when there are two children (6 and 3 years).
For child no. 3 (1 year old) the allowance is 779 FIM/month, i.e. 9,348 FIM on an annual basis. Compared to the situation without children the increase is (6,420 + 7,884 + 9,348) /

142,504 x 100 = 16.6 per cent when there are 3 children (6, 3 and 1 year).

4. The couple gets the second child and has 2 children

There are the same 'timing-problems' as mentioned in the documentation for Denmark, cf. Appendix 1.

1. The couple has a combined maternity and paternity leave of 281 weekdays. There are 105 days for the mother and 18 days for the father and 158 days which can be shared or taken by either the mother or the father. In this case it is assumed that the mother has 263 days and the father 18 days.
   The husband has a wage reduction of (140,619 / 312) x 18 = 8,113 FIM. He receives 5,604 FIM [1] in compensation. The benefit has no maximum. There is a minimum of 60 FIM/day.
   The wife has a wage reduction of (70,310 / 312) x 263 = 59,268 FIM. The benefit for this period is 41,204 FIM [2].
   Combined the wage reduction is 67,381 FIM and the compensation received is 46,808 FIM.
   The gross compensation percentage is 46,808 / 67,381 x 100 = 69.5. The disposable income of the couple with a combined leave of 281 days is 144,101 FIM including family allowance for 2 children (1 child 3 years of age and 1 born in 1997).
   The decrease in disposable income compared to the situation where the couple has two children (3 and 1 year) is 156,808 - 144,101 = 12,707 FIM or 8.1 per cent.

2. In this calculation the common period of 14 weeks maternity leave for the wife is used. Her wage reduction is (70,310 / 312) x 84 = 18,930 FIM. She receives 13,160 FIM in compensation. The benefit has no maximum. There is a minimum of 60 FIM/day.
   The gross compensation percentage is 13,160 / 18,930 x 100 = 69.5. 14 weeks of maternity leave results in a disposable income of 153,745 FIM.
   The decrease in disposable income compared to the situation, where the couple has two children is 156,808 - 153,745 = 3,063 FIM or 2.0 per cent.

1) In the husband's income bracket the daily allowance is calculated in this way: 308.65 + 0.4 (0.955 x 140,619 - 132,280) / 300 = 308.65 + 2.68 = 311.33 FIM. For 18 days the compensation is 18 x 311.33 = 5,604 FIM.
2) In the wife's income bracket the daily allowance is calculated in this way: 0.7 H (0.955 x 70,310) / 300 = 156.67 FIM. For 263 days the compensation is 263 x 156.67 = 41,204 FIM.

Annex Tax and social contribution calculation for single APW, 1997. FIM

Gross wage income:	140,619
Standard deduction:	
Work related expenses, 3.0 per cent max.	1,800
Social contr. unemployment, 1.5 per cent	2,109
Social contr. occupational pension, 4.5 per cent	6,328
Total	10,237
State taxable income:	
Gross wage income	140,619
Total standard deductions	10,237
State taxable income	130,382
State tax:	
State taxable income is in the bracket 108,000 - 170,000 FIM.	
Then the state tax is calculated this way:	
Fixed amount:	9,810
+ .26 x (130,382 - 108,000)	5,819
State tax	15,629
Local Government taxable income:	
1. Calculation of 'low income deduction'	
Gross wage income	140,619
Work related expenses	1,800
Basis for calculation of deduction	138,819
Full deduction is 20 per cent of income above 15,000 FIM, max. 5,500 FIM.	
The deduction is reduced with 2 per cent of the income above 43,000 FIM.	
The reduction is 0.02 x (138,819 - 43,000) = 1,916 FIM.	
The deduction is:	
Full deduction	5,500
- reduction	1,916
Low income deduction	3,584
2. Calculation of Local Government taxable income:	
State taxable income	130,382
- low income deduction	3,584
Local Government taxable income	126,798
Local tax:	
Average Local Government plus church tax rate: 18.73	
Local tax: 0.1873 x (126,798)	23,749

Annex Continued.

Social contributions:	
Contributions for illness:	
1.9 per cent (+ 0.45 per cent for income above 80,000 FIM).	
0.019 x (80,000) =	1,520
0.0235 x (126,798 - 80,000)	1,100
+ Soc. contr. unemployment	2,109
+ Soc. contr. occupational pension	6,328
All social contributions	11,057
Tax and social contributions:	
State tax	15,629
Local tax	23,749
Social contributions	11,057
Tax and social contributions	50,435

DOCUMENTATION OF APW CALCULATIONS FOR FINLAND, 1998, 'CORRECT' DATA

Single APW

The information on the gross wage of the APW in 1998 has been provided by the 'Government Institute for Economic Research' in Finland.

	1998 Non-insured[1)]
Gross wage	141,732 FIM
Tax and social security[2)]	50,357 FIM
Disposable income	91,375 FIM

APW-couple

The husband has the same gross wage as the single APW, the wife has 50 per cent of that income. There are no children.

	1998 Non-insured[1)]
Gross wage	212,598 FIM
Tax and social security	68,291 FIM
Disposable income	144,307 FIM

1) Unemployment insurance (the earnings related component) is voluntary in Finland. In the official APW calculation for Finland in 'The Tax/Benefit Position of Employees' there is no deduction in the disposable income for membership fees. This is also the case for the Swedish APW. This procedure has been continued in this study even if it is not strictly correct. The error is, however, marginal.
2) Cf. the annex for a documentation.

'Standard' income events

1. Ill for one week. Single APW

The gross wage is reduced by 1/52, i.e. 2,726 FIM. In Finland there is a waiting period of 9 weekdays (after the first day of illness), so there is no compensation at all from the insurance scheme for the first week of illness. The benefit has no maximum, the minimum is 0.

The gross compensation percentage is 0. When the APW is ill for one week his or her disposable income is 90,025 FIM.

The decrease in disposable income compared to the situation without illness is 91,375 - 90,025 = 1,350 FIM or 1.5 per cent.

In Finland labour market agreements are covering the relatively long waiting period. In the usual situation the employee therefore receives wages during short term illness. In some agreements wages will be paid during illness for 1 to 2 months.

2. Unemployed for 3 months during the year, insured. Single APW

The loss of income is 1/4 of the gross wage, i.e. 35,433 FIM. The compensation on a daily basis is: Basic benefit of 120 FIM/day plus 42 per cent of the difference between 502.33 and 120 = 160.58 FIM/day plus 20 per cent of the difference between 521.88 and 502.33 = 3.91 FIM/day, in total 284.49 FIM/day. The ceiling of the 42 per cent bracket is calculated as 90 x 120 = 10,800 FIM/month or on a daily basis 10,800 : 21.5 = 502.33 FIM. The base for the calculation is 95.0 per cent of the actual monthly wage, i.e. 141,732:12 x 0.95 = 11,220.45 FIM/month or on a daily basis 11,220.45: 21.5 = 521.88 FIM, the entry in the 20 per cent bracket. The calculated daily benefit is paid for 5 days per week. There is a waiting period of 7 days (1 2/5 week), so the compensation is 65-7 = 58 days x 284,49 FIM/day = 16,500 FIM. There is no maximum benefit, the minimum is 120 FIM/day.

The gross compensation percentage is 16,500 / 35,433 x 100 = 46.5. The disposable income of the APW is 82,600 FIM when he or she is unemployed 25 per cent of the year.

The decrease in disposable income compared to the situation without unemployment is 91,375 - 82,600 = 8,775 FIM or 9.6 per cent.

3. Unemployed for the whole year, insured. Single APW

There is no gross wage. The compensation is 260-7 = 253 days x 284.49 FIM/day = 71,976 FIM. There is no maximum benefit, the minimum is 120 FIM/day.

The gross compensation percentage is 71,976 / 141,732 x 100 = 51. The disposable income of the APW is 54,723 FIM when he or she is unemployed for the whole year.

The decrease in disposable income compared to the situation without unemployment is 91,375 - 54,723 = 36,652 FIM or 40.1 per cent.

4. Unemployed for 3 months during the year, non-insured. Single APW

The reduction of the gross wage is 35,433 FIM as in case 2. The compensation for an APW, who is not a member of the voluntary earnings related unemployment insurance scheme, is 65 - 7 = 58 days x 120 FIM/day = 6,960 FIM, there is also a waiting period of 7 days in this scheme. The benefit is flat-rate.

The gross compensation percentage is 6,960 / 35,433 x 100 = 20. The disposable income is 77,223 FIM in this situation.

The decrease in disposable income compared to the situation without unemployment is 91,375 - 77,223 = 14,152 FIM or 15.5 per cent.

5. Unemployed for the whole year, non-insured. Single APW

There is no gross wage. The compensation is 260 - 7 = 253 days x 120 FIM/day = 30,360 FIM for a whole year when the unemployed APW is not insured. The benefit is flat-rate.

The gross compensation percentage is 30,360 / 141,732 x 100 = 21. The disposable income is 25,095 FIM in this situation.

The decrease in disposable income compared to the situation without unemployment is 91,375 - 25,095 = 66,280 FIM or 72.5 per cent.

The recipient is eligible to receive additional support for housing costs, either from the housing benefit scheme or from social assistance.

6. Wife unemployed for the whole year, insured. APW-couple

There is no gross wage for the wife. The compensation on a daily basis is: Basic benefit of 120 FIM/day plus 42 per cent of the difference between 260.94 and 120 = 59.19 FIM/day, in total 179.19 FIM/day. The entry of 260.94 FIM/day is calculated as 95.0 per cent of the actual monthly wage, i.e. 5,610.23 FIM or on a daily basis 5,610.23 : 21.5 = 260.94 FIM/day. There is no 20 per cent component. The calculated daily benefit is paid for 5 days a week. There is a waiting pediod of 7 days (1 2/5 week), so the compensation is 260 - 7 = 253 days x 179.19FIM/day = 45,335 FIM. There is no maximum benefit, the minimum is 120 FIM/day.

The gross compensation percentage is 45,335 / 70,866 x 100 = 64. The disposable income of the APW-couple is 127,788 FIM, when the wife is unemployed for the whole year in 1998 and usually is working part time ($^1/_2$ APW income).

The decrease in disposable income compared to the situation without unemployment is 144,307 - 127,788 = 16,519 FIM or 11.4 per cent.

7. Injured from work. Single APW

The effects of injuries from work are investigated in two cases. In the first there is a complete loss of working capability. In the second, the working capability is reduced by 33.3 per cent.

1. Working capability completely lost
   There is no gross wage. In Finland the compensation ('full pension') is 85 per cent of the lost income (70 per cent if the recipient is 65 or older), i.e. 120,472 FIM.
   The gross compensation percentage is thus 85. The disposable income in this case is 84,281 FIM.
   The decrease in disposable income compared to the situation without injuries is 91,375 - 84,281 = 7,094 FIM or 7.8 per cent.

2. Loss of $^1/_3$ of the working capability
   The loss of income is 47,244 FIM. The compensation is 1/3 of the 'full pension', i.e. equivalent to 85 per cent of the lost income assuming 2/3 of the wage is maintained. The compensation is 0.85 x 47,244 = 40,157 FIM.
   The gross compensation percentage is thus 85. The disposable income is 89,735 FIM, when the APW has lost a of the working capability.
   The decrease in dispoable income compared to the situation without injuries is 91,375 - 89,735 = 1,640 FIM or 1.8 per cent.

8. Disability pensioner with former working record and income at APW level. Single APW

It is assumed that the pensioner has a former working record with income at APW level. In this case he or she will get 'anticipated' pension rights on that basis. How much also depends on the age at the pension time. The usual old age pension accrual rate is 1.5 per cent per year of the wage from the 23rd year to 60th and then 2.5 per cent to the 65th year. In case of disability pension the 'anticipated' accrual rate is 1.5 per cent per year of the wage until the 50th year, then 1.2 per cent to the 60th and finally 0.8 per cent to the 65th. The maximum pension right is 60 per cent of the former income. A person who is 50 years (or younger) when he or she receives a disability pension can as a maximum receive 56.5 per cent of the former income. An age of max. 50 years is assumed here. The income related pension is 80,079 FIM. The basic pension is 29,772 FIM a year when the pensioner is living in the low cost part of the country. The basic pension is 'integrated' with the income related pension in this way: basic pension - 0.5 (income related pension - 2,990). In this case the basic pension is reduced to zero.

The disposable income for the 'APW-disability pensioner' (full pension) is 80,079 FIM in income related pension minus 21,460 FIM in personal taxation, in total 58,619 FIM.
The net compensation percentage is 58,619 / 91,375 x 100 = 64.2.
The decrease in disposable income is 35.8 per cent in this situation.

9. Disability pensioner without former working record. 'Single APW'

The disability pensioner receives the basic pension which for a single person in the low cost part of the country is 29,772 FIM a year (it is the same as basic old age pension).
There is no taxation of this basic pension. The disposable income is 29,772 FIM.
The 'net compensation percentage' (relative to the APW) is 29,772 / 91,375 x 100 = 32.6.
The 'decrease' in disposable income, relative to that of the APW, is 67.4 per cent.

10. Wife disability pensioner. APW-couple

It is assumed that the wife in the APW couple becomes a disability pensioner, while the husband continues to work (APW income level). The wife has a working record earning 1/2 APW income. If she becomes a disability pensioner at the age of 50 years (or earlier) she will as a maximum receive an earningsrelated pension of 56.5 per cent of the former income, i.e. 40,039 FIM in this case.
The basic pension is 26,136 FIM a year for a married person living in the low cost part of the country. The basic pension is 'integrated' with the earningsrelated pension, cf. case 8. This leaves 7,611 FIM of the basic pension. The total gross pension for the disability pensioner is 40,039 + 7,611 = 47,650 FIM.
The gross compensation percentage for the wife is 47,650 / 70,866 H 100 = 67. The disposable income of the couple is 91,375 FIM for the husband (APW income) and 41,126 FIM for the wife receiving disability pension, in total 133,501 FIM.
The decrease in disposable income compared to the situation without disability pension is 144,307 - 132,501 = 11,806 FIM or 8.2 per cent.

11. Pensioner with maximum period of former occupation. Single APW Retirement at 'usual' age, here 65 years

The old age pension scheme in Finland consists of a basic part and an income related part. In the case where the APW has been working 'all the time' the income related pension will be 60 per cent of the gross income at retirement. The basic pension will in 1998 be means tested down to 0, cf. case 13 for a factual calculation for the spouse in the APW-couple. On these assumptions an APW with a full working record from the age of 23 years to 65 years will have a pension equal to 0.6 x 141,732 = 85,039 FIM.
The disposable income of the pensioner is 85,039 FIM in income related pension minus 24,580 FIM in personal tax, in total 60,459 FIM.

The net compensation percentage is 60,459 / 91,375 x 100 = 66.2.
The decrease in disposable income by retirement is 33.8 per cent.

12. Pensioner without former occupation. Single APW 'Retirement' at 'usual' age, here 65 years

The 'basic' pension in the Finnish old age pension system now consists of one amount, 2,481 FIM/month (for a single pensioner in the 'low' cost part of the country), in total 29,772 FIM a year. There is no taxation of any kind of this minimum pension. The disposable income is 29,772 FIM.
The 'net compensation percentage' (relative to the APW) is 29,772 / 91,375 x 100 = 32.6.
The 'decrease' in disposable income, relative to that of the APW, is 67.4 by this kind of 'retirement'.

13. Pensioners with maximum period of former occupation. APW-couple. The two pensioners have the same age, and both retire 65 years old

It is assumed, that both had a 'full' working record. In this case the income related pension is 60 per cent of the gross wage income at retirement, i.e. 0.6 x 141,732 = 85,039 FIM plus 0.6 x 70,866 = 42,520 FIM, in total 127,559 FIM. For the former part time working spouse, there will be an additional 6,371 FIM left from the means testing of the basic pension (26,136 - 0.5 x (42,590 - 2,990) = 6,371). The total pension is 127,559+ 6,371 = 133,930 FIM. 26,136 FIM is the annual basic pension for a spouse in the 'low' cost part of the country.
The disposable income of the pensioner couple is 127,559 FIM in income related pension plus 6,371 FIM basic pension minus 31,687 FIM in personal tax, in total 102,243 FIM.
The net compensation percentage is 102,243 / 144,307 x 100 = 70.9.
The decrease in disposable income is 29,1 per cent compared to the APW-couple.

'Standard' income events in connection with children

1-3. The couple has 1, 2 or 3 children

For child no. 1 (6 years old) there is a family allowance of 535 FIM/month in 1998, i.e. 6,420 FIM on an annual basis. Compared to the situation without children the increase in disposable income is (6,420 / 144,307) x 100 = 4.4 per cent when there is one child (6 years old). For child no. 2 (3 years old) the allowance is 657 FIM/ month, i.e. 7,884 FIM on an annual basis. Compared to the situation without children the increase is (6,420 + 7,884) / 144,307 x 100 = 9.9 per cent when there are two children (6 and 3 years).

For child no. 3 (1 year old) the allowance is 779 FIM/month, i.e. 9,348 FIM on an annual basis. Compared to the situation without children the increase is (6,420 + 7,884 + 9,348) / 144,307 x 100 = 16.4 per cent when there are 3 children (6, 3 and 1 year).

4. The couple gets the second child and has 2 children

There are the same 'timing-problems' as mentioned in the documentation for Denmark.

1. The couple has a combined maternity and paternity leave of 281 weekdays. There are 105 days for the mother and 18 days for the father and 158 days which can be shared or taken by either the mother or the father. In this case it is assumed that the mother has 263 days and the father 18 days.
   The husband has a wage reduction of (141,732 / 312) x 18 = 8,177 FIM. He receives 5,655 FIM [1] in compensation. The benefit has no maximum. There is a minimum of 60 FIM/day.
   The wife has a wage reduction of (70,866 / 312) x 263 = 59,736 FIM. The benefit for this period is 41,315 FIM [2].
   Combined the wage reduction is 67,913 FIM and the compensation received is 46,970 FIM.
   The gross compensation percentage is 46,970 / 67,913 x 100 = 69. The disposable income of the couple with a combined leave of 281 days is 145,617 FIM including family allowance for 2 children (1 child 3 years of age and 1 born in 1998).
   The decrease in disposable income compared to the situation where the couple has two children (3 and 1 year) is 158,611 - 145,617 = 12,994 FIM or 8.2 per cent.

2. In this calculation the common period of 14 weeks maternity leave for the wife is used. Her wage reduction is (70,866 / 312) x 84 = 19,079 FIM. She receives 13,196 FIM in compensation. The benefit has no maximum. There is a minimum of 60 FIM/day.
   The gross compensation percentage is 13,196 / 19,079 x 100 = 69. 14 weeks of maternity leave results in a disposable income of 155,422 FIM.
   The decrease in disposable income compared to the situation, where the couple has two children is 158,611 - 155,422 = 3,189 FIM or 2,0 per cent.

1) In the husband's income bracket the daily allowance is calculated in this way: 0.7 x (0.95 x 141,732)/300 = 314.17 FIM. For 18 days the compensation is 18 x 314.17 = 5,655 FIM.
2) In the wife's income bracket the daily allowance is calculated in this way: 0.7 x (0.95 x 70,866) / 300 = 157.09 FIM. For 263 days the compensation is 263 x 157.09 = 41.315 FIM.

Annex Tax and social contribution calculation for single APW, 1998. FIM

Gross wage income:	141,732
Standard deduction:	
Work related expenses, 3.0 per cent max.	1,800
Social contr. unemployment, 1.4 per cent	1,984
Social contr. occupational pension, 4.7 per cent	6,661
Total	10,445
State taxable income:	
Gross wage income	141,732
Total standard deductions	10,445
State taxable income	131,287
State tax:	
State taxable income is in the bracket 110,000 - 173,000 FIM.	
Then the state tax is calculated this way:	
Fixed amount:	9,970
+ .26 x (131,287 - 110,000)	5,535
State tax	15,505
Local Government taxable income:	
1. Calculation of 'low income deduction'	
Gross wage income	141,732
Work related expenses	1,800
Basis for calculation of deduction	139,932
Full deduction is 20 per cent of income above 15,000 FIM, max. 5,500 FIM.	
The deduction is reduced with 2 per cent of the income above 43,000 FIM.	
The reduction is 0.02 x (139,932 - 43,000) = 1,939 FIM.	
The deduction is:	
Full deduction	5,500
- reduction	1,939
Low income deduction	3,561
2. Calculation of Local Government taxable income:	
State taxable income	131,287
- low income deduction	3,561
Local Government taxable income	127,726
Local tax:	
Average Local Government plus church tax rate: 18.85	
Local tax: 0.1885 x (127,726)	24,076

Annex Continued.

Social contributions:	
Contributions for illness:	
1.5 per cent (+ 0.45 per cent for income above 80,000 FIM).	
0.015 x (80,000) =	1,200
0.0195 x (127,726 - 80,000)	931
+ Soc. contr. unemployment	1,984
+ Soc. contr. occupational pension	6,661
All social contributions	10,776
Tax and social contributions:	
State tax	15,505
Local tax	24,076
Social contributions	10,776
Tax and social contributions	50,357

APPENDIX 4

DOCUMENTATION OF FAMILY TYPE (APW) CALCULATIONS FOR CANADA 1996–1998, 'CORRECT' DATA

DOCUMENTATION OF APW CALCULATIONS FOR CANADA 1996, 'CORRECT' DATA

Single APW The gross wage of the APW (or AE) in 1996 is calculated by Statistics Canada, revised series.

	1996 Insured[1]
Gross wage	34,304 CAD
Tax and social security contribution[2]	9,569 CAD
Disposable income	24,735 CAD

APW-couple The husband has the same wage as the single APW, the wife has 50 per cent of that income. The couple has no children.

	1996 Insured[1]
Gross wage	51,456 CAD
Tax and social security contribution[2]	13,108 CAD
Disposable income	38,348 CAD

1) Unemployment insurance is mandatory in Canada.
2) Cf. the annex for a documentation.

'Standard' income events

1. Ill for one week during the year. Single APW

The gross wage is reduced by 1/52, i.e. 660 CAD. The compensation is 55 per cent of the lost income, but with a waiting period of 2 weeks in the scheme there is no compensation. The rules are the same as in the 'Employment Insurance' scheme. Maximum insurable earnings are 39,000 CAD in 1996.

The gross compensation percentage is 0. The disposable income of the APW who is ill for one week is 24,377 CAD in 1996.
The decrease in disposable income compared to the situation with no illness is 24,735 - 24,377 = 358 CAD or 1.4 per cent.
There are no general labour market agreements to cover in case of illness, but there are supplementary benefits from some large corporations.

2. Unemployed for 3 months during the year, insured. Single APW

The gross wage of the insured APW is reduced by 1/4, i.e. 8,576 CAD. The compensation is 55 per cent of the lost income according to the 'Employment Insurance' scheme. For 13 weeks with a waiting period of 2 weeks the compensation is 11/13 * 0.55 * 8,576 = 3,991 CAD. Maximum insurable earnings are 39,000 CAD in 1996.
The gross compensation percentage is 3,991/8,576 x 100 = 46.5. The disposable income of the APW with 25 per cent unemployment is 22,406 CAD in 1996.
The decrease in disposable income compared to the situation with no unemployment is 24,735 - 22,406 = 2,329 CAD or 9.4 per cent.

3. Unemployed for the whole year, insured. Single APW

There is no gross wage. The maximum benefit period is 45 weeks (varies across the provinces according to the unemployment level). The compensation is 55 per cent of the lost income in 45 weeks, i.e. 45/52 * 0.55 * 34,304 = 16,327 CAD. There are first 2 weeks (waiting period) with no compensation, then 45 weeks with compensation from the 'Employment Insurance' scheme, and in the end 5 weeks with social assistance. Social assistance is 195 CAD/month (rate for the province of Ontario) for a single person (not including housing coverage), i.e. 225 CAD for 5 weeks. Social assistance (S.A.) is not taxable (this is the case in all provinces except Quebec). The total compensation is 16,327 CAD from the employment insurance and 225 CAD from S.A., in total 16,552 CAD.
The gross compensation percentage is 16,552/34,304 x 100 = 48. The disposable income of the APW who is unemployed for the whole year is 13,884 CAD in 1996.
The decrease in disposable income compared to the situation with no unemployment is 24,735 - 13,884 = 10,851 CAD or 43.9 per cent.

4. Unemployed for 3 months during the year, not eligible for insurance. Single APW

The reduction of the gross wage is 8,576 CAD just as in case 2 (3 months of unemployment). It is assumed that the unemployed receives social assistance during the unemployment period.

The monthly rate for a single person is 195 CAD (cf. also case 3), i.e. 585 CAD in compensation for three months (housing allowances are not included).
The gross compensation percentage is 585/ 8,576 x 100 = 7. Disposable income for an APW with 3 months of unemployment receiving social assistance is 20,097 CAD.
The decrease in disposable income compared to the situation with no unemployment is 24,735 - 20,097 = 4,638 CAD or 18.8 per cent.

5. Unemployed for the whole year, not eligible for insurance. Single APW

There is no gross wage. The compensation is 12 * 195 = 2,340 CAD on the assumption that the unemployed single person receives social assistance during the unemployment period.
The gross compensation percentage is 2,340/34,304 x 100 = 7. Social assistance is not taxable so the disposable income is 2,340 CAD (excluding housing allowances).
The decrease in disposable income compared to the situation with no unemployment is 24,735 - 2,340 = 22,395 or 90.5 per cent.
The single unemployed recipient of social assistance would also be eligible for a (non taxable) housing allowance of 325 CAD/month. The personal as well as the housing allowance increase with family size. A couple (no children) receives 390 CAD/month in personal allowances and 511 CAD/month in housing allowance.

6. Wife unemployed for the whole year, insured. APW couple

There is no gross wage for the wife. The maximum benefit period for a person working part time (here 50 per cent) is 39 weeks (varies across the provinces according to the unemployment level). The compensation is 55 per cent of the lost income in 39 weeks, i.e. 39/52 * 0.55 * 17,152 = 7,075 CAD. There are first 2 weeks (waiting period) with no compensation, then 39 weeks with compensation from the 'Employment Insurance'. There is no compensation from social assistance for the remaining time (11 weeks), because it is means tested to 0 against the husband's income from work. Total compensation is 7,075 CAD.
The gross compensation percentage is 7,075/17,152 x 100 = 41. The disposable income for the APW-couple is 31,643 CAD, when the wife is unemployed for the whole year in 1996 and usually is working part time.
The decrease in disposable income compared to the situation with no unemployment is 38,348 - 31,643 = 6,705 CAD or 17.5 per cent.

7. Injured from work. Single APW

The effects of injuries from work are studied in two cases. In the first there is a complete loss of working capability. In the second the working capability is reduced by 33.3 per cent. Only current benefits are considered. The Canadian cases are based on the legislation for the Ontario Province.

1. Working capability completely lost
   There is no gross wage. The compensation is 90 per cent of the lost income after tax and social contributions up to a ceiling, which in 1996 corresponds to a gross wage of 55,600 CAD. The compensation (in Ontario) is .9*24,735 = 22,262 CAD which is also the disposable income.
   The net compensation percentage is thus 90.
   The decrease in disposable income is 24,735-22,262 = 2,473 CAD or 10.0 per cent compared to the situation with no injuries.

2. Loss of 1/3 of the working capability
   The gross wage is reduced by 1/3, i.e. 11,435 CAD. The compensation would be approx. 1/3 of that in case 7.1, i.e. 7,421 CAD.
   The net compensation percentage is thus 90. The disposable income is 24,967 CAD in case of loss of 1/3 of the working capability (disregarding lump sum payments).
   The increase in disposable income is 24,967-24,735 = 232 CAD or 0.9 per cent compared to the situation with no injuries. The positive effect is because of the progression in the Canadian tax scheme.

