



Elements of Social Security

A comparison covering: Denmark

Sweden

Finland

Austria

Germany

The Netherlands

Great Britain

Canada

Hans Hansen



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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 7th edition of the publication, covering income levels and rules for social security and personal taxation for 1997. Basis for the projections to 1997 income levels is the 1996 data (in some cases 1997 data) for OECD's *The Tax/Benefit Position of Employees* 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 and edition 6 as publication no. 98:4, from the Danish National Institute of Social Research.

The calculations have always been based upon 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*, since 1996 *The Tax/Benefit Position of Employees* from OECD, are included for Sweden covering the period 1991-1996. 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.

The sequence of the countries in the tables has been changed, it is now DK, S, FIN, A, D, NL, GB and CAN. The Scandinavian 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 Scandinavian model, the continental European model and the Anglo Saxon model.

A few errors were found in the previous editions, this time for Great Britain. The income related component of the Statutory Maternity Pay should have been levied with national insurance contributions, it was not. The impact from receiving maternity benefits was a little too small as a consequence of this error. Furthermore, the presentation of the basic old age pension in Great Britain was misleading, this has now been corrected.

Copenhagen, August 1999

Hans Hansen

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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 conditions of entitlements, 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 upon the 'August 1992' study, but the scope was narrower. Only the 5 countries, for which the APW-calculations were 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 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. This 7th edition is based upon 1997 income levels and rules, the cases have been enhanced to include disability pension and Austria is included among the countries studied. The 'special studies' chapters, which started in the 6th edition, have been continued here, including up-dates for 1996 and 1997.

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 or 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 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.

CHAPTER 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. The conditions of entitlements
2. The benefit formula (is it a flat rate payment or is it related to previous income)
3. The 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 e.g. unemployment insurance. This scheme is voluntary in Denmark, Sweden and Finland (the 'earnings related' component) 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 1997) 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.***Conditions of entitlements***

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

It is evident from table 1.1 that the Austrian and German social security systems are characterized by schemes 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 Scandinavian model. The British, Dutch, and Canadian systems are 'in between'.

Table 1.1. Entitlement for social security, 1997.

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 entitlement is in principle for all relevant groups.

■ The entitlement 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 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.

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.

Austria has a system similar in structure to that of Germany and which is also insurance based in the sense that entitlement 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 defined contribution plan. Only employees can receive benefits from the additional public pension scheme.

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.

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 Scandinavian 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 entitlement 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 Scandinavian 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 formula

There are three basic 'benefit formulas' used in the social security systems studied. 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.

A few examples from the unemployment insurance schemes: Both the Danish and Swedish unemployment benefits are a constant share 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 1997). In the Swedish case the maximum is reached below, but relatively close to the income level of the APW in 1997, while in 1994 it was just above the APW income level. In Germany, the maximum is reached at a much higher income level (1.7 APW income). Several of the schemes also have minimum benefits, e.g. in Denmark, Sweden and Finland.

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 and 1997 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', 1997.

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 level in the Austrian pension schemes which are flat rate benefits.

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). The only Danish 'income related' element in 1997 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. benefits, which have been on the 1992 level since mid 1993. It was first increased in 1998. The Swedish unemployment benefit scheme together with the Canadian supplemen-

tary pension scheme are the only ones in this study, where the cap is very close to 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 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, as mentioned, is very close to the APW income level, and in the 'Workmen's Compensation' (injuries from work) where the cap (in Ontario) is approx. 60 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 very soon 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 tax bracket), the separate one for employees 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 1997 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 fi-

Table 1.3. *Methods of financing social security, 1997.*

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.

nanced by taxes or budget deficits, e.g. the unemployment insurance in Sweden and Germany has been supplemented by 'deficit' financing in recent years.

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 is expected to continue during the introduction of the new public pension scheme, cf. chapter 2. 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 'defined contribution plan' with an actuarial link between the contributions and the benefits.

In systems based upon contributions, entitlement for benefits is often conditional on having paid contributions, but not always. In *Sweden* e.g. there is a general entitlement for 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.

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', 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, 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 groups in the population, e.g. self-employed people or public sector employees. The results are only valid for employees in the private sector.

The calculations are valid at two points in the income distribution, those of the single APW and the APW couple. These points are not the same in all 8 countries, cf. appendix 1¹⁾. 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 levels of income, and that will also be done in coming reports, when suitable software has been implemented. 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 the 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.

Some times 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 the rules say otherwise. All 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.

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.

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

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 the 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 while 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 an usual supplement to the public social security benefits.

The social security system is important for almost all groups when longer spells of illness are considered²⁾.

In 6 of the countries (Finland and Canada are the exceptions) it is the employer, who administers the public insurance scheme, at least for shorter spells of illness. The compensation for illness schemes are characterized on 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, 1997.

	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	Yes ²⁾ 1 day	Yes 9 week-days	No	No	Yes ⁵⁾ 2 days	Yes 3 days	Yes 2 weeks
Maximum benefit period	52 weeks	No limit	300 week-days	64 weeks (12+52)	78 weeks	52 weeks	28 weeks	15 weeks
Eligible groups	Employees, Self-employed	Employees, Self-employed	Employees, Self-employed	Employees,	Employees,	Employees,	Employees, Self-employed ⁸⁾	Employees,
Benefit formula	Income related, low cap	Income-related	Income-related	Income-related	Income-related	Income-related	Flat rate	Income-related
Special rules	White collar workers receive wages			Longer period with wages for white collar	High income earners may leave the system			

- 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 (75 per cent of wages for 4 weeks in 1997), and they can supplement the benefits from the insurance from day 29 to day 90, cf. the comments on the table. From April 1993 there is a waiting period of 1 day.
- 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 (4-10 weeks) or white (6-12 weeks) collar employee.
- 5) In Germany, the employer has a legal obligation to pay 80% of wages the first 6 weeks (1997), but most labour contracts still contain full wages for the first 6 weeks.
- 6) According to collective labour 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) Self-employed in GB receive from the Incapacity Benefit scheme.

Comments on table 2.1

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 stipulate payment of usual wages for that period. This obligation depends on

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 also is 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 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 the employee having worked for the employer for a minimum length of time and having 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. OSP is a labour market agreement.

In Canada a work requirement (700 hours in the last 52 weeks) 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 years³. In 1993 a waiting period of 1 day 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 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 to 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 of 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 per cent 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, but that was changed back again to 2 weeks in 1998.

The maximum duration of the compensation in Denmark is 52 weeks within 1 1/2 years while it is 78 weeks in Germany within 3 years. Including these conditions makes the Danish system more favourable than the German one, where duration is concerned. There are no such conditions in the other countries.

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. In Sweden there is also an upper limit on income from which the contribution is paid by the employee, but not for the contribution paid by the employer. (The employee contribution was introduced in 1993).

The criterion for characterizing the benefit as 'flat rate', 'income related, low cap' or 'income related' is the same as was used in chapter I. 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, 1997.*

	DK	S	FIN	A	D	NL	GB	CAN
Social security alone								
Compensation percentage	53	60	0	50	70 ¹⁾	42	7	0
Change in disposable income, %	-0.7	-0.8	-1.5	-0.8	0	-0.8	-1.6	-1.5
<i>'Usual' situation (combined with social security)</i>								
Compensation percentage	100	60	100	100	100	100 ²⁾	80 ^{3,4)}	0
Change in disposable income, %	0	-0.8	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.

The best coverage is received in Germany for both shorter and longer spells of illness. The unchanged disposable income in the insurance case is due to lower taxation of the remaining wage income, even after including the 'progressions vorbehalt'. Austria also usually has full compensation for shorter spells, but the coverage is considerably lower for longer spells. 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 changes in 1993 in Sweden also lowered the compensation for longer spells of illness. The relatively substantial reductions in disposable income for Finland, Great Britain, Canada and the Netherlands are primarily due to the waiting period. For Austria and Denmark it is due to a relatively low compensation. In the 'usual' situation all these countries, except Canada, have a high degree of coverage.

For longer spells of illness the 'social security system' plays the dominant role for most groups. Waiting periods (S, FIN, GB, NL and CAN) will be of less importance 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 coverage in the 'social security alone' case for longer spells of illness in 1997.

Unemployment

Where unemployment insurance is concerned, 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 the 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 the benefit?
- ▶ 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, 1997.

	DK	S	FIN	A
<i>Basic System</i>				
Type of insurance	Voluntary	Voluntary ¹⁾	Voluntary	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	5 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	5 years, longer if person is 50-60 years, shorter if over 60	14-21 months dependent on age renewal: repeated, based on joboffer ⁵⁾	100 weeks within 4 consecutive years. Longer when 57 years	20-52 weeks dependent on age and former work history
<i>Additional System</i>				
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⁾

- 1) The Swedish system changed from voluntary to mandatory on July 1st 1994, and back again to voluntary from January 1995. From 1998 there is a mandatory basic insurance and a voluntary income related 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, earningsrelated 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 January 1994 the max. benefit period has been limited to one year for people who have not worked long enough to claim insurance benefits from the basic system.
- 7) The working 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.

Table 2.3. Continued

	D	NL	GB	CAN
<i>Basic System</i>				
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	Minimum 12 months of work within 3 years	26 weeks of work within 39 weeks and work in 4 out of 5 years	In 2 years at least 25 min. contr. paid and 100 credited ⁴⁾	10-20 weeks 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	½ to 2 2/3 years dependent on age and former work history	Step 1: ½ year	½ year in JSA (C)	Up to 45 weeks dependent on work record and regional unemployment
<i>Additional System</i>				
Existence	Yes	Yes	Yes	None
Eligible groups	Unemployed not eligible for insurance	Unemployed not eligible for insur. from step 1	Unemployed not eligible for insur. JSA (ib)	
Maximum benefit period	No limit ⁶⁾	Step 2: ⁷⁾ ¼ to 4½ years Step 3: 2 years, longer when 57 years	No limit	
Benefit formula	Income related	Income related ⁷⁾	Flat rate Means-test	

1) The Swedish system changed from voluntary to mandatory on July 1st 1994, and back again to voluntary from January 1995. From 1998 there is a mandatory basic insurance and a voluntary income related 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 January 1994 the max. benefit period has been limited to one year for people who have not worked long enough to claim insurance benefits from the basic system.

7) The working 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 voluntary in Denmark, Sweden and Finland (the earnings related part), while it is mandatory in the other countries including the basic insurance in Finland. In Sweden the scheme was voluntary until July 1994, when it became mandatory, a decision taken by the liberal government. From January 1995, however, it became voluntary again, a change of government caused the short life of the mandatory scheme. From 1998 there is a mandatory basic insurance in Sweden and a voluntary income related scheme on top of that, just as in Finland. In both Denmark, Sweden and Finland there is a minimum length of membership required (for employees it is 1 year in DK and S, 5/6 year in FIN in 1997) before the employee or self-employed person is eligible for the insurance benefit.

Four countries (GB, S, FIN and CAN) have a waiting period varying in length from ½ week in GB, 1 week in S, 1 2/5 in FIN to 2 weeks in CAN. In Canada it is possible to receive social assistance in the waiting period, but it will be reclaimed when U.B. starts to be received.

There is a working condition which has to be met in all of 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 (S, GB⁴⁾ and CAN), the requirement to former work must have been met within 1 year before the unemployment. In Finland and Austria it is within 2 years and in Germany and Denmark it is within 3 years, the requirement in both countries⁵⁾ (D and DK) is work in 1 year.

In Sweden⁶⁾ 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 jobtraining and from 1999 it will be 4 years. Renewal of the benefit period in Denmark requires a new working period as it does in the other countries. It is only in Sweden that repeated 'job-offers' can continue to renew the benefit period, which in practice is without time limitations. Some kind of limitation is,

4) For GB it is a little more complicated, cf. table 2.3.

5) Changes were implemented in Denmark from 1997, before it was ½ 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.

however, under consideration. Repeated use of 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 GB, 'income related, low cap' in DK and S and 'income related' in FIN, A, D, NL⁷⁾ and CAN. In Sweden the cap has, as earlier mentioned, changed position in relation to the APW income several times. In 1997 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, but with a lower cap. The constant compensation percentage is reached at approx. 64 per cent of the APW income, where it is reached much closer to 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. 1.5 APW level. 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. Graph 2.1 contains profiles for six of the countries covered by the study.