8. Pensioner with maximum period of former occupation. Single APW Retirement at 'usual' age, here 65 years

The public pension for the former APW consists of 3 components, the Old Age Security Pension (OAS), which in 1996 was 4,764 CAD (annual basis), the Guaranteed Income Supplement (GIS), which in 1996 was 5,662 CAD and the Canadian Pension Plan (CPP), where the maximum pension was 8,725 CAD in 1996. The CPP aims for a gross replacement rate of 25 per cent up to the Maximum Pensionable Earnings (YMPE). It is assumed that the APW income is 97 per cent of the YMPE (average for 1996-1999) implying that the former APW receives 97 per cent of the max. pension, i.e. 8,463 CAD.
OAS and CPP pensions are taxable, GIS is not, but this component is means tested against other income (here CPP) with a taper of 50 per cent. There might in addition be a provincial 'top-up', not included here.

The disposable income for the APW pensioner is 4,764 CAD (OAS) plus 1,430 (GIS) plus 8,463 CAD (CPP) minus 889 CAD in personal tax, in total 13,768 CAD.
The net compensation percentage is 13,768/24,735 x 100 = 55.7.
The decrease in disposable income compared to the APW is 44.3 per cent.

9. Pensioner without former occupation. 'Single APW' 'Retirement' at 'usual' age, here 65 years

In this case the public pension consists of 2 components, OAS of 4,764 CAD and GIS of 5,662 CAD, in total 10,426 CAD in 1996. OAS is taxable but the non refundable tax credits are larger than the tax liability, so there is no personal taxation in this case. The disposable income is 10,426 CAD.
The 'net compensation percentage' in relation to the APW is 10,426/24,735 x 100 = 42.2.
The 'decrease' in disposable income is 57.8 per cent by this kind of 'retirement'.

10. Pensioners with maximum period of former occupation. APW couple The two pensioners have the same age, and both retire 65 years old

The OAS rate is the same for singles and spouses, 4,764 CAD, but the GIS rate is 3,688 CAD for each spouse in the pensioner couple. 96 per cent of the max. CPP rate, i.e. 8,463 CAD, is used for the husband, and the wife having a long working record earning 1/2 APW income receives half of that, i.e. 4,232 CAD in CPP pension. The combined GIS, 7,376 CAD, is means tested against the combined CPP pension for the couple, 12,695 CAD, leaving 1,028 CAD in GIS for the couple.
The disposable income for the pensioner couple is 9,528 (OAS) plus 1,028 (GIS) plus 12,695 (CPP) minus 485 in personal tax in total 22,766 CAD. The reason for a lower personal tax for the couple than for the single is a transferable old age tax credit for each of the spouses, and an Ontario tax reduction for the high income spouse.
The net compensation percentage is 22,766/38,348 x 100 = 59.4.
The decrease in disposable income at retirement is 40.6 per cent for the APW couple.

'Standard' income events in connection with children

1-3. The APW-couple has 1, 2 or 3 children

Child no. 1 (6 years old). The basic child tax benefit is 1,020 CAD plus 213 CAD if there are no tax deductions for child care and the child is in the age bracket 0-7 years. The benefit is 'taxed back' at a rate of 2.5 per cent of net income above 25,921 CAD (net income here is equivalent to the gross wage income of the couple).

'Tax back': 0.025 * (51,456 - 25,921) = 638 CAD, child benefit : 1,020 + 213 -638 = 595 CAD. Compared to the situation without children the increase in disposable income is 595/38,348 x 100 = 1.6 per cent with 1 child (6 years old).

Child no. 2 (3 years old). The basic child tax benefit is 1,020 CAD plus 213 CAD just as for child no. 1. The benefit is 'taxed back' at a rate of 5 per cent of net income when there are 2 or more children.
'Tax back': 0.05 * (51,456 - 25,921) = 1,277 CAD, child benefits: 2,040 + 426 - 1,277 = 1,189 CAD. Compared to the situation without children the increase in disposable income is 1,189/38,348 x 100 = 3.1 per cent with 2 children (6 and 3 years old).

Child no. 3 (1 year old). The basic child tax benefit is 1,020 CAD plus 213 CAD just as for child no. 1 and 2, but there is a supplement of 75 CAD for child no. 3 and more. The 'tax back' rate is 5 per cent of net income, that is 1,277 CAD just as in the case with 2 children. Child benefits: 3,060 + 639 + 75 - 1,277 = 2,497 CAD. Compared to the situation without children the increase in disposable income is 2,497/38,348 x 100 = 6.5 per cent with 3 children (6, 3 and 1 year old).

4. The couple gets their second child and has two children

There are the same 'timing-problems' as mentioned in the documentation for Denmark, cf. Appendix 1.

1. The couple has a combined parental leave of 27 weeks, 17 for the wife (including a waiting period of 2 weeks) and 10 weeks which can be shared. If the husband participates there will also be a waiting period of 2 weeks for him. It is assumed in the following that the wife has the entire leave period. The compensation is 55 per cent of the lost income up to a ceiling, which is 39,000 CAD in 1996. The scheme is a part of the 'Employment Insurance' scheme.
   The wife has a wage reduction of 27/52, i.e. 8,906 CAD. The compensation is 25/27 * 8,906 * 0.55 = 4,535 CAD. This compensation leaves the couple with a gross income (disregarding the family allowance) of 47,085 CAD which is the basis for calculation of the 'tax back' of the family allowance. The 'tax back' here is 0.05 * (47,085-25,921) = 1,058 CAD, where it in the full employment case was 1,277 CAD, a difference of 219 CAD which is added to the benefit of 4,535 CAD, in total 4,754 CAD.

The gross compensation percentage is 4,754/8,906 * 100 = 53. 27 weeks of maternity leave (for the wife alone) results in a disposable income of 36,941 CAD for the couple including allowance for 2 children (1 child 3 years old and 1 born in 1996). The decrease in disposable income compared to the situation where the couple has two children (3 and 1 year) is 39,537 - 36,941= 2,596 CAD or 6.6 per cent.

2. In this calculation the common period of 14 weeks is used. Her wage reduction is 14/52, i.e. 4,618 CAD. The compensation is 12/14 * 4,618 * 0.55 = 2,177 CAD. The difference in 'tax back' of the family allowance is 122 CAD in this case. The result is a total benefit of 2,299 CAD.
The gross compensation percentage is 2,299/4,618 * 100 = 50. 14 weeks of maternity leave results in a disposable income of 37,309 CAD.
The decrease in disposable income compared to the situation, where the couple has two children is 39,537 - 38,072 = 1,465 CAD or 3.7 per cent.

Annex Tax and social contribution calculation for single APW, 1996. CAD.

Gross wage income:	34,304
Taxable income:	34,304
Basic federal tax liability:	
17 per cent of 29,590 CAD	5,030
26 per cent of (34,304 - 29,590)	1,226
Total basic liability	6,256
Social contributions:	
Pensions (CPP): 0,028 * (34,304 - 3,500)	863
Unemployment (E.I.): 0.0295 * 34,304	1,012
Total social contributions	1,875
Associated tax credit: 0.17 * 1,818	319
Federal taxes:	
Basic tax liability	6,256
– Basic personal tax credit	1,098
– Social contribution tax credit	319
Basic federal tax	4,839
+ Surtax: 0.03 * 4,592	145
Total federal taxes	4,984
Local taxes[1]:	
56 per cent of 4,839 total local taxes	2,710
Tax and social contributions:	
Federal taxes	4,984
Local taxes	2,710
Social contributions	1,875
Total tax and social contributions	9,569

1) The tax rate of Ontario has been selected.

DOCUMENTATION OF APW CALCULATIONS FOR CANADA 1997, 'CORRECT' DATA

Single APW The gross wage of the APW (or AE) in 1997 was calculated by Statistics Canada, revised series.

	1997 Insured[1)]
Gross wage	35,322 CAD
Tax and social security[2)]	9,659 CAD
Disposable income	25,663 CAD

APW-couple The husband has the same wage as the single APW, the wife has 50 per cent of that. The couple has no children.

	1997 Insured[1)]
Gross wage	52,983 CAD
Tax and social security	13,231 CAD
Disposable income	39,752 CAD

1) Unemployment insurance is mandatory in Canada.
2) Cf. the annex for a documentation.

'Standard' income events

1. Ill for one week during the year. Single APW

The gross wage is reduced by 1/52, i.e. 679 CAD. The compensation is 55 per cent of the lost income, but with a waiting period of 2 weeks in the scheme there is no compensation. The rules are contained in the Employment Insurance scheme. Maximum insurable earnings are 39,000 CAD in 1997.

The gross compensation percentage is 0. The disposable income of the APW who is ill for one week is 25,281 CAD in 1997.

The decrease in disposable income compared to the situation with no illness is 25,663 - 25,281 = 382 CAD or 1.5 per cent.

There are no general labour market agreements for cover in case of illness, but there are supplementary benefits from some large corporations.

2. Unemployed for 3 months during the year, insured. Single APW

The gross wage of the insured APW is reduced by 1/4, i.e. 8,831 CAD. The compensation is 55 per cent of the lost income according to the Employment Insurance scheme. For 13 weeks with a waiting period of 2 weeks the compensation is 11/13 x 0.55 x 8,831 = 4,110 CAD. Maximum insurable earnings are 39,000 CAD in 1997.
The gross compensation percentage is 4,110 / 8,831 x 100 = 46.5. The disposable income of the APW with 25 per cent unemployment is 23,183 CAD in 1997.
The decrease in disposable income compared to the situation with no unemployment is 25,663 - 23,183 = 2,480 CAD or 9.7 per cent.

3. Unemployed for the whole year, insured. Single APW

There is no gross wage. The maximum benefit period is 45 weeks (varies across the provinces according to the unemployment level), but 45 weeks is the longest benefit period. The compensation is 55 per cent of the lost income in 45 weeks, i.e. 45/52 x 0.55 x 35,322 = 16,812 CAD. There are first 2 weeks (waiting period) with no compensation, then 45 weeks with compensation from the Employment Insurance scheme, and in the end 5 weeks with social assistance. Social assistance is 195 CAD/month (rate for the province of Ontario) for a single person (not including housing coverage), i.e. 225 CAD for 5 weeks. Social assistance (S.A.) is not taxable (this is the case in all provinces except Quebec). The total compensation is 16,812 CAD from the employment insurance and 225 CAD from S.A., in total 17,037 CAD.
The gross compensation percentage is 17,037 / 35,322 x 100 = 48. The disposable income of the APW who is unemployed for the whole year is 14,379 CAD in 1997.
The decrease in disposable income compared to the situation with no unemployment is 25,663 - 14,379 = 11,284 CAD or 44.0 per cent.

4. Unemployed for 3 months during the year, not eligible for insurance. Single APW

The reduction of the gross wage is 8,831 CAD just as in case 2 (3 months of unemployment). It is assumed that the unemployed receives social assistance during the unemployment period.
The monthly rate for a single person is 195 CAD (cf. also case 3), i.e. 585 CAD in compensation for three months (housing allowances are not included).
The gross compensation percentage is 585 / 8,831 x 100 = 7. Disposable income for an APW with 3 months of unemployment receiving social assistance is 20,851 CAD.
The decrease in disposable income compared to the situation with no unemployment is 25,663 - 20,851 = 4,812 CAD or 18.8 per cent.

5. Unemployed for the whole year, not eligible for insurance. Single APW

There is no gross wage. The compensation is 12 x 195 = 2,340 CAD on the assumption that the unemployed single person receives social assistance during the unemployment period.

The gross compensation percentage is 2,340 / 35,322 x 100 = 7. Social assistance is not taxable so the disposable income is 2,340 CAD (excluding housing allowances).

The decrease in disposable income compared to the situation with no unemployment is 25,663 - 2,340 = 23,323 or 90.9 per cent.

The single unemployed recipient of social assistance would also be eligible for a (non taxable) housing allowance of 325 CAD/month. The personal as well as the housing allowance increase with family size. A couple (no children) receives 390 CAD/month in personal allowances and 511 CAD/month in housing allowance.

6. Wife unemployed for the whole year, insured. APW couple

There is no gross wage for the wife. The maximum benefit period for a person working part time (here 50 per cent) is 39 weeks (varies across the provinces according to the unemployment level), but 39 weeks is the longest benefit period. The compensation is 55 per cent of the lost income in 39 weeks, i.e. 39/52 x 0.55 x 17,661 = 7,285 CAD. There are first 2 weeks (waiting period) with no compensation, then 39 weeks with compensation from the Employment Insurance. There is no compensation from social assistance for the remaining time (11 weeks), because it is means tested to 0 against the husband's income from work. Total compensation is 7,285 CAD.

The gross compensation percentage is 7,285 / 17,661 x 100 = 41. The disposable income for the APW-couple is 32,804 CAD, when the wife is unemployed for the whole year in 1997 and usually is working part time.

The decrease in disposable income compared to the situation with no unemployment is 39,752 - 32,804 = 6,948 CAD or 17.5 per cent.

7. Injured from work. Single APW

The effects of injuries from work are studied in two cases. In the first there is a complete loss of working capability. In the second the working capability is reduced by 33.3 per cent. Only current benefits are considered. The Canadian cases are based on the legislation for the Ontario Province.

1. Working capability completely lost

   There is no gross wage. The compensation is 90 per cent of the lost income after tax and social contributions up to a ceiling, which in 1997 corresponds to a gross wage of 55,600 CAD. The compensation (in Ontario) is .9 x 25,663 = 23,097 CAD

which is also the disposable income.
The net compensation percentage is thus 90.
The decrease in disposable income is 25,663 - 23,097 = 2,566 CAD or 10.0 per cent compared to the situation with no injuries.

2. Loss of 1/3 of the working capability
The gross wage is reduced by 1/3, i.e. 11,774 CAD. The compensation would be approx. 1/3 of that in case 7.1, i.e. 7,692 CAD.
The net compensation percentage is thus 90. The disposable income is 25,905 CAD in case of loss of 1/3 of the working capability (disregarding lump sum payments).
The increase in disposable income is 25,905-25,663 = 242 CAD or 0.9 per cent compared to the situation with no injuries. The positive effect is because of the progression in the Canadian tax scheme.

8. Disability pensioner with former working record and income at APW-level. Single APW

The Canadian disability pensioner who is eligible for benefits from the CPP will receive a benefit with two components, an earnings related and a flat rate. The earnings related component is 75 per cent of the 'corresponding' retirement pension. The retirement pension for the APW is estimated to 97 per cent of the max. pension in 1997, i.e. 0.97 x 8,842 = 8,577 CAD, cf. case 11. The earnings related component will be .75 x 8,577 = 6,433 CAD. The flat rate component is 3,966 CAD in 1997, in total 10,399 CAD. This is also the disposable income, because the tax credits more than outweigh the gross tax liability.
The net compensation percentage is 10,399 / 25,663 x 100 = 40.5.
The decrease in disposable income compared with the situation without disability is 59.5 per cent.

9. Disability pensioner without former working record. ' Single APW'

A disabled person in Canada with no former working record would not be eligible for CPP. He will instead receive a social assistance benefit of 516 CAD / month in 1997. To this a benefit for shelter will be added. The total benefit (excluding shelter) would be 6,192 CAD in 1997. The benefit is taxfree, so the disposable income is also 6,192 CAD.
The 'net compensation percentage' (relative to the APW) is 6,192 / 25,663 x 100 = 24.1.
The 'decrease' in disposable income, relative to that of the APW, would be 75.9 per cent.

10. Wife disability pensioner. APW-couple

It is assumed that the wife in the APW-couple becomes a disability pensioner while the husband continues to work (APW income level). The wife has a working record earning $^1/_2$ APW income. There are, cf. case 8, two components in the CPP for disability pensioners, an earnings related and a flat rate. The earnings related component is 75 per cent of the 'corresponding' retirement pension, i.e. 50 per cent of the disability pension in case 8: 3,216 CAD. The flat rate component is 3,966 CAD, in total 7,182 CAD, which will also be the disposable income of the wife.
The gross compensation percentage is 7,182 / 17,661 x 100 = 41. The disposable income of the APW-couple is 32,845 CAD, when the wife becomes a disability pensioner in 1997.
The decrease in income compared to the situation with no disability is 39,752 - 32,845 = 6,907 CAD or 17.4 per cent.

11. Pensioner with maximum period of former occupation. Single APW Retirement at 'usual' age, here 65 years

The public pension for the former APW consists of 3 components, the Old Age Security Pension (OAS), which in 1997 was 4,836 CAD (annual basis), the Guaranteed Income Supplement (GIS), which in 1997 was 5,747 CAD and the Canadian Pension Plan (CPP), where the maximum pension was 8,842 CAD in 1997. The CPP aims for a gross replacement rate of 25 per cent up to the Maximum Pensionable Earnings (YMPE) which in 1997 was 35,800 CAD. This is close to, but not identical to the APW income level. On the assumption that the APW-income YMPE ratio is 97 per cent (average of 96-99) and that this ratio is also valid for the past, the pensioner will receive 97 per cent of the max. pension in 1997, i.e. 8,577 CAD. The max. CPP pension in 1997 is calculated as 25 per cent of the average of YMPE in 1995, 1996 and 1997.
OAS and CPP pensions are taxable, GIS is not, but this component is means tested against other income (here CPP) with a taper of 50 per cent. There might in addition be a provincial 'top-up', not included here.
The disposable income for the APW pensioner is 4,836 CAD (OAS) plus 1,459 (GIS) plus 8,577 CAD (CPP) minus 832 CAD in personal tax, in total 14,040 CAD.
The net compensation percentage is 14,040 / 25,663 x 100 = 54.7.
The decrease in disposable income compared to the APW is 45.3 per cent.

12. Pensioner without former occupation. 'Single APW' 'Retirement' at 'usual' age, here 65 years

In this case the public pension consists of 2 components, OAS of 4,836 CAD and GIS of 5,747 CAD, in total 10,583 CAD in 1997. OAS is taxable but the non refundable tax credits are larger than the tax liability, so there is no personal taxation in this case. The disposable income is 10,583 CAD.

The 'net compensation percentage' (relative to the APW) is 10,583 / 25,663 x 100 = 41.2.

The 'decrease' in disposable income is 58.8 per cent relative to that of the APW by this kind of 'retirement'.

13. Pensioners with maximum period of former occupation. APW couple The two pensioners have the same age, and both retire 65 years old

The OAS rate is the same for singles and spouses, 4,836 CAD, but the GIS rate is 3,744 CAD for each spouse in the pensioner couple. 97 per cent of the max. CPP rate, 8,577 CAD, is used for the husband, and the wife having a long working record earning $^1/_2$ APW income receives half of that, i.e. 4,288 CAD in CPP pension. The combined GIS, 7,488 CAD, is means tested against the combined CPP pension for the couple, 12,865 CAD, leaving 1,055 CAD in GIS for the couple.

The disposable income for the pensioner couple is 9,672 (OAS) plus 1,055 (GIS) plus 12,865 (CPP) minus 555 in personal tax in total 23,037 CAD. The reason for a lower personal tax for the couple than for the single is a transferable old age tax credit for each of the spouses and a larger Ontario tax reduction for the husband.

The net compensation percentage is 23,037 / 39.752 x 100 = 58.0.

The decrease in disposable income at retirement is 42.0 per cent for the APW couple.

'Standard' income events in connection with children

1-3. The APW-couple has 1, 2 or 3 children

Child no. 1 (6 years old). The basic child tax benefit is 1,020 CAD plus 213 CAD if there are no tax deductions for child care and the child is in the age bracket 0-7 years. The benefit is 'taxed back' at a rate of 2.5 per cent of net income above 25,921 CAD (net income here is equivalent to the gross wage income of the couple).

'Tax back': 0.025 x (52,923 - 25,921) = 677 CAD, child benefit : 1,020 + 213 -677 = 556 CAD. Compared to the situation without children the increase in disposable income is 556 / 39,752 x 100 = 1.4 per cent with 1 child (6 years old).

Child no. 2 (3 years old). The basic child tax benefit is 1,020 CAD plus 213 CAD just as for child no. 1. The benefit is 'taxed back' at a rate of 5 per cent of net income when there are 2 or more children.
'Tax back': 0.05 x (52,983 - 25,921) = 1,353 CAD, child benefits: 2,040 + 426 - 1,353 = 1,113 CAD. Compared to the situation without children the increase in disposable income is 1,113 / 39,752 x 100 = 2.8 per cent with 2 children (6 and 3 years old).

Child no. 3 (1 year old). The basic child tax benefit is 1,020 CAD plus 213 CAD just as for child no. 1 and 2, but there is a supplement of 75 CAD for child no. 3 and more. The 'tax back' rate is 5 per cent of net income, that is 1,353 CAD just as in the case with 2 children. There is no Ontario tax reduction due to the number of children in this case. Child benefits: 3,060 + 639 + 75 - 1,353 = 2,421 CAD. Compared to the situation without children the increase in disposable income is 2,421 / 39,752 x 100 = 6.1 per cent with 3 children (6, 3 and 1 year old).

4. The couple gets their second child and has two children

There are the same 'timing-problems' as mentioned in the documentation for Denmark, cf. Appendix 1.

1. The couple has a combined parental leave of 27 weeks, 17 for the wife (including a waiting period of 2 weeks) and 10 weeks which can be shared. If the husband participates there will also be a waiting period of 2 weeks for him. It is assumed in the following that the wife has the entire leave period. The compensation is 55 per cent of the lost income up to a ceiling, which is 39,000 CAD in 1997. The scheme is a part of the 'Employment Insurance' scheme.
   The wife has a wage reduction of 27/52, i.e. 9,170 CAD. The compensation is 25/27 x 9,170 x 0.55 = 4,670 CAD. This compensation leaves the couple with a gross income (disregarding the family allowance) of 48,481 CAD which is the basis for calculation of the 'tax back' of the family allowance. The 'tax back' here is 0.05 x (48,483 - 25,921) = 1,128 CAD, where it in the full employment case was 1,353 CAD, a difference of 225 CAD which is added to the benefit of 4,670 CAD, in total 4,895 CAD.
   The gross compensation percentage is 4,895 / 9,170 x 100 = 53. 27 weeks of maternity leave (for the wife alone) results in a disposable income of 38,147 CAD for the couple including allowance for 2 children (1 child 3 years old and 1 born in 1997).
   The decrease in disposable income compared to the situation where the couple has two children (3 and 1 year) is 40,865-38,147 = 2,718 CAD or 6.7 per cent.

2. In this calculation the common period of 14 weeks is used. Her wage reduction is 14/52, i.e. 4,755 CAD. The compensation is 12/14 x 4,755 x 0.55 = 2,242 CAD. The difference in 'tax back' of the family allowance is 123 CAD in this case. The result is a total benefit of 2,368 CAD.
The gross compensation percentage is 2,368 / 4,755 x 100 = 50. 14 weeks of maternity leave results in a disposable income of 39,333 CAD.
The decrease in disposable income compared to the situation, where the couple has two children is 40,865 - 39,333 = 1,532 CAD or 3.7 per cent.

Annex Tax and social contribution calculation for single APW, 1997. CAD.

Gross wage income:	35,322
Taxable income:	35,322
Basic federal tax liability:	
17 per cent of 29,590 CAD	5,030
26 per cent of (35,322 - 29,590)	1,490
Total basic liability	6,520
Social contributions:	
Pensions (CPP): 0,03 x (35,322 - 3,500)	955
Unemployment (E.I.): 0.029 x 35,322	1,024
Total social contributions	1,979
Associated tax credit: 0.17 x 1,925	336
Federal taxes:	
Basic tax liability	6,520
– Basic personal tax credit	1,098
– Social contribution tax credit	336
Basic federal tax	5,086
+ Surtax: 0.03 x 4,859	153
Total federal taxes	5,239
Local taxes[1]:	
48 per cent of 5,087, total local taxes	2,441
Tax and social contributions:	
Federal taxes	5,239
Local taxes	2,441
Social contributions	1,979
Total tax and social contributions	9,659

1) The tax rate of Ontario has been selected.

DOCUMENTATION OF APW CALCULATIONS FOR CANADA 1998, 'CORRECT' DATA

Single APW The gross wage of the APW (or AE) in 1998 is calculated by Statistics Canada, revised series.

	1998 Insured[1]
Gross wage	35,299 CAD
Tax and social security	9,376 CAD
Disposable income	25,923 CAD

APW-couple The husband has the same wage as the single APW, the wife has 50 per cent of that. The couple has no children.

	1998 Insured[1]
Gross wage	52,949 CAD
Tax and social security	12,839 CAD
Disposable income	40,110 CAD

1) Unemployment insurance is mandatory in Canada.
2) Cf. the annex for a documentation.

'Standard' income events

1. Ill for one week during the year. Single APW

The gross wage is reduced by 1/52, i.e. 679 CAD. The compensation is 55 per cent of the lost income, but with a waiting period of 2 weeks in the scheme there is no compensation. The rules are contained in the Employment Insurance scheme. Maximum insurable earnings are 39,000 CAD in 1998.
The gross compensation percentage is 0. The disposable income of the APW who is ill for one week is 25,530 CAD in 1998.
The decrease in disposable income compared to the situation with no illness is 25,923 - 25,530 = 393 CAD or 1.5 per cent.
There are no general labour market agreements for cover in case of illness, but there are supplementary benefits from some large corporations.

2. Unemployed for 3 months during the year, insured. Single APW

The gross wage of the insured APW is reduced by 1/4, i.e. 8,825 CAD. The compensation is 55 per cent of the lost income according to the Employment Insurance scheme. For 13 weeks with a waiting period of 2 weeks the compensation is 11/13 x 0.55 x 8,825 = 4,107 CAD. Maximum insurable earnings are 39,000 CAD in 1998.
The gross compensation percentage is 4,107 / 8,825 x 100 = 46.5. The disposable income of the APW with 25 per cent unemployment is 23,384 CAD in 1998.
The decrease in disposable income compared to the situation with no unemployment is 25,923 - 23,384 = 2,539 CAD or 9.8 per cent.

3. Unemployed for the whole year, insured. Single APW

There is no gross wage. The maximum benefit period is 45 weeks (varies across the provinces according to the unemployment level), but 45 weeks is the longest benefit period. The compensation is 55 per cent of the lost income in 45 weeks, i.e. 45/52 x 0.55 x 35,292 = 16,800 CAD. There are first 2 weeks (waiting period) with no compensation, then 45 weeks with compensation from the Employment Insurance scheme, and in the end 5 weeks with social assistance. Possible minor refundable tax credits are not taken into account. Social assistance is 195 CAD/ month (rate for the province of Ontario) for a single person (not including housing coverage), i.e. 225 CAD for 5 weeks. Social assistance (S.A.) is not taxable (this is the case in all provinces except Quebec). The total compensation is 16,801 CAD from the employment insurance and 225 CAD from S.A., in total 17,026 CAD.
The gross compensation percentage is 17,026 / 35,292 x 100 = 48. The disposable income of the APW who is unemployed for the whole year is 14,477 CAD in 1998.
The decrease in disposable income compared to the situation with no unemployment is 25,923 - 14,477 = 11,446 CAD or 44.2 per cent.

4. Unemployed for 3 months during the year, not eligible for insurance. Single APW

The reduction of the gross wage is 8,825 CAD just as in case 2 (3 months of unemployment). It is assumed that the unemployed receives social assistance during the unemployment period.
The monthly rate for a single person is 195 CAD (cf. also case 3), i.e. 585 CAD in compensation for three months (housing allowances are not included).
The gross compensation percentage is 585 / 8,825 x 100 = 7. Disposable for an APW with 3 months of unemployment receiving social assistance is 21,009 CAD.
The decrease in disposable income compared to the situation with no unemployment is 25,923 - 21,009 = 4,914 CAD or 19.0 per cent.

5. Unemployed for the whole year, not eligible for insurance. Single APW

There is no gross wage. The compensation is 12 x 195 = 2,340 CAD on the assumption that the unemployed single person receives social assistance during the unemployment period.
The gross compensation percentage is 2,340 / 35,299 x 100 = 7. Social assistance is not taxable so the disposable income is 2,340 CAD (excluding housing allowances).
The decrease in disposable income compared to the situation with no unemployment is 25,923 - 2,340 = 23,583 or 91,0 per cent. The decrease would be approx. 2.5 percentage points smaller when refundable tax credits are included.
The single unemployed recipient of social assistance would also be eligible for a (non taxable) housing allowance of 325 CAD/month. The personal as well as the housing allowance increase with family size. A couple (no children) receives 390 CAD/month in personal allowances and 511 CAD/month in housing allowance as well as refundable tax credits.

6. Wife unemployed for the whole year, insured. APW couple

There is no gross wage for the wife. The maximum benefit period for a person working half time (as assumed here) is 39 weeks (varies across the provinces according to the unemployment level), but 39 weeks is the longest benefit period in this situation. The compensation is 55 per cent of the lost income and will be received for 39 weeks, i.e. 39/52 x 0.55 x 17,650 = 7,281 CAD. There are first 2 weeks (waiting period) with no compensation, then 39 weeks with compensation from the Employment Insurance. There is no compensation from social assistance for the remaining time (11 weeks), because it is means tested to 0 against the husband's income from work. Total compensation is 7,281 CAD.
The gross compensation percentage is 7,281 / 17,650 x 100 = 41. The disposable income for the APW-couple is 33,102 CAD, when the wife is unemployed for the whole year in 1998 and usually is working part time.
The decrease in disposable income compared to the situation with no unemployment is 40,110 - 33,102 = 7,008 CAD or 17.5 per cent.

7. Injured from work. Single APW

The effects of injuries from work are studied in two cases. In the first there is a complete loss of working capability. In the second the working capability is reduced by 33.3 per cent. Only current benefits are considered. The Canadian cases are based on the legislation for the Ontario Province.

1. Working capability completely lost

   There is no gross wage. The compensation is 90 per cent of the lost income after tax and social contributions up to a ceiling, which in 1998 corresponds to a gross

wage of 58,200 CAD. The compensation (in Ontario) is .9 x 25,923 = 23,331 CAD which is also the disposable income.
The net compensation percentage is thus 90.
The decrease in disposable income is 25,923 - 23,331 = 2,592 CAD or 10.0 per cent compared to the situation with no injuries.

2. Loss of 1/3 of the working capability
The gross wage is reduced by 1/3, i.e. 11,766 CAD. The compensation would be approx. 1/3 of that in case 7.1, i.e. 7,777 CAD.
The net compensation percentage is thus 90. The disposable income is 26,119 CAD in case of loss of 1/3 of the working capability (disregarding lump sum payments).
The increase in disposable income is 26,119-25,923 = 196 CAD or 0.8 per cent compared to the situation with no injuries. The positive effect is because of the progression in the Canadian tax scheme.

8. Disability pensioner with former working record and income at APW-level. Single APW

The Canadian disability pensioner who is eligible for benefits from the CPP will receive a benefit with two components, an earnings related and a flat rate. The earnings related component is 75 per cent of the 'corresponding' retirement pension. The retirement pension for the APW is estimated to 97 per cent of the max. pension in 1998, i.e. 0.97 x 8,938 = 8,670 CAD, cf. case 11. The earnings related component will be .75 x 8,670 = 6,503 CAD. The flat rate component is 4,041 CAD in 1998, in total 10,544 CAD. This is also the disposable income, because the tax credits more than outweigh the gross tax liability.
The net compensation percentage is 10,544 / 25,923 x 100 = 40.7.
The decrease in disposable income compared with the situation without disability is 59.3 per cent.

9. Disability pensioner without former working record. ' Single APW'

A disabled person in Canada with no former working record would not be eligible for CPP. He will instead receive a social assistance benefit of 516 CAD / month in 1998. To this a benefit for shelter will be added. The total benefit (excluding shelter) would be 6,192 CAD in 1998. The benefit is taxfree, so the disposable income is also 6,192 CAD, not including relatively small refundable tax credits.
The 'net compensation percentage' (relative to the APW) is 6,192 / 25,923 x 100 = 23.9.
The 'decrease' in disposable income, relative to that of the APW, would be 76.1 per cent.

10. Wife disability pensioner. APW-couple

It is assumed that the wife in the APW-couple becomes a disability pensioner while the husband continues to work (APW income level). The wife has a working record earning $^1/_2$ APW income. There are, cf. case 8, two components in the CPP for disability pensioners, an earnings related and a flat rate. The earnings related component is 75 per cent of the 'corresponding' retirement pension, i.e. 50 per cent of the disability pension in case 8, 3,252 CAD. The flat rate component is 4,041 CAD, in total 7,293 CAD, which will also be the disposable income of the wife.
The gross compensation percentage is 7,293 / 17,650 x 100 = 41. The disposable income of the APW-couple is 33,216 CAD, when the wife becomes a disability pensioner in 1998.
The decrease in income compared to the situation with no disability is 40,110 - 33,216 = 6,894 CAD or 17.2 per cent.

11. Pensioner with maximum period of former occupation. Single APW Retirement at 'usual' age, here 65 years

The public pension for the former APW consists of 3 components, the Old Age Security Pension (OAS), which in 1998 was 4,902 CAD (annual basis), the Guaranteed Income Supplement (GIS), which in 1998 was 5,825 CAD and the Canadian Pension Plan (CPP), where the maximum pension was 8,938 CAD in 1998. The CPP aims for a gross replacement rate of 25 per cent up to the Maximum Pensionable Earnings (YMPE) which in 1998 was 36,900 CAD. This is close to, but not identical to the APW income level. On the assumption that the APW-income YMPE ratio is 97 per cent (average of 96-99) and that this ratio also is valid for the past, the pensioner will receive 97 per cent of the max. pension in 1998, i.e. 8,670 CAD. The max. CPP pension in 1998 is calculated as 25 per cent of the average of YMPE in 1995, 1996, 1997 and 1998.
OAS and CPP pensions are taxable, GIS is not, but this component is means tested against other income (here CPP) with a taper of 50 per cent. There might in addition be a provincial 'top-up', not included here.
The disposable income for the APW pensioner is 4,902 CAD (OAS) plus 1,490 (GIS) plus 8,670 CAD (CPP) minus 804 CAD in personal tax, in total 14,258 CAD.
The net compensation percentage is 14,258 / 25,923 x 100 = 55.0.
The decrease in disposable income compared to the APW is 45.0 per cent.

12. Pensioner without former occupation. 'Single APW'
'Retirement' at 'usual' age, here 65 years

In this case the public pension consists of 2 components, OAS of 4,902 CAD and GIS of 5,825 CAD, in total 10,727 CAD in 1998. OAS is taxable but the non refundable tax credits are larger than the tax liability, so there is no personal taxation in this case. The disposable income is 10,727 CAD.
The 'net compensation percentage' (relative to the APW) is 10,727 / 25,923 x 100 = 41.4.
The 'decrease' in disposable income is 58.6 per cent relative to that of the APW by this kind of 'retirement'.

13. Pensioners with maximum period of former occupation. APW couple
The two pensioners have the same age, and both retire 65 years old

The OAS rate is the same for singles and spouses, 4,902 CAD, but the GIS rate is 3,794 CAD for each spouse in the pensioner couple. 97 per cent of the max. CPP rate, 8,670 CAD, is used for the husband, and the wife having a long working record earning $^1/_2$ APW income receives half of that, i.e. 4,335 CAD in CPP pension. The combined GIS, 7,588 CAD, is means tested against the combined CPP pension for the couple, 13,005 CAD, leaving 1,085 CAD in GIS for the couple.
The disposable income for the pensioner couple is 9,804 (OAS) plus 1,085 (GIS) plus 13,005 (CPP) minus 512 in personal tax in total 23,382 CAD. The reason for a lower personal tax for the couple than for the single is a transferable old age tax credit for each of the spouses.
The net compensation percentage is 23,382 / 40,110 x 100 = 58.3.
The decrease in disposable income at retirement is 41.7 per cent for the APW couple.

'Standard' income events in connection with children

1-3. The APW-couple has 1, 2 or 3 children

Child no. 1 (6 years old). The basic child tax benefit is 1,020 CAD plus 213 CAD if there are no tax deductions for child care and the child is in the age bracket 0-7 years. The benefit is 'taxed back' at a rate of 2.5 per cent of net income above 25,921 CAD (net income here is equivalent to the gross wage income of the couple).
'Tax back': 0.025 x (52,949 - 25,921) = 676 CAD, child benefit : 1,020 + 213 -676 = 557 CAD.
Compared to the situation without children the increase in disposable income is 557 / 40,110 x 100 = 1.4 per cent with 1 child (6 years old).

Child no. 2 (3 years old). The basic child tax benefit is 1,020 CAD plus 213 CAD just as for child no. 1. The benefit is 'taxed back' at a rate of 5 per cent of net income when there are 2 or more children.
'Tax back': 0.05 x (52,949 - 25,921) = 1,351 CAD, child benefits: 2,040 + 426 - 1,351 = 1,115 CAD. Compared to the situation without children the increase in disposable income is 1,115 / 40,110 x 100 = 2.8 per cent with 2 children (6 and 3 years old).

Child no. 3 (1 year old). The basic child tax benefit is 1,020 CAD plus 213 CAD just as for child no. 1 and 2, but there is a supplement of 75 CAD for child no. 3 and more. The 'tax back' rate is 5 per cent of net income, that is 1,351 CAD just as in the case with 2 children. There is also a tax reduction in this case (3 children) of 117 CAD. From July 1998 an Ontario child care supplement scheme was implemented. The benefit for x year is 212 CAD in the case with 3 children. Child benefits: 3,060 + 639 + 75 + 117 + 212 - 1,351 = 2,752 CAD. Compared to the situation without children the increase in disposable income is 2,752 / 40,110 x 100 = 6.9 per cent with 3 children (6, 3 and 1 year old).

4. The couple gets their second child and has two children

There are the same 'timing-problems' as mentioned in the documentation for Denmark.

1. The couple has a combined parental leave of 27 weeks, 17 for the wife (including a waiting period of 2 weeks) and 10 weeks which can be shared. If the husband participates there will also be a waiting period of 2 weeks for him. It is assumed in the following that the wife has the entire leave period. The compensation is 55 per cent of the lost income up to a ceiling, which is 39,000 CAD in 1998. The scheme is a part of the 'Employment Insurance' scheme.
   The wife has a wage reduction of 27/52, i.e. 9,164 CAD. The compensation is 25/27 x 9,164 x 0.55 = 4,667 CAD. This compensation leaves the couple with a gross income (disregarding the family allowance) of 48,452 CAD which is the basis for calculation of the 'tax back' of the family allowance. The 'tax back' here is 0.05 x (48,452 - 25,921) = 1,127 CAD, where it in the full employment case was 1,351 CAD, a difference of 224 CAD which is added to the benefit of 4,667 CAD, in total 4,891 CAD. This is only to illustrate the full gross impact of the maternity benefit. The difference in 'Tax Back' is allocated to the family allowance when disposable income is calculated.

The gross compensation percentage is 4,891 / 9,164 x 100 = 53. 27 weeks of maternity leave (for the wife alone) results in a disposable income of 38,494 CAD for the couple including allowance for 2 children (1 child 3 years old and 1 born in 1998).
The decrease in disposable income compared to the situation where the couple has two children (3 and 1 year) is 41,225-38,494 = 2,731 CAD or 6.6 per cent.

2. In this calculation the common period of 14 weeks is used. Her wage reduction is 14/52, i.e. 4,752 CAD. The compensation is 12/14 x 4,752 x 0.55 = 2,240 CAD. The difference in 'tax back' of the family allowance is 125 CAD in this case. The result is a total benefit of 2,365 CAD.
The gross compensation percentage is 2,365 / 4,752 x 100 = 50. 14 weeks of maternity leave results in a disposable income of 39,684 CAD.
The decrease in disposable income compared to the situation, where the couple has two children is 41,225 - 39,684 = 1,541 CAD or 3.7 per cent.

Annex Tax and social contribution calculation for single APW, 1998. CAD.

Gross wage income:	**35,299**
Taxable income:	35,299
Basic federal tax liability:	
17 per cent of 29,590 CAD	5,030
26 per cent of (35,299 - 29,590)	1,484
Total basic liability	6,514
Social contributions:	
Pensions (CPP): 0,032 x (35,299 - 3,500)	1,018
Unemployment (E.I.): 0.027 x 35,299	953
Total social contributions	1,971
Associated tax credit: 0.17 x 1,971	335
Federal taxes:	
Basic tax liability	6,514
– Basic personal tax credit	1,098
– Social contribution tax credit	335
Basic federal tax	5,081
+ Surtax: 0.03 x 5,081	152
Total federal taxes	5,233
Local taxes[1]:	
42.75 per cent of 5,081, total local taxes	2,172
Tax and social contributions:	
Federal taxes	5,233
Local taxes	2,172
Social contributions	1,971
Total tax and social contributions	9,376

1) The tax rate of Ontario has been selected.

APPENDIX 5

DOCUMENTATION OF FAMILY TYPE (APW) CALCULATIONS FOR DENMARK 1994-1998, 'CORRECT' DATA

DOCUMENTATION OF APW CALCULATIONS FOR DENMARK 1994, 'CORRECT' DATA

Single APW The gross wage of the APW in 1994 is a revised figure, which has not been published before. It is consistent with OECD data for the Danish APW for years after 1994.

	1994 Insured[1]	1994 Non-insured[1]
Gross wage	234,600 DKK	234,600 DKK
Tax and social security	107,226 DKK2)	105,262 DKK
Disposable income	127,374 DKK	129,338 DKK

APW-couple The husband has the same gross wage as the single APW, the wife has 50 per cent of that income. The couple has no children.

	1994 Insured[1]
Gross wage	351,900 DKK
Tax and social security	148,078 DKK
Disposable income	203,822 DKK

1) The terms insured and non-insured refer to unemployment insurance.
2) Cf. the annex for a documentation.

'Standard' income events

1. Ill for one week. Single APW

The gross wage of the insured APW is reduced by 1/52 that is by 4,512 DKK.
Compensation for illness in 1 week is 2,546 DKK (Rate for maximum compensation in 1994 for illness).
The gross compensation percentage is 2,546 / 4,512 x 100 = 56. The disposable income of the APW is 126,576 DKK, when he or she is ill for one week during 1994.
The decrease in disposable income compared to the case with no illness is 127,374 - 126,576 = 798 DKK or 0.6 per cent.
From 1994 nearly all employees will receive the usual wage during short spells of illness according to labour market agreements.

2. Unemployed for 3 months during the year, insured. Single APW

The gross wage of the insured APW is reduced by 1/4 that is by 58,650 DKK. 3 months' compensation (13 weeks of 5 days each) is 13 x 5 x 509 = 33,085 DKK. The maximum compensation for unemployment in 1994 was 509 DKK a day.
The gross compensation percentage is 33,085 / 58,650 x 100 = 56. The disposable income of the APW is 117,005 DKK, when he or she is unemployed for 3 months during 1994.
The decrease in disposable income compared to the case with no unemployment is 127,374 - 117,005 = 10,369 DKK or 8.1 per cent.

3. Unemployed for the whole year, insured. Single APW

There is no gross wage. The compensation is 52 x 5 x 509 = 132,340 DKK. The maximum compensation for unemployment in 1994 was 509 DKK a day.
The gross compensation percentage is 132,340 / 234,600 x 100 = 56. The disposable income of the APW is 83,817 DKK, when he or she is unemployed for the whole of 1994.
The decrease in disposable income compared to the case with no unemployment is 127,374 - 83,817 = 43,557 DKK or 34.2 per cent.

4. Unemployed for 3 months during the year, non-insured. Single APW

The reduction in gross wage is 58,650 DKK as in case 2 (unemployed for 3 months). It is assumed that the non-insured APW receives social assistance during the unemployment period.
The rate is 5,546 DKK per month (equivalent to 50 per cent of the maximum unemployment benefit). This benefit is taxable. Contrary to earlier years, housing allowances are not included. This is done to make the Danish cases more comparable with those of the

other countries. The housing allowance part of the social assistance is not taxable.
The total social assistance for 3 months is 16,638 DKK.
The gross compensation percentage is 16,638 / 58,650 x 100 = 28. Disposable income for an APW with 3 months of unemployment receiving social assistance is 111,524 DKK.
The decrease in disposable income compared to the case with no unemployment is 129,338 - 111,524 = 17,814 DKK or 13.8 per cent.

5. Unemployed for the whole year, non-insured. Single APW

There is no gross wage. The compensation is social assistance and the rate is 5,546 DKK a month, just as in case 4. The total assistance for 12 months is 66,552 DKK (taxable).
The gross compensation percentage is 66,552 / 234,600 x 100 = 28. Social assistance is as already mentioned taxable in 1994. Disposable income in this case is 49,900 DKK.
The decrease in disposable income is 129,338 - 49,900 = 79,438 DKK or 61.4 per cent.

6. Wife unemployed for the whole year, insured. APW-couple

There is no gross wage for the wife. The compensation is 52 x 5 x 339 = 88,140 DKK. The maximum compensation for unemployed (working part time and being insured accordingly) in 1994 was 339 DKK a day.
The gross compensation percentage is 88,140 / 117,300 x 100 = 75. The disposable income of the APW-couple is 191,975 DKK, when the wife is unemployed for the whole year in 1994 and usually is working part time.
The decrease in disposable income compared to the situation with no unemployment is 203,822 - 191,975 = 11,847 DKK or 5.8 per cent.

7. Injured from work. Single APW

Transfer payments caused by injuries from work are usually studied in two cases, one where the working capability is completely lost and one where 1/3 of the working capability is lost.
The compensation is based on 'last years annual income'. Because of the inconsistency between the APW calculation for 1993 and 1994 in the Danish case there is no calculation of the impact from this 'event' in 1994.

8. Pensioner with maximum period of former occupation. Single APW Retirement at 'usual' age, here 67 years

The public pension for the single former APW consists of the following components in 1994 level. A basic amount ('grundbeløb') of 44,328 DKK, a 'supplement' ('pensionstillæg') of 19,476 DKK , a 'special supplement' for single pensioners primarily of 24,468 DKK

because public pensions became 'ordinarily' taxable from 1994 and a 'personal supplement' ('personligt tillæg') of 2,050 DKK, in total 90,322 DKK. The 'personal supplement' varies according to economic needs and is non-taxable.
On top of the public pension there is an additional pension scheme. The benefit from that is 12,288 DKK in 1994 on the assumption of full membership since April 1964.
The disposable income for the APW-pensioner is 90,228 DKK in public pension (the 'personal supplement' is reduced by 94 DKK, due to means testing), plus 12,288 DKK in additional pension minus 31,854 DKK in personal tax, in total 70,662 DKK.
The net compensation percentage is 70,662 / 127,374 x 100 = 55.5.
The decrease in disposable income compared to the APW is 44.5 per cent.

9. Pensioner without former occupation. 'Single APW' 'Retirement' at 'usual' age, here 67 years

The public pension is the same as in the former case, i.e. 90,322 DKK. This pension (including the 'personal supplement' of 2,050 DKK) results in a disposable income of 63,961 DKK.
The 'net compensation percentage' is 63,961 / 127,374 x 100 = 50.2 relative to the APW.
The 'decrease' in income (relative to the APW) is 49.8 per cent.

10. Pensioners with maximum period of former occupation. APW-couple The two pensioners have the same age, and both retire 67 years old

The public pension for the APW-couple is twice the basic amount for the single pensioner and twice the 'supplement' for married pensioners that is 2 x 44,328 + 2 x 19,476 = 127,608 DKK. The 'personal supplement' is received according to economic needs. Here it is assumed that this is the double amount of what the single pensioner receives, in total 4,100 DKK. There is no 'special supplement' for the couple.
It is assumed that the couple has been members of the additional pension scheme as long as possible (since April 1964), the husband on full time working basis, the wife on part time working basis. The combined pension from this source is 20,484 DKK in 1994, 12,288 DKK for the husband and 8,196 DKK for the wife.
The disposable income for the APW-couple as pensioners is 131,708 DKK in public pensions plus 20,484 DKK in additional pension minus 40,003 DKK in personal tax, in total 112,189 DKK.
The net compensation percentage is 112,189 / 203,822 x 100 = 55.0 per cent.
The decrease in disposable income compared to the APW-couple is 45.0 per cent.

'Standard' income events in connection with children

1-3. The APW-couple has 1, 2 or 3 children

Child no 1 (6 years old). The family allowance is 8,300 DKK in 1994. Compared to the situation without children the increase in disposable income is 8,300 / 203,822 x 100 = 4.1 per cent.
Child no 2 (3 years old). The family allowance is 8,300 DKK in 1994. Compared to the situation without children the increase in disposable income is (8,300 + 8,300) / 203,822 x 100 = 8.1 per cent.
Child no 3 (1 year old). The family allowance is the same as for child no 2, i.e. 8,300 DKK. Compared to the situation without children the increase in disposable income is (8,300 + 8,300 + 8,300) / 203,822 x 100 = 12.2 per cent.

4. The couple gets child no 2 and has 2 children

Even if it is not possible to get 1 child and have 2 children for a whole year and within the same year receive benefits from 4 weeks prior to delivery, this is assumed to be the case in the following.

1. The couple has 30 weeks of maternity leave, 28 weeks for the wife and 2 weeks for the husband. The husband has a loss of income of 2/52 of the gross wage that is 9,023 DKK. He receives 2 x 2,546 = 5,092 DKK in compensation (the rate is the maximum compensation for illness, weekly basis, in 1994). The wife has a gross wage reduction of 28/52 that is 63,162 DKK. She receives 28 x 2,546 / 2 = 35,644 DKK in compensation (the rate is 50 per cent of the maximum compensation for illness in 1994).
   Together the couple loses 72,185 DKK in gross wages and receives 40,736 DKK in compensation.
   The gross compensation percentage is 40,736 / 72,185 x 100 = 56. 30 weeks of maternity leave results in a disposable income of 206,270 DKK including allowance for 2 children for the couple (1 child 3 years of age and 1 new-born).
   The decrease in disposable income compared to the situation with 2 children is 220,422 - 206,270 = 14,152 DKK or 6.4 per cent.
   This calculation reflects the effect of using the maximum maternity leave.

2. In the alternative calculation the length of the maternity leave is 14 weeks for the wife alone, this period is used for all countries in the alternative calculation.
The gross wage of the wife is reduced by 14/52 that is 31,581 DKK. She receives (14 x 2,546) / 2 = 17,822 DKK in compensation.
The gross compensation percentage is 17,822 / 31,581 x 100 = 56. The disposable income is 214,231 DKK for the couple with 2 children where the wife has 14 weeks of maternity leave.
The decrease in disposable income compared to the situation, where the couple has 2 children is 220,422 - 214,231 = 6,191 DKK or 2.8 per cent.

Annex Tax and social contribution calculation for single APW, 1994. DKK.

Gross wage income	234,600
Contribution for supplementary pension	778
Base for 5 per cent contribution	233,822
Social contributions:	
5 per cent social contribution, 0.05 x 233,822=	11,691
Other social contributions:	
Contribution for supplementary pension	778
Contribution for unemployment insurance	3,552
All social contributions	16,021
Taxable income:	
Gross wage	234,600
- Social contributions	16,021
Taxable income	218,579
Personal income:	
Gross wage	234,600
- 5 per cent social contribution	11,691
- Contribution for supplementary pension	778
Personal income	222,131
State tax:	
Bottom tax: 0.145 (218,579 - 29,300) =	27,445
Middle tax: 0.045 (222,131 - 130,000) =	4,146
Temporary tax: 0.05 (222,131 - 173,100) =	2,452
Total state tax:	34,043
Local tax: 0.302 (218,579 - 29,300) =	57,162
Tax and social contributions:	
State tax	34,043
Local tax	57,162
Social contributions	16,021
Tax and social contributions	107,226

DOCUMENTATION OF APW CALCULATIONS FOR DENMARK 1995, 'CORRECT' DATA

Single APW The gross wage of the APW in 1995 is from 'The Tax/Benefit Position of Employees', OECD, 1996 edition.

	1995 Insured[1]	1995 Non-insured[1]
Gross wage	240,100 DKK	240,100 DKK
Tax and social security	108,568 DKK2)	106,538 DKK
Disposable income	131,532 DKK	133,562 DKK

APW-couple The husband has the same gross wage as the single APW, the wife has 50 per cent of that income. The couple has no children.

	1995 Insured[1]
Gross wage	360,150 DKK
Tax and social security	151,249 DKK
Disposable income	208,901 DKK

1) The terms insured and non-insured refer to unemployment insurance.
2) Cf. the annex for a documentation.

'Standard' income events

1. Ill for one week. Single APW

The gross wage of the insured APW is reduced by 1/52 that is by 4,617 DKK.
Compensation for illness in 1 week is 2,556 DKK (Rate for maximum compensation in 1995 for illness).
The gross compensation percentage is 2,556 / 4,617 x 100 = 55. The disposable income of the APW is 130,668 DKK, when he or she is ill for one week during 1995.
The decrease in disposable income compared to the case with no illness is 131,532 - 130,668 = 864 DKK or 0.7 per cent.
From 1994 nearly all employees will receive the usual wage during short spells of illness according to labour market agreements.

2. Unemployed for 3 months during the year, insured. Single APW

The gross wage of the insured APW is reduced by 1/4 that is by 60,025 DKK. 3 months' compensation (13 weeks of 5 days each) is 13 x 5 x 511 = 33,215 DKK. The maximum compensation for unemployment in 1995 was 511 DKK a day.
The gross compensation percentage is 33,215 / 60,025 x 100 = 55. The disposable income of the APW is 120,293 DKK, when he or she is unemployed for 3 months during 1995.
The decrease in disposable income compared to the case with no unemployment is 131,532 - 120,293 = 11,239 DKK or 8.5 per cent.

3. Unemployed for the whole year, insured. Single APW

There is no gross wage. The compensation is 52 x 5 x 511 = 132,860 DKK. The maximum compensation for unemployment in 1995 was 511 DKK a day.
The gross compensation percentage is 132,860 / 240,100 x 100 = 55. The disposable income of the APW is 85,310 DKK, when he or she is unemployed for the whole of 1995.
The decrease in disposable income compared to the case with no unemployment is 131,532 - 85,310 = 46,222 DKK or 35.1 per cent.

4. Unemployed for 3 months during the year, non-insured. Single APW

The reduction in gross wage is 60,025 DKK as in case 2 (unemployed for 3 months). It is assumed that the non-insured APW receives social assistance during the unemployment period.
The rate is 6,652 DKK per month (equivalent to 60 per cent of the maximum unemployment benefit). This benefit is taxable. Just as in the 1994-calculation housing allowances are not included. This is done to make the Danish cases more comparable with those of the other countries. The housing allowance part of the social assistance is not taxable.
The total social assistance for 3 months is 19,956 DKK.
The gross compensation percentage is 19,956 / 60,025 x 100 = 33. Disposable income for an APW with 3 months of unemployment receiving social assistance is 116,000 DKK.
The decrease in disposable income compared to the case with no unemployment is 133,562 - 116,000 = 17,562 DKK or 13.1 per cent.

5. Unemployed for the whole year, non-insured. Single APW

There is no gross wage. The compensation is social assistance and the rate is 6,652 DKK a month, just as in case 4. The total assistance for 12 months is 79,824 DKK (taxable).
The gross compensation percentage is 79,824 / 240,100 x 100 = 33. Social assistance is as already mentioned taxable in 1995. Disposable income in this case is 57,926 DKK.
The decrease in disposable income is 133,562 - 57,926 = 75,636 DKK or 56.6 per cent.

6. Wife unemployed for the whole year, insured. APW-couple

There is no gross wage for the wife. The compensation is 52 x 5 x 341 = 88,660 DKK. The maximum compensation for unemployed (working part time and being insured accordingly) in 1995 was 341 DKK a day.
The gross compensation percentage is 88,660 / 120,050 x 100 = 74. The disposable income of the APW-couple is 196,455 DKK, when the wife is unemployed for the whole year in 1995 and usually is working part time.
The decrease in disposable income compared to the situation with no unemployment is 208,901 - 196,455 = 12,446 DKK or 6.0 per cent.