The 'income related' schemes usually also have a minimum, which, however, is reached at low income levels. Denmark probably has the most narrow gap between the max. benefit reached at approx. 0.64 APW income level and the min. benefit reached at approx. 0.53 APW income level. This implies that the income range with a constant compensation percentage is quite small in Denmark.

Only one country, that is Canada, has a 'claw-back' clause, i.e. the benefits are claimed back (partly or entirely) 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 max. period requires work in 9 years out of the last 15 and an age of over 50 years. The min. period requires work in

7) On the assumption that the 'double' working condition is met.

1 year out of the last 2, c.f. table 2.3. In Germany the length of the benefit period varies from $\frac{1}{2}$ year to $2\frac{2}{3}$ years dependent on work history and age. The maximum length requires an age of over 54 years 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, one year of work within the last three years. If step 1 (basic system) and step 2 (additional system) in the Dutch system are taken together the max. length of the benefit period is 5 years with income related benefits. The max. length again requires a relatively high age and a long working history. In Sweden the formal benefit period is $1\frac{1}{6}$ years, longer when the unemployed is over 54 year, 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 DK (5 years), shortest in GB ($\frac{1}{2}$ year under the JSA (C) scheme from Oct. 1996), also with a prolonged period for elderly in the age group 50-60 years in Denmark (but shorter for unemployed between 60 and 67 years). From 1999 the benefit period will be 4 years in Denmark and the prolonged period for the age group 55-60 years. 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 $\frac{1}{2}$ 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 also is a scheme alongside the insurance system, but that is an alternative system for people who are not insured. That scheme became a part of the mandatory insurance system from July 1994. From January 1995 the alternative system regained its original 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 (mandatory) component of the new Swedish insurance scheme. Finland has both an additional and an alternative scheme. The alternative scheme in Finland is primarily for people not in the insurance scheme (not insured), while the additional scheme is a parallel scheme to social assistance. It is primarily for unemployed who are 'new comers' or 'outinsured' from the 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 primarily 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 max. benefit period shorter than a year in 1997. Social assistance benefits (JSA (IB) in GB) 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, 1997.*

	DK	S	FIN	A	D	NL	GB	CAN
<i>Eligible for insurance, 3 months' unemployment</i>								
Compensation percentage	53	65	46	56 ¹⁾	60 ¹⁾	70	15	46.5
Change in disposable income, %	-9.2	-8.3	-9.8	-7.6	-6.7	-6.1	-19.1	-9.6
<i>Eligible for insurance, 12 months' unemployment</i>								
Compensation percentage	53	69	50	56 ¹⁾	60 ¹⁾	70	15	48
Change in disposable income, %	-37.0	-29.2	-39.3	-43.7	-41.6	-27.4	-79.8	-44.0

1) The compensation percent is after tax.

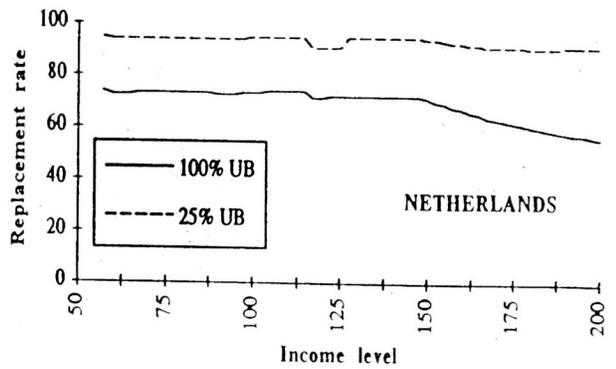
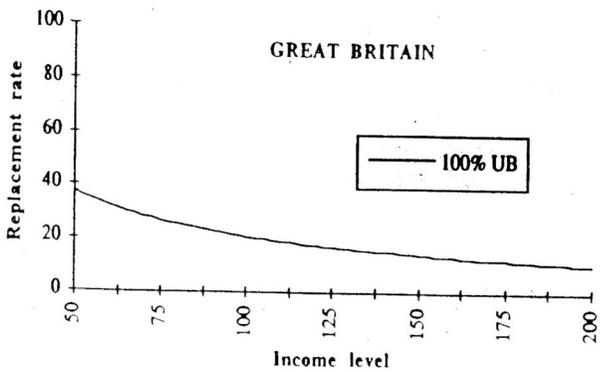
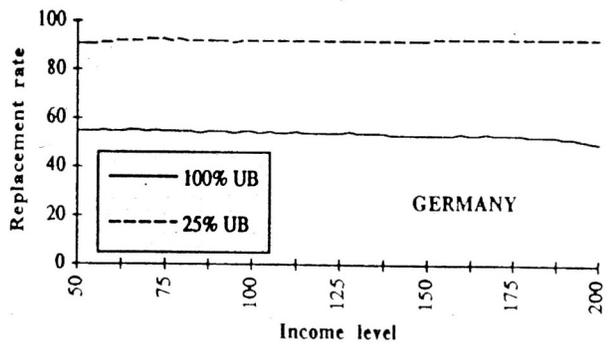
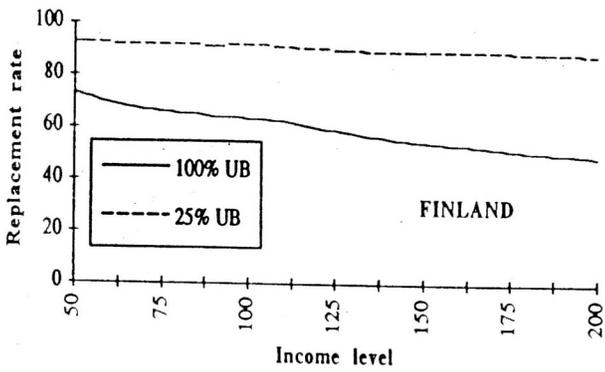
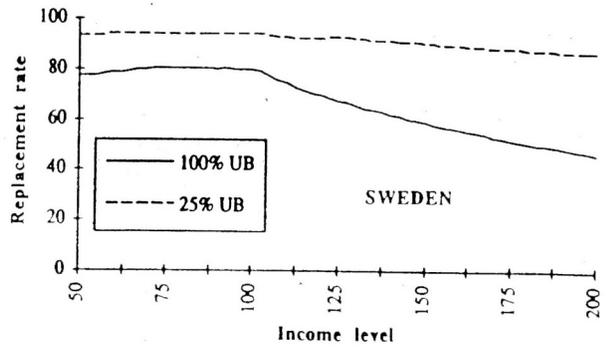
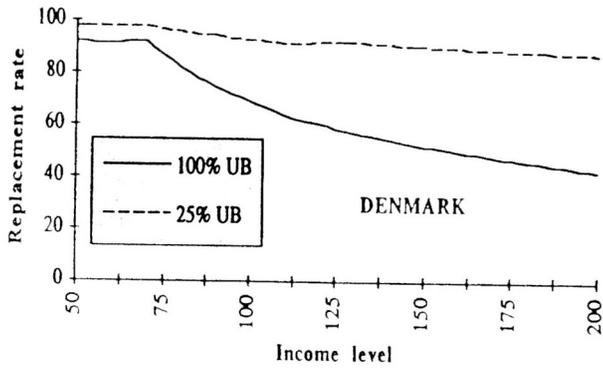
The decrease in disposable income is smallest in the Netherlands followed by Germany and Austria when the APW is unemployed for 3 months and eligible for insurance benefits. The decrease is somewhat larger in Sweden, Denmark, Canada and Finland, smallest in S, largest in FIN. Great Britain has the largest decrease of all. 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 Swedish, Danish and the Finnish, but still

smaller than the Austrian and Canadian. It is especially the variation in the progression of the 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 housing⁸⁾, 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 the profiles for the schemes would differ considerably with varying income. Graph 2.1 illustrates the net replacement rate profiles for U.B. schemes in six of the countries studied (net replacement rate: 100 + 'change in disposable income, per cent' from table 2.4). The cases in graph 2.1 are from 1994. The net replacement rates have changed since then, but the form of the profiles is still valid.

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

Graph 2.1 Net replacement rates 1994. Single worker unemployed for 25 per cent and 100 per cent of the year. Income varies from 1/2 to 2 APW.



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 July 1st to December 31st 1994 when the system was integrated in the mandatory insurance scheme) a special labour market compensation is received, but this may be supplemented by social assistance and housing allowances (not included in the calculations). In Denmark and Sweden (except in the 'mandatory' period), these elements of social security are alternatives to unemployment insurance benefits. From 1998 this element in Sweden is the basic (mandatory) level in the new Swedish unemployment insurance scheme, cf. the section 'announced changes 1997/98'. The Danish social assistance system was changed fundamentally from 1994. The benefit became related to the max. 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 earningsrelated U.B. This is also equivalent with the benefit for the outinsured.

Table 2.5. *Effects on disposable income of being unemployed for 3 months and the whole year in 8 countries, 1997.*

	DK	S	FIN	A	D	NL	GB	CAN
<i>Not eligible for insurance, 3 months' unemployment</i>								
Compensation percentage	32	26	19	51.5 ¹⁾	53 ¹⁾	32	15	7
Change in disposable income, %	-14.0	-17.2	-15.5	-8.6	-8.2	-9.5	-19.1	- 19.0
<i>Not eligible for insurance, 12 months' unemployment</i>								
Compensation percentage	32	28	21	51.5 ¹⁾	53 ¹⁾	32	15	7
Change in disposable income, %	-58.2	-70.6	-71.9	-48.2	-48.5	- 52.6	-79.8	- 90.7

1) The compensation percent 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 e.g. 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 ½ year, in step 2 the length of the benefit period (dependent on former work) varies from ¼ year to 4½ 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 outinsured 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 coverage than those of the Scandinavian countries. For Sweden, where the insurance scheme is without time limitations, the scheme here, however, is a not often used alternative. 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, 1997.*

	DK	S	FIN	A	D	NL	GB	CAN
Compensation percentage	71	75	64	56	60 ¹⁾	70	15	41
Change in disposable income, %	- 6.5	- 9.1	- 10.6	-15.7	-12.3	-10.2	-28.6	- 17.6

1) The compensation percent 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.

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 (DK and S), 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. 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 while 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 $\frac{1}{3}$ of the working capability of the single APW is lost. In the latter case it is assumed that the injured person still receives $\frac{2}{3}$ 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.

Table 2.7. *Effects on disposable income from being permanently injured from work in 8 countries, 1997.*

	DK	S	FIN	A	D	NL	GB	CAN
<i>Complete loss of working capability</i>								
Compensation percentage	108	100	85	80	67	70	53	90 ¹⁾
Change in disposable income, %	+23.7	0.0	-7.7	+8.7	+16.6	-27.4	-29.2	- 10.0
<i>Loss of $\frac{1}{3}$ of working capability</i>								
Compensation percentage	74	100	85	67	67	63	28	90 ¹⁾
Change in disposable income, %	- 5.2	0.0	-2.2	+2.6	+12.4	- 10.3	-17.2	+0.7

1) The compensation per cent is after tax.

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 $\frac{1}{3}$ 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 $\frac{1}{3}$ 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, 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% loss of working capability has an extra benefit (20% 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 $\frac{1}{3}$ 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, while 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 in the Netherlands (phase 1), in the 100 per cent loss of working capability case. Incapacity Benefit is assumed not to be received in the 33 $\frac{1}{3}$ per cent loss of working capability case in GB. 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 on 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 it is only the permanent benefit which is included in the calculation, and the impact is related to current (1997) 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 max. 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 considerable among the 8 countries studied. In some countries the disability pension scheme is aligned to the old-age pension scheme. This is e.g. the case in Denmark, Sweden, Finland, Austria, Germany and Canada. In other countries it is aligned to sickness benefits, e.g. in Great Britain and the Netherlands. 'Anticipated' pension points or years 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 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, 1997.

	DK	S	FIN	A
<i>Basic Public Scheme</i>				
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
<i>Additional Public Scheme</i>				
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	

- 1) Persons who become disabled in the age bracket 57-64 years (55-59 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.

Table 2.8. Continued.

	D	NL	GB	CAN
<i>Basic Public Scheme</i>				
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
<i>Additional Public Scheme</i>				
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 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 max. age is lower than the formal old-age pension age. Here there are early retirement possibilities for disabled 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 Scandinavian 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 GB, 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 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 the age, the higher this is the longer the duration is.