7. Injured from work. Single APW

Transfer payments caused by injuries from work are studied in two cases, one where the working capability is completely lost and one where $^1/_3$ of the working capability is lost.

1. Working capability completely lost
   There is no gross wage. The compensation is 80 per cent of the 'annual income'. The 'annual income' is the income for the year before the accident, here assumed to be 1994 income adjusted for pension contributions from the employer and rounded to the closest amount divisible by 1000. For 1994 this will be the APW gross wage of 234,600 DKK plus the ATP contribution from the employer, 1,556 DKK, in total 236,156 DKK, rounded to 236,000 DKK. The compensation is 0.8 x 236,000 = 188,800 DKK or 188,796 DKK when rounded to the closest amount divisible by 12. On top of that there are four components from the ordinary invalidity pension scheme that is an 'invalidity supplement' of 21,660 DKK ('invaliditetsbeløb') and a 'disability supplement' 29,892 DKK ('erhvervsudygtighedsbeløb') and the 'special supplement' of 21,552 DKK for a single pensioner, cf. case 8 below, all in 1995 level. Finally there is the basic amount, which, however, is tapered from 44,508 DKK to 1,550 DKK. The total compensation amounts to 263,450 DKK. All components except the 'invalidity supplement' are taxable.
   The gross compensation percentage is 263,450 / 240,100 x 100 = 110. The disposable income for an APW losing the working capability is 162,711 DKK.
   The increase in disposable income is 162,711 - 131,532 = 31,179 DKK or 23.7 per cent compared to the situation without injuries.

2. Loss of 1/3 of the working capability

The gross wage is reduced by a, i.e. 80,033 DKK. The compensation is 80 per cent of the wage reduction or a of that in the former case, i.e. 62,928 DKK (rounded). Loss of a of the working capability does not make the APW eligible for invalidity pension.

The gross compensation percentage is 62,928 / 80,003 x 100 = 79. The disposable income for an APW with b of the former gross wage and compensation for loss of a of his or her working capability is 126,372 DKK.

The decrease in disposable income compared to the situation with no injuries is 131,532 - 6,372 = 5,160 DKK or 3.9 per cent.

8. Pensioner with maximum period of former occupation. Single APW Retirement at 'usual' age, here 67 years

The public pension for the single former APW consists of the following components in 1995 level. A basic amount ('grundbeløb') of 44,508 DKK, a 'supplement' ('pensionstillæg') of 22,560 DKK , a 'special supplement' for single pensioners primarily of 21,552 DKK because public pensions became 'ordinarily' taxable from 1994 and a 'personal supplement' ('personligt tillæg') of 2,100 DKK, in total 90,720 DKK. The 'personal supplement' varies according to economic needs and is non-taxable.

On top of the public pension there is an additional pension scheme. The benefit from that is 13,344 DKK in 1995 on the assumption of full membership since April 1964.

The disposable income for the APW-pensioner is 90,550 DKK in public pension (the 'personal supplement' is reduced by 170 DKK, due to means testing), plus 13,344 DKK in additional pension minus 31,550 DKK in personal tax, in total 72,344 DKK.

The net compensation percentage is 72,344 / 131,532 x 100 = 55.0.

The decrease in disposable income compared to the APW is 45.0 per cent.

9. Pensioner without former occupation. 'Single APW' 'Retirement' at 'usual' age, here 67 years

The public pension is the same as in the former case, i.e. 90,720 DKK. This pension (including the 'personal supplement' of 2,100 DKK) results in a disposable income of 64,987 DKK.

The 'net compensation percentage' is 64,987 / 131,532 x 100 = 49.4 relative to the APW.

The 'decrease' in income (relative to the APW) is 50.6 per cent.

10. Pensioners with maximum period of former occupation. APW-couple The two pensioners have the same age, and both retire 67 years old

The public pension for the APW-couple is twice the basic amount for the single pensioner and twice the 'supplement' for married pensioners that is 2 x 44,508 + 2 x 19,548 = 128,112 DKK. The 'personal supplement' is received according to economic needs. Here it is assumed that this is the double amount of what the single pensioner receives, in total 4,200 DKK. There is no 'special supplement' for the couple.

It is assumed that the couple has been members of the additional pension scheme as long as possible (since April 1964), the husband on full time working basis, the wife on part time working basis. The combined pension from this source is 22,236 DKK in 1995, 13,344 DKK for the husband and 8,892 DKK for the wife.

The disposable income for the APW-couple as pensioners is 132,295 DKK in public pensions (the 'personal supplement' is reduced by 17 DKK due to means testing) plus 22,236 DKK in additional pension minus 39,740 DKK in personal tax, in total 114,791 DKK.

The net compensation percentage is 114,719 / 208,901 x 100 = 54.9 per cent.

The decrease in disposable income compared to the APW-couple is 45.1 per cent.

'Standard' income events in connection with children

1-3. The APW-couple has 1, 2 or 3 children

Child no 1 (6 years old). The family allowance is 8,600 DKK in 1995. Compared to the situation without children the increase in disposable income is 8,600 / 208,901 x 100 = 4.1 per cent.

Child no 2 (3 years old). The family allowance is 8,600 DKK in 1995. Compared to the situation without children the increase in disposable income is (8,600 + 8,600) / 208,901 x 100 = 8.2 per cent.

Child no 3 (1 year old). The family allowance is 9,600 DKK for infants (0-2 years) in 1995. Compared to the situation without children the increase in disposable income is (8,600 + 8,600 + 9,600) / 208,901 x 100 = 12.8 per cent.

4. The couple gets child no 2 and has 2 children

Even if it is not possible to get 1 child and have 2 children for a whole year and within the same year receive benefits from 4 weeks prior to delivery, this is assumed to be the case in the following.

1. The couple has 30 weeks of maternity leave, 28 weeks for the wife and 2 weeks for the husband. The husband has a loss of income of 2/52 of the gross wage that is 9,235 DKK. He receives 2 x 2,556 = 5,112 DKK in compensation (the rate is the maximum compensation for illness, weekly basis, in 1995). The wife has a gross wage reduction of 28/52 that is 64,642 DKK. She receives 28 x 2,556 / 2 = 35,784 DKK in compensation (the rate is 50 per cent of the maximum compensation for illness in 1995).
   Together the couple loses 73,877 DKK in gross wages and receives 40,896 DKK in compensation.
   The gross compensation percentage is 40,896 / 73,877 x 100 = 55. 30 weeks of maternity leave results in a disposable income of 212,418 DKK including allowance for 2 children for the couple (1 child 3 years of age and 1 new-born).
   The decrease in disposable income compared to the situation with 2 children is 227,101 - 212,418 = 14,683 DKK or 6.5 per cent.
   This calculation reflects the effect of using the maximum maternity leave.

2. In the alternative calculation the length of the maternity leave is 14 weeks for the wife alone, this period is used for all countries in the alternative calculation.
   The gross wage of the wife is reduced by 14/52 that is 32,321 DKK. She receives (14 x 2,556) / 2 = 17,892 DKK in compensation.
   The gross compensation percentage is 17,892 / 32,321 x 100 = 55. The disposable income is 220,678 DKK for the couple with 2 children where the wife has 14 weeks of maternity leave.
   The decrease in disposable income compared to the situation, where the couple has 2 children is 227,101 - 220,678 = 6,432 DKK or 2.8 per cent.

Annex Tax and social contribution calculation for single APW, 1995. DKK.

Gross wage income	240,100
Contribution for supplementary pension	778
Base for 6 per cent contribution	239,322
Social contributions:	
6 per cent social contribution 0.06 x 239,322 =	14,359
Other social contributions:	
Contribution for supplementary pension	778
Contribution for unemployment insurance	3,600
All social contributions	18,737
Taxable income:	
Gross wage	240,100
- Social contributions	18,737
Taxable income	221,363
Personal income:	
Gross wage	240,100
- 6 per cent social contribution	14,359
- Contribution for supplementary pension	778
Personal income	224,963
State tax:	
Bottom tax: 0.13 (221,363 - 29,600) =	24,929
Middle tax: 0.05 (224,963 - 130,900) =	4,703
Temporary tax: 0.03 (224,963 - 174,300) =	1,520
Total state tax:	31,152
Local tax: 0.306 (221,363 - 29,600) =	58,679
Tax and social contributions:	
State tax	31,152
Local tax	58,679
Social contributions	18,737
Tax and social contributions	108,568

DOCUMENTATION OF APW CALCULATIONS FOR DENMARK 1996, 'CORRECT' DATA

Single APW The gross wage of the APW in 1996 is from 'The Tax/Benefit Position of Employees', OECD, 1997 edition.

	1996 Insured[1]	1996 Non-insured[1]
Gross wage	249,200 DKK	249,200 DKK
Tax and social security	111,648 DKK[2]	109,522 DKK
Disposable income	137,552 DKK	139,678 DKK

APW-couple The husband has the same gross wage as the single APW, the wife has 50 per cent of that income. The couple has no children.

	1996 Insured[1]	
Gross wage	373,800 DKK	
Tax and social security	157,985 DKK	
Disposable income	215,815 DKK	

1) The terms insured and non-insured refer to unemployment insurance.
2) Cf. the annex for a documentation.

'Standard' income events

1. Ill for one week. Single APW

The gross wage of the insured APW is reduced by 1/52 that is by 4,792 DKK.
Compensation for illness in 1 week is 2,617 DKK (Rate for maximum compensation in 1996 for illness). Max. benefit is reached at an income of 146,260 DKK.
The gross compensation percentage is 2,617 / 4,792 x 100 = 55. The disposable income of the APW is 136,596 DKK, when he or she is ill for one week during 1996.
The decrease in disposable income compared to the case with no illness is 137,552 - 136,596 = 956 DKK or 0.7 per cent.
From 1994 nearly all employees have received the usual wage during short spells of illness according to labour market agreements.

2. Unemployed for 3 months during the year, insured. Single APW

The gross wage of the insured APW is reduced by 1/4 that is by 62,300 DKK. 3 months' compensation (13 weeks of 5 days each) is 13 x 5 x 523 = 33,995 DKK. The maximum compensation for unemployment in 1996 was 523 DKK a day. Max. benefit is reached at an income of 162,394 DKK. Minimum benefit (429 DKK/day) is reached at an income of 133,194 DKK and below.
The gross compensation percentage is 33,995 / 62,300 x 100 = 55. The disposable income of the APW is 125,117 DKK, when he or she is unemployed for 3 months during 1996.
The decrease in disposable income compared to the case with no unemployment is 137,552 – 125,117 = 12,435 DKK or 9.0 per cent.

3. Unemployed for the whole year, insured. Single APW

There is no gross wage. The compensation is 52 x 5 x 523 = 135,980 DKK. The maximum compensation for unemployment in 1996 was 523 DKK a day. Max. benefit is reached at an income of 162,394 DKK. Minimum benefit (429 DKK/day) is reached at an income of 133,194 DKK and below.
The gross compensation percentage is 135,980 / 249,200 x 100 = 55. The disposable income of the APW is 87,812 DKK, when he or she is unemployed for the whole of 1996.
The decrease in disposable income compared to the case with no unemployment is 137,552- 87,812 = 49,740 DKK or 36.2 per cent.

4. Unemployed for 3 months during the year, non-insured. Single APW

The reduction in gross wage is 62,300 DKK as in case 2 (unemployed for 3 months). It is assumed that the non-insured APW receives social assistance during the unemployment period.
The rate is 6,803 DKK per month (equivalent to 60 per cent of the maximum unemployment benefit). This benefit is taxable. Just as in the 1995-calculation housing allowances are not included. This is done to make the Danish cases more comparable with those of the other countries. The housing allowance part of the social assistance is not taxable.
The total social assistance for 3 months is 20,409 DKK.
The gross compensation percentage is 20,409/ 62,300 x 100 = 33. Disposable income for an APW with 3 months of unemployment receiving social assistance is 120,307 DKK.
The decrease in disposable income compared to the case with no unemployment is 139,678 – 120,307 = 19,371 DKK or 13.9 per cent.

5. Unemployed for the whole year, non-insured. Single APW

There is no gross wage. The compensation is social assistance and the rate is 6,803 DKK a month, just as in case 4. The total assistance for 12 months is 81,636 DKK (taxable).
The gross compensation percentage is 81,636 / 249,200 x 100 = 33. Social assistance is as already mentioned taxable in 1996. Disposable income in this case is 59,554 DKK.
The decrease in disposable income compared to the case without unemployment is 139,678 - 59,554 = 80,124 DKK or 57.4 per cent.

6. Wife unemployed for the whole year, insured. APW-couple

There is no gross wage for the wife. The compensation is 52 x 5 x 349 = 90,740 DKK. The maximum compensation for unemployed (working part time and being insured accordingly) in 1996 was 349 DKK a day. Max. benefit (part time) is reached at an income of 108,366 DKK.
The gross compensation percentage is 90,740/ 124,600 x 100 = 73. The disposable income of the APW-couple is 202,747 DKK, when the wife is unemployed for the whole year in 1996 and usually is working part time.
The decrease in disposable income compared to the situation with no unemployment is 215,815 - 202,747 = 13,068 DKK or 6.1per cent.

7. Injured from work. Single APW

Transfer payments caused by injuries from work are studied in two cases, one where the working capability is completely lost and one where 1/3 of the working capability is lost.

1. Working capability completely lost
   There is no gross wage. The compensation is 80 per cent of the 'annual income'. The 'annual income' is the income for the year before the accident, here assumed to be 1995 income adjusted for pension contributions from the employer and rounded to the closest amount divisible by 1000. For 1995 this will be the APW gross wage of 240,100 DKK plus the ATP contribution from the employer, 1,788 DKK, in total 241,888 DKK, rounded to 242,000 DKK. The compensation is 0.8 x 242,000 = 193,600 DKK or 193,596 DKK when rounded to the closest amount divisible by 12. On top of that there are four components from the ordinary invalidity pension scheme that is an 'invalidity supplement' of 22,176 DKK ('invaliditetsbeløb') and a 'disability supplement' 30,612 DKK ('erhvervsudygtighedsbeløb') and the 'special supplement' of 17,964 DKK for a single pensioner, cf. case 8 below, all in 1996 level. Finally there is the basic amount, which however, is tapered from 45,576 DKK to 9,698 DKK. The total compensation amounts to 274,046 DKK. All components except the 'invalidity supplement' are taxable.

The gross compensation percentage is 274,046 / 249,200 x 100 = 110. The disposable income for an APW losing the working capability is 171,444 DKK.
The increase in disposable income compared to the situation without injuries is 171,444 - 137,552 = 33,892 DKK or 24.6 per cent.

2. Loss of 1/3 of the working capability
The gross wage is reduced by a, i.e. 83,067 DKK. The compensation is 80 per cent of the wage reduction or a of that in the former case, i.e. 64,536 DKK (rounded). Loss of a of the working capability does not make the APW eligible for invalidity pension.
The gross compensation percentage is 64,536 / 83,067 x 100 = 78. The disposable income for an APW with b of the former gross wage and compensation for loss of a of his or her working capability is 131,804 DKK.
The decrease in disposable income compared to the situation with no injuries is 137,552 - 131,804 = 5,748 DKK or 4.2 per cent.

8. Pensioner with maximum period of former occupation. Single APW Retirement at 'usual' age, here 67 years

The public pension for the single former APW consists of the following components in 1996 level. A basic amount ('grundbeløb') of 45,576 DKK, a 'supplement' ('pensionstillæg') of 27,216 DKK , a 'special supplement' for primarily single pensioners of 17,964 DKK because public pensions became 'ordinarily' taxable from 1994 and a 'personal supplement' ('personligt tillæg') of 2,150 DKK, in total 92,906 DKK. The 'personal supplement' varies according to economic needs, it is non-taxable and means tested.
On top of the public pension there is an additional pension scheme. The benefit from that is 14,376 DKK in 1996 on the assumption of full membership since April 1964.
The disposable income for the APW-pensioner is 92,678 DKK in public pension (the 'personal supplement' is reduced by 228 DKK, due to means testing), plus 14,376 DKK in additional pension minus 32,210 DKK in personal tax, in total 74,844 DKK.
The net compensation percentage is 74,844 / 137,552 x 100 = 54.4.
The decrease in disposable income compared to the APW is 45.6 per cent.

9. Pensioner without former occupation. 'Single APW' 'Retirement' at 'usual' age, here 67 years

The public pension is the same as in the former case, i.e. 92,906 DKK. This pension (including the 'personal supplement' of 2,150 DKK) results in a disposable income of 66,892 DKK. The 'net compensation percentage' is 66,892 / 137,552 x 100 = 48.6 relative to the APW. The 'decrease' in disposable income (relative to the APW) is 51.4 per cent.

10. Pensioners with maximum period of former occupation. APW-couple The two pensioners have the same age, and both retire 67 years old

The public pension for the APW-couple is twice the basic amount for the single pensioner and twice the 'supplement' for married pensioners that is 2 x 45,576 + 2 x 20,016 = 131,184 DKK. The 'personal supplement' is received according to economic needs. Here it is assumed that this is the double amount of what the single pensioner receives, in total 4,300 DKK. There is no 'special supplement' for the couple.
It is assumed that the couple has been members of the additional pension scheme as long as possible (since april 1964), the husband on full time working basis, the wife on part time working basis. The combined pension from this source is 23,856 DKK in 1995, 14,376 DKK for the husband and 9,480 DKK for the wife.
The disposable income for the APW-couple as pensioners is 135,385 DKK in public pensions (the 'personal supplement' is reduced by 99 DKK, due to means testing) plus 23,856 DKK in additional pension minus 40,618 DKK in personal tax, in total 118,623 DKK.
The net compensation percentage is 118,623 / 215,815 x 100 = 55.0.
The decrease in disposable income compared to the APW-couple is 45.0 per cent.

'Standard' income events in connection with children

1-3. The APW-couple has 1, 2 or 3 children

Child no. 1 (6 years old). The family allowance is 9,100 DKK in 1996. Compared to the situation without children the increase in disposable income is 9,100 / 215,815 x 100 = 4.2 per cent with 1 child (6 years old).
Child no. 2 (3 years old). The family allowance is 9,100 DKK in 1996. Compared to the situation without children the increase in disposable income is (9,100 + 9,100) / 215,815 x 100 = 8.4 per cent with 2 children (6 and 3 years old).
Child no. 3 (1 year old). The family allowance is 10,200 DKK for infants (0-2 years) in 1996. Compared to the situation without children the increase in disposable income is (9,100 + 9,100 + 10,200) / 215,815 x 100 = 13.2 per cent with 3 children (6, 3 and 1 year old).

4. The couple gets child no. 2 and has 2 children

Even if it is not possible to get 1 child and have 2 children for a whole year and within the same year receive benefits from 4 weeks prior to delivery, this is assumed to be the case in the following.

1. The couple has 30 weeks of maternity leave, 28 weeks for the wife and 2 weeks for the husband. The husband has a loss of income of 2/52 of the gross wage that is 9,585 DKK. He receives 2 x 2,617 = 5,234 DKK in compensation (the rate is the maximum compensation for illness, weekly basis, in 1996). Max. benefit is reached at an income of 146,260 DKK. The wife has a gross wage reduction of 28/52 that is 67,092 DKK. She receives 28 x 2,617 / 2 = 36,638 DKK in compensation (the rate is 50 per cent of the maximum compensation for illness in 1996).
Together the couple loses 76,677 DKK in gross wages and receives 41,872 DKK in compensation.
The gross compensation percentage is 41,872 / 76,677 x 100 = 55. 30 weeks of maternity leave results in a disposable income of 219,824 DKK including allowance for 2 children for the couple (1 child 3 years of age and 1 born in 1996).
The decrease in disposable income compared to the situation with 2 children (3 and 1 year) is 235,115 - 219,824 = 15,291 DKK or 6.5 per cent.
This calculation reflects the effect of using the maximum maternity leave.

2. In the alternative calculation the length of the maternity leave is 14 weeks for the wife alone, this period is used for all countries in the alternative calculation.
The gross wage of the wife is reduced by 14/52 that is 33,546 DKK. She receives (14 x 2,617) / 2 = 18,319 DKK in compensation.
The gross compensation percentage is 18,319 / 33,546 x 100 = 55. The disposable income is 228,425 DKK for the couple with 2 children where the wife has 14 weeks of maternity leave.
The decrease in disposable income compared to the situation, where the couple has 2 children is 235,115 - 228,425 = 6,690 DKK or 2.8 per cent.

Annex Tax and social contribution calculation for single APW, 1996. DKK.

Gross wage income		249,200
– Contribution for supplementary pension		894
Base for 7 per cent contribution		248,306
Social contributions:		
7 per cent social contribution 0.07 x 248,306 =		17,381
Other social contributions:		
Contribution for supplementary pension		894
Contribution for unemployment insurance		3,736
All social contributions		22,011
Taxable income:		
Gross wage		249,200
– Social contributions		22,011
Taxable income		227,189
Personal income:		
Gross wage		249,200
– 7 per cent social contribution		17,381
– Contribution for supplementary pension		894
Personal income		230.925
State tax:		
Bottom tax:	0.12 (227,189 - 30,400) =	23,615
Middle tax:	0.05 (230,925 - 134,500) =	4,821
Total state tax:		28,436
Local tax:	0.311 (227,189 - 30,400) =	61,201
Tax and social contributions:		
State tax		28,436
Local tax		61,201
Social contributions		22,011
Tax and social contributions		111,648

DOCUMENTATION OF APW CALCULATIONS FOR DENMARK 1997, 'CORRECT' DATA

Single APW The gross wage of the APW in 1997 is the offficial Danish estimate for the 1998 edition of The Tax/Benefit Position of Employees, OECD.

	1997 Insured[1]	1997 Non-insured[1]
Gross wage	257,000 DKK	257,000 DKK
Tax and social security	115,436 DKK[2]	113,222 DKK
Disposable income	141,564 DKK	143,778 DKK

APW-couple The husband has the same gross wage as the single APW, the wife has 50 per cent of that income. The couple has no children.

	1997 Insured[1]	
Gross wage	385,500 DKK	
Tax and social security	163,130 DKK	
Disposable income	222,370 DKK	

1) The terms insured and non-insured refer to unemployment insurance.
2) Cf. the annex for a documentation.

'Standard' income events

1. Ill for one week. Single APW

The gross wage of the insured APW is reduced by 1/52 that is by 4,942 DKK.
Compensation for illness in 1 week is 2,625 DKK (Rate for maximum compensation in 1997 for illness). Max. benefit is reached at an income of 148,291 DKK.
The gross compensation percentage is 2,625 / 4,942 x 100 = 53. The disposable income of the APW is 140,557 DKK, when he or she is ill for one week during 1997.
The decrease in disposable income compared to the case with no illness is 141,564 - 140,557 = 1,007 DKK or 0.7 per cent.
From 1994 nearly all employees have received the usual wage during short spells of illness according to labour market agreements.

2. Unemployed for 3 months during the year, insured. Single APW

The gross wage of the insured APW is reduced by 1/4 that is by 64,250 DKK. 3 months' compensation (13 weeks of 5 days each) is 13 x 5 x 525 = 34,125 DKK. The maximum compensation for unemployment in 1997 was 525 DKK a day. Max. benefit is reached at an income of 164,777 DKK. Minimum benefit (431 DKK/day) is reached at an income of 135,260 DKK and below.

The gross compensation percentage is 34,125 / 64,250 x 100 = 53. The disposable income of the APW is 128,469 DKK, when he or she is unemployed for 3 months during 1997.

The decrease in disposable income compared to the case with no unemployment is 141,564 - 128,469 = 13,095 DKK or 9.3 per cent.

3. Unemployed for the whole year, insured. Single APW

There is no gross wage. The compensation is 52 x 5 x 525 = 136,500 DKK. The maximum compensation for unemployment in 1997 was 525 DKK a day. Max. benefit is reached at an income of 164,777 DKK. Minimum benefit (431 DKK/day) is reached at an income of 135,260 DKK and below.

The gross compensation percentage is 136,500 / 257,000 x 100 = 53. The disposable income of the APW is 89,177 DKK, when he or she is unemployed for the whole of 1997.

The decrease in disposable income compared to the case with no unemployment is 141,564 - 89,177 = 52,387 DKK or 37.0 per cent.

4. Unemployed for 3 months during the year, non-insured. Single APW

The reduction in gross wage is 64,250 DKK as in case 2 (unemployed for 3 months). It is assumed that the non-insured APW receives social assistance during the unemployment period.

The rate is 6,825 DKK per month (equivalent to 60 per cent of the maximum unemployment benefit). This benefit is taxable. Just as in the 1996-calculation housing allowances are not included. This is done to make the Danish cases more comparable with those of the other countries. The housing allowance part of the social assistance is not taxable.

The total social assistance for 3 months is 20,475 DKK.

The gross compensation percentage is 20,475/ 64,250 x 100 = 32. Disposable income for an APW with 3 months of unemployment receiving social assistance is 123,682 DKK.

The decrease in disposable income compared to the case with no unemployment is 143,778 - 123,682 = 20,096 DKK or 14.0 per cent.

5. Unemployed for the whole year, non-insured. Single APW

There is no gross wage. The compensation is social assistance and the rate is 6,825 DKK a month, just as in case 4. The total assistance for 12 months is 81,900 DKK.

The gross compensation percentage is 81,900 / 257,000 x 100 = 32. Social assistance is as already mentioned taxable in 1997. Disposable income in this case is 60,165 DKK.

The decrease in disposable income compared to the case without unemployment is 143,778 - 60,165 = 83,613 DKK or 58.2 per cent.

6. Wife unemployed for the whole year, insured. APW-couple

There is no gross wage for the wife. The compensation is 52 x 5 x 350 = 91,000 DKK. The maximum compensation for unemployed (working part time and being insured accordingly) in 1997 was 350 DKK a day. Max. benefit (part time) is reached at an income of 109,851 DKK. There is no minimum benefit for part time insured.

The gross compensation percentage is 91,000 / 128,500 x 100 = 71. The disposable income of the APW-couple is 207,996 DKK, when the wife is unemployed for the whole year in 1997 and usually is working part time.

The decrease in disposable income compared to the situation with no unemployment is 222,370 - 207,996 = 14,374 DKK or 6.5 per cent.

7. Injured from work. Single APW

Transfer payments caused by injuries from work are studied in two cases, one where the working capability is completely lost and one where $^1/_3$ of the working capability is lost.

1. Working capability completely lost

   There is no gross wage. The compensation is 80 per cent of the 'annual income'. The 'annual income' is the income for the year before the accident, here assumed to be 1996 income adjusted for pension contributions from the employer and rounded to the closest amount divisible by 1000. For 1996 this will be the APW gross wage of 249,200 DKK plus the ATP contribution from the employer, 1,788 DKK, in total 250,988 DKK, rounded to 251,000 DKK. The compensation is 0.8 x 251,000 = 200,800 DKK or 200,796 DKK when rounded to the closest amount divisible by 12. On top of that there are four components from the ordinary disability pension scheme that is an 'invalidity' amount of 22,248 DKK ('invaliditetsbeløb') and a 'no working capability' amount of 30,696 DKK ('erhvervsudygtighedsbeløb') and the 'special' supplement of 12,852 DKK for a single pensioner, cf. case 8 below, all in 1997 level. Finally there is the basic amount, which, however, is tapered from 45,720 DKK to 16,082 DKK. The total compensation amounts to 282,674 DKK. All components except the 'invalidity' amount are taxable.

The gross compensation percentage is 282,674 / 257,000 x 100 = 110. The disposable income for an APW losing the working capability is 176,928 DKK.
The increase in disposable income compared to the situation without injuries is 176,928 - 141,564 = 35,364 DKK or 25.0 per cent.

2. Loss of 1/3 of the working capability
The gross wage is reduced by a, i.e. 85,667 DKK. The compensation is 80 per cent of the wage reduction or a of that in the former case, i.e. 66,936 DKK (rounded). Loss of a of the working capability does not make the APW eligible for disability pension.
The gross compensation percentage is 66,936 / 85,667 x 100 = 78. The disposable income for an APW with b of the former gross wage and compensation for loss of a of his or her working capability is 136,251 DKK.
The decrease in disposable income compared to the situation with no injuries is 141,564 - 136,251 = 5,313 DKK or 3.8 per cent.

8. Disability pensioner with former working record and income at APW-level. Single APW

It is assumed that the pensioner receives the highest level of disability pension, which is comparable to a 'full' pension in the other countries.
The Danish disability pension for a single at the highest level consists of 5 components, basic amount 45,720 DKK in 1997, supplement 32,460 DKK, 'special' supplement 12,852 DKK, 'invalidity' amount 22,248 DKK and a 'no working capability' amount of 30,696 DKK, in total 143,976 DKK in 1997. All components are flat-rate benefits and all are taxable, except the invalidity amount. The former work record is of no relevance, there are no additional public pension schemes which are income or work related.
The disposable income for the pensioner with the highest disability pension is 143,976 DKK minus 38,146 DKK in personal tax, in total 105,830 DKK.
The net compensation percentage is 105,830 / 141,564 x 100 = 74.8.
The decrease in disposable income is 25.2 per cent.

9. Disability pensioner without former working record. 'Single APW'

The working record is, as already mentioned, of no relevance for the benefits in the Danish disability pension scheme. If a person is accepted for the highest level of the pension (full loss of working capability) he or she will receive the amounts mentioned in case 8, disregarding earlier income or work. The disposale income is 105,830 DKK.
The 'net compensation percentage' (relative to the APW) is 105,830 / 141,564 x 100 = 74.8. The 'decrease' in disposable income, relative to that of the APW, is 25.2 per cent.

10. Wife disability pensioner. APW-couple

It is assumed that the wife in the APW-couple becomes a disability pensioner (highest level) while the husband continues to work (APW income level). Her former working record is of no relevance for the pension.
The disability pension, highest level, consists of 4 components for the married person, basic amount 45,720 DKK in 1997, supplement 20,088 DKK, 'invalidity' amount 22,248 DKK and a 'no working capability' amount of 30,696 DKK, in total 118,752 DKK. The basic amount is means-tested, but only against own income. The supplement is means-tested against own income as well as income of the spouse. None of the other components are means-tested. In the case here the supplement is means-tested to 0 against the income of the spouse. The total gross pension is 118,752 - 20,088 = 98,664 DKK.
The gross compensation percentage is 98,664 / 128,500 x 110 = 77. The disposable income of the couple is 224,582 DKK in the case where the wife receives the highest disability pension and the husband continues to work.
The increase in disposable income compared to the situation with no disability is 224,582 - 222,370 = 2,212 DKK or 1.0 per cent.

11. Pensioner with maximum period of former occupation. Single APW Retirement at 'usual' age, here 67 years

The public pension for the single former APW consists of the following components in 1997 level. A basic amount ('grundbeløb') of 45,720 DKK, a 'supplement' ('pensionstillæg') of 32,460 DKK , a 'special supplement' for primarily single pensioners of 12,852 DKK because public pensions became 'ordinarily' taxable from 1994 and a 'personal supplement' ('personligt tillæg') of 2,200 DKK, in total 93,232 DKK. The 'personal supplement' varies according to economic needs, it is non-taxable and means tested.
On top of the public pension there is an additional pension scheme. The benefit from that is 15,528 DKK in 1997 on the assumption of full membership since April 1964.
The disposable income for the APW-pensioner is 92,915 DKK in public pension (the 'personal supplement' is reduced by 317 DKK, due to means testing), plus 15,528 DKK in

additional pension minus 31,797 DKK in personal tax, in total 76,646 DKK.
The net compensation percentage is 76,646 / 141,564 x 100 = 54.1.
The decrease in disposable income compared to the APW is 45.9 per cent.

12. Pensioner without former occupation. 'Single APW' 'Retirement' at 'usual' age, here 67 years

The public pension is the same as in the former case, i.e. 93,232 DKK. This pension (including the 'personal supplement' of 2,200 DKK) results in a disposable income of 67,935 DKK.
The 'net compensation percentage' (relative to the APW) is 67,935 / 141,564 x 100 = 48.0.
The 'decrease' in disposable income, relative to that of the APW, is 52.0 per cent by this kind of retirement.

13. Pensioners with maximum period of former occupation. APW-couple The two pensioners have the same age, and both retire 67 years old

The public pension for the APW-couple is twice the basic amount for the single pensioner and twice the 'supplement' for married pensioners that is 2 x 45,720 + 2 x 20,088 = 131,616 DKK. The 'personal supplement' is received according to economic needs. Here it is assumed that this is the double amount of what the single pensioner receives, in total 4,400 DKK. There is no 'special supplement' for the couple.
It is assumed that the couple has been members of the additional pension scheme as long as possible (since April 1964), the husband on full time working basis, the wife on part time working basis. The combined pension from this source is 25,872 DKK in 1997, 15,528 DKK for the husband and 10,344 DKK for the wife.
The disposable income for the APW-couple as pensioners is 135,776 DKK in public pensions (the 'personal supplement' is reduced by 240 DKK, due to means testing) plus 25,872 DKK in additional pension minus 40,306 DKK in personal tax, in total 121,342 DKK.
The net compensation percentage is 121,342 / 222,370 x 100 = 54.6.
The decrease in disposable income compared to the APW-couple is 45.4 per cent.

'Standard' income events in connection with children

1-3. The APW-couple has 1, 2 or 3 children

Child no. 1 (6 years old). The family allowance is 9,400 DKK in 1997. Compared to the situation without children the increase in disposable income is 9,400 / 222,370 x 100 = 4.2 per cent with 1 child (6 years old).

Child no. 2 (3 years old). The family allowance is 9,400 DKK in 1997. Compared to the situation without children the increase in disposable income is (9,400 + 9,400) / 222,370 x 100 = 8.5 per cent with 2 children (6 and 3 years old).
Child no. 3 (1 year old). The family allowance is 10,500 DKK for infants (0-2 years) in 1997. Compared to the situation without children the increase in disposable income is (9,400 + 9,400 + 10,500) / 222,370 x 100 = 13.2 per cent with 3 children (6, 3 and 1 year old).

4. The couple gets child no. 2 and has 2 children

Even if it is not possible to get 1 child and have 2 children for a whole year and within the same year receive benefits from 4 weeks prior to delivery, this is assumed to be the case in the following.

1. The couple has 30 weeks of maternity leave, 28 weeks for the wife and 2 weeks for the husband. The husband has a loss of income of 2/52 of the gross wage that is 9,885 DKK. He receives 2 x 2,625 = 5,250 DKK in compensation (the rate is the maximum compensation for illness, weekly basis, in 1997). Max. benefit is reached at an income of 148,291 DKK. The wife has a gross wage reduction of 28/52 that is 69,192 DKK. She receives 28 x 2,625 / 2 = 36,750 DKK in compensation (the rate is 50 per cent of the maximum compensation for illness in 1997).
   Together the couple loses 79,077 DKK in gross wages and receives 42,000 DKK in compensation.
   The gross compensation percentage is 42,000 / 79,077 x 100 = 53. 30 weeks of maternity leave results in a disposable income of 226,128 DKK including allowance for 2 children for the couple (1 child 3 years of age and 1 born in 1997).
   The decrease in disposable income compared to the situation with 2 children (3 and 1 year) is 242,270 - 226,128 = 16,142 DKK or 6.7 per cent.
   This calculation reflects the effect of using the maximum maternity leave.

2. In the alternative calculation the length of the maternity leave is 14 weeks for the wife alone, this period is used for all countries in the alternative calculation.
   The gross wage of the wife is reduced by 14/52 that is 34,596DKK. She receives (14 x 2,625) / 2 = 18,375 DKK in compensation.
   The gross compensation percentage is 18,375 / 34,596 x 100 = 53. The disposable income is 235,206 DKK for the couple with 2 children where the wife has 14 weeks of maternity leave.
   The decrease in disposable income compared to the situation, where the couple has 2 children is 242,270 - 235,206 = 7,064 DKK or 2.9 per cent.

Annex Tax and social contribution calculation for single APW, 1997. DKK.

Gross wage income		257,000
– Contribution for supplementary pension		894
Base for 8 per cent contribution		256,106
Social contributions:		
8 per cent social contribution 0.08 x 256.106 =		20,488
Other social contributions:		
Contribution for supplementary pension		894
Contribution for unemployment insurance		3,808
All social contributions		25,190
Taxable income:		
Gross wage		257,000
– Social contributions		25,190
Taxable income		231,810
Personal income:		
Gross wage		257,000
– 8 per cent social contribution		20,488
– Contribution for supplementary pension		894
Personal income		235,618
State tax:		
Bottom tax:	0.10 (231,810 - 30,600) =	20,121
Middle tax:	0.06 (235,618 - 135,300) =	6,019
Total state tax:		26,140
Local tax:	0.3186 (231,810 - 30,600) =	64,106
Tax and social contributions:		
State tax		26,140
Local tax		64,106
Social contributions		25,190
Tax and social contributions		115,436

DOCUMENTATION OF APW CALCULATIONS FOR DENMARK 1998, 'CORRECT' DATA

Single APW The gross wage of the APW in 1998 is the offficial Danish estimate for the 1999 edition of Taxing Wages, OECD.

	1998 Insured[1]	1998 Non-insured[1]
Gross wage	263,300 DKK	263,300 DKK
Tax and social security	116,610 DKK[2]	114,283 DKK
Disposable income	146,690 DKK	149,017 DKK

APW-couple The husband has the same gross wage as the single APW, the wife has 50 per cent of that income. The couple has no children.

	1994 Insured[1]	
Gross wage	394,950 DKK	
Tax and social security	164,863 DKK	
Disposable income	230,087 DKK	

1) The terms insured and non-insured refer to unemployment insurance.
2) Cf. the annex for a documentation.

'Standard' income events

1. Ill for one week. Single APW

The gross wage of the insured APW is reduced by 1/52 that is by 5,063 DKK.
Compensation for illness in 1 week is 2,688 DKK (Rate for maximum compensation in 1998 for illness). Max. benefit is reached at an income of 151,852 DKK.
The gross compensation percentage is 2,688 / 5,063 x 100 = 53. The disposable income of the APW is 145,639 DKK, when he or she is ill for one week during 1998.
The decrease in disposable income compared to the case with no illness is 146,690 - 145,639 = 1,051 DKK or 0.7 per cent.
From 1994 nearly all employees have received the usual wage during short spells of illness according to labour market agreements.

2. Unemployed for 3 months during the year, insured. Single APW

The gross wage of the insured APW is reduced by 1/4 that is by 65,825 DKK. 3 months' compensation (13 weeks of 5 days each) is 13 x 5 x 538 = 34,970 DKK. The maximum compensation for unemployment in 1998 was 538 DKK a day. Max. benefit is reached at an income of 168,859 DKK. Minimum benefit (441 DKK/day) is reached at an income of 138,400 DKK and below.
The gross compensation percentage is 34,970 / 65,825 x 100 = 53. The disposable income of the APW is 133,023 DKK, when he or she is unemployed for 3 months during 1998.
The decrease in disposable income compared to the case with no unemployment is 146,690 - 133,023 = 13,667 DKK or 9.3 per cent.

3. Unemployed for the whole year, insured. Single APW

There is no gross wage. The compensation is 52 x 5 x 538 = 139,880 DKK. The maximum compensation for unemployment in 1998 was 538 DKK a day. Max. benefit is reached at an income of 168,859 DKK. Minimum benefit (441 DKK/day) is reached at an income of 138,400 DKK and below.
The gross compensation percentage is 139,880 / 263,300 x 100 = 53. The disposable income of the APW is 91,887 DKK, when he or she is unemployed for the whole of 1998.
The decrease in disposable income compared to the case with no unemployment is 146,690 - 91,887 = 54,803 DKK or 37.4 per cent.

4. Unemployed for 3 months during the year, non-insured. Single APW

The reduction in gross wage is 65,825 DKK as in case 2 (unemployed for 3 months). It is assumed that the non-insured APW receives social assistance during the unemployment period.
The rate is 6,998 DKK per month (equivalent to 60 per cent of the maximum unemployment benefit). This benefit is taxable. Just as in the 1997-calculation housing allowances are not included. This is done to make the Danish cases more comparable with those of the other countries. The housing allowance part of the social assistance is not taxable.
The total social assistance for 3 months is 20,994 DKK.
The gross compensation percentage is 20,994/ 65,825 x 100 = 32. Disposable income for an APW with 3 months of unemployment receiving social assistance is 128,097 DKK.
The decrease in disposable income compared to the case with no unemployment is 149,017 - 128,097 = 20,920 DKK or 14.0 per cent.

5. Unemployed for the whole year, non-insured. Single APW

There is no gross wage. The compensation is social assistance and the rate is 6,998 DKK a month, just as in case 4. The total assistance for 12 months is 83,976 DKK.

The gross compensation percentage is 83,976 / 263,300 x 100 = 32. Social assistance is as already mentioned taxable in 1998. Disposable income in this case is 61,694 DKK.

The decrease in disposable income compared to the case without unemployment is 149,017 - 61,694 = 87,323 DKK or 58.6 per cent.

6. Wife unemployed for the whole year, insured. APW-couple

There is no gross wage for the wife. The compensation is 52 x 5 x 359 = 93,340 DKK. The maximum compensation for unemployed (working part time and being insured accordingly) in 1998 was 359 DKK a day. Max. benefit (part time) is reached at an income of 112,677 DKK. There is no minimum benefit for part time insured.

The gross compensation percentage is 93,340 / 131,650 x 100 = 71. The disposable income of the APW-couple is 214,858 DKK, when the wife is unemployed for the whole year in 1998 and usually is working part time.

The decrease in disposable income compared to the situation with no unemployment is 230,087 - 214,858 = 15,229 DKK or 6.6 per cent.

7. Injured from work. Single APW

Transfer payments caused by injuries from work are studied in two cases, one where the working capability is completely lost and one where $^1/_3$ of the working capability is lost.

1. Working capability completely lost

   There is no gross wage. The compensation is 80 per cent of the 'annual income'. The 'annual income' is the income for the year before the accident, here assumed to be 1997 income adjusted for pension contributions from the employer and rounded to the closest amount divisible by 1000. For 1997 this will be the APW gross wage of 257,000 DKK plus the ATP contribution from the employer, 1,788 DKK, in total 258,788 DKK, rounded to 259,000 DKK. The compensation is 0.8 x 259,000 = 207,200 DKK or 207,204 DKK when rounded to the closest amount divisible by 12. On top of that there are four components from the ordinary disability pension scheme that is an 'invalidity' amount of 22,776 DKK ('invaliditetsbeløb') and a 'no working capability' amount of 31,428 DKK ('erhvervsudygtighedsbeløb') and the 'special' supplement of 6,828 DKK for a single pensioner, cf. case 8 below, all in 1998 level. Finally there is the basic amount, which, however, is tapered from 46,812 DKK to 28,150 DKK. The total compensation amounts to 296,386 DKK. All components except the 'invalidity' amount are taxable.

The gross compensation percentage is 296,386 / 263,300 x 100 = 112.5. The disposable income for an APW losing the working capability is 187,700 DKK.
The increase in disposable income compared to the situation without injuries is 187,700 - 146,690 = 41,010 DKK or 28.0 per cent.

2. Loss of 1/3 of the working capability
The gross wage is reduced by a, i.e. 87,767 DKK. The compensation is 80 per cent of the wage reduction or a of that in the former case, i.e. 69,072 DKK (rounded). Loss of a of the working capability does not make the APW eligible for disability pension.
The gross compensation percentage is 69,072 / 87,767 x 100 = 79. The disposable income for an APW with b of the former gross wage and compensation for loss of a of his or her working capability is 141,824 DKK.
The decrease in disposable income compared to the situation with no injuries is 146,690 - 141,824 = 4,866 DKK or 3.3 per cent.

8. Disability pensioner with former working record and income at APW-level. Single APW

It is assumed that the pensioner receives the highest level of disability pension, which is comparable to a 'full' pension in the other countries.
The Danish disability pension for a single at the highest level consists of 5 components, basic amount 46,812 DKK in 1998, supplement 39,576 DKK, 'special' supplement 6,828 DKK, 'invalidity' amount 22,776 DKK and a 'no working capability' amount of 31,428 DKK, in total 147,420 DKK in 1998. All components are flat-rate benefits and all are taxable, except the invalidity amount. The former work record is of no relevance, there are no additional public pension schemes which are income or work related.
The disposable income for the pensioner with the highest disability pension is 147,420 DKK minus 37,670 DKK in personal tax, in total 109,750 DKK.
The net compensation percentage is 109,750 / 146,690 x 100 = 74.8.
The decrease in disposable income is 25.2 per cent.

9. Disability pensioner without former working record. 'Single APW'

The working record is, as already mentioned, of no relevance for the benefits in the Danish disability pension scheme. If a person is accepted for the highest level of the pension (full loss of working capability) he or she will receive the amounts mentioned in case 8, disregarding earlier income or work. The disposale income is 109,750 DKK.
The 'net compensation percentage' (relative to the APW) is 109,750 / 146,690 x 100 = 74.8. The 'decrease' in disposable income, relative to that of the APW, is 25.2 per cent.

10. Wife disability pensioner. APW-couple

It is assumed that the wife in the APW-couple becomes a disability pensioner (highest level) while the husband continues to work (APW income level). Her former working record is of no relevance for the pension.
The disability pension, highest level, consists of 4 components for the married person, basic amount 46,812 DKK in 1998, supplement 20,568 DKK, 'invalidity' amount 22,776 DKK and a 'no working capability' amount of 31,428 DKK, in total 121,584 DKK. The basic amount is means-tested, but only against own income. The supplement is means-tested against own income as well as income of the spouse. None of the other components are means-tested. In the case here the supplement is means-tested to 0 against the income of the spouse. The total gross pension is 121,584 - 20,568 = 101,016 DKK.
The gross compensation percentage is 101,016 / 131,650 x 100 = 77. The disposable income of the couple is 232,428 DKK in the case where the wife receives the highest disability pension and the husband continues to work.
The increase in disposable income compared to the situation with no disability is 232,428 - 230,087 = 2,341 DKK or 1.0 per cent.

11. Pensioner with maximum period of former occupation. Single APW Retirement at 'usual' age, here 67 years

The public pension for the single former APW consists of the following components in 1997 level. A basic amount ('grundbeløb') of 46,812 DKK, a 'supplement' ('pensionstillæg') of 39,576 DKK , a 'special supplement' for primarily single pensioners of 6,828 DKK because public pensions became 'ordinarily' taxable from 1994 and a 'personal supplement' ('personligt tillæg') of 2,250 DKK, in total 95,466 DKK. The 'personal supplement' varies according to economic needs, it is non-taxable and means tested.
On top of the public pension there is an additional pension scheme. The benefit from that is 16,620 DKK in 1998 on the assumption of full membership since April 1964.
The disposable income for the APW-pensioner is 95,083 DKK in public pension (the 'personal supplement' is reduced by 383 DKK, due to means testing), plus 16,620 DKK in

additional pension minus 31,688 DKK in personal tax, in total 80,015 DKK.
The net compensation percentage is 80,015 / 146,690 x 100 = 54.5.
The decrease in disposable income compared to the APW is 45.5 per cent.

12. Pensioner without former occupation. 'Single APW' 'Retirement' at 'usual' age, here 67 years

The public pension is the same as in the former case, i.e. 95,466 DKK. This pension (including the 'personal supplement' of 2,250 DKK) results in a disposable income of 70,493 DKK.
The 'net compensation percentage' (relative to the APW) is 70,493 / 146,690 x 100 = 48.1.
The 'decrease' in disposable income, relative to that of the APW, is 51.9 per cent by this kind of retirement.

13. Pensioners with maximum period of former occupation. APW-couple The two pensioners have the same age, and both retire 67 years old

The public pension for the APW-couple is twice the basic amount for the single pensioner and twice the 'supplement' for married pensioners that is 2 x 46,812 + 2 x 20,568 = 134,760 DKK. The 'personal supplement' is received according to economic needs. Here it is assumed that this is the double amount of what the single pensioner receives, in total 4,500 DKK. There is no 'special supplement' for the couple.
It is assumed that the couple has been members of the additional pension scheme as long as possible (since april 1964), the husband on full time working basis, the wife on part time working basis. The combined pension from this source is 27,696 DKK in 1998, 16,620 DKK for the husband and 11,076 DKK for the wife.
The disposable income for the APW-couple as pensioners is 138,900 DKK in public pensions (the 'personal supplement' is reduced by 360 DKK, due to means testing) plus 27,696 DKK in additional pension minus 40,260 DKK in personal tax, in total 126,336 DKK.
The net compensation percentage is 126,336 / 230,087 x 100 = 54.9.
The decrease in disposable income compared to the APW-couple is 45.1 per cent.

'Standard' income events in connection with children

1-3. The APW-couple has 1, 2 or 3 children

Child no. 1 (6 years old). The family allowance is 10,000 DKK in 1998. Compared to the situation without children the increase in disposable income is 10,000 / 230,087 x 100 = 4.3 per cent with 1 child (6 years old).

Child no. 2 (3 years old). The family allowance is 10,000 DKK in 1998. Compared to the situation without children the increase in disposable income is (10,000 + 10,000) / 230,087 x 100 = 8.7 per cent with 2 children (6 and 3 years old).
Child no. 3 (1 year old). The family allowance is 11,000 DKK for infants (0-2 years) in 1998. Compared to the situation without children the increase in disposable income is (10,000 + 10,000 + 11,000) / 230,087 x 100 = 13.5 per cent with 3 children (6, 3 and 1 year old).

4. The couple gets child no. 2 and has 2 children

Even if it is not possible to get 1 child and have 2 children for a whole year and within the same year receive benefits from 4 weeks prior to delivery, this is assumed to be the case in the following.

1. The couple has 30 weeks of maternity leave, 28 weeks for the wife and 2 weeks for the husband (2 extra weeks for the husband is not used). The husband has a loss of income of 2/52 of the gross wage that is 10,127 DKK. He receives 2 x 2,688 = 5,376 DKK in compensation (the rate is the maximum compensation for illness, weekly basis, in 1998). Max. benefit is reached at an income of 151,852 DKK. The wife has a gross wage reduction of 28/52 that is 70,888 DKK. She receives 28 x 2,688 / 2 = 37,632 DKK in compensation (the rate is 50 per cent of the maximum compensation for illness in 1998).
   Together the couple loses 81,015 DKK in gross wages and receives 43,008 DKK in compensation.
   The gross compensation percentage is 43,008 / 81,015 x 100 = 53. 30 weeks of maternity leave results in a disposable income of 234,014 DKK including allowance for 2 children for the couple (1 child 3 years of age and 1 born in 1998).
   The decrease in disposable income compared to the situation with 2 children (3 and 1 year) is 251,087 - 234,014 = 17,073 DKK or 6.8 per cent.
   This calculation reflects the effect of using the maximum maternity leave.

2. In the alternative calculation the length of the maternity leave is 14 weeks for the wife alone, this period is used for all countries in the alternative calculation.
   The gross wage of the wife is reduced by 14/52 that is 35,444 She receives (14 x 2,688) / 2 = 18,816 DKK in compensation.
   The gross compensation percentage is 18,816 / 35,444 x 100 = 53. The disposable income is 243,603DKK for the couple with 2 children where the wife has 14 weeks of maternity leave.
   The decrease in disposable income compared to the situation, where the couple has 2 children is 251,087 - 243,603 = 7,484 DKK or 3.0 per cent.

Annex Tax and social contribution calculation for single APW, 1998. DKK.

Gross wage income		263,300
– Contribution for supplementary pension		894
Base for 8+1 per cent contribution		262,406
Social contributions:		
8+1 per cent social contribution 0.09 x 262.406 =		23,617
Other social contributions:		
Contribution for supplementary pension		894
Contribution for unemployment insurance		3,904
All social contributions		28,415
Taxable income:		
Gross wage		263,300
– Social contributions		28,415
Taxable income		234,885
Personal income:		
Gross wage		263,300
– 8+1 per cent social contribution		23,617
– Contribution for supplementary pension		894
Personal income		238,789
State tax:		
Bottom tax:	0.08 (234,885 - 31,400) =	16,279
Middle tax:	0.06 (238,789 - 139,000) =	5,987
Total state tax:		22,266
Local tax:	0.324 (234,885 - 31,400) =	65,929
Tax and social contributions:		
State tax		22,266
Local tax		65,929
Social contributions		28,415
Tax and social contributions		116,610

2

including Italy

The cases for Italy have been calculated by Rita Dibiase and Aldo Gandiglio, ISAE – Institute for Studies and Economic Analyses, Rome.

COMPARISON OF THE SEPARATE ELEMENTS OF SOCIAL SECURITY IN THE 9 COUNTRIES

This chapter will focus on the characteristics of each of the selected elements of the social security systems in the 9 countries (the 8 original countries and Italy). As already mentioned these elements are:

- Illness
- Unemployment
- Injuries from work
- Disability/invalidity
- Retirement
- Having children
- Maternity leave

As a supplement, a set of calculations of the combined effect of taxation and social security has been performed for each social security element and compared with disposable income when fully employed. As mentioned in the introduction, the framework for these calculations is the 'Average Production Worker' or 'Average Employee' derived from 'The Tax/Benefit Position of Employees', since the 1999 edition called 'Taxing Wages', an annual publication from the OECD.

The calculations are documented in appendix 1, and the following is a short note on the interpretation of the calculations.

2.1. Interpretation of the 'APW-calculations'

The calculations have the form of 'gross compensation percentages' (in some cases net compensation percentages, if that is the relevant concept) and 'change in disposable income'. The disposable income concept is somewhat crude, cf. appendix 1, and does not fully reflect the considerable variation in income conditions for production workers in the 9 countries. Day care for children and housing are disregarded, and only standard deductions in taxable income, standard social security contributions and public social security benefits are included.

The strength of the 'APW-calculation' of disposable income is that it is consistent across the 9 countries.

The 'APW' is a production worker, i.e. an employee in the private sector. The effect of income events could be different for other population groups, e.g. self-employed persons or public sector employees. The results are only valid for private sector employees.

The calculations are valid at two points in the income distribution, i.e. the single APW and the APW couple. These points are not the same in all 9 countries, cf. appendix 1 [1]. More important is the fact that 'single-point calculations' do not reflect the effects of varying income. This is important because 'flat rate systems' and 'income-related systems' have different characteristics, when the income varies. The results are only valid for the 'APW-points' in the income distribution. Based upon supplementary information on the 'benefit formula' ('flat rate', 'income-related, low cap' or 'income-related') it is, however, possible to make some conclusions about the profile of net replacement rates (100 plus the percentage change in disposable income), often used in international comparisons.

The 'standard' income events have a defined length of time (one week, 3 months, etc.), other durations of the events could change the results. The 'seriousness' of the event could also influence the results, e.g. loss of working capability in connection with injuries from work. This problem could also be 'solved' by performing more calculations, and this has been done in a few cases. The results are only valid for the specific duration of the events assumed in the calculations.

Sometimes vacation pay and pay for overtime are not included in the basis for calculation of benefits. In this study all wage income is included in the basis for benefits (where that is relevant) and there are 260 wage days, 312 week days and 364 calendar days in the year, except where rules say otherwise. Most calculations are based upon current income, another simplification compared to the real world, where benefit calculations to a varying degree are based upon former income.

1) Cf. also the November 1994 edition of The Tax/Benefit Position of Production Workers, p. 259.