Only the Scandinavian countries differentiate the basic pension according to being single or married, and only the Scandinavian countries means test 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 should be mentioned, that disability pension schemes are often complex and the eligibility criteria vary considerably, they are mainly based upon medical assessments but some times also on social and economic conditions. All this is not reflected in table 2.8.

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.

Table 2.9. *Net replacement rates in case of disability in 8 countries, 1997.*

	DK	S	FIN	A	D	NL	GB	CAN
<i>With former working record</i>								
Net replacement rate	75	63	63	68	62	73	29	41
<i>Without former working record</i>								
Net replacement rate	75	45	32	36 ¹⁾	23 ¹⁾	47 ¹⁾	21	25 ¹⁾

1) These cases are based upon 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. 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 ½ year, for a 40 year old it is 1 year. For a 50 year old it is 2 years and for a 59 year 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, 1997.

	DK	S	FIN	A	D	NL	GB	CAN
Compensation percentage	77	63	67	53	38	70	43	42
Change in disposable income, %	+1.0	-8.0	-9.3	-13.4	-10.2	-10.2	-16.8	-17.0

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 ½ APW income. Again, it should be remembered that the duration of the benefit at this level in the Netherlands in most cases is only temporary.

Retirement

Pension schemes are very important where public expenditures and the distribution of income between the generations are considered, especially because an ageing of the population will take place 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 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, 1997.

	DK	S	FIN	A
<i>Basic public pension scheme</i>				
Formal pension age	67	65	65	60/65 ¹⁾
Flexible retirement	No	Yes	Yes	Yes
Eligible groups	All	All	All	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⁾
<i>Additional public pension scheme</i>				
Existence	Yes	Yes ⁴⁾	Yes	None
Eligible groups	Employees	Employees and self-employed	Employees and self-employed	
Pension dependent on work history and income	Only on work history	Yes	Yes	

- 1) The age 60 is for women, 65 is for men. It will be increased to 65 for women over 10 years starting in 2010 in GB. 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 2001.
- 5) The Canadian Additional pension Scheme CPP allows flexible retirement between 60 and 70 years of age.

Comments on table 2.11

The formal retirement age is not a good indicator for when retirement actually takes place, but it is an important signal. Great Britain has decided to increase the retirement age for women from 60 to 65 years over 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

Table 2.11. Continued.

	D	NL	GB	CAN
<i>Basic public pension scheme</i>				
Formal pension age	65	65	60/65 ¹⁾	65
Flexible retirement	Yes	No	Only post-ponement	No
Eligible groups	Employees, Some self-empl.	All	Employees, Self-employed	All
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
<i>Additional public pension scheme</i>				
Existence	None	None	Yes	Yes ⁵⁾
Eligible groups			Employees	Employees and self-employed
Pension dependent on work history and income			Yes	Yes

- 1) The age 60 is for women, 65 is for men. It will be increased to 65 for women over 10 years starting in 2010 in GB. 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 2001.
- 5) The Canadian Additional pension Scheme CPP allows flexible retirement between 60 and 70 years of age.

will start in 2001, 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 have flexible public old age pension schemes which can also be used for early or postponed retirement. This is the case in Sweden, Finland, Austria, Germany

and Canada. 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 the 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 system. This flexible German scheme will be implemented gradually from year 2001 to 2012 and will contain a higher minimum age for receiving pension than in the replaced early retirement schemes. In all five countries it is also possible to postpone retirement to 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 accommodate 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 where 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 the five countries (DK, S, FIN, NL and CAN) with a basic pension (minimum pension) for all, this is residence based and 'flat rate'. In Germany, the public pension system is basically for employees in the private sector and 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 in 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 (GB 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 upon full own contributions in GB do not differ according to marital status, but a

pension based upon the contributions of a spouse is lower. 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 to that of a single pensioner varies a great deal.

Means testing of pensions is a Scandinavian 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 can result in means testing of public basic pensions. In Canada one component of the basic pension, that is the guaranteed income supplement, is means tested against other income including pensions from the additional scheme, CPP. The benefits of social assistance type, 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 point of view of the recipient, the Swedish and Finnish schemes. The average pension from the Swedish additional pension scheme is now 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'. The taxation of income from the additional pension scheme in excess of the means tested part of the basic pension is rather severe. 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 it is the whole basic pension which 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 1997. In some additional schemes, e.g. the Danish and the British ones, it is not possible to obtain full pension rights in 1997. 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 1997. 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.

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 upon residence (DK, S, FIN, NL and CAN).

On these assumptions, the APW-calculations show the pensions received at the formal age of retirement in the 8 countries in 1997.

Table 2.12. Net replacement rates at retirement in 8 countries, 1997.

	DK	S	FIN	A	D	NL	GB	CAN
<i>With former work, single APW</i>								
Net replacement rate	54	64	66	86	76	47	52	55.5
<i>With former work, APW-couple</i>								
Net replacement rate	55	65	70	83	71	43	56	59
<i>Without former work, single APW</i>								
'Net replacement rate'	48	39	32	51.5 ¹⁾	23 ¹⁾	47	29 ¹⁾	42

1) The replacement rates for Austria, Germany and Great Britain are based upon 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' has been continued since, but will stop in 1999. Furthermore, in 1997 pensions in Sweden were only increased by 60 per cent of the price development.

In the case of the 'APW-couple' formerly with 1½ 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 ½ 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 the 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 Denmark and the Netherlands 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, while 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 for single parents.

Seven of the countries have cash benefits and one, that is Germany, has (from 1996) refundable tax credits or, if that is advantageously 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, 1997.

	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. Same rate for all	Flat rate per child. Increasing from 2nd child	Flat rate benefit increasing with age. Tax credit increasing from 2nd child
Means-testing	No	No	No	No
Max. 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) In some special cases up to 25 years.
- 4) Canada also has a supplementary scheme for low income families.

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 where graduation according to number and age of the children is concerned. In Denmark, the cash benefit is highest when the child is an infant (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, that 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 it is the 'youngest' children who receive the highest allowance, in Great Britain it is the first, the oldest child. Sweden had a scheme similar to the Finnish, but from 1996 new entrants stopped, implying that in the longer run there would be no graduation according to the number of children if the rule was maintained. This was changed in 1998, when the graduation according to number of children was reintroduced. In the Netherlands the allowance for all children increased with 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.

Table 2.13. Continued.

	D	NL	GB	CAN
Type of scheme	Tax credit/ allowance	Cash benefit	Cash benefit	Cash benefit ⁴⁾
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	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
Max. duration (age of child)	Until: 16/27	Until: 16/18 ³⁾	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) In some special cases up to 25 years.
- 4) Canada also has a supplementary scheme for low income families.

It is only in Canada the family allowance is means-tested, and the means testing may result in zero family allowances. 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 behind the / in table 2.13, max. 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 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, for more details, cf. the section 'announced changes 1997/1998'. The British 'Family Credit' scheme serves the same purpose, it is not a family allowance scheme, but includes having children among the eligibility criteria.

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 1997). In the Canadian case, the means-testing has an effect on the allowance for all 3 family types in table 2.14.

The most generous scheme is the Austrian followed by the German. The new German scheme (from 1996) based upon tax credits is substantially more generous than the old one and was further improved in 1997. Finland now follows after Germany (last year it was opposite), the Finnish benefits were nominally unchanged from 1996 to 1997. Denmark is fourth followed by Sweden, where the allowance was nominally unchanged from 1996 to 1997, and graduation according to the number of children was still closed for new entrants (this is included in the calculation for Sweden). In the 1995 calculations Sweden was 'ranked' just after Finland, since 1996 it is after Denmark. In 1998 the child benefits were increased and the 'old' graduation according to the number of children reintroduced in Sweden. The relative impact of family allowances in the Netherlands and Great Britain are less than ½ of what they are in Austria and Germany. Last is Canada, where the means testing has a substantial impact, especially for the families with 1 and 2 children.

Table 2.14. *Effects on disposable income of receiving family allowance in 8 countries, 1997.*

	DK	S	FIN	A	D	NL	GB	CAN
<i>Percentage change in disposable income with:</i>								
1 child (no. 1)	+4.2	+3.7	+4.5	+5.9	+5.2	+2.6	+2.9	+1.5
2 children (no. 1+2)	+8.5	+7.3	+10.0	+12.4	+10.4	+5.6	+5.3	+3.0
3 children (no. 1+2+3)	+13.2	+11.0	+16.5	+19.6	+17.4	+8.0	+7.7	+6.4

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

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 is 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 countries, 1997.*

	DK	S	FIN	A
Max. benefit period	28 + 2 + 2 weeks ¹⁾	64 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

- 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 new scheme is intended to increase 'rotation' on the labour market.
- 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.
- 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 1997. 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 weeks 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 expire of the 'ordinary' leave.

Comments on table 2.15

It is obvious from the table, that the variation in the maximum benefit period is very considerable with Sweden having 4.5 times as long a period as Germany. The three Scandinavian countries have the longest benefit periods and they are letting the father participate in the maternity leave. This is also the case in Canada. The Swedish system is very flexible both with regard to the mother's and the father's rights (most of the maternity leave can be divided between them in varying proportions) and with regard to splitting the period. The 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 in Denmark and Canada. In Denmark there are also 2 + 2 weeks separately for the father.

Table 2.15. Continued.

	D	NL	GB	CAN
Max. benefit period	14 weeks ⁵⁾	16 weeks	18 weeks	27 weeks ⁶⁾
Participation of the father, rights	None	None	None	Yes, share of 10 weeks
Benefit formula	Income related	Income related	Mixed	Income related

- 1) The 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 new scheme is intended to increase 'rotation' on the labour market.
- 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.
- 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 1997. 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 weeks 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 expire of the 'ordinary' leave.

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 (1997), it is 75 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 75 per cent for the following 44 weeks, which can be divided between the parents, 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 schemes for 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, 1997.*

	DK	S	FIN	A	D	NL	GB	CAN
<i>Maximum duration of maternity leave</i>								
Compensation percentage	53	75	69.5	100	100 ¹⁾	100	53	53
Change in disposable income, per cent	-6.7	-8.8	-7.3	0	0	0	-4.5	- 6.6
<i>Common duration of maternity leave</i>								
Compensation percentage	53	75	69.5	100	100 ¹⁾	100	58	50
Change in disposable income, per cent	-2.9	-2.3	-2.0	0	0	0	-3.1	- 3.7

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 in 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 Scandinavian 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, Great Britain, where the decrease, however, is modest. In the three Scandinavian 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 1997

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

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, 'Announced changes 1997/98'. Then follows short comments on the 'APW-calculations' for 1997 compared to those for 1996, including an attempt to explain at least the major changes.

Announced changes 1997/98

DENMARK

Taxation

The gradual implementation of the tax reform from 1994 continued. The marginal tax rates are lowered and the general social contribution is increased, it was 7 per cent of wage income (employees and self-employed) in 1996, increasing to 8 per cent in 1997 and 1998. The reform was fully implemented in 1998. The social contribution for supplementary pensions was increased in 1997 and 1998 for recipients of U.B. and sickness benefits. Social assistance recipients started to pay this contribution in 1997, although at a reduced rate. In 1998 a temporary savings contribution was introduced (1 per cent of wage income and a fixed amount for benefit recipients). This became permanent in 1999. The tax value of negative capital income was reduced and the deduction for the 'middle' state tax was increased.

Unemployment benefits

There were a few changes to the basic reform from 1994. The duration of the benefit period was shortened from 7 to 5 years in 1996, a change which will be gradually implemented until 1998. Active labour market measures will no longer prolong the benefit period. From 1999 the benefit period will maximum be 4 years, participation in active labour market measure will start after 1 year.

From 1999 all young unemployed below 25 years will have to participate in active labour market measures after 6 months of unemployment.

From 1997 the working condition was 52 weeks within the last 3 years, up from 26 weeks, before benefits could be received (requirement for full time insured). Two rules for elderly unemployed should be mentioned, even if they are from the start of the reform. One is that unemployed who are over 50 years when their U.B. rights expire can continue receiving benefits until the age of 60 years if they by continued membership of the U.B. scheme at that time will qualify for the early retirement scheme (Efterløøn).