In several countries, it is possible to receive more than one kind of benefit (e.g. unemployment compensation and social assistance) at the same time. In the APW-calculations only one kind at a time is considered. Furthermore, it is the isolated effect of the event, which is calculated. Many of the 'events' lead to a decrease in disposable income and, therefore, other means-tested benefits (e.g. relating to day care for children or housing), could 'respond'. This combined effect is not included in the calculations. The calculations presented here are basically focusing on separate schemes, not so much on the 'standard of living' for the ill, unemployed etc., where all relevant schemes are involved, and where a 'stacking' analysis is more relevant.

The APW-calculations therefore have a very narrow interpretation, but they do provide a framework, although a simple one, for illustration of the functioning of the tax/benefit rules and thereby hopefully contribute to an insight into the structural differences between the social security (and taxation) systems of the countries included in this study.

2.2. The social security elements

Illness

The effects on disposable income from short spells of illness vary to some degree among the 9 countries. This is mainly because in some countries the employer has a legal obligation to pay the usual or close to the usual wages during relatively short spells of illness whereas this is not the case in other countries. The existence of a waiting period in some of the countries is also of importance. Labour market agreements to supplement the public benefits are, however, implemented in most countries with low benefits and/or relatively long waiting periods.

Even in countries where the employer has an obligation to pay wages during short spells of illness (partly or in full), there will be groups who are not eligible for this, and for those the social security benefits for illness are relevant. The APW-calculations therefore cover two situations, one where the ill person is eligible only for public social security, and the other where the ill person receives the usual wage or a usual supplement to the public social security benefits.

The social security system is important for almost all groups when longer spells of illness are considered [2].

In 7 of the countries (Finland and Canada are the exceptions) the employer administers the public insurance scheme, at least for shorter spells of illness. Compensation for illness schemes are characterized on the basis of these criteria:

- Is it usual for the employer to pay wages (partly or in full) for a period?
- Is there a waiting period?
- For how long can the ill person receive the compensation?
- Is the system for all population groups?
- Is the benefit ‘flat rate’ or is it ‘income-related’?

The result is contained in table 2.1.

2) In the Netherlands the compensation scheme was privatized in 1996.

Table 2.1. Characteristics of compensation for illness in 9 countries, 1999.

	DK	S	FIN	A	D	NL	IT	GB	CAN
Is it usual for the employer to supplement the public benefit?	Yes [1]	Yes [2]	Yes [3]	No [4]	Yes [5]	Yes [6]	Yes	Yes	No [7]
Waiting period	No, for employees	Yes [2], 1 day for employees	Yes, 9 week-days	No	No	Yes 2 days	Yes 3 days	Yes 3 days	Yes 2 weeks
Maximum benefit period	54 weeks (2+52) [8]	No limit	300 week-days for same illness	64 weeks (12+52)	78 weeks for same illness	52 weeks	26 weeks per year	28 weeks	15 weeks
Eligible groups	Employees, Self-employed	Employees, Self-employed	Employees, Self-employed	Employees	Employees	Employees	Employees	Employees, Self-employed [9]	Employees
Benefit formula	Income-related, low cap	Income-related	Income-related	Income-related	Income-related	Income-related	Income-related	Flat rate	Income-related
Special rules	Whitecollar workers receive wages			Longer period with wages for whitecollar workers	High income earners may leave the system		Whitecollar workers receive wages for at least 3 months		

1) From 1994 almost all blue-collar workers receive full wages in the first 2 weeks.
2) From 1992 the employers are obliged to pay benefits (80 per cent of wages for 2 weeks in 1999), and they can supplement the benefits from the insurance from day 15, cf. the comments on the table. From April 1993 there is a one-day waiting period.
3) There are labour market agreements in the private sector covering the income lost during short spells of illness, cf. also the documentation.
4) Usual wages are paid for some time, varying according to former work period and position as blue-collar (4-10 weeks) or white-collar (6-12 weeks) employee.
5) In Germany, the employer has a legal obligation to pay 80 per cent of wages for the first 6 weeks (1999), but most labour contracts still contain full wages for the first 6 weeks.
6) According to collective labour market agreements in the Netherlands, most employees receive full wages when they are ill, also in the waiting period.
7) There are supplementary benefits from some large corporations.
8) The 52 weeks are after the first 2 weeks where the employer pays wages or insurance benefits (the employer period). For newcomers, insurance benefits from the municipality may be received for the first 2 weeks.
9) Self-employed in GB receive from the Incapacity Benefit scheme.

Comments on table 2.1

In Germany, the employer's obligation to pay wages for the first 6 weeks of illness in Germany was reduced from 100 per cent to 80 per cent of the former wage in 1997, but most labour contracts still (1999) stipulate payment of usual wages for that period. This obligation depends on for how long the employee has worked for the employer. The insurance compensation was lowered from 80 per cent to 70 per cent of the gross wage.

In Austria, there is also a minimum work period before the employer is obliged to pay wages. For a blue-collar worker, the maximum duration of this obligation is 10 weeks (12 weeks for a white-collar worker). After that period he will receive 50-60 per cent of his former income for up to 1 year, first 50 per cent then increasing to 60 per cent.

In Great Britain, payment of Statutory Sick Pay is dependent on whether the employee has worked for the employer for a minimum length of time and has an income above the Lower Earnings Limit. If that condition is not met, the payment is made according to a lower rate (short-term Incapacity Benefit, lower rate) if the contribution record for that scheme is met. Many British workers receive supplementary benefits from the OSP (Occupational Sick Pay) scheme when they are ill. The OSP is a labour market agreement.

In Canada, a work requirement (700 hours in the last 52 weeks, 600 hours from 2000) has to be met before benefits can be received. There are supplementary benefits during illness for employees in some large corporations.

Sweden has changed its legislation concerning compensation for illness several times in recent years [3)]. In 1993, a one-day waiting period was introduced. Sweden, Finland, Great Britain, the Netherlands, Italy, and Canada all have a waiting period, shortest in Sweden (1 day), longest in Canada (2 weeks).

3) Before March 1st, 1991, the compensation from the insurance was 90 per cent, and it was usual for the employer to pay 10 per cent of the former wage, the total compensation then usually being 100 per cent (up to an upper limit of 7.5 times 'basbeloppet', the 'basic rate' in the Swedish social security system). From March 1st, 1991, the benefit from the insurance was changed to 65 per cent of the wage for the first 3 days of illness and 80 per cent for the remaining days in the first two-week period. Again it was usual that the employer paid 10 per cent of the wage. The total compensation was then 75 per cent (first 3 days) and 90 per cent (for the remaining days of the first two-week period). From the third week the total compensation was 90 per cent (80 per cent from the insurance and 10 per cent from the employer until day 90, thereafter 90 per cent from the insurance). From the beginning of 1992 the employer is obliged to pay 75 per cent of the wages for the first 3 days and 90 per cent for the remaining days in the first two-week period. The insurance takes over from the third week, and the compensation is 90 per cent, and there is no supplement from the employer. The increased burden for the employer was compensated by a decrease in the social security contribution paid by the Swedish employers. In 1993 the system was changed again. This time a waiting period was introduced (1 day) and the compensation lowered for longer spells of illness. This again opens for supplements from the employer. In 1994 these were, however, restricted to the period from the start of the 3rd week to the 90th day of illness. From 1996 the gross compensation percentage was lowered to 75 in the entire scheme. This may be supplemented with 10 per cent from day 15 to day 90. In 1997 the employer paid benefits were for the first 4 weeks of illness (and the supplement was paid from the 29th to the 90th day), but that was changed back again to 2 weeks in 1998, when the compensation percentage also was increased to 80. The supplement is again paid from the 15th day and is still 10 per cent.

The maximum duration of the compensation in Italy is 26 weeks within a year, in Denmark it is 52 weeks within 1 1/2 years whereas it is 78 weeks in Germany within 3 years and 300 days within 2 years in Finland. The German and Finnish time limitations are only for the same illness, the Italian and Danish ones are general. Germany, Finland, Italy, and Denmark are the only countries where the maximum benefit period is within a broader time limit.

In Germany, there is a maximum level of income to which the contribution percentage is applied. Employees with income above that level may leave the system for public insurance against illness.

The criterion for characterizing the benefit as 'flat rate', 'income-related, low cap' or 'income-related' is the same as was used in chapter 1. Finland has a 'step formula' without maximum, characterized as 'income-related'.

The level of compensation

The effect on disposable income of the 'standard' event 'being ill for one week' is illustrated by APW-calculations, in this case for the single APW.

Table 2.2. Effects on disposable income of being ill for 1 week in 9 countries, 1999

	DK	S	FIN	A	D	NL	IT	GB	CAN
Social security alone									
Compensation percentage	52	64	0	50	70 1)	42	29	7	0
Change in disposable income, %	-0.7	-0.7	-1.5	-0.8	0.0	-0.9	-1.3	-1.6	-1.5
'Usual' situation (combined with social security)									
Compensation percentage	100	64	100	100	100	100 2)	100	80 3,4)	0
Change in disposable income, %	0	-0.7	0	0	0	0	0	-0.4	-1.5

1) The compensation percentage is before taxation, but with a maximum of 90 per cent of the former net income (applied here).
2) In the usual situation the waiting period of 2 days is also compensated.
3) The compensation percentage is after taxation (net income).
4) The range of variation is considerable for this compensation percentage.

For all countries, two calculations have been made, one covering the social security system alone, the other covering the 'usual' situation where the employer may pay wages (partly or in full) or may supplement the benefit from the social security system. The percentage change in disposable income is based upon the change in the annual disposable income of the APW caused by being ill for one week.

For shorter spells of illness the best compensation is received in Germany. The unchanged disposable income in the insurance case is a result of lower taxation of the remaining wage income, even after including the 'progressions vorbehalt'. Usually, Austria also has full compensation for shorter spells, but in the insurance case it is considerably lower. In Sweden there will always be a reduction of disposable income. The effect of the waiting day introduced in 1993 is significant, especially for short spells of illness. The relatively substantial reductions in disposable income in the insurance cases for Finland, Great Britain, Canada, Italy, and the Netherlands are primarily caused by the waiting period. For Austria and Denmark they are due to a relatively low compensation. In the 'usual' situation all these countries, except Canada, have a high degree of compensation.

For longer spells of illness the 'social security system' plays the dominant role for most groups. Waiting periods (Sweden, Finland, Great Britain, the Netherlands, Italy, and Canada) will be of less importance for longer spells of illness than for shorter spells. This will 'improve' the position of Sweden, Finland, Great Britain, the Netherlands, Italy, and Canada compared to Germany, Austria and Denmark, Italy also has a higher compensation (66 per cent) for longer spells than for shorter ones (50 per cent). After Germany, Sweden and Finland have the highest compensation in the 'social security alone' case for longer spells of illness in 1999.

Unemployment

In the case of unemployment insurance, the variation of the effect on disposable income is considerable among the 9 countries studied. This variation depends on both the principles of unemployment insurance and the level of benefits.

The criteria, according to which this important element of the social security system is characterized, are:

- Is insurance mandatory or voluntary?
- Is there a waiting period?
- Is the period during which benefits can be received dependent on the duration of former occupation?
- Is there a mechanism by which to renew the right to benefits?
- Is the benefit ‘flat rate’ or ‘income-related’?
- For how long can the unemployed receive benefits?
- Is there an ‘additional’ system?

Italy has several schemes for unemployment insurance. The description covers the ‘ordinary’ unemployment insurance scheme.

The characterization of the unemployment benefit (U.B.) schemes is contained in table 2.3.

Table 2.3. Characteristics of unemployment insurance in 9 countries, 1999

	DK	S	FIN	A
Basic System				
Type of insurance	Voluntary	Voluntary [1]	Voluntary [1]	Mandatory
Eligible groups	Employees, Self-employed	Employees, Self-employed	Employees, Self-employed	Employees
Waiting period	No [2]	Yes [3], 5 days	Yes, 7 days	No
Duration of former period of work required for employees	52 weeks of work within 3 years	6 months of work within 1 year	43 weeks of work within 2 years	Minimum 52 weeks of work within 2 years
Renewal of rights	26 weeks of work within 3 years	As above, job offer	As above	As above
Benefit formula	Income-related, low cap	Income-related, low cap	Income-related	Income-related
Maximum benefit period	4 years, longer if person is 55-60 years, shorter if over 60	14-21 months dependent on age renewal: repeated, based on job offer [5]	100 weeks within 4 consecutive years. Longer when 57 years	20-52 weeks dependent on age and former work history
Additional System				
Existence	None	None	Yes	Yes
Eligible groups			'Newcomers' and out-insured	Unemployed not eligible for insurance
Maximum benefit period			No limit	No limit
Benefit formula			Flat rate, means-test	Income-related [8]

Table 2.3. Continued

	D	NL	IT	GB	CAN
			Basic System		
Type of insurance	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory
Eligible groups	Employees	Employees	Employees	Employees	Employees
Waiting period	No	No	Yes, 7 days	Yes, 3 days	Yes, 2 weeks
Duration of former period of work required for employees	Minimum 12 months of work within 3 years	26 weeks of work within 39 weeks and work in 4 out of 5 years	52 weeks in preceding 2 years	In 1 of 2 years 25 min.contr.paid and in each of 2 years a number of min. contr.credited [4]	420-700 hours in precidin g year
Renewal of rights	As above,	As above,	As above	13 weeks of work in the last 26 weeks	20 weeks in preceding year
Benefit formula	Income-related	Income-related	Income-related	Flat rate	Income-related
Maximum benefit period	$^1/_2$ to 2 $^2/_3$ years dependent on age and former work history	Step 1: $^1/_2$ year	6 months (180 days, 7 days per week)	$^1/_2$ year in JSA (C) (182 days)	Up to 45 weeks dependent on work record and regional unemployment
			Additional System		
Existence	Yes	Yes	None	Yes	None
Eligible groups	Unemployed not eligible for insurance [6]	Unemployed not eligible for insurance from step 1		Unemployed not eligible for insurance. JSA (ib)	
Maximum benefit period	No limit	Step 2: [7] $^1/_4$ to 4 $^1/_2$ years Step 3: 2 years, longer when 57 years		No limit	
Benefit formula	Income-related	Income-related [7]		Flat rate, means-test	

1) Both Sweden and Finland have a general basic scheme for all meeting the eligibility criteria and on top of that a voluntary income-related insurance scheme.
2) In Denmark, the employer pays compensation for the first 2 days.
3) From July 1993 Sweden has 5 waiting days.
4) There are two initial qualifying conditions:
a. During one of the two complete tax years prior to the calendar year in which the claim for unemployment benefits is made, earnings-related contributions must have been made for earnings equal to at least twenty five times the lower earnings limit (measured in GBP/week).
b. In each of the complete tax years prior to the calendar year in which the claim is made, the claimant must have paid or been credited with contributions which total to those from income equal to at least fifty times the lower earnings limit. Concerning renewal, the claimant must have worked for at least 16 hours in each of at least 13 weeks in the 26 weeks before the benefit is reclaimed.
5) From July 1994 the rules were changed in order to stop the repeated renewals without time limitations. From 1995 the renewal mechanism was basically as before July 1994, i.e. without time limitation through job offers, limitations are being considered by the Swedish Government.
6) From 2000 the additional scheme is exclusively a 'follow-on' scheme to the insurance scheme.
7) The work condition for step 2 is 4 years out of 5. In step 3 of the system the benefit is 'flat rate'.
8) With a short work record there might be a flat rate ceiling.

Comments on table 2.3

Unemployment insurance is mandatory except in the 3 Nordic countries. The Danish insurance scheme is 'completely' voluntary. Both Finland and Sweden have a basic scheme providing a minimum benefit which can be received when the work conditions are met, it is not necessary to be a member of any insurance scheme. These are general schemes for all meeting the eligibility criteria. On top of that both Sweden and Finland have a voluntary earnings-related scheme. In both Denmark, Sweden and Finland a minimum length of membership is required (for employees it is 1 year in Denmark and Sweden, 5/6 year in Finland in 1999) before the employee or the self-employed person is eligible for the insurance benefit from the voluntary schemes.

Five countries (Great Britain, Sweden, Italy, Finland, and Canada) have a waiting period varying in length from 1/2 week in Great Britain, 1 week in Sweden and Italy, 1 2/5 week in Finland to 2 weeks in Canada. In Canada, it is possible to receive social assistance in the waiting period, but it will be reclaimed when the U.B. is received.

A work condition has to be met in all the countries before the unemployed can receive benefits from the insurance schemes. The Netherlands has a double condition relating both to the short-term (26 weeks of work within 39 weeks before unemployment) and the long-term (work, but not all the time, for 4 years out of the 5 preceding calendar years) for entitlement to income-related benefits. If only the first condition is met, the benefit will be flat rate in the basic system (70 per cent of the minimum wage). In three of the countries (Sweden, Great Britain [4] and Canada), the requirement for former work must have been met within 1 year prior to unemployment. In Finland, Italy and Austria, it is within 2

4) For Great Britain it is a little more complicated, cf. table 2.3.

years prior to unemployment, and in Germany and Denmark it is within 3 years. The requirement in both Germany and Denmark [5] is work for 1 year.

In Sweden [6], the right to receive insurance benefits can be renewed (when the initial period has expired) by a 'job offer' (which can be claimed by the unemployed). This has also been the case in Denmark, but from January 1994 the benefit period was changed to 7 years (9 years if paid leave was included), from 1996 it was further reduced to 5 years, including periods with education and/or job training and from 1999 it has been 4 years. Renewal of the benefit period in Denmark requires a new working period as it does in the other countries. Only in Sweden repeated 'job-offers' can continue to renew the benefit period, which in practice is without time limitations. Some kind of limitation is, however, under consideration and has been for some time. Repeated use of the U.B. in Canada (e.g. by seasonal work) results in a decreasing compensation percentage down to a floor.

According to the definitions used here, cf. chapter 1, section 1.2, the benefit formula is 'flat rate' in Great Britain, 'income-related, low cap' in Denmark and Sweden and 'income-related' in Finland, Austria, Germany, the Netherlands [7], Italy, and Canada. In Sweden, the cap, as earlier mentioned, has changed position several times in relation to the APW income. In 1999 it was below the APW income.

The maximum benefits (there are two levels) in Italy are the same for all unemployment benefit schemes. As the compensation is low in ordinary U.B. (30 per cent of former wage) and high in the CIG (80 per cent of former wage), the ordinary U.B. scheme is 'income-related' while the CIG scheme is 'income-related, low cap'.

In the 'flat rate' and 'income-related, low cap' countries there is a decreasing compensation percentage (here assumed to be after tax, but that is not important) for income higher than that of the APW (and an increasing compensation percentage for lower income down to the cap). This is also the case in the Finnish 'income-related' scheme using a 'step formula' (no cap), but the decrease is more gradual than for the 'flat rate' and 'income-related, low cap' schemes. In Sweden the compensation percentage is decreasing for income above the APW level, and after an initial increase down to the cap close to being constant for income below that level. The Danish profile is similar to the Swedish one, but with a lower cap. The constant compensation percentage is reached at approx. 63 per cent

5) Changes were implemented in Denmark from 1997, before then it was $^1/_2$ year of work.
6) The rights for renewal were changed in Sweden from July 1994. From January 1995 the rules were changed back again, but new changes are under consideration.
7) On the assumption that the 'double' work condition is met.

of the APW income in the Danish scheme, whereas it is reached at approx. 85 per cent of the APW income in Sweden (moving from higher to lower income). The compensation percentage is almost constant in Germany and the Netherlands, at least to an upper income limit, which for Germany is approx. 1.7 APW level, for the Netherlands approx. 1.4 APW level. Austria and Italy (ordinary U.B.) also have a relatively high upper limit. The maximum insurable income in Canada is approx. 1.1 APW level. Above these limits, the compensation percentage will also decrease in these 5 countries.

Usually, the 'income-related' schemes also have a minimum, which, however, is reached at low income levels. Denmark probably has the most narrow gap between the maximum benefit reached at approx. 0.63 APW income level and the minimum benefit reached at approx. 0.52 APW income level. This implies that the income range with a constant compensation percentage is quite small in Denmark.

Only one country (Canada) has a 'claw-back' clause, i.e. a claim for paying back benefits (either wholly or partly), if the earned income, when employment is obtained again, is above a certain, relatively high, threshold, the already mentioned maximum insurable income.

There is substantial variation among the countries, with regard to the maximum period for which the benefit can be received. Austria has a relatively short benefit period varying from 20 to 52 weeks, depending on work record and age. The maximum period requires work for 9 years within the last 15 years and an age of over 50. The minimum period requires work for 1 year within the last 2 years, cf. table 2.3. In Germany, the length of the benefit period varies from 1/2 year to 2 2/3 years dependent on work history and age. The maximum length requires an age of over 54 and a little more than 5 years of work within the last 7 years. For the minimum period, the requirement is, cf. table 2.3, 1 year of work within the last 3 years. If step 1 (basic system) and step 2 (additional system) in the Dutch system are taken together the maximum length of the benefit period is 5 years with income-related benefits. The maximum length again requires a relatively high age and a long working history. In Sweden, the formal benefit period is 1 1/6 years, longer if the unemployed has reached the age of 57, in fact there are no time limitations. Finland has a benefit period of 100 weeks, longer when the unemployed reaches the age of 57. Denmark, Italy and Great Britain have 'uniform' benefit periods, longest in Denmark (4 years), shortest in Italy (1/2 year) and in Great Britain (1/2 year under the JSA (C) scheme from October 1996), also with a prolonged period in Denmark for the elderly in the 55 to 60 age group (but shorter for unemployed between the age of 60 and 67). The length of the benefit period in Canada depends on the former working record (preceding year) and the unemployment rate in the province (high rate implies longer benefit period).

For three of the countries with relatively short periods in the basic system (Austria, Germany, and the Netherlands) there is an 'additional system' primarily for unemployed whose rights in the basic system have expired. The 'split' between the basic system and step 2 of the additional system in the Netherlands, cf. table 2.3, is rather formal. These two parts constitute the earnings-related scheme and are quite coherent. In Great Britain, the unemployment benefit scheme JSA (C) is 'replaced' with JSA (IB) after 1/2 year (from October 1996), often with little economic consequences for the recipient (the only difference for a single is that the benefit now is means tested against other income). In Sweden, there is also a scheme alongside the insurance system, but that is an alternative system for people who are not insured. That scheme became part of the mandatory insurance system from July 1994. From January 1995 the alternative system regained its orginal role as a short-term scheme (short benefit period) which may be supplemented and finally 'replaced' by social assistance. From 1998 this scheme was replaced by the basic general component of the Swedish unemployment benefit scheme. It has the same benefit period as the voluntary earnings-related component. Finland has both an additional and an alternative scheme. The alternative scheme in Finland is primarily for people, who are not eligible for the insurance scheme (not insured), whereas the additional scheme is a parallel scheme to social assistance. It is primarily for unemployed 'newcomers' or 'out-insured' from the voluntary insurance scheme or the alternative scheme, which has the same duration and work conditions as the insurance scheme.

The additional schemes in Finland, Great Britain, Austria, Germany, and the Netherlands are quite different. In Finland, it is a parallel scheme to social assistance with no time limitations. This is also the case for the British JSA (IB) scheme, which is a parallel to Income Support. In Austria and Germany, it is a continuation of the insurance scheme but with a lower benefit level, it is means-tested and with no time limitations (it has some of the characteristics of the social assistance scheme). In the Netherlands, it is a time limited continuation of the insurance scheme with the same benefit level (except in the last step where the benefit is 'flat rate' and usually lower). Except for the last step, it has none of the characteristics of the social assistance scheme.

The level of compensation

In this case the 'standard' events are unemployment for 3 months and for the whole year. The calculations have been made for two situations, one where the unemployed single APW is eligible for insurance benefits and one where he or she is not. The results of the calculations for the two situations are summarized in table 2.4 and 2.5 respectively. The effect on disposable income is calculated in relation to the annual disposable income of the APW. For Italy, two insurance schemes have been applied. One (marked 1) is the ordinary unemployment benefit scheme, which has the lowest benefit level and the shortest benefit period. The other one (marked 2) is the CIG (special wage supplementation fund), which has higher benefits and longer benefit periods. Access to the CIG scheme is more restricted than to the ordinary unemployment benefit scheme. It is more a 'lay-off' scheme, which can be followed by the mobility benefit, when the CIG rights expire if the recipient is not back working. Only Canada, Great Britain and Italy (ordinary unemployment benefit scheme) have a maximum benefit period shorter than a year in 1999. Social assistance benefits (JSA (IB) in Great Britain) have been applied for the rest of the year in these cases.

Table 2.4. Effects on disposable income of being unemployed for 3 months and the whole year in 9 countries, 1999.

	DK	S	FIN	A	D	NL	IT 1/2	GB	CAN
				Eligible for insurance, 3 months of unemployment					
Compensation percentage	52	63	46	56 1)	60 1)	70	28/51	14.5	46.5
Change in disposable income, %	-9.6	-8.8	-9.7	-7.7	-6.6	-6.6	-15.9/ -4.0	-19.1	-9.9
				Eligible for insurance, 12 months of unemployment					
Compensation percentage	52	67	50	56 1)	60 1)	70	22/51	15	48
Change in disposable income, %	-38.6	-30.5	-41.4	-44.0	-41.8	-27.9	-72.3/ -45.5	-80.3	-44.1

1) The compensation per cent is after tax.

For ordinary unemployment insurance benefits the decrease in disposable income is smallest in the Netherlands and Germany followed by Austria when the APW is unemployed for 3 months and eligible for insurance benefits. The decrease is somewhat larger in Sweden, Denmark, Finland and Canada, smallest in Sweden, largest in Canada. Great Britain and Italy (scheme 1) have the largest decrease among the 9 countries. The picture is somewhat different for the APW who is unemployed for the whole year, and the 'ranking' of the countries has changed. The Netherlands is still the country with the smallest change, but the German change is now larger than the Dutch, the Swedish, the Danish and the Finnish ones, but still smaller than the Austrian and Canadian ones. It is especially the variation in the progression of tax schemes and the German and Austrian benefits being on a net (after tax and social contribution) basis, which causes the changed picture from 25 per cent to full unemployment. In Great Britain, which still has the largest change, it is possible to supplement the insurance benefit with other benefits, especially for housing [5]), an aspect not included in the calculation. The Italian scheme 1 has effects similar to the British one, while the CIG scheme has much higher benefits, in the 25 per cent case it has the smallest negative impact of all the countries.

The calculations in the case where the unemployed person is not eligible for insurance benefits are more difficult to interpret. In general the calculations in table 2.5 show rather large decreases in disposable income. This is partly because housing costs and allowances are not taken into consideration in the calculations.

Housing allowances are separate components of the social assistance schemes in several countries and often more generous than ordinary housing benefit schemes (Denmark, Sweden, Finland and Germany but not in Italy, Great Britain and the Netherlands). Canada only has housing allowances in relation to social assistance. For those receiving social assistance there is therefore in the first mentioned countries and in Canada a tendency to overestimate the negative impact of this 'income event', compared to receiving unemployment insurance benefits, when housing benefits and allowances are not taken into consideration.

In the calculations for Denmark, the unemployed receives social assistance (without allowances for housing). In Sweden (except for the period of July 1st to December 31st 1994 when the system was integrated in the mandatory insurance scheme), a special labour market compensation was received, but this could be supplemented by social assistance and housing allowances (not included in the calculations). From 1998 this element in Sweden is the basic (general) level in the Swedish unemployment benefit scheme. In Denmark and Sweden, these elements of social security are alternatives to unemployment benefits from the voluntary schemes. The Danish social assistance system was changed fundamentally from 1994. The benefit became related to the maximum benefit for unemployment and it became taxable. The system, as mentioned, also includes allowances for housing costs (this allowance is non-taxable), in some cases more favourable than the ordinary housing benefit scheme. The minimum U.B. (the rate in the alternative scheme) has been used in the case for Finland, when the unemployed is not eligible for earnings-related U.B. This is also equivalent to the benefit for the out-insured.