Table 2.17. Summary, 'standard' income events for APW-families without children, 1997

	DENMARK		SWEDEN		FINLAND		AUSTRIA	
	Compensation %	Change disp. inc. %	Compensation %	Change disp. inc. %	Compensation %	Change disp. inc. %	Compensation %	Change disp. inc. %
Ill 1 week, single APW	53 ¹⁾ , 100 ¹⁾	-0.7, 0.0	60 ¹⁾	-0.8	0 ¹⁾ , 100 ¹⁾	-1.5, 0.0	50 ¹⁾ , 100 ¹⁾	-0.8, 0.0
25% unemployment, eligible for compensation, single APW	53 ¹⁾	-9.2	65 ¹⁾	-8.3	46 ¹⁾	-9.8	56 ²⁾	-7.6
100% unemployment, eligible for compensation, single APW	53 ¹⁾	-37	69 ¹⁾	-29.2	50 ¹⁾	-39.3	56 ²⁾	-43.7
25% unemployment, not eligible for compensation, single APW	32 ¹⁾	-14	26 ¹⁾	-17.2	19 ¹⁾	-15.5	51.5 ²⁾	-8.6
100% unemployment, not eligible for compensation, single APW	32 ¹⁾	-58.2	28 ¹⁾	-70.6	21 ¹⁾	-71.9	51.5 ²⁾	-48.2
Female 100% unemployment, eligible for compensation, APW-couple	71 ¹⁾	-6.5	75 ¹⁾	-9.1	64 ¹⁾	-10.6	56 ²⁾	-15.7

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 refers to insurance alone, the second includes usual compensation from the employer. For Sweden the two coincide from 1993.

2) The compensation percentage is after taxation.

Table 2.17. Summary, 'standard' income events for APW-families without children, 1997

Table 2.17. Continued	GERMANY		THE NETHERLANDS		GREAT BRITAIN		CANADA	
	Compensation %	Change disp. inc. %	Compensation %	Change disp. inc. %	Compensation %	Change disp. inc. %	Compensation %	Change disp. inc. %
Ill 1 week, single APW	90 ²⁾ , 100 ¹⁾	0.0, 0.0	42 ¹⁾ , 100 ¹⁾	-0.8, 0.0	7 ¹⁾ , 80 ²⁾	-1.6, -0.4	0 ¹⁾	-1.5
25% unemployment, eligible for compensation, single APW	60 ²⁾	-6.7	70 ¹⁾	-6.1	15 ¹⁾	-19.1	46.5 ¹⁾	-9.6
100% unemployment, eligible for compensation, single APW	60 ²⁾	-41.6	70 ¹⁾	-27.4	15 ¹⁾	-79.8	48 ¹⁾	-44
25% unemployment, not eligible for compensation, single APW	53 ²⁾	-8.2	32 ¹⁾	-9.5	15 ¹⁾	-19.1	7 ¹⁾	-19
100% unemployment, not eligible for compensation, single APW	53 ²⁾	-48.5	32 ¹⁾	-52.6	15 ¹⁾	-79.8	7 ¹⁾	-90.7
Female 100% unemployment, eligible for compensation, APW-couple	60 ²⁾	-12.3	70 ¹⁾	-10.2	15 ¹⁾	-28.6	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 refers to insurance alone, the second includes usual compensation from the employer. For Sweden the two coincide from 1993.

2) The compensation percentage is after taxation.

Table 2.17. Summary, 'standard' income events for APW-families without children, 1997

	DENMARK		SWEDEN		FINLAND		AUSTRIA	
	Compensation %	Change disp. inc. %	Compensation %	Change disp. inc. %	Compensation %	Change disp. inc. %	Compensation %	Change disp. inc. %
Injured, total loss of working capability, single APW	108 ¹⁾	23.7	100 ¹⁾	0	85 ¹⁾	-7.7	80 ¹⁾	8.7
Injured, 1/3 loss of working capability, single APW	74 ¹⁾	-5.2	100 ¹⁾	0	85 ¹⁾	-2.2	67 ¹⁾	2.6
Pensioner ²⁾ , disability, former working period, single APW	75	-25	63	-37	63	-37	68	-32
Pensioner ^{2,3)} , disability, no former working period, single APW	75	-25	45	-55	32	-68	36	-64
Pensioner, disability, wife (former 1/2 APW), APW-couple	77 ¹⁾	1	63 ¹⁾	-8	67 ¹⁾	-9.3	53 ¹⁾	-13.4
Pensioner ²⁾ , old-age max. working period, single APW	54	-46	64	-36	66	-34	86	-14
Pensioner ^{2,3)} , old-age no working period, single APW	48	-52	39	-61	32	-68	51.5	-48.5
Pensioner ²⁾ , old-age max. working period, APW-couple	55	-45	65	-35	70	-30	83	-17

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. Summary, 'standard' income events for APW-families without children, 1997

Table 2.17. Continued	GERMANY		THE NETHERLANDS		GREAT BRITAIN		CANADA	
	Compensation %	Change disp. inc. %						
Injured, total loss of working capability, single APW	67 ⁽¹⁾	16.6	70 ⁽¹⁾	-27.4	53 ⁽¹⁾	-29.2	90 ⁽²⁾	-10.0
Injured, 1/3 loss of working capability, single APW	67 ⁽¹⁾	12.4	63 ⁽¹⁾	-10.3	28 ⁽¹⁾	-17.2	90 ⁽²⁾	0.7
Pensioner ² , disability, former working period, single APW	62	-38	73	-27	29	-71	41	-59
Pensioner ^{2,3} , disability, no former working period, single APW	23	-77	47	-53	21	-79	25	-75
Pensioner, disability, wife (former 1/2 APW), APW-couple	38 ⁽¹⁾	-10.2	70 ⁽¹⁾	-10.2	43 ⁽¹⁾	-16.8	42 ⁽¹⁾	-17
Pensioner ² , old-age max. working period, single APW	76	-24	47	-53	52	-48	55.5	-44.5
Pensioner ^{2,3} , old-age no working period, single APW	23	-77	47	-53	29	-71	42	-58
Pensioner ² , old-age max. working period, APW-couple	71	-29	43	-57	56	-44	59	-41

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, 1997

	DENMARK		SWEDEN		FINLAND		AUSTRIA	
	Compensation %	Change disp. inc. %	Compensation %	Change disp. inc. %	Compensation %	Change disp. inc. %	Compensation %	Change disp. inc. %
1 child (6 years old)	-	4.2	-	+3.7	-	+4.5	-	5.9
2 children (6 and 3 years old)	-	+8.5	-	+7.3	-	10	-	12.4
3 children (6, 3 and 1 year old)	-	13.2	-	11	-	16.5	-	+19.6
Birth of child no. 2, benefits, max. duration	53 ¹⁾	-6.7	75 ¹⁾	-8.8	69.5 ¹⁾	-7.3	100 ¹⁾	0
Birth of child no. 2, benefits, standard duration	53 ¹⁾	-2.9	75 ¹⁾	-2.3	69.5 ¹⁾	-2	100 ¹⁾	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. Summary, benefits for APW-families concerning children, 1997

	GERMANY		THE NETHERLANDS		GREAT BRITAIN		CANADA	
	Compensation %	Change disp. inc. %						
1 child (6 years old)	-	5.2	-	+2.6	-	2.9	-	+1.5
2 children (6 and 3 years old)	-	10.4	-	+5.6	-	5.3	-	3
3 children (6, 3 and 1 year old)	-	17.4	-	+8.0	-	7.7	-	6.4
Birth of child no. 2, benefits, max. duration	100 ²⁾	0	100 ¹⁾	0	531	-4.5	53 ¹⁾	-6.6
Birth of child no. 2, benefits, standard duration	100 ²⁾	0	100 ¹⁾	0	581	-3.1	50 ¹⁾	-3.7

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.

In 1999 this was changed to those who are over 55 years. They also became obliged to participate in active labour market measures. For unemployed over 60 years the duration of the benefit period is only 2½ years as a maximum, and there are no active labour market measures for this age group. From 1999 the 60 and 61 year old unemployed participate in active labour market measures.

Early retirement

The temporary schemes for early retirement from the labour market (considering unemployed people in the age bracket 50 to 60 years) were closed for new entrants from February 1996. Those reaching the age of 50 years during the whole of 1996 could join the scheme if they fulfilled the requirements and applied during January 1996. Many, especially women, used this opportunity for 'very' early retirement. The ordinary early retirement scheme (*Efterløn*) was changed in 1999. The entrance benefit was lowered, premiums for delayed early retirement or none at all were introduced, and benefits can be received to the age of 65, the new formal retirement age (from 2004). A specified contribution for the scheme was introduced and the membership condition of the unemployment insurance scheme increased to 25 out of the last 30 years.

SWEDEN

Taxation

There were no major changes in personal taxation in Sweden in 1997 and 1998. The employee paid social contribution for illness was increased from 3.95 per cent in 1996 to 4.95 per cent in 1997 (up to the usual ceiling, 7.5 times the full 'basbeloppet'). The contribution to pensions was 1 per cent in both years. In 1998 the combined rate increased to 6.95 per cent. The minimum state tax was increased from 100 SEK to 200 SEK in 1997. The minimum state tax is paid by all who also pay local income tax.

Unemployment benefits

The gross compensation rate was increased from 75 per cent of the lost income to 80 per cent in the last quarter of 1997. The max. benefit was 564 SEK/day in 1997, a level which had been unchanged since the second half of 1993. The max. benefit increased to 580 SEK/day in 1998. The minimum benefit was increased from 230 SEK/day to 240 SEK/day in 1998. The gross compensation rate stayed at 80 per cent of the former income in 1998.

A mandatory basic insurance replaced the KAS scheme from 1998. The working condition were tightened and the prolonged benefit period of 450 days was for unemployed at least 57 years of age (formerly 55 years). The basic insurance benefit is identical to the former KAS benefit. The structure in the Swedish unemployment insurance is from 1998 similar to that in the Finnish scheme, a mandatory basic insurance and on top of that a voluntary earnings related scheme. Shortening of the benefit period, which in practice is without time limitation, is under consideration.

Illness

The gross compensation rate was changed (lowered) to a uniform 75 per cent of former income in all segments of the scheme in 1996 and stayed unchanged in 1997. The employer paid period of illness was extended to 4 weeks (from 2) in 1997. In 1998 the compensation rate increased to a uniform 80 per cent and the employer paid period became 2 weeks again. The waiting period is unchanged 1 day.

Maternity leave benefits

The gross compensation rate was lowered from 90 per cent of the former income for 2 months (one for each of the parents) to 85 per cent in 1996. The gross compensation rate for the remaining 10 months of the income related benefits were reduced from 80 to 75 per cent in 1996. In 1997 the compensation rate was a uniform 75 per cent. This was increased to 80 per cent in 1998.

Family allowances

The basic child allowance was nominally unchanged from 1991 to 1995, i.e. 9,000 SEK/year/child. In 1996 the basic allowance was reduced to 7,680 SEK/year/child. The supplements for more children were reduced in 1994 and in 1995. The supplements were unchanged in 1996, but the 'access' to new supplements was closed in 1996. The benefits were unchanged in 1997, but in 1998 the basic benefit was changed back to 9,000 SEK/year/child. The supplements were unchanged, but the access to the scheme was reopened for new entrants.

Pensions

The minimum age for old-age pension was increased from 60 to 61 years in 1998. The 60 per cent price regulation of 'basbeloppet' continued in 1997 and 1998, and the basis for payment of pensions was 98 per cent of 'basbeloppet' just as in the preceding years. The 98 per cent base will be abolished in 1999 and changed to a 100 per cent base.

Social assistance

A new norm for recommendation was constructed in 1996 based upon a basic set of commodities and services. The new norm will typically imply somewhat lower benefits, especially for families with many children, than the old one.

FINLAND

Taxation

There were important changes in the Finnish scheme for personal taxation in 1997 and 1998. The state tax rates were lower (1 percentage point) in 1997 and the thresholds higher than in 1996. The tax rates were unchanged in 1998, but the thresholds were increased. The social contributions based upon taxable income for local taxation were lowered (illness) and that for national pension was abolished in 1996. That implied a reduction from 4.35

per cent (for taxable income above 80,000 FIM) to 3.35 per cent in 1996. In 1997 there was a further reduction to 2.35 per cent and to 1.95 per cent in 1998. In 1997 and 1998 there were marginal increases in the wage based social contributions (0.2 and 0.1 per cent respectively). The most significant change was in the 'low income allowance' (for local taxation and the just mentioned social contribution for illness). The maximum for this allowance was increased from 2,000 FIM to 5,500 FIM in 1997 and the 'build-up' as well as the 'taper-off' profile was changed significantly. The parameters are the same in 1998, but in 1999 the maximum will increase to 8,600 FIM, and the 'build-up' and 'taper-off' profiles will be changed.

Unemployment benefits

The reduction of the wage base by 4.5 per cent for calculation of earnings related benefits was unchanged in 1996 and 1997 from 1995, but increased to 5 per cent in 1998. A tightening of the 'access' conditions to the schemes (both the mandatory 'flat rate' and the voluntary 'earnings related') was implemented in 1997. The minimum length of membership of the voluntary scheme was increased from 6 to 10 months before eligibility for benefits is obtained. The working condition (same for both schemes) became 43 weeks of work within the last 2 years, up from 26 weeks. The waiting period was extended from 5 to 7 days in 1997 and the age limit for prolonged (more than 500 days) benefits was increased from 55 years to 57 years.

Illness

The minimum pay, 60 FIM/day, was abolished in 1996. The change in 1996 in the 'step wise' benefit formula implied a minor decrease in the benefits. The same benefit formula is used for maternity leave benefits. The reduction in the wage base is the same as for unemployment benefits, i.e. 4.5 per cent in 1997 and 5 per cent in 1998.

Maternity leave benefits

As already mentioned, cf. illness, the benefit formula was changed in 1996, implying somewhat lower benefits in relation to earned income. The minimum pay, 60 FIM/day, is maintained in this scheme.

Family allowances

The family allowances were nominally reduced from 1995 to 1996 and they stayed nominally unchanged from 1996 to 1997 and 1998. The reduction was from 570 FIM/month to 535 FIM/month for the first child, from 720 FIM/month to 657 FIM/month for the second child and from 910 FIM/month to 779 FIM/month for the third child.

Pensions

A major change took place concerning the 'integration' of the basic national pension and the public occupational pension scheme from 1996, where the basic amount of the national

pension scheme was also included in the 'integration', i.e. it could be means-tested all the way down to zero. That was only possible for the supplement prior to 1996.

AUSTRIA

Taxation

The personal tax allowance became means tested from 1997. It is reduced in the income interval 200.000-500.000 ATS from its maximum value (8,840 ATS in 1997) to zero.

Pensions

The main objectives of the 1997 pension reform were to extend the scope of coverage (new self-employed, marginally employed), to increase the 'assessment basis' from the best 15 to the best 18 years if the pension is taken out early (from 2002), to increase the reductions in the pension for early retirement in order to increase the average retirement age and to increase the self finance from self-employed. The assessment will be simplified to a uniform progress, replacing the present very complicated individually based process. The access to the part time pension scheme was enlarged from 1998.

Family allowances

The cash component of the child benefits will be increased in 1999 and 2000 and there will be graduation according to the number of children as well as to the age of the child (the last mentioned is already the case). A growing number of children and growing age will both lead to increasing benefits. The tax credit component, which increases with the number of children, will also be augmented in 1999 and in 2000.

The duration of parental leave has been reduced until the child is 18 months from 1996, if only one of the parents participate. It can be extended to the age of 2 years if both parents participate.

GERMANY

Taxation

The German personal taxation scheme was changed considerably in 1996 following the rulings of the Constitutional Court. The non-taxable income was increased to 12,095 DEM, up from 5,616 DEM. The tax schedule was changed for taxable income up to 55,727 DEM in such a way that average taxation was lowered (result of the increased non-taxable income) and marginal taxation increased. From taxable income of 57,727 DEM and up, the new scheme is identical to the old. There were no changes in 1997, and only minor changes in 1998. The tax reform from January 1999 implied substantial tax reductions for families with children.

The *social contributions* also increased in 1997, where they in average were 21.05 per cent of the wage (the employee paid contributions), up from 20.2 in 1996. There were no changes in 1998.

Illness

The obligation (the legal foundation) for employers to pay full wages for the first 6 weeks of illness was changed to payment of 80 per cent of the former wage in the fall 1996. The obligation is, however, also implemented in the labour market agreements so it is up to the negotiators to change the current agreements partly or completely. It will take some time before there is a significant impact from the change.

The *gross compensation* percentage in the public insurance scheme was lowered from 80 per cent to 70 per cent of the former wage, with the ceiling that the compensation cannot be larger than 90 per cent of the lost income after tax.

Disability

The two German schemes for disability pensions (Erwerbs- and Berufsunfähigkeit) will be replaced by a uniform scheme from year 2000.

Pensions

Minor changes were implemented in 1998 with the main implication that indexing of pensions in future also will take 'the demographic factor' into consideration.

Family allowances

The German family allowances were changed fundamentally, also following the rulings of the Constitutional Court. There is now (from 1996) a refundable tax credit per child for families with children. The tax credits are 2,400 DEM/year/child for child no. 1 and 2, 3,600 DEM/year/child for child no. 3, and 4,200 DEM/year/child for child no. 4 and more. This scheme is quite similar to a cash benefit, the tax credit is implemented each pay day, and if there is no taxation, the tax credit is paid out in cash. In 1997 the credits were 2,640 DEM/year/child for the first 2 children, the other credits were unchanged. There were no changes in 1998, but further increases in 1999.

Alternatively there is an allowance of 6,264 DEM/year/child in taxable income (6,912 DEM per child in 1997 and 1998). The family will have the allowance, if that is advantageous compared with the tax credit. That will only be the case for families with relatively high incomes, where the deductible allowance will have its highest value due to the progression in the German personal taxation scheme. It should be mentioned that the deductible allowance is used for all families with children, when the solidarity and church tax is calculated (church tax is not included in the tax calculations in 'Elements').

The NETHERLANDS

Taxation

Personal taxation in the Netherlands was, generally speaking, lowered somewhat in 1997 compared to 1996.

Illness

The complete scheme for sickness benefits was privatized in 1996, implying that the employers took over the responsibility for and financing of the scheme. It is now up to the employers to control the scheme within the legal frame work and reap possible savings from that.

Unemployment benefits

The access to the scheme was tightened considerably in 1995. This was followed up in 1996 with more effective control of the availability for the labour market of the unemployed. Employer financing was enhanced (more weeks covered by employer financing), and differentiation of contributions according to the number of firings of each firm introduced. This can be seen as a move in direction of further privatization of the scheme.

The job seekers employment act was implemented in 1998, one of its aims is to keep young unemployed (16-18 years) close to the labour market through individual action plans.

Disability pensions

Access to this scheme (WAO) has been tightened considerably in recent years, the benefit levels and the duration of benefits have been cut for many, e.g. in form of benefit reductions after some time as a recipient. From 1998 there is also a scheme for self employed (WAZ). Employer contributions will be differentiated according to the entrants to the scheme from each company, and from 1998 only the employer pays contributions also to the WAO scheme.

GREAT BRITAIN

Taxation

Personal taxation was decreased in Great Britain again in 1997. The personal allowance increased significantly and the tax rate in the second bracket was lowered from 24 to 23 per cent. Britain is the 'low tax' country in Europe, a position which was further strengthened in 1997. The reductions in personal taxation continued in 1998. From 1999 a 10 per cent tax bracket was introduced and the 20 per cent bracket disappeared.

Unemployment benefits

The unemployment benefit scheme was replaced by the Jobseeker's Allowance (JSA) from October 1996. The new scheme combines U.B. and I.S. paid to unemployed people in one

scheme. If the contribution conditions are met the unemployed will receive JSA (C), where C indicates that it is contribution based, for six months in the same way as in the old U.B. scheme. If the person is still unemployed after six months he or she will receive JSA (IB), where IB indicates that it is income based. This part of the scheme is means-tested. There are no time limitations attached to JSA (IB).

If the contribution conditions are not met, the unemployed starts immediately (after the usual waiting period) receiving JSA (IB). It is possible to receive JSA with work for up to 16 hours (if it is JSA (IB) there will be means-testing) and as a participant in government training courses. The rates are differentiated according to age, lowest for the 16 to 17 years old, higher for 18 - 24 years old and highest for unemployed over 25 years of age. In some cases there will be a 'Top-Up' from JSA (IB) to recipients of JSA (C).

Family allowances

From June 1998 the family allowances for lone parents were lowered to the same level as for couples with children, but only for new single parents. The reduction was approximately 6 GBP/week for the eldest child.

Family credit

The Family Credit (FC) scheme is for families with children and low working income. It has a basic credit, credits for children and a special 30 hours (of work) credit. For income (net of tax and social contributions) above a certain threshold the benefit is being tapered off by 70 per cent. A child care disregard (CCD) of up to 60 GBP/week could be deducted from the income. From June 1998 the CCD has a max. value of 100 GBP/week for families with 2 children. FC is a cash benefit paid on a weekly basis. From October 1999 the Family Credit scheme will be replaced by the Working Families Tax Credit scheme. Tax credits (refundable) will be used in stead of cash benefits. The structure of the scheme is similar to the FC scheme, but the taper is smaller, 55 per cent. The CCD has also been changed into tax credits. The administration of the new scheme will be done by Inland Revenue. Another cash benefit scheme, the Disability Working Allowance will, at the same time, be replaced by the Disabled Person's Tax Credit. There seems to be a development, at least in Great Britain and Canada, cf. the next section, 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.

Other initiatives

The New Labour government has started a comprehensive reform of the tax/benefit system, some of the changes are reported above, others are in preparation. A new old-age pension scheme, known as Stakeholder Pension is being discussed, labour market initiatives, under the label New Deal are being implemented, e.g. initiatives to get young unem-

ployed back to work, which may be subsidized work. The reforms will be commented upon in more detail in future editions of 'Elements'.

CANADA

Taxation

The tax rates and tax brackets stayed constant in 1997, they only change when the annual price increases are above a certain level. Contributions for CPP increased slightly while those for employment insurance, cf. below, decreased slightly. Local taxes for Ontario dropped significantly.

In 1997 the earned income tax credit scheme (WIS) was reshaped to contain a new refundable tax credit scheme, which is designed as child benefits (on top of the ordinary child benefit scheme). There is a 'build-up' phase, where the benefit grows from zero to its maximum, a constant phase, where the benefit is unchanged, and a 'tapering' phase, where the benefit is reduced to zero. The 'build-up' phase was abolished in 1998, implying that all low income families (with children) start as recipients. It is the plan that this new scheme will develop into a uniform child benefit scheme replacing all other benefits for children.

Employment insurance

A major reform of the former U.B. scheme was passed by the Canadian Parliament in 1995 and was gradually implemented in 1996 and 1997. Basis for the benefits has been weeks of work, it will now be hours, which will be beneficial especially for part time workers. The duration of the benefit period was reduced from a former maximum of 50 weeks to 45 weeks (this is an absolute max.). Measures to promote employment is included in the new scheme, e.g. by improved information on jobs available and subsidized employment also for self-employed. From 1997 a supplement for families with children was introduced, raising the compensation rate to a maximum of 65 per cent of the lost income. The usual level is 55 per cent.

Comments on 'APW - calculations' for 1997 compared to 1996

DENMARK

The net replacement rates in the Danish cases decreased somewhat from 1996 to 1997. The main reason is that the relative increase in most benefits (mainly flat rates) was smaller than the relative wage increase from 1996 to 1997, this, again, is due to the regulation mechanism for most benefits being based upon former wage changes (partially) and adaptation to the tax reform from 1994, which will be fully implemented in 1998.

The only exception is injuries from work, 1/3 loss of working capability, where the relative impact was the same in 1997 as in 1996. This is the only real income related benefit in the Danish system.

SWEDEN

Nearly all net replacement rates, except in the cases with injuries from work, decreased in 1997 compared to 1996. One main reason was, that major flat rate benefits stayed nominally unchanged from 1996 to 1997, this was e.g. the case for the maximum unemployment benefit from the insurance scheme, the alternative unemployment benefit (KAS) as well as the child benefits. Furthermore, the basic rate 'basbeloppet' is price indexed, and only partially, and falls behind the wage development, this is of importance for pensions. Finally, the compensation for maternity was reduced for the first month for each of the parents, from 85 to 75 per cent of the former wage.