8) Housing benefits are also available in most of the other countries, but not to the same extent as in Great Britain.

Table 2.5. Effects on disposable income of being unemployed for 3 months and the whole year in 9 countries, 1999.

	DK	S	FIN	A	D	NL	IT	GB	CAN
Not eligible for insurance, 3 months of unemployment									
Compensation percentage	31	26	19	51.5 [1]	53 [1]	31	0	14.5	6.5
Change in disposable income, %	-14.1	-17.2	-15.5	-8.7	-8.1	-10.0	-15.6	-19.1	-18.9
Not eligible for insurance, 12 months of unemployment									
Compensation percentage	31	28	21	51.5 [1]	53 [1]	31	17	15	6.5
Change in disposable income, %	-59.1	-70.2	-73.4	-48.5	-48.5	-53.3	-77.6	-80.3	-91.2

1) The compensation per cent is after tax.

In Germany, the additional scheme is primarily for people whose rights to receive insurance benefits have expired, but only if the person needs the compensation. Austria has a similar scheme. In Great Britain it is also possible to supplement the compensation (JSA (IB)) shown in table 2.5 with for instance compensation for housing expenditures just as in the case with unemployment benefits. In the Netherlands, the unemployment insurance system consists of 3 steps, the first is the basic system, where the duration of the benefit period is 1/2 year. In step 2 the length of the benefit period (dependent on former work) varies from 1/4 year to 4 1/2 years. Step 3 has a benefit period of 2 years and thereafter the unemployed will receive social assistance (older unemployed workers can stay longer in step 3). Step 2 and 3 are categorized as the additional system in table 2.3. The out-insured Dutch unemployed APW in table 2.5 receives social assistance, which on a net base is equivalent to the flat rate benefit in step 3 of the U.B. scheme.

Italy has a newly implemented social assistance scheme, which has been applied here. The zero compensation in the 25 per cent case is because the earned income in the 9 months of the year is too high for social assistance eligibility.

The out-insured Canadian unemployed receives social assistance, the rate of Ontario has been applied. Housing allowances are available in Canada in these cases, but have, as already mentioned, not been considered in the calculations in table 2.5.

Even if direct comparison of the outcome recorded in table 2.5 is difficult, it is evident that the schemes of Austria, Germany and The Netherlands give a considerably better compensation than those of the Nordic countries. The schemes of Italy, Great Britain and Canada give a low compensation. It may surprise that the negative impact in the 25 per cent unemployment case is smaller for social assistance in Italy (no compensation) than for ordinary U.B. The reason is that social contributions are not paid on earned income in the social assistance case.

Table 2.6. Effects on the couple's disposable income from unemployment during the whole year for the part-time working partner in the APW-couple in 9 countries, 1999.

	DK	S	FIN	A	D	NL	IT 1	GB	CAN
Compensation percentage	70	78.5	63.5	56	60 [1)]	70	14	15	41
Change in disposable income, %	-6.9	-7.6	-12.0	-15.8	-12.3	-10.1	-26.0	-29.1	-17.6

1) The compensation per cent is after tax.

In order to see the impact of unemployment on the disposable income of a married couple, the case where an insured part-time working partner becomes unemployed was studied (unemployed for the whole year). The results are contained in table 2.6.

It is evident that the relative loss of income in the Danish case is modest, some would say very modest. This could imply small economic incentives for the part-time working partner in a couple to seek for a job in case of unemployment, if the joint income is basis for such decisions, especially if the unemployed is entitled to the prolonged benefit period, cf. comments on table 2.3. The low reduction in the Danish case is partly due to the taxation of couples. The lower income for the wife as unemployed results in increased tax reductions for the husband, because of increased unused tax allowances for the now unemployed partner, which are transferable to the spouse. The Swedish case is, after the increase to 80 per cent of the gross wage in compensation, not very different from the Danish one. The other countries have more substantial decreases in this case, the British decrease is for instance 4 times as large as the Danish one. Only ordinary U.B. has been applied for Italy in this case.

Injuries from work

In the Netherlands, there is no separate compensation scheme covering the 'event' of being injured from work. The injured person receives compensation for illness and, if the loss of working capability becomes permanent, public invalidity pension, cf. the section on this. In the 8 other countries there are specific schemes for industrial injuries. Compensation is, however, typically received some time after the injury, sickness benefits may cover the interim period. Only permanent benefits from the schemes are considered here. The level of compensation varies a great deal. The gross compensation percentages are high in 3 of the countries (Denmark, Sweden and Italy), relatively high in Finland, Austria and Germany, while they are somewhat lower in Great Britain. Canada has a high compensation (90 per cent) of lost net income. The minimum loss of working capability, making the injured person eligible for permanent compensation, varies from 6.7 per cent in Sweden, 10 per cent in Finland, 11 per cent in Italy, 14 per cent in Great Britain, 15 per cent in Denmark to 20 per cent in Austria and Germany. In the Netherlands (where the injured person receives invalidity pension according to the public scheme), the threshold is 15 per cent loss of working capability. This is very much in line with most of the other countries as far as industrial injuries are concerned, but it is a low minimum for ordinary disability pensions, cf. the section on this. There is no stated minimum in Canada.

The compensation from the insurance can be supplemented by, or co-ordinated with, the public invalidity pension scheme. In Denmark and Great Britain the two systems are combined, in Sweden and Germany a co-ordination takes place.

The scheme is financed by the employer in 7 of the countries whereas it is financed by taxes in Great Britain.

The level of compensation

Two sets of calculations have been performed, one where the working capability is completely lost, and one where 1/3 of the working capability of the single APW is lost. In the latter case it is assumed that the injured person still receives 2/3 of his or her former working income. Only current permanent benefits are considered. Supplementary benefits for immobility or special care are not included.

The results of the calculations are shown in table 2.7. The impact on disposable income is again measured in relation to the current annual disposable income of the APW.

Sweden has the most transparent system, the compensation percentage is 100 and there is no change in disposable income. The compensation is in relation to the loss of income, not the degree of disability. In the Danish case there is a considerable increase in disposable income (in the case of complete loss of working capability) for the injured person.

Table 2.7. Effects on disposable income from being permanently injured from work in 9 countries, 1999.

	DK	S	FIN	A	D	NL	IT	GB	CAN
Complete loss of working capability									
Compensation percentage	113	100	85	80	67	70	99.5	53	90 [1]
Change in disposable income, %	+28.4	0	-8.6	+9.3	+16.0	-27.9	+4.7	-29.7	-10.0
Loss of 1/3 of working capability									
Compensation percentage	77	100	85	67	67	63	55	28	90 [1]
Change in disposable income, %	-3.6	0	-1.7	+2.9	+12.5	-10.7	-9.6	-17.0	+0.8

1) The compensation per cent is after tax.

This is because the compensation for injuries from work is combined with the public invalidity pension scheme. In the case of 1/3 loss of working capability, the Danish APW is not eligible for invalidity pension and there is a modest drop in disposable income. The separate compensation for injuries from work is related to income and proportional to the degree of disability.

In Germany, the compensation is calculated on the basis of gross income and is proportional to the degree of disability. The compensation is not taxed, and there is no 'Progressionsvorbehalt', cf. appendix 1 (Germany, Unemployment). These conditions lead to increases in disposable income in both cases, most when the working capability is completely lost. The relative impact in the case with 1/3 loss of working capacity is, however, large in proportion to the loss of working capacity because the tax free compensation here replaces income with a relatively high marginal taxation.

Austria has a scheme of similar design as the German one, and with similar effects. The relative effects in the two cases are close to being proportional to the degree of disability but that is because the 100 per cent loss of working capability has an extra benefit (20 per cent of the basic pension).

The Finnish scheme leads to relatively modest declines in disposable income in both cases. The compensation is related to income and proportional to the degree of disability.

The Italian scheme is related to income with a cap just below the APW wage level. The scheme is graduated according to loss of working capability. The over compensation in case of 100 per cent loss of working capability is because social contributions are not levied on the benefit.

The Canadian scheme compensates a high proportion of lost net income and is proportional to the degree of disability. The negative effect in case of full disability is relatively modest, in case of 1/3 loss of working capability there is a small positive effect due to the progression in the tax scheme.

In Denmark, Sweden, Finland, Austria, Germany, and Canada the compensation is 'income-related', the cap is at a high income level (Finland has none). Italy has an 'income-related, low cap' benefit, whereas the British system is 'flat rate' and graduated after the degree of disability. Combined with Incapacity Benefit the negative impact on disposable income is similar to that of the Netherlands (phase 1, cf. below), in the 100 per cent loss of working capability case. Incapacity Benefit is assumed not to be received in the 33 1/3 per cent loss of working capability case in Great Britatin. For the Netherlands it is, as already mentioned, the impact of the public invalidity pension scheme which is presented in table 2.7. The scheme is 'income-related' and the compensation is related to the degree of disability. The initial (phase 1) benefit is time limited for most new recipients (after 1994), most of whom will experience reduced benefits when phase 2 starts, cf. the section on invalidity pension.

Disability/invalidity

Industrial injuries are related to accidents at work or diseases developed from work. Disability is related to illness in general. The typical 'route' for disability pensioners is illness and then a decision in favour of rehabilitation or disability pension. Disability pension is usually obtained after illness for a considerable time and mainly if the loss of working capability is permanent. Sickness or related benefits may cover the interim period, which, as mentioned, may be long.

In the cases illustrated here, only the permanent benefit is included in the calculation, and the impact is related to current (1999) income.

The age is sometimes important for the first time recipient of disability pensions (accrual rates vary in some countries with age). In the cases illustrated here, it is assumed that the first time recipient is maximum 50 years old. In cases where a specific age is needed (e.g. for taxation in Germany, and age related supplements in Great Britain), this is assumed to be 35 years.

Disability pensions from private or labour market arrangements have been disregarded.

The principles for disability pensions vary considerably among the 9 countries studied. In some countries the disability pension scheme is aligned with the old-age pension scheme. This is for instance the case in Denmark, Sweden, Finland, Austria, Germany, Italy, and Canada. In other countries it is aligned with sickness benefits, for instance in Great Britain and the Netherlands. 'Anticipated' pension points or years for periods without an actual income are used in several countries to calculate an old-age like pension. Important criteria for characterization of disability pension schemes include:

- Minimum and maximum age for first time recipients of disability pension?
- Does disability pension continue as old-age pension?
- Are all citizens eligible for pensions from the scheme or the basic part of it?
- Is the pension dependent on former work and income or is it a 'flat rate'?
- Is the pension graduated according to the loss of working capability?
- Is the level of the pension dependent on the age of the first time recipient?
- Is the level of the pension dependent on being married or single?
- Is the pension means-tested?
- Is there an additional scheme?

The categorization of the public disability pension schemes according to these criteria is contained in table 2.8.

Table 2.8. Characteristics of public disability pension schemes in 9 countries, 1999.

	DK	S	FIN	A
Basic Public Scheme				
Minimum age, start	18	16	16	-
Maximum age, start	66	64	64	56 [1)]
Continue as old-age pension	No	No	Yes	Yes
Eligible groups	All	All	All	Employees
Pension dep. on work hist. and income	No	No	No	Yes
Pens. graduated accord. to loss of w. cap.	Yes	Yes	No	No
Pens. dependent on age of 1st time recip.	Yes	No	No	Yes
Pens. dependent on marital status	Yes	Yes	Yes	No
Means-testing	Yes	Yes	Yes	No
Additional Public Scheme				
Existence	None	Yes	Yes	None
Eligible groups		Empl. + self.	Empl. + self.	
Pension dependent on work hist. and income		Yes	Yes	
Continue as old-age pension		Yes	Yes	

Table 2.8. Continued

	D	NL	IT	GB	CAN
			Basic Public Scheme		
Minimum age, start	-	-	-	-	18
Maximum age, start	59 [2]	64	63/58 [7]	64/59 [7]	64
Continue as old-age pension	Yes [3]	No	Yes	No	No
Eligible groups	Employees, Some self-empl.	Employees [4]	Employees,	Employees, Self-employed	Employees, Self-employed
Pension dep. on work hist. and income	Yes	Yes	Yes	No	Yes
Pens. graduated accord. to loss of w. cap.	No	Yes	No	No	No
Pens. dependent on age of 1st time recip.	Yes	Yes [5]	No	Yes [6]	No
Pens. dependent on marital status	No	No	No	No	No
Means-testing	No	No	No	No	No
			Additional Public Scheme		
Existence	None	None	None	None	None
Eligible groups					
Pension dependent on work hist. and income					
Continue as old-age pension					

1) Persons who become disabled in the age bracket 57-64 years (55-59 years for women) receive an early retirement pension.
2) Persons who become disabled in the age bracket 60-64 years start in the retirement scheme for disabled, where the formal retirement age is 60 years.
3) Only disability pension due to 'Erwerbsunfähigkeit', 'Berufsunfähigkeit' based pension will be increased as old-age pension.
4) From 1998 there will also be a scheme (WAZ) covering self-employed.
5) The duration of the benefit at the highest level depends on the age of the first time recipient.
6) Incapacity Benefit and Severe Disablement Allowance both have age additions, highest for young people.
7) The first age is for men, the second is for women.

Comments on table 2.8

The age range between the minimum and maximum age is for eligibility for disability pension, i.e. the range where it is possible to start as a recipient of disability pension. In two of the countries, Austria and Germany, the maximum age is lower than the formal old-age pension age. In these countries, early retirement possibilities for disabled are covering the ages up to the formal retirement age.

In some of the countries basic disability pension continues as old-age pension. This is the case in Finland, Austria, Italy and Germany (Erwerbsunfähigkeit). The early retirement pensions for disabled in Austria and Germany also continue as old-age pension.

Only the three Nordic countries have residence based disability pension schemes, in all the other countries a former working or contribution record is required. Without this there will be no pensions, social assistance will be the alternative (Great Britain has a non contribution alternative Severe Disablement Allowance, which, however, may be 'topped-up' with Income Support). For old-age pension, cf. the following section, the Netherlands and Canada also have residence based schemes, but not for disability pensions.

In all the countries where eligibility depends on former work and income the level of the pension also depends on these parameters, except in Great Britain, where the pension is flat rate.

In Denmark, Sweden and the Netherlands the pension is graduated according to loss of working capability, in the other countries a 'full' pension or no pension at all is received. The Netherlands has the lowest 'entry' level, 15 per cent loss of working capability, in Sweden it is 25 per cent and in Denmark it is 50 per cent.

The pension may vary according to the age of the first time recipient. In Denmark there are age groups where it is not possible to receive (for the first time) certain of the pension levels, e.g. the highest level cannot be received for the first time in the age bracket 60-66 years. In other countries, e.g. Austria and Germany, the accrual rate for 'anticipated' years is (after a threshold age) smaller than for 'real' years. In general the higher the age, the larger the pension. In Great Britain it is the other way round. The age supplement of the pension is highest for younger people. In the Netherlands, it is more the duration of the pension at the highest level which depends on age, the higher this is the longer the duration is.

Only the Nordic countries differentiate the basic pension according to marital status and means test (taper) the basic pension, in Sweden and Finland only when it is 'integrated' with the public occupational pension, in Denmark it is against a wider range of other income sources.

Sweden and Finland have, as already mentioned, additional occupational pension schemes which for disability pensioners apply 'anticipated' time. The accrual rate for 'anticipated' time is lower than for 'real' time in the Finnish scheme (but not in the Swedish), so Finnish disability pension will often also depend on the age of the first time recipient.

It is worth mentioning that disability pension schemes are often complex and the eligibility criteria vary considerably. They are mainly based on medical assessments but some times also on social and economic conditions. All this is not reflected in table 2.8. Major reforms of the schemes in Denmark, Sweden and Germany are in the pipeline. Italy has implemented a new scheme, which will be in use from 2001.

Level of compensation

Only permanent benefits for 100 per cent disability are included in the calculations which have been made for the single APW in two situations, one where there is a former working record and all access conditions are met and another where there is no former working record at all. The two cases are recorded in table 2.9. It should be emphasized that no supplementary benefits (e.g. for care or help to get around) are included, and that the calculations cover a 'full' disability pension at the highest level in all countries.

Table 2.9. Net replacement rates in case of disability in 9 countries, 1999.

	DK	S	FIN	A	D	NL	IT	GB [1]	CAN
					With former working record				
Net replacement rate	74	61	63.5	68	60	72	88	28.5	40
					Without former working record				
Net replacement rate	74	45	32	36 [2]	22 [2]	47 [2]	19 [2]	21	23 [2]

1) In the British cases the benefits can be 'topped-up' with Income Support. In the second case (no former working record), it would result in a net replacement rate of 28.3 per cent if the case is ordinary disability, 34.9 per cent if it is severe disability. This would also be the result in the first case (with former working record) for severe disability.
2) These cases are based on social assistance because the persons have no pension rights.

The supplements for care and other help vary considerably from a relatively modest level in Denmark to a relatively generous level in Great Britain. If the maximum of the Disability Living Allowance is included in the calculations for Great Britain, the net replacement rate would more than double. The British case without former working record could also be 'topped-up' with Income Support, cf. note 1) for table 2.9. The Danish disability pension scheme is, as the only one, completely independent of former work and income. The net replacement rates are quite high for 7 of the countries (former work record), only Great Britain and Canada are at substantially lower levels.

It should be remembered that the duration of the benefit period in the Netherlands varies with the age of the 1st time recipient. For a 35-year-old person it is 1/2 year, for a 40-year-old it is 1 year. For a 50-year-old it is 2 years and for a 59-year-old and older it is until old-age pension. When the benefit period expires the benefit is calculated on a reduced basis.

Compared to the cases in table 2.7 for industrial injuries, it is evident that the compensation recorded in table 2.9 is lower.

Table 2.10 contains the cases where the usually part-time working spouse becomes disabled while her husband continues to work at APW income level.

Table 2.10. Effects on the couple's disposable income from permanent disability for the part-time working partner in the APW-couple in 9 countries, 1999.

	DK	S	FIN	A	D	NL	GB	CAN	
Compensation percentage	75.5	61	67	53	37	70	78	43	41
Change in disposable income, %	+0,7	-8.8	-8.8	-13.1	-10.8	-10.1	-2.6	-17.3	-17.5

The negative impact on the family disposable is approximately 10 per cent in several coun-tries, more in Austria, Great Britain and Canada, less in Italy. Only Denmark has a small gain, caused by the relatively high flat rate benefit in relation to the 1/2 APW income and favourable taxation. Again, it should be remembered that the duration of benefit at this level in the Netherlands is only temporary in most cases.

Retirement

Pension schemes are very important where public expenditures and distribution of income between the generations are considered, especially because of an ageing population in many countries (including the 8 European countries and Canada in this study) in the coming decades.

This study only deals with public pension schemes, implying that the comparisons between the countries can be only partial. Private pensions and/or company based pensions and/or labour market agreed schemes are important in many countries, especially in those countries where the public pension schemes are not so generous. Company pension schemes are important in the Netherlands, Great Britain and Canada, and labour market pension schemes are under gradual implementation in Denmark. Negotiated pensions (avtalspension) are usual in Sweden; they are not included here.

For this element of social security too, there is a substantial variation among the 9 countries studied. Important criteria for characterization include:

- What is the formal age of retirement?
- Does the pension scheme allow flexible retirement?
- Are all citizens eligible for pensions from the scheme or the basic part of it?
- Is the pension dependent on former work and income or is it a 'flat rate'?
- Is the level of the pension dependent on being married or single?
- Is the pension means-tested?
- Is there an 'additional' public pension scheme?

The categorization according to these criteria of the public pension schemes in the 9 countries is shown in table 2.11.

Table 2.11. Characteristics of public pension schemes in 9 countries, 1999.

	DK	S	FIN	A
		Basic public pension scheme		
Formal pension age	67	65	65	60/65 [1]
Flexible retirement	No	Yes	Yes	Yes
Eligible groups	All Residence based	All Residence based	All Residence based	Employees, Self-employed
Pension dependent on work history and income	No	No	No	Yes
Pension dependent on marital status	Yes	Yes	Yes	No
Means-testing	Partly	Partly	Partly	No [3]
		Additional public pension scheme		
Existence	Yes	Yes [4]	Yes	None
Eligible groups	Employees [6]	Employees and self-employed	Employees and self-employed	
Pension dependent on work history and income	Only on work history [6]	Yes	Yes	

Table 2.11. Continued

	D	NL	IT	GB	CAN
			Basic public pension scheme		
Formal pension age	65	65	59/64 [8]	60/65 [1]	65
Flexible retirement	Yes	No	No [7]	Only postponement	No
Eligible groups	Employees, Some self-empl.	All Residence based	Employees	Employees, Self-employed	All Residence based
Pension dependent on work history and income	Yes	No	Yes	Yes [2]	No
Pension dependent on marital status	No	Yes	No	No	Yes
Means-testing	No	No	No	No	Partly
			Additional public pension scheme		
Existence	None	None	None	Yes	Yes [5]
Eligible groups				Employees	Employees and self-employed
Pension dependent on work history and income				Yes	Yes

1) 60 years for women, 65, years for men. In Great Britain, It will be increased to 65 for women over a period of 10 years starting in 2010. In Austria, the pension age will also be increased to 65 years for women (from 2018 to 2033).
2) In Great Britain, the basic system is for people who have been working. There are non contribution based pensions for special groups, e.g. persons over 80 years who are not entitled to the basic pension.
3) There is no minimum pension in Austria, but a 'safeguard' which has all the characteristics of social assistance, including means-testing.
4) The Swedish Government has decided on a new pension system to replace the existing one.
A gradual implementation will take place from 2003.
5) The Canadian Additional pension Scheme CPP allows flexible retirement between the age of 60 and 70.
6) In 1999, a new additional scheme was implemented, which also covers the self-employed. The pension was designed with 'equalisation' but that will probably be changed from 2002, so future pensions will reflect former income.
7) Seniority system recognized, by which a pension can be drawn earlier, this scheme will gradually be abolished.
8) The first age is for women, the second is for men.

Comments on table 2.11

The formal retirement age is not a good indicator for the actual time of retirement, but it is an important signal. Great Britain has decided to increase the retirement age for women from 60 to 65 years over a period of 10 years starting in 2010. The same will take place in Austria from 2018 to 2033. The German reforms, cf. the following, will result in a higher actual retirement age. That is also the aim of the recent Swedish pension reform, which will start in 2003, and of the reduced options for retiring before the formal 'pension age' in the Netherlands and Denmark. In Austria the reductions in pensions will be increased from 2000 in relation to early retirement. Italy reformed its pension system in 1995 also with the aim of reducing the access to early retirement. The transition to the new system is gradual and the calculations presented here for Italy are based on the old scheme.

Some of the countries (Sweden, Finland, Austria, Germany and Canada) have flexible public old-age pension schemes, which can also be used for early or postponed retirement. In Sweden and Finland, a pension can be obtained from the age of 60 years (61 years from 1998 in Sweden) at the cost of an actuarial reduction in the pension for the rest of one's life. This is also the case in Canada, but only from the additional pension scheme. The Austrian pension scheme can also be used for early retirement with quite modest reductions in the pensions received. Italy's seniority scheme, which will gradually be abolished according to the 1995 reform, also provides generous possibilities for early retirement. In Germany, some early retirement schemes are being replaced by a flexible pension following the same principles as the Swedish and Finnish systems. This flexible German scheme will be implemented gradually from 2001 to 2012 and will contain a higher minimum age for receiving pension than in the replaced early retirement schemes. According to the 1992 reform the time span over which the age increase takes place has later (after 1992) been shortened. The increase from 60 to 65 years in the scheme for long-term unemployed took place from 1997 to 2001. In the scheme for wives the change will be accomplished from 2000 to 2004, and in the scheme for long time insured the increase from 63 to 65 years took place in 2000 and 2001. There are exemptions for groups who would be negatively affected by the 'acceleration' of the 1992 reform, they will follow the original plan in the 1992 reform. In all five countries, it is also possible to postpone retirement until after the formal retirement age and then obtain an actuarial increase in the pension.

In Great Britain and the Netherlands, it is not possible to receive a public pension (related to age) before the formal retirement age, but in Great Britain it is possible to postpone the retirement and then receive a bonus. Denmark does not have a flexible old-age pension system, but other schemes, e.g. the 'Efterløn' scheme, established according to labour market agreements, are dedicated for early retirement and quite popular. Great Britain and the Netherlands have private pension schemes, which can also accomodate early retirement. Besides the flexible old-age pension scheme Finland also has an unemployment pension scheme for early retirement from unemployment. Some of the countries, e.g. Denmark, Sweden, Finland and Austria, also have special part-time pension schemes with access before the formal retirement age, and the requirements include reductions of the number of hours worked.

All countries except Austria, Germany, Italy, and Great Britain have a basic public pension available for all citizens. In countries with a basic pension (minimum pension) for all, i.e. Denmark, Sweden, Finland, the Netherlands, and Canada, this is residence based and 'flat rate'. In Germany, the public pension system is basically for private sector employees and for specific groups of self-employed. In Great Britain, it is broader, but still basically for people with a work and contribution record. Austria's pension scheme is also for people who have worked, and so is the Italian pension scheme. This is very different from the other countries. Furthermore, the level of pension according to the German basic public scheme is dependent on work history and income. There is a 'factual' maximum level for that pension because both the number of years at work (50 years is, in practice, the most) and the income factor applied in the formula for the actual calculation of pensions have limits. The pension level in Austria also depends on former income, which is also the case for the 'old' Italian scheme used here. The basic pension in Great Britain is 'flat rate'. There is no pension for people without a work record in the pension schemes of Austria, Germany, Italy, and Great Britain (Great Britain has a residence based scheme for persons over 80 years, but this is of minor importance). Pensioners without a former work record will have to rely on social assistance or social assistance type schemes.

The basic gross pension received depends on marital status in Denmark, Sweden, Finland, the Netherlands, and Canada, but not in Austria, Germany, Italy, and Great Britain. Pensions based on full own contributions in Great Britain do not differ according to marital status, whereas pension is lower if based on a spouse's contributions. Taxation may, however, also have an impact. A married couple of two pensioners often receive less than twice the net amount of a single person, but the ratio of disposable income for a couple compared to that of a single pensioner varies a great deal.

Means-testing of pensions is a Nordic and Canadian phenomenon. In Sweden and Finland, the basic pension (part of it in Sweden, all of it in Finland) is means-tested only in relation to income from the additional pension scheme. The means-testing is due to the 'integration' of the two parts of the public pension scheme. In Denmark, several income sources may result in means-testing of public basic pensions. In Canada, one component of the basic pension, i.e. the guaranteed income supplement, is means-tested against other income including pensions from the additional scheme, CPP. The type of social assistance benefits that pensioners in Austria, Germany and Great Britain can receive, are all means- tested against any other income.

Additional pension schemes are available in Denmark, Sweden, Finland, Great Britain and Canada. The most important of these are from the recipient's point of view the Swedish and Finnish schemes. The average pension from the Swedish additional pension scheme is substantially larger than pensions from the basic scheme. Part of the basic Swedish pension is means-tested against income from the additional pension scheme in such a way that the combined marginal percentage is 100, a consequence of the 'integration'. There is a rather severe taxation of income from the additional pension scheme that is in excess of the means-tested part of the basic pension. The contribution to disposable income from additional pensions is therefore considerably smaller than the gross level might suggest. The Finnish additional pension system has similar characteristics, the combined marginal percentage from means-testing is, however, lower, i.e. 50 per cent. From 1996 the whole basic pension is exposed to means-testing in Finland. Also the Canadian CPP scheme is an important component and it is integrated with the basic scheme using a taper of 50 per cent, but only the guaranteed income supplement is means-tested. The British and especially the Danish additional schemes consist of more modest supplements to the basic pension systems.