The only increase in net replacement rate was for the couple where the part time working spouse is unemployed for the whole year. The reason is, that the compensation was raised from 75 to 80 per cent of the former income for the last quarter of 1997 (her income is not high enough to reach the unchanged U.B. maximum). The comments above are based upon the 'correct' data calculation for Sweden, 1996. For a more comprehensive coverage of the changes in the Swedish tax/benefit schemes, cf. chapter 3.

FINLAND

The flat rate component of the unemployment compensation was nominally unchanged from 1996 to 1997 indicating falling net replacement rates in 1997 in case of unemployment. In the earnings related U.B. scheme a larger part of the income was compensated with the lowest percentage, i.e. 20, in 1997 than in 1996. This also contributes to lower net replacement rates in 1997. The increased waiting period pulls in the same direction.

Replacement rates for pensioners with a former work history have decreased, primarily because the tax reduction in 1997 was most important for people with income from work. The reduced net replacement rate for the minimum pension is also due to a small increase in pension rates.

The family allowances were nominally unchanged from 1996 to 1997, implying a smaller positive impact in 1997. For injuries from work there were only minor changes. The same was the case for maternity leave benefits. The comments above are based upon the 'correct' data calculations for Finland 1996. For a more comprehensive coverage of the changes in the Finnish tax/benefit system, cf. chapter 4.

AUSTRIA

No former calculations to refer to.

GERMANY

Most relative impacts on disposable income are very stable from 1996 to 1997. The tax and social contribution burden increased from 1996 to 1997 implying higher net replacement rates for tax free benefits based upon gross wage e.g. compensation for industrial injuries. Pensions also came out with higher net replacement rates in 1997 than in 1996. This is especially due to the fact that the disposable income for the APW and APW-couple in work was lower in 1997 than in 1996. The no former work record case for pensions is now covered by social assistance, previously it was just zero pension. The child benefits were increased from 1996 to 1997 implying a higher relative positive impact from this component in 1997.

The NETHERLANDS

The relative impacts on disposable income from the events are very stable from 1996 to 1997. Most are unchanged, a few have a marginally larger negative impact and one has a marginally smaller negative impact.

GREAT BRITAIN

There are, generally speaking, only minor differences between the impact on disposable income from the selected 'events' in 1996 and 1997. The negative impact from most events was somewhat larger in 1997 than in 1996 because the indexation (price based) of benefits is smaller than the wage development. The positive impact from family allowances was slightly lower for the same reason. The improved situation in the 100 per cent loss of working capability case from industrial injuries is because long term Incapacity Benefits can also be received. They are included in 1997 and should also have been in previous years. Old-age pensions (former work record) had somewhat lower net replacement rates in 1997 than in 1996. The price indexation of national pensions contributes and the SERPS component is only an estimate. The no former work record case for old-age pension is now based upon 'income support' which is not comparable with previous years' cases. The most important increase in negative impact is for the couple where the spouse usually working part time, is unemployed. She will only receive JSA (C) for ½ year. Her JSA (IB) will be tapered away by her husband's income. In 1996 she received U.B. for the whole year. Taxation was lower in 1997 than in 1996.

CANADA

The APW estimated in 'Elements' for 1996 was too high. The comments below are therefore based upon a 'correct' data calculation for Canada. Most negative impacts on disposable income were a little higher in 1997 than in 1996 mainly because flat rate benefits did not follow the wage development. The positive impact from family benefits was, for the same reason, somewhat smaller in 1997 compared with 1996. For income related benefits,

primarily from Employment Insurance, the negative impact was slightly smaller in 1997 than in 1996, the benefits replace the same share of the income in the two years, but a larger share of the income was taxed in bracket 2 (higher rate) in 1997 than in 1996.

CHAPTER 3

Special studies with 1997 up-date, Sweden

This chapter focuses on two topics. The first 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 1990es. The calculations based upon 'correct' APW gross wage income are used to illustrate the impact of the changes in the Swedish tax and benefit schemes from 1991 to 1996. For 1997 the calculations contained in this edition of 'Elements' have been applied.

3.1.

APW-calculations based upon projected and 'correct' data

The calculations of impacts on disposable income of the APW from different 'events' are based upon 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 1996 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 OECD for the years 1991-1994 and the 1996 and 1997 editions of 'The Tax/Benefit Position of Employees' for the years 1995 and 1996 respectively. 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 upon 'correct' data.

Sweden was chosen 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. Finally the Swedish Ministry of Finance was willing to participate in these very detailed calculations, which without this help would not have been possible.

The repeated calculations are primarily to evaluate the calculations based upon projected data, but they also tell about the impact of the changes in the Swedish taxation and social security system over the period 1991-96, cf. section 3.2.

The basic APW-calculations for the 6 years from 'Elements' and 'correct' data are contained in table 3.1.

Table 3.1. Sweden, single APW.

Used in:	SEK					
	1991	1992	1993	1994	1995	1996
<i>'Elements'</i>						
Gross wage	162,085	169,700	178,700	180,000	191,000	200,000
Tax and soc. contribution	45,205	47,467	52,890	55,143	62,315	67,318
Disp. income	116,880	122,233	125,810	124,857	128,685	132,682
<i>'Correct' data</i>						
Gross wage	162,400	171,000	173,900	183,100	190,260	204,714
Tax and soc. contribution.	45,548	47,901 ¹⁾	51,246	56,198 ¹⁾	62,032	69,069 ¹⁾
Disp. income	116,852	123,099 ¹⁾	122,654	126,902 ¹⁾	128,228	135,645 ¹⁾

Source: 1995 edition of 'The Tax/Benefit Position of Production Workers' and 1996 and 1997 editions of 'The Tax/Benefit Position of Employees', OECD.

1) 'Correct' data deviates 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.

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 upon '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 upon '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						
Max. 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						
Max. 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	
	Elements	'Correct' data
Ill, 1 week	-0.8	
Unemployed 3 months, insured	-8.3	
Unemployed 12 months, insured	-29.2	
Unemployed 3 months, non-insured	-17.2	
Unemployed 12 months, non-insured	-70.6	
Wife unemployed 12 months, insured	-9.1	
Injuries work, 100 % loss	0	
Injuries work, 33 1/3 % loss	0	
Pensioner, full working history	-36.3	
Pensioner, no working history	-60.7	
Pensioner couple, full working history	-34.8	
Family		
1 child	+3.7	
2 children	+7.3	
3 children	+11.0	
Maternity		
Max. period	-9.3	
Common period	-2.3	

*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 roundings 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 pensions¹⁾ 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) while 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, pensions¹⁾ 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 pensions¹⁾ 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.

1) The pension points for supplementary pension are fixed in the calculations, cf. the documentation.

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 max. or min. U.B.). The same is, as should be expected, 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.

The conclusion is that the results are quite reliable even when the projections are not all that accurate.

The calculations based upon 'correct' data are documented in appendix 2.

3.2.

Changes in the Swedish tax/benefit system. 1991-1997

Introduction

The Swedish tax/benefit system has been changed considerably in the 1990es. It started with the tax reform in 1991, where 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, and the process is expected to continue in coming years, although at a reduced pace.

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 1991-1996 from section 3.1 supplemented with 1997 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 4,000 SEK was abolished

and only transportation costs above 4,000 SEK and other costs (membership of unemployment insurance etc.) over 1,000 SEK 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 it was only transportation costs above 6,000 SEK which 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 'basbelopp' to 0.24 'basbelopp' (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 100 SEK to 200 SEK.

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 100 SEK; 200 SEK from 1997), but table 3.3 contains the average tax for the 'production worker' (APW) over 7 years.

Table 3.3. Average tax for single APW, 1991–1997. Income at APW level.

	1991	1992	1993	1994	1995	1996	1997 ¹⁾
Gross wages, SEK	162,400	171,000	173,900	183,100	190,260	204,714	209,214
Tax + soc.contr., SEK	45,548	47,901	51,246	56,198	62,032	69,069	72,220
Average tax, %	28.05	28.01	29.47	30.69	32.60	33.74	34.52
Tax rate, local gov. %	31.15	31.04	31.04	31.05	31.50	31.65	31.66

1) Preliminary calculation ('Elements').

The average tax for the APW increased by almost 6.5 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. This trend with a switch from employer to employee paid social contributions will continue, e.g. because of the new pension reform, cf. the section on pensions. The increased tax burden is

of interest in its own, but it is also of importance when the impact of 'social events' is calculated, depending on how the benefits are taxed.

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 it was usual, that the employer 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 in 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 will be changed to 80 per cent in 1998.

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.*

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

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 that 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.

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 max. 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 max. benefit becomes effective. If the max. 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 renew the rights to benefits once, next time required a 'real' job. The working 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 max. 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 ½ year. The max. 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' working 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 working condition) for benefit eligibility. Only work after joining the scheme counts. In 1996 the coverage was lowered to 75 per cent. The coverage was also 75 per cent for 3 quarters of 1997, and 80 per cent in the last quarter as well as in 1998.

Table 3.5 contains the impact on annual disposable income from unemployment spells of differing 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 ¹⁾
Single, 25 % unemployed. Reduction in disp. income %	3.0	3.3	6.0	6.1	6.7	7.9	8.3
Single, 100 % unemployed. Reduction in disp. income % Net replacement rate %	11.9 88.1	13.0 87.0	19.9 80.1	20.1 79.9	22.7 77.3	27.8 72.2	29.2 70.8
Couple, spouse with 0.5 APW inc. 100 % unemployed. Reduction in disp. income %	3.5	3.5	7.6	7.7	7.7	9.6	9.1

1) Preliminary calculations ('Elements').

The single 'production worker' receives max. compensation in 1991, 1992, 1995, 1996 and 1997 (equivalent to a gross coverage of 87 per cent, 86 per cent, 76 per cent, 70 per cent and 69 per cent in the respective years when 100 per cent unemployed), and 80 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 compensation percentage of 76.25 was applied (weighted average of 75 and 80).

The change in impact for the single APW from 1991 to 1992 is due to a small relative increase in the max. 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 days 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 max. compensation, which is nominally unchanged since 1992. The implication is a gross coverage of 76 per cent in 1995 compared with 80 per cent in 1994. The same max. 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.

For the single person the negative impact on disposable income from unemployment has almost tripled for short spells (25 per cent unemployment) over the 7 years studied. For long spells (100 per cent unemployment) the negative impact has increased close to 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 coverage to 75 per cent. The smaller impact in 1997 is because of the higher average compensation, 76.25 per cent.

KAS (Kontant ArbejdsmarkedsStøtte) is an *alternative scheme* to the voluntary unemployment insurance scheme. It is designed for unemployed who are not members of the insurance scheme or have not been members long enough (1 year) to obtain benefit rights. The benefit period is relatively short, and it is possible to receive social assistance as a supplement.

The scheme has not been changed significantly, except in the 2nd half year of 1994 when it was integrated with the mandatory unemployment insurance 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 coverage in the insurance scheme was lowered to 75 per cent. This level was maintained in 1997.

Table 3.6 contains the impact on disposable income of receiving *KAS*. The case where *KAS* is received for the whole year (longer than the benefit period) should be interpreted as the 'annual rate' of impact.

Table 3.6. *Impact on annual disposable income from unemployment (KAS). APW income level.*

	1991	1992	1993	1994	1995	1996	1997 ¹⁾
Single, 25 % unemployed. Reduction in disp. inc. %	15.9	16.0	16.8	15.8	16.0	17.1	17.2
Single, 100 % unemployed. Reduction in disp. inc. %	67.0	67.5	69.2	64.6	65.8	70.0	70.6
Net replacement rate %	33.0	32.5	30.8	35.4	34.2	30.0	29.4

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. Net replacement rates in the 30-35 per cent bracket are highly unusual in the Swedish social security system and the KAS benefit (even with a relatively short benefit period) will hardly be the sole source of income. It will probably be supplemented by social assistance, where allowances for housing costs is an important component. 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 for injuries from work scheme were paid after special rules. From July 1993 these special rules were abolished and replaced with the ordinary rules for sickness benefits, cf. the section on sickness benefits.

If the loss of working capability is permanent the lost income is replaced completely (up to the usual ceiling in the Swedish system). There is consequently no reason to calculate the impact on disposable income from compensation for permanent loss of working capability, 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*, the only one considered here, is very flexible.

It is possible to receive this pension, also on a partial basis, from the age of 60 years (61 years from 1998). If the pension is received before the age of 65 years 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 years.

There have been relatively few changes in the rules for old age pension. From 1993 the pensions have been based upon 98 per cent of the 'basic rate' down from 100 per cent. 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 (its 'share' of the basic rate was increased).

The old age pension scheme will be reformed, and a new system will be gradually introduced from 2001. 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. This social contribution will be augmented in coming years (and the employer paid contributions will be decreased).

In 1995, 1996 and 1997 the 'basic rate' was only increased by 60 per cent of the relative price increase, the 'usual' is 100 per cent. The degree of price regulation depends on the public budget deficit, the smaller this is, the closer to 100 per cent the price regulation of the 'basic rate' will be. The 98 per cent of the 'basic rate' as basis for public pensions was continued. This 'basic rate' is also applied in the calculation of the personal allowance for pensioners in the taxation scheme.

Table 3.7 contains the net replacement rates (based upon disposable income) for a single pensioner and a pensioner couple in different 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 ¹⁾
Single, full working record	68.7	68.3	68.7	67.4	67.4	64.3	63.7
Single, no working record	41.3	41.1	41.6	41.2	41.3	39.6	39.3
Couple, full working record (1.5 APW income)	70.0	69.6	70.2	69.1	69.0	65.8	65.2

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 where disposable income from work increased much more than the base for pensions. This was again, and even stronger, the case from 1995 to 1996 and again, but this time more moderately, from 1996 to 1997, implying further quite significant decreases in the net replacement rates for pensioners. In the calculations presented, the number of 'pension points' in the supplementary pension scheme have been held constant. In the real world these will increase slightly. The implication here is a slight overestimation of the decrease in the net replacement rates.

Child benefits

The basic Swedish *allowance for children* has been 9,000 SEK 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 the supplements were changed again, for child no. 3 it became 2,400 SEK, for no. 4 it became 7,200 SEK and for no. 5 (and higher numbers) 9,000 SEK. From 1996 the basic allowance was lowered to 7,680 SEK and no 'new' supplements will 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 will be increased to the 1995 level and the access to the supplements will be 'reopened'. Table 3.8 contains the effect on the disposable incomes for a couple (1.5 APW income level) of receiving allowances for children from 1991-1997.

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

	1991	1992	1993	1994	1995	1996	1997 ¹⁾
1 child, increase in disp. inc. %	5.0	4.8	4.8	4.7	4.6	3.7	3.7
2 children, increase in disp. inc. %	10.1	9.6	9.6	9.3	9.2	7.4	7.3
3 children, increase in disp. inc. %	17.7	16.8	16.8	16.3	15.0	11.1	11.0

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 little 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 is born in 1996, and that there is no supplement. The decrease in positive impact continued in 1997, where 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 14,000 SEK higher than it was in 1997.

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 the parents considering 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 the parents have rights for income related benefits in 360 days and after that rights to a (low) flat rate benefit for 90 days more. 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 the parents received a taxable benefit of 2,000 SEK 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 full time basis. Expenditures for private day care were deductible in taxable income. The scheme was only in operation for ½ year 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 will be changed back to 80 per cent.

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) already having 2 children. Two cases

are calculated. In the first 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 $\frac{3}{4}$, $\frac{1}{2}$ or $\frac{1}{4}$ of the benefit and work on part time basis, and the period of leave 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 ²⁾
Benefit in 360 days ¹⁾ , Reduction in disp. inc. %	3.5	3.4	3.6	3.6	6.5	8.5	9.3
Benefit in 98 days, Reduction in disp. inc. %	0.9	0.8	0.9	0.9	1.5	2.0	2.3

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.

Up to 1995 the 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 what it was in 1991.

Summary

It is without any doubts that the changes in the Swedish tax/benefit system during the period 1991 to 1997 have had significant impacts. For the schemes covered in this section, with the exception of injuries from work, the situation for recipients of benefits is relatively worse in 1997 than it was in 1991 based upon the chosen reference family types. 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.

CHAPTER 4



Special studies with 1997 up-date, Finland

Approach for Sweden

A 'time series' of APW-calculations has been established for Sweden, based upon 'correct' data and covering the period since the start of 'Elements' in 1991, cf. chapter 3. The purposes were two. One was to assess the stability of the calculations when the projected APW income levels used in 'Elements' were more or less off the mark. Another purpose was to follow the impact of the 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 is in particular important, when the development is followed over time.

4.1.

APW-calculations based upon projected and 'correct' data

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

Table 4.1. Finland, single APW.

Used in:	FIM		
	1994	1995	1996
<i>'Elements'</i>			
Gross wage	119,788	126,782	137,600
Tax and soc. contribution	44,171	47,364	51,823
Disp. income	75,617	79,418	85,777
<i>'Correct' data</i>			
Gross wage	121,916	132,533	137,046
Tax and soc. contribution.	45,338	50,419	51,495
Disp. income	76,578	82,114	85,551

Source: 1995 edition of 'The Tax/Benefit Position of Production Workers' and 1996 and 1997 editions of 'The Tax/Benefit Position of Employees', OECD.

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	-8.2	- 7.3	-7.4	-7.6	-7.6
Injuries work, 33 1/3 % loss	- 9.6	-2.3	- 9.4	- 2.2	-2.3	- 2.3
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	- 26.5	- 30.6	- 26.8	- 28.9	- 28.9
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	+ 21.8	+ 21.0	+ 20.3	+ 17.4	+17.4
Maternity						
Max. 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	
	Elements	'Correct' data
Ill, 1 week	-1.5	
Unemployed 3 months, insured	- 9.8	
Unemployed 12 months, insured	- 39.3	
Unemployed 3 months, non-insured	- 15.5	
Unemployed 12 months, non-insured	- 71.9	
Wife unemployed 12 months, insured	- 10.6	
Injuries work, 100 % loss	- 7.7	
Injuries work, 33 1/3 % loss	- 2.2	
Pensioner, full working history	- 34.2	
Pensioner, no working history	- 67.7	
Pensioner couple, full working history	- 30.4	
Family		
1 child	+4.5	
2 children	+10.0	
3 children	+16.5	
Maternity		
Max. period	- 7.3	
Common period	- 2.0	

'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 and 1996 it is the

gross wage data in 'The Tax/Benefit Position of Employees', 1996 and 1997 editions respectively.

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

Comments on table 4.2

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 which has an impact is the unemployment cases where the recipient is not eligible for the earningsrelated component, the basic pension (no former work history) and the family allowances. Here 'correct' data results in a negative impact (unemployment and pensions) which is a little larger and a positive impact (family allowances) which is a little smaller than in 'Elements', just as should be expected.

In the earningsrelated 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 where there should be no reduction).

Concerning pensions, the basic amount (437 FIM/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 approximately 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 net result is an increase of approx. 1.5 percentage points in the net replacement rate when 'correct' data are applied.

In the cases with maternity leave the income base for calculation of the benefits should have been reduced by 3.5 per cent, just as in the cases with earningsrelated 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 a little larger when based upon 'correct' data than upon 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 upon '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 is 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 upon 'correct' data.

For pensioners with a full former work record, the error from 1994 was repeated, the basic amount of the national pension (445 FIM/month) should have been added, but was not. The net replacement rates based upon 'correct' data are 3-4 percentage points higher in these cases than in 'Elements'. There were no counteracting errors for the APW-couple in 1995.

For maternity leave benefits there were no errors, 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. 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.

The calculations are documented in appendix 3

4.2.

Changes in the Finnish tax/benefit system. 1994-1997

Introduction

In the time span covered, 1994-1997, 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 upon wages and total income (including most transfer payments) in the tax scheme. A quite considerable reduction in personal taxation was, however, implemented in 1997.

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 max. deduction for work related expenses was reduced in 1995. The social contributions based upon wages (for unemployment benefits and public occupational pensions) were increased in 1995, while those based upon '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 upon '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 upon wage increased slightly. The average local government tax rate was a little 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 5,500 FIM (against 2,000 FIM in 1996) and the tapering is more gradual, implying that the deduction is effective over a much wider span of income than before. Finally, the 'twist' was continued also by reduction of the contribution for illness insurance based upon 'all' income.

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, 1994-1997. Income at APW level.

	1994	1995	1996	1997 ¹⁾
Gross wage, FIM	121,916	132,533	137,046	141,157
Tax + soc. contribution, FIM	45,338	50,419	51,495	50,708
Average tax, %	37.2	38.0	37.6	35.9
Tax rate, local government, %	18.83	18.83	18.81	18.73

1) Preliminary calculation ('Elements').

The 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 the rates for social contributions compared to 1995. The changes in 1997 result in a significant reduction in the average tax burden.

Sickness benefits

Due to the long waiting period in the Finnish scheme (9 week days after the first day with illness) there are no benefits in the insurance scheme for illness in 1 week. There is therefore 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 earningsrelated part of the scheme in 1994, implying that only 96.5 per cent of the lost income was included when the 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. The waiting period was increased from 5 to 7 days in 1997.

The flat rate part of the scheme was 116 FIM/day in 1994. This was increased to 118 FIM/day in 1995, which was also the rate in 1996 and 1997. 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) with the result that the share of the lost income which is compensated with the high percentage (42) is declining. The results of the changes are contained in table 4.4.

The result is, as should be expected, 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 decline for singles. It is the first time this low percentage is applied, due to 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 almost unchanged impact for the couple in 1997 is primarily because of the low income deduction, which is almost at maximum level for the unemployed wife. The lighter taxation outweighs the constant flat rate element and the longer waiting period.

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 ¹⁾
Single, 25 % unemployed. Reduction in disp. income %	8.3	8.8	9.2	9.8
Single, 100 % unemployed. Reduction in disp. income % Net replacement rate %	36.0 64.0	36.3 63.7	37.4 62.6	39.3 60.7
Couple, spouse with 0.5 APW income 100 % unemployed. Reduction in disp. income %	9.7	10.2	10.5	10.6

1) Preliminary calculation ('Elements').

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 116 FIM/day in 1994, 118 FIM/day in 1995, 1996 and 1997. 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.

	1994	1995	1996	1997 ¹⁾
Single, 25 % unemployed. Reduction in disp. income %	14.3	14.6	14.9	15.5
Single, 100% unemployed. Reduction in disp. income % Net replacement rate %	68.5 31.5	69.8 30.2	70.9 29.1	71.9 28.1

1) Preliminary calculation ('elements').

With an almost constant flat rate benefit and a relatively strong increase in nominal wages, the result is an increasing 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% unemployment case. The minimum U.B. is also a component of the earnings-related scheme presented in table 4.4.

Compensation for injuries from work

There have been 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.

	1994	1995	1996	1997 ¹⁾
Single, 100% injured				
Reduction in disp. income %	8.2	7.4	7.6	7.7
Net replacement rate %	91.8	92.6	92.4	92.3
Single, 33 1/3 % injured.				
Reduction in disp. income %	2.3	2.2	2.3	2.2

1) Preliminary calculation ('Elements').

The change from 1994 to 1995 (100% injured) is due to the mentioned 'twist' (cf. Personal taxation) in the social contributions where the contribution percentage from wage was increased and that from 'all' income (including compensation for industrial injuries) was lowered. The changes in the following years are relatively marginal.

Old age pensions

The most significant change was in the 'integration' between 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 1997. The result of the pension calculations for each of the years 1994 to 1997 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 ¹⁾
Single, full working record	68.8	69.6	66.9	65.8
Single, no working record	37.2	35.3	34.0	32.3
Couple, full working record (1.5 APW income)	73.5	73.2	71.1	69.6

1) Preliminary calculation ('Elements').

The decreasing net replacement rate for the single pensioner with no former work record and then only receiving national pension is as should be expected.

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

The increase in net replacement rate for the single pensioner (full work record) from 1994 to 1995 is due to 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.

The just mentioned increase for the single (1994 to 1995) is not found for the couple which experienced a slight 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 ½ APW) is tapered away in 1995 than in 1994. There was also a slight increase in the tax burden for the pensioner with former ½ 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 the two years, is means tested. In the case of the husband (former 1 APW) this allowance was tapered to zero in both years. 1997 saw a further decline in the net replacement rate for the couple for the same reason as mentioned for the single pensioner.