The level of public pensions

Two sets of calculations have been performed. One concerns persons with former work and income, the other concerns people with no former working income. For those with former work, it is assumed that the former APW (and the former part-time working partner in the APW-couple) receives the maximum possible pension in 1999. In some additional schemes, e.g. the Danish and the British ones, it is not possible to obtain full pension rights in 1999. In these cases it is assumed that the APW (and the part-time working partner in the APW-couple) has been a member for as long time as possible. In Sweden and Finland, it is possible to obtain full pension rights from the additional pension scheme in 1999. For Germany it is assumed that pension rights have been obtained for 45 years (including education).

It is important to emphasize that it is the maximum pension, and not the average pension, which has been calculated, and that the assumptions are simplified. For Germany there is no maximum pension, but a contribution record of 45 years must be close to maximum.

For people without former working income the situation is also extreme. They have obtained no pension rights (basic or additional) at all, unless the rights are based on residence (Denmark, Sweden, Finland, the Netherlands, and Canada).

On these assumptions, the APW-calculations show the pensions received at the formal age of retirement in the 9 countries in 1999.

Table 2.12. Net replacement rates at retirement in 9 countries, 1999.

	DK	S	FIN	A	D	NL	IT	GB	CAN
				With former work, single APW					
Net replacement rate	54	62	66	86	74	49	88	51	55
				With former work, APW-couple					
Net replacement rate	55	63.5	70	84	69	42	90	55	58
				Without former work, single APW					
'Net replacement rate'	47	39	32	52 1)	22 1)	49	28 1)	29 1)	41

1) The replacement rates for Austria, Germany, Italy, and Great Britain are based on social assistance type benefits for pensioners with no former work record.

Note: For persons without former occupation the net replacement rate is strictly speaking meaningless.
The interpretation is: 'Replacement' relative to the annual disposable income of the APW.

In the case with former work, the net replacement rate for the single APW is high in Italy followed by Austria, Germany, Finland, and Sweden, and relatively low in the Netherlands, with Canada, Denmark and Great Britain in between. In 1993, the pensions in Sweden were lowered by approximately 2 per cent, compared to what they would have been in 1993 without reductions. This 'mechanism' continued until it stopped in 1999.

In the case of the 'APW-couple' formerly with 1 1/2income, the net replacement rate is a little higher than for the single pensioner in Denmark. This is also the case in Sweden and

Italy. In Finland (where the former part-time working spouse also receives some of the basic pension), the net replacement rate is substantially higher for the couple. In Great Britain, the flat rate benefit results in a relatively high replacement rate for the person formerly with 1/2 income implying a higher net replacement rate for the couple. This is also the case in Canada. In Germany, the splitting taxation system for couples implies a high disposable working income resulting in a lower replacement rate than for singles (pensions are not taxable in the cases presented here, cf. appendix 1 on Germany). In Austria, where the wife was pensioned 5 years ago (at the age of 60), the indexation of her pension has not followed wage development, implying a lower replacement rate for the couple than for the single (man). In the Netherlands, the replacement rate is also lower for the couple, here it is because of the rate structure for couples, cf. appendix 1. In Italy, the part-time working wife also retired 5 years before her husband just as in Great Britain and Austria.

In the case without former work, the pensions in the Netherlands and Denmark are relatively high and somewhat lower in Canada, Sweden and Finland. Among the 4 countries with social assistance type minimum pensions Austria has the highest coverage, which in fact is higher than in any of the countries with residence based minimum pensions, but means-tested to a larger extent. Only basic rates have been included in the social assistance type cases. In Germany, Austria, Italy, and Great Britain the public pensions are very much dependent on former participation in the working life, whereas that is not so much the case in Finland, Sweden, Canada and Denmark, and not at all the case in the Netherlands.

Having children

Only 'ordinary' family allowances, i.e. allowances for couples with children, are considered here. In addition, all countries also have special or additional allowances or tax credits for single parents.

Eight of the countries have cash benefits and one (Germany), has (from 1996) refundable tax credits or, if that is advantageous for the families, allowances which are deductible in taxable income. Austria has, in addition to the cash benefit, also refundable tax credits for families with children, this is also the case for Italy. Superficially most of the family allowance schemes look alike, but there are, however, some significant differences in the criteria applied.

The family allowance schemes were categorized according to these criteria:

- Is the family allowance a cash transfer or/and a tax credit/deductible tax allowance?
- Is the allowance for all families (couples) with children?
- Is there a graduation of the allowance according to the number and/or age of the children?
- Is the allowance means-tested?
- For how long can it be received?

The result of the categorization is contained in table 2.13.

Table 2.13. Characteristics of ordinary family allowance schemes in 9 countries, 1999.

	DK	S	FIN	A
Type of scheme	Cash benefit	Cash benefit	Cash benefit [1]	Cash benefit/ tax credit
Eligible groups	All families with children	All families with children	All families with children	All families with children
Graduation according to number and age	Flat rate per child. Highest for infants (0-2 years)	Flat rate per child. Increasing from 3rd child until 5th child	Flat rate per child. Increasing from 2nd child until 5th child	Flat rate benefit increasing with age [4]. Tax credit increasing from 2rd child
Means-testing	No	No	No	No, but large family supplement is means-tested
Maximum duration (age of child)	Until: 18	Until: 16/end of school	Until: 17	Until: 19/27

1) Up until 1994 there were tax deductions in the Finnish scheme.
2) The deductible tax allowance has the same nominal value for all children.
3) Canada also has a supplementary scheme for low income families, both federal and provincial.
4) As of January 1999 also a large family supplement for the 3rd and subsequent children. Means-tested.

Table 2.13. Continued

	D	NL	IT	GB	CAN
Type of scheme	Tax credit/ allowance	Cash benefit	Cash benefit(tax credit	Cash benefit	Cash benefit [3]
Eligible groups	All families with children	All families with children	All families with children	All families with children	All families with children
Graduation according to number and age	Flat rate per child [2]. Increasing from 3rd child until 4th child	Flat rate per child. Increasing with age	Means-tested flat rate per child [5] Constant tax credit per child.	Flat rate per child. Highest for first child	Flat rate per child. Highest from 3rd child, highest for 0-7 years
Means-testing	No	No	Yes	No	Yes
Maximum duration (age of child)	Until: 18/27	Until: 16/18	Until: 18	Until: 16/19	Until: 18

1) Up until 1994 there were tax deductions in the Finnish scheme.
2) The deductible tax allowance has the same nominal value for all children.
3) Canada also has a supplementary scheme for low income families, both federal and provincial.
4) As of January 1999 also a large family supplement for the 3rd and subsequent children. Means-tested.
5) The basic flat rate is decreasing from child no 1 to child no 2, increasing from child no3 to child no 4 and decreasing a little from child no 4 to child no 5. Then there is a substantial decrease from child no 5 to child no 6, but then this rate stays constant for subsequent children.

Comments on table 2.13

The German tax credit scheme works very much like a cash scheme, the tax is reduced every pay day or, if there is no tax, the tax credit is paid in cash to the recipient (it is a refundable tax credit). Most families in Germany will receive tax credits, only relatively few with high incomes will have the deductible tax allowance (in these cases the tax credits will be reclaimed).

There is some variation in terms of graduation according to number and age of the children. In Denmark, the cash benefit is highest when the child is 0-2 years, a little lower from 3-6 years and lowest from 7-17 years. In the Netherlands, the allowance is highest when the child is in the upper age bracket, which is also the case in Austria for the cash component. In Finland, Austria (tax credit), Germany (tax credit) and Great Britain, there is graduation according to the number of children. In Finland, Austria and Germany, the 'youngest' children receive the highest allowance. In Great Britain, it is the first, the oldest child, who receives the highest allowance. Sweden had a scheme similar to the Finnish one, but from 1996 new entrants stopped, implying that in the long run there would be no graduation according to the number of children, if this rule was maintained. It was not; in 1998, the graduation according to number of children was reintroduced. In the Netherlands, the allowance for all children increased by the number of children, but this 'bonus' was stopped for new entrants from 1995. In Canada, there is graduation according to both the number of children and their age. Italy has some variation according to number of children for the cash component, the tax credit is, however, the same for each child.

Only in Italy and Canada, family allowance is means-tested, and the means-testing may result in zero family allowances in Canada and for the cash component in Italy (the tax credit component is not means-tested). The large family supplement in Austria is only available for families with an income below a relatively high level. Prior to 1996, family allowances were also means-tested in Germany but only for the second and subsequent children and only down to a minimum.

The maximum age of children is not a good indicator for when the allowance stops. In some countries it can be extended when the children are participating in education (marked as the age after the / in table 2.13, maximum duration), in other countries special allowances for education replace the family allowance. Ideally, the family allowance and allowances for education should be considered together, this has, however, not been done here.

It should be mentioned that Canada also has a refundable tax credit scheme for families with children (couples and single parents) and low income. From July 1997 to July 1998 there was a 'phase-in, a maximum and a phase-out' profile, according to earned income, in this scheme. It was an earned income supplement for low income families with children, designed as supplementary child benefits, earlier it was of the same type as the US earned income tax credit scheme. From July 1998 the basis was changed to all income and the phase-in component was eliminated, cf. the section 'Changes 1999' for more details. The British 'Family Credit' scheme served the same purpose, it was not a family allowance scheme, but included having children among the eligibility criteria. The British 'Family Credit' scheme was replaced late in 1999 by 'Working Families Tax Credit', which is also based on refundable tax credits.

The level of the family allowance

The APW-couple has 1.5 times the income of the single APW. The effect on disposable income of having children (receiving family allowance) is calculated relatively to the disposable income of the couple without any children. The children are assumed to be in the age bracket 1-6 years. Child no. 1 is assumed to be 6 years old, child no. 2 is 3 years old and child no. 3 is 1 year old (and, even if that is not quite possible, born in 1999). In the Canadian case, the means-testing has an effect on the allowance for all 3 family types in table 2.14. This is also the case for the Italian family types.

Table 2.14. Effects on disposable income of receiving family allowance in 9 countries, 1999.

	DK	S	FIN	A	D	NL	IT	GB	CAN
	Percentage change in disposable income with:								
1 child (no. 1)	+4.3	+4.1	+4.3	+6.6	+5.5	+2.6	+1.6	+3.5	+1.3
2 children (no. 1+2)	+8.5	+8.2	+9.5	+13.9	+11.0	+5.1	+3.6	+5.9	+2.6
3 children (no.1+2+3)	+13.2	+13.3	+15.8	+22.4	+17.6	+7.4	+9.7	+8.3	+7.5

Note: Child no. 1 is 6 years old, no. 2 is 3 years old and no. 3 is 1 year old.

The most generous scheme is the Austrian one (substantial improvements in 1999) followed by the German one. The new German scheme (from 1996) based on tax credits is substantially more generous than the old one and was further improved in 1997 and 1999. Finland follows after Germany (since 1997), the Finnish benefits were nominally unchanged from 1996 to 1999. Denmark and Sweden are now close. The nominal rates were increased in Sweden in 1998, when they were brought back to their 1995-level, cf. also chapter 3 the section on child benefits, but were unchanged in 1999. Furthermore, the graduation according to the number of children was reintroduced in the Swedish scheme from 1998. This has an impact in the case with 3 children. The Danish rates are increased every year. The relative impact of family allowances in Italy, the Netherlands and Great Britain is in several cases less than half of what it is in Austria and Germany. Last is Canada, where the means-testing has a substantial impact, especially for families with 1 and 2 children. The Ontario supplement has a positive impact in 1999 for families with 3 children. The means-testing in Italy and Canada have similar effects.

The results depend on the selected ages at least for Denmark, Austria, the Netherlands and Canada.

Maternity leave

In all 9 countries maternity leave and the associated compensation for loss of income is an important element of the social security system. Compensation in connection with maternity leave is often a separate part of the system for compensation in connection with illness. Only 'ordinary' maternity leave schemes are covered. Many countries have supplementary schemes, some of which are mentioned in the notes to table 2.15.

Relevant criteria for characterization of maternity leave benefits are:

- For how long can the benefit be received?
- Has the father a legal right to a share of the maternity leave and the benefits?
- Is the benefit a 'flat rate' or is it 'income-related'?

Even if there is a close connection to the system for illness related insurance in several countries (income concepts, administration, etc.) there are also significant differences. There is no waiting period in any of the 8 European countries when compensation in connection with maternity leave is considered. There is a waiting period in Canada, where this scheme together with that for sickness benefits are part of the Employment Insurance scheme. Neither is there a special low compensation percentage for the first period of the maternity leave (that was the case in the Swedish sickness benefit scheme for several years until 1996), but there may be for the last part.

Table 2.15 shows the compensation in connection with maternity leave categorized according to the criteria listed.

Table 2.15. Characteristics of compensation in connection with 'ordinary' maternity leave in 9 countries, 1999.

	DK	S	FIN	A
Maximum benefit period	28 + 2 + 2 weeks [1]	64 + 2 weeks [2]	281 days [3] (approx. 47 weeks)	16 weeks
Participation of the father, rights	Minimum 4 [7] weeks	Minimum 30 days	Minimum 18 days [3]	None [4]
Benefit formula	Income-related, low cap	Income-related [2]	Income-related	Income-related

Table 2.15. Continued

	D	NL	IT	GB	CAN
Maximum benefit period	14 weeks	16 weeks	5 months	18 weeks	27 weeks [6]
Participation of the father, rights	None [5]	None	None [8]	None	No separate rights, 10 weeks to share
Benefit formula	Income-related	Income-related	Income-related	Mixed	Income-related

1) A new scheme (implemented from the start of 1994) for 'leave of absence for parents' may be used to prolong the maternity leave substantially (by up to 1 year). The scheme is intended to increase 'rotation' on the labour market. It will probably be abolished from 2002.
2) From July 1st 1994 a special benefit for care of small children (1-2 years) was introduced. That replaced the last 12 weeks of maternity leave. The new scheme was abolished from January 1995 and the old reimplemented. In the 'old' scheme 52 weeks of the leave has a benefit which is income-related, the benefit in the remaining 12 weeks is flat rate. The 2 extra weeks are for the father and must be taken just after delivery.
3) Week days. Finland also has a special benefit if one of the parents stay at home to care for the child.
4) Austria has a supplementary scheme where the father can also participate. The benefits are reduced.
5) Germany has a supplementary system where the mother or the father can receive 600 DM/month in up to 24 months for children born in 1999. After 6 months this benefit is means-tested, for high income families (140,00 DEM and above) immediately.
6) 2 of the 27 weeks will be waiting period. If the father participates, there will also be a 2-week waiting period for him.
7) The 4 weeks are split in 2 + 2 weeks. 2 weeks can be taken just after delivery and 2 weeks after the 'ordinary' leave expires. A new maternity leave scheme will be implemented from 2002.
8) Italy has a supplementary scheme in which the father can also participate. The benefits are reduced.

Comments on table 2.15

It is obvious from the table that variation in the maximum benefit period is very considerable with Sweden having more than 4.5 times as long a period as Germany. The three Nordic countries have the longest benefit periods and they are letting the father participate in the maternity leave. This is also the case in Canada. Sometimes the father has his own rights (Nordic countries), sometimes they are shared with the mother (Nordic countries and Canada). The Swedish system is very flexible both with regard to the mother and father's rights (most of the maternity leave can be divided between the two of them in varying proportions) and with regard to splitting the leave period. The leave period can be split into minor periods until the child is 8 years old. It is also possible to work part time and be on leave the rest of the time. In Finland, there is also considerable flexibility in dividing the maternity leave between the mother and the father. There are 10 weeks to share between the parents both in Denmark and in Canada. In Denmark, there are also 2 + 2 weeks separately for the father.

Austria, Germany, the Netherlands and Great Britain have schemes characterized by relatively short benefit periods and with rights for the mother only. The Italian scheme has a longer benefit period than that of the just mentioned for the 4 countries, and it is for the mother only. The compensation is basically equal to the lost income in Austria, Germany and the Netherlands. In Sweden (1999), it is 80 per cent of the lost income (up to an upper limit) for the first 8 weeks (4 weeks for each of the parents), and also 80 per cent for the following 44 weeks, which can be divided between parents (the two separate weeks for the father is compensated in the same way), and then a low flat rate compensation for the remaining 12 weeks. In Denmark, the compensation is 'income-related with a low cap' (the maximum will be reached at approx. 60 per cent of the APW income, for income below that level, the compensation equals the lost income). Finland uses a 'stepwise' benefit formula, which is income-related with a decreasing compensation rate for increasing income. In Great Britain, the benefit is 'income-related' for the first part of the period (the first 6 weeks) and 'flat rate' for the last part. Italy has a high compensation level, i.e. 80 per cent of the lost income. The Canadian benefits are income-related, 55 per cent of the lost income, up to a ceiling, 39,000 CAD being the maximum insurable amount.

The level of compensation

With considerable variation in the duration of paid maternity leave between the countries, two calculations have been made. The first shows the effect on disposable income of utilizing the maximum possible duration (one year being the limit as the calculation concerns the change in annual disposable income) of the maternity leave in each country, the second shows the effect of a 'common period'; that of Germany which is 14 weeks. Table 2.16 contains the results. Several of the countries have, as already mentioned, supplementary maternity or parental leave schemes, usually at lower benefits than during the 'ordinary' leave. The supplementary schemes are not included in the calculations, neither are special 'maternity packages' in kind or in cash.

Table 2.16. Effects on disposable income from 'ordinary' maternity leave benefits in 9 countries, 1999

	DK	S	FIN	A	D	NL	IT	GB	CAN
	Maximum duration of maternity leave								
Compensation percentage	52	80	69	100	100 1)	100	80	53	53
Change in disposable income, per cent	-6.9	-6.8	-8.7	0	0	0	-2.4	-4.3	-6.7
	Common duration of maternity leave								
Compensation percentage	52	80	69	100	100 1)	100	80	58.5	50
Change in disposable income, per cent	-3.0	-1.6	-2.2	0	0	0	-1.6	-3.0	-3.8

1) The compensation per cent is after taxation.

The change in disposable income is measured in proportion to an APW-couple with two children. The interpretation is then that the family gets its second child at the start of the year. Concerning the 'timing problems' here, cf. appendix 1 (Denmark, The couple gets the second child and then has 2 children). In the three Nordic countries it has been assumed that the father uses his minimum rights (for Denmark only 2 weeks) in the case of maximum duration. The Canadian father does not participate in the maternity leave in the calculation presented here.

Three of the countries with short maximum benefit periods, Austria, Germany and the Netherlands, have full compensation for the lost income, this is not the case for the fourth country, Great Britain, where the decrease, however, is relatively modest. In the three Nordic countries the APW-couple experiences relatively modest decreases in disposable income, both in the maximum duration and in the common duration case. The Swedish system has the longest income-related benefit period of the 9 countries. Italy has a relatively long benefit period and a high compensation level, resulting in a modest reduction in disposable income in the two cases presented here, in the 'common' case the impact is the same as for Sweden. The loss of income during maternity leave is highest in Canada, but still relatively modest.

2.3. Summary tables of APW-calculations for 1999

The results reported in section 2.2 are summarized in tables 2.17 and 2.18.

Table 2.17. Summary, 'standard' income events for APW-families without children, 1999

	DENMARK		SWEDEN		FINLAND		AUSTRIA	
	Compensation %	Change disposable income, %	Compensation %	Change disposable income, %	Compensation %	Change disposable income, %	Compensation %	Change disposable income, %
Ill 1 week, single APW	52 [1], 100 [1]	-0.7, 0.0	64 [1]	-0.7	0 [1], 100 [1]	-1.5, 0.0	50 [1], 100 [1]	-0.8, 0.0
25% unemployment, eligible for compensation, single APW	52 [1]	-9.6	63 [1]	-8.8	46 [1]	-9.7	56 [2]	-7.7
100% unemployment, eligible for compensation, single APW	52 [1]	-38.6	67 [1]	-30.5	50 [1]	-41.4	56 [2]	-44.0
25% unemployment, not eligible for compensation, single APW	31 [1]	-14.1	26 [1]	-17.2	19 [1]	-15.5	51.5 [2]	-8.7
100% unemployment, not eligible for compensation, single APW	31 [1]	-59.1	28 [1]	-70.2	21 [1]	-73.4	51.5 [2]	-48.5
Female 100% unemployment, eligible for compensation, APW-couple	70 [1]	-6.9	78.5 [1]	-7.6	63.5 [1]	-12.0	56 [2]	-15.8

1) The compensation percentage is before taxation. For illness there are two compensation percentages and changes for all the countries, except Sweden and Canada. The first one refers to insurance alone, the second one includes usual compensation from the employer. For Sweden the two coincide from 1993.

2) The compensation percentage is after taxation.

Table 2.17. Continued.

	GERMANY		THE NETHERLANDS		ITALY		GREAT BRITAIN		CANADA	
	Compen-sation %	Change disposable income, %	Compen-sation %	Change disposable income, %	Compen-sation %	Change disposable income, %	Compen-sation %	Change disposable income, %	Compen-sation %	Change disposable income, %
Ill 1 week, single APW	90 [2], 100 [1]	0.0, 0.0	42 [1], 100 [1]	-0.9, 0.0	21 [1], 100 [1]	-1.3, 0.0	7 [1], 80 [2]	-1.6, -0.4	0 [1]	-1.5
25% unemployment, eligible for compensation, single APW	60 [2]	-6.6	70 [1]	-6.6	28 [3], 51 [3]	-15.9 [3], -4.0 [3]	14.5 [1]	-19.1	46.5 [1]	-9.9
100% unemployment, eligible for compensation, single APW	60 [2]	-41.8	70 [1]	-27.9	22 [3], 51 [3]	-72.3 [3], -45.5 [3]	15 [1]	-80.3	48 [1]	-44.1
25% unemployment, not eligible for compensation, single APW	53 [2]	-8.1	31 [1]	-10.0	0 [1]	-15.6	14.5 [1]	-19.1	6.5 [1]	-18.9
100% unemployment, not eligible for compensation, single APW	53 [2]	-48.5	31 [1]	-53.3	17 [1]	-77.6	15 [1]	-80.3	6.5 [1]	-91.2
Female 100% unemployment, eligible for compensation, APW-couple	60 [2]	-12.3	70 [1]	-10.1	14 [4]	-26.0 [4]	15 [1]	-29.1	41 [1]	-17.6

1) The compensation percentage is before taxation. For illness there are two compensation percentages and changes for all the countries, except Sweden and Canada. The first one refers to insurance alone, the second one includes usual compensation from the employer. For Sweden the two coincide from 1993.
2) The compensation percentage is after taxation.
3) The first figure refers to the ordinary U.B. scheme, the second one to the CIG scheme. The compensation % is before taxation.
4) Ordinary U.B. scheme. Compensation % is before taxation.

Table 2.17. Continued.

	DENMARK		SWEDEN		FINLAND		AUSTRIA	
	Compensation %	Change disposable income, %	Compensation %	Change disposable income, %	Compensation %	Change disposable income, %	Compensation %	Change disposable income, %
Injured, total loss of working capability, single APW	113 [1]	+28.4	100 [1]	0.0	85 [1]	-8.6	80 [1]	+9.3
Injured, 1/3 loss of working capability, single APW	77 [1]	-3.6	100 [1]	0.0	85 [1]	-1.7	67 [1]	+2.9
Pensioner [2], disability, former working period, single APW	74	-26	61	-39	63.5	-36.5	68	-32
Pensioner [2,3] disability, no former working period, single APW	74	-26	45	-55	32	-68	36	-64
Pensioner, disability, wife (former 1/2 APW), APW-couple	75.5 [1]	+0.7	61 [1]	-8.8	67 [1]	-8.8	53 [1]	-13.1
Pensioner [2] old-age max. working period, single APW	54	-46	62	-38	66	-34	86	-14
Pensioner [2,3] old-age no working period, single APW	47	-53	39	-61	32	-68	52	-48
Pensioner [2] old-age max. working period, APW-couple	55	-45	63.5	-36.5	70	-30	84	-16

1) The compensation percentage is before taxation.
2) The compensation percentage is after taxation.
3) Strictly speaking "nonsense". The concepts are relative to the APW.

Table 2.17. Continued.

	GERMANY		THE NETHERLANDS		ITALY		GREAT BRITAIN		CANADA	
	Compen-sation%	Change disposable income, %	Compen-sation %	Change disposable income, %	Compen-sation %	Change disposable income, %	Compen-sation %	Change disposable income, %	Commpen-sation %	Change disposable income, %
Injured, total loss of working capability, single APW	67 [1)]	+16.0	70 [1)]	-27.9	99.5 [1)]	+4.7	53 [1)]	-29.7	90 [2)]	-10.0
Injured, 1/3 loss of working capability, single APW	67 [1)]	+12.5	63 [1)]	-10.7	55 [1)]	-9.6	28 [1)]	-17.0	90 [2)]	+0.8
Pensioner [2], disability, former working period, single APW	60	-40	72	-28	88	-12	28.5	-71.5	40	-60
Pensioner [2,3,] disability, no former working period, single APW	22	-78	47	-53	19	-81	21	-79	23	-77
Pensioner, disability, wife (former $^1/_2$ APW), APW-couple	37 [1)]	-10.8	70 [1)]	-10.1	78 [1)]	-2.6	43 [1)]	-17.3	41 [1)]	-17.5
Pensioner [2,] old-age max. working period, single APW	74	-26	49	-51	88	-12	51	-49	55	-45
Pensioner [2,3,] old-age no working period, single APW	22	-78	49	-51	28	-72	29	-71	41	-59
Pensioner [2,] old-age max. working period, APW-couple	69	-31	42	-58	90	-10	55	-45	58	-42

1) The compensation percentage is before taxation.
2) The compensation percentage is after taxation.
3) Strictly speaking "nonsense". The concepts are relative to the APW.

Table 2.18. Summary, benefits for APW-families concerning children, 1999

	DENMARK		SWEDEN		FINLAND		AUSTRIA	
	Compensation %	Change disposable income, %	Compensation %	Change disposable income, %	Compensation %	Change disposable income, %	Compensation %	Change disposable income, %
1 child (6 years old)	-	+4.3	-	+4.1	-	+4.3	-	+6.6
2 children (6 and 3 years old)	-	+8.5	-	+8.2	-	+9.5	-	+13.9
3 children (6, 3 and 1 year old)	-	+13.2	-	+13.3	-	+15.8	-	+22.4
Birth of child no. 2, benefits, maximum duration	52 [1]	-6.9	80 [1]	-6.8	69 [1]	-8.7	100 [1]	0.0
Birth of child no. 2, benefits, standard duration	52 [1]	-3.0	80 [1]	-1.6	69 [1]	-2.2	100 [1]	0.0

1) The compensation percentage is before taxation. The first case with benefits in connection with birth reflects the effect of the maximum duration of the benefit. The second case reflects the effect of a common duration.
2) The compensation percentage is after taxation.

Table 2.18. Continued

	GERMANY		THE NETHERLANDS		ITALY		GREAT BRITAIN		CANADA	
	Compen-sation %	Change disposable income, %	Compen-sation %	Change disposable income, %	Compen-sation %	Change disposable income, %	Compen-sation %	Change disposable income, %	Compen-sation %	Change disposable income %
1 child (6 years old)	-	+5.5	-	+2.6	-	+1.6	-	+3.5	-	+1.3
2 children (6 and 3 years old)	-	+11.0	-	+5.1	-	+3.6	-	+5.9	-	+2.6
3 children (6, 3 and 1 year old)	-	+17.6	-	+7.4	-	+9.7	-	+8.3	-	+7.5
Birth of child no. 2, benefits, maximum duration	100 [2]	0.0	100 [1]	0.0	80 [1]	-2.4	53 [1]	-4.3	53 [1]	-6.7
Birth of child no. 2, benefits, standard duration	100 [2]	0.0	100 [1]	0.0	80 [1]	-1.6	58.5 [1]	-3.0	50 [1]	-3.8

1) The compensation percentage is before taxation. The first case with benefits in connection with birth reflects the effect of the maximum duration of the benefit. The second case reflects the effect of a common duration.
2) The compensation percentage is after taxation.