Child benefits

The family allowances in Finland were nominally unchanged from 1994 to 1995. In 1996 they were reduced significantly, from 570 FIM/month to 535 for the first child, from 720

FIM/month to 657 for child no. 2 and from 910 FIM/month to 779 for child no. 3. These rates were unchanged in 1997. 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, couple.

	1994	1995	1996	1997 ¹⁾
1 child increase in disp. income %	5.6	5.2	4.7	4.5
2 children increase in disp. income %	12.8	11.9	10.5	10.0
3 children increase in disp. income %	21.8	20.3	17.4	16.5

1) Preliminary calculation ('Elements').

The changes here are probably the most 'visible' in the Finnish tax/benefit scheme in the period and the impact is 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 and by 4.5 per cent in 1995, 1996 and 1997 just as in the earningsrelated U.B. scheme. In 1996 the stepwise scheme was changed in such a way that the benefits were reduced. The timeseries 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 ²⁾
Benefit in 281 days, ¹⁾ Reduction in disp. income %	6.1	6.2	7.4	7.3
Benefit in 14 weeks, Reduction in disp. income %	1.8	1.6	1.9	2.0

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 splitting 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', and in this case only the mother participates.

The change in 1996 is clearly seen. The change from 1994 to 1995 is hard to detect. In the 281 days case it is the situation for the husband which is slightly inferior in 1995 compared to 1994 (ratio of disposable income as benefit recipient to disposable income as fully employed) while that for the wife is unchanged (a relatively strong increase in benefits for the wife is contributing to this result). In the 14 weeks 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 changes in 1997 are marginal.

Summary

There have in most cases 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, two areas where Finland has a high standard, and still has even after the reductions. It should be noted that changes in taxation and social contributions often contribute significantly to the impact of the different benefit schemes.

APPENDIX 1***Documentation of family type (APW) calculations for the 8 countries studied, 1997***

The calculations of the effects of social security benefits and taxation are based upon OECD's 'The Tax/Benefit Position of Production Workers', 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 1997 edition, covering the years 1995-1996. This publication is now called 'The Tax/Benefit Position of Employees'.

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). 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. 'Our' APW-couple has a varying number of children, OECD's has none or two. The APW is thus a simplified, stylized family type. The basis for the calculations is 1996 data for the APW from OECD's publication. These have been projected to 1997 level by national estimates because 1997 is the 'calculation year' for the study. Some of the 1997 estimates are identical to the entries in the 1998 edition of the OECD publication, for others there are minor deviations. 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 $\frac{1}{3}$ 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 1997. The interpretation of the calculation in this case is the maximum possible amount the pensioner can get, when he or she retires in 1997 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 calculated based upon current income, i.e. 1997 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.

Results

The results of the calculations are presented in a compressed form in the attached tables, cf. Chapter 2, section 2.3. There are 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. Progress in technology will soon make it possible to present results containing much more variation and complexity.

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. The detailed calculations for each case are also documented and stored, but not printed in the publication. 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 1996 to 1997 and in providing new information for 1997 for their respective countries. This effort is essential for the correctness of the results presented in the report.

Outline of the APW

As already mentioned, the APW is contained in 'The Tax/Benefit Position of Production Workers', now 'The Tax/Benefit Position of Employees', an annual publication from 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
	--- Per cent ---							
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.

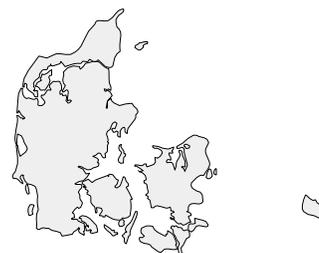
The calculation of disposable income is rather crude.

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 $\frac{1}{2}$ APW), which would improve the foundation for the comparisons. This will soon be possible, when appropriate software is implemented.

Even if some of the limitations concern the APW as such, it should not be forgotten that OECD's APW is the only existing operational framework for this kind of international comparisons. Calculations based upon representative data would be 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.

1. The 1994-edition of the OECD publication contains a study of the position of the APW in the income distribution in Canada, Denmark, Iceland, Sweden, Great Britain and the United States.



Documentation of APW calculations for Denmark, 1997

Single APW: The gross wage of the APW in 1997 is the official 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	115,424 DKK ²⁾	113,210 DKK
<i>Disposable income</i>	<i>141,576 DKK</i>	<i>143,790 DKK</i>

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	163,106 DKK
<i>Disposable income</i>	<i>222,394 DKK</i>

- 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 $2,625 / 4,942 \times 100 = 53$. The disposable income of the APW is 140,569 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 $141,576 - 140,569 = 1,007$ 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 $13 \times 5 \times 525 = 34,125$ 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 $34,125 / 64,250 \times 100 = 53$. The disposable income of the APW is 128,481 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 $141,576 - 128,481 = 13,095$ DKK or 9.2 per cent.

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

There is no gross wage. The compensation is $52 \times 5 \times 525 = 136,500$ 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 $136,500 / 257,000 \times 100 = 53$. 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 $141,576 - 89,177 = 52,399$ 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 $20,475 / 64,250 \times 100 = 32$. Disposable income for an APW with 3 months of unemployment receiving social assistance is 123,694 DKK.

The *decrease* in disposable income compared to the case with no unemployment is $143,790 - 123,694 = 20,096$ 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 $81,900 / 257,000 \times 100 = 32$. 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 $143,790 - 60,165 = 83,625$ 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 $52 \times 5 \times 350 = 91,000$ 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 $91,000 / 128,500 = 71$. The disposable income of the APW-couple is 208,020 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 $222,394 - 208,020 = 14,374$ 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 $\frac{1}{3}$ of the working capability is lost. Due to the 8 per cent social contribution from January 1997 the compensation (on which no contribution is paid) is based upon gross wages minus the 8 per cent social contribution.

1. Working capability completely lost

There is no gross wage. The compensation is approximately 80 per cent of the lost gross wage of the insured APW, corrected for the 8 per cent social contribution, i.e. 189,036 DKK (rounded upwards to an amount which can be divided by 12). The compensation is calculated according to the official rules but based upon an annual income of 257,000 DKK which is the current income in 1997. This is not strictly correct, but corresponds to the assumption that current income is used as base. Max. benefit is 243,780 DKK which is reached at an income of 331,443 DKK (305,000 net of the 8 per cent contribution). There is no compensation for an annual income below 122,748 DKK (113,000 net of the 8 per cent contribution). On top of that there are three 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. The remaining components of the ordinary disability pension scheme are reduced to 23,138 DKK by means testing. The total compensation amounts to 277,970 DKK. All components except the 'invalidity' amount are taxable.

The *gross compensation percentage* is $277,970 / 257,000 \times 100 = 108$. The disposable income for an APW losing the working capability is 175,144 DKK. The *increase* in disposable income compared to the situation without injuries is $175,144 - 141,576 = 33,568$ DKK or 23.7 per cent.

2. *Loss of 1/3 of the working capability*

The gross wage is reduced by $\frac{1}{3}$, i.e. 85,667 DKK. The compensation is approximately 80 per cent of the wage reduction corrected for the 8 per cent social contribution, that is 63,012 DKK ($\frac{1}{3}$ of the compensation from the former case). Loss of $\frac{1}{3}$ of the working capability does not make the APW eligible for disability pension.

The *gross compensation percentage* is $63,012 / 85,667 \times 100 = 74$. The disposable income for an APW with $\frac{2}{3}$ of the former gross wage and compensation for loss of $\frac{1}{3}$ of his or her working capability is 134,218 DKK.

The *decrease* in disposable income compared to the situation with no injuries is $141,576 - 134,218 = 7,358$ DKK or 5.2 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 $105,830 / 141,576 \times 100 = 74.8$.

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 disposable income is 105,830 DKK.

The '*net compensation percentage*' (relative to the APW) is $105,830 / 141,576 \times 100 = 74.8$.

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 $98,664 / 128,500 = 77$. The disposable income of the couple is 224,606 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 $224,606 - 222,394 = 2,212$ 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 $76,646 / 141,576 \times 100 = 54.1$.

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 $67,935 / 141,576 \times 100 = 48.0$.

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 $2 \times 45,720 + 2 \times 20,088 = 131,616$ 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 $121,342 / 222,394 \times 100 = 54.6$.

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 $9,400 / 222,394 \times 100 = 4.2$ 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 $(9,400 + 9,400) / 222,394 \times 100 = 8.5$ 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 $(9,400 + 9,400 + 10,500) / 222,394 \times 100 = 13.2$ 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 $2 \times 2,625 = 5,250$ 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 $28 \times 2,625 / 2 = 36,750$ 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 $42,000 / 79,077 \times 100 = 53$. 30 weeks of maternity leave results in a disposable income of 226,152 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 $242,294 - 226,152 = 16,142$ 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 34,596 DKK. She receives $(14 \times 2,625) / 2 = 18,375$ DKK in compensation.

The *gross compensation percentage* is $18,375 / 34,596 \times 100 = 53$. The disposable income is 235,230 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 $242,294 - 235,230 = 7,064$ 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
<i>Social contributions:</i>	
8 per cent social contribution $0.08 \times 256.106 =$	20,488
<i>Other social contributions:</i>	
Contribution for supplementary pension	894
Contribution for unemployment insurance	3,808
All social contributions	25,190
<i>Taxable income:</i>	
Gross wage	257,000
– Social contributions	25,190
Taxable income	231,810
<i>Personal income:</i>	
Gross wage	257,000
– 8 per cent social contribution	20,488
– Contribution for supplementary pension	894
Personal income	235,618
<i>State tax:</i>	
Bottom tax: $0.10 (231,810 - 30,600) =$	20,121
Middle tax: $0.06 (235,618 - 135,500) =$	6,007
Total state tax:	26,128
<i>Local tax:</i> $0.3186 (231,810 - 30,600) =$	64,106
<i>Tax and social contributions:</i>	
State tax	26,128
Local tax	64,106
Social contributions	25,190
Tax and social contributions	115,424



Documentation of APW calculations for Sweden, 1997

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
<i>Disposable income</i>	<i>136,994 SEK</i>

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
<i>Disposable income</i>	<i>209,747 SEK</i>

- 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 approximately 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 (approximately 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 ($0.75 \times 209,214 = 156,911 / 260 = 603.50$, rounded up: 604 SEK) for the next 4 days. The compensation is $4 \times 604 = 2,416$ 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 covered 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 5rd week of illness, max benefit is reached at an income level of $7.5 \times 36,300 = 272,250$ SEK.

The *gross compensation percentage* is $2,416 / 4,023 \times 100 = 60$. 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 with a maximum of 564 SEK a day. 75 per cent of the lost income on a daily basis is $0.75 \times 209,214 = 136,911 / 260 = 603.50$, rounded up: 604 SEK which is above the maximum of 564 SEK a day which is reached at an income level of $260 \times 564 / 0.75 = 195,520$ SEK. 80 per cent of the lost income on a daily basis is $0.80 \times 209,214 \times 167,371 / 260 = 643.74$, rounded up: 644 SEK which is above the maximum of 564 SEK a day which is reached at an income level of $260 \times 564 / 0.80 = 183,300$ SEK. There is a minimum, 230 SEK a day, which is reached at an income level below $260 \times 230 / 0.75 = 79,733$ SEK (75 per cent), $260 \times 230 / 0.80 = 74,750$ SEK (80 per cent).

For 13 weeks (5 days each) with a waiting period of 5 days the compensation is $60 \times 564 = 33,840$ SEK.

The *gross compensation percentage* is $33,840 / 52,304 \times 100 = 65$. 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 $255 \times 564 = 143,820$ SEK in the 'standard' year used here. Max. benefit (564 SEK/day) is reached at an income level of 195,520 SEK (75 per cent), 183,300 SEK (80 per cent), min. benefit (230 SEK/day) is reached below 79,733 SEK (75 per cent), 74,750 SEK (80 per cent).

The *gross compensation percentage* is $143,820 / 209,214 \times 100 = 69$. The disposable income of the APW is 96,939 SEK, when he or she is unemployed for the whole 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 $60 \times 230 = 13,800$ 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 $13,800 / 52,304 \times 100 = 26$. 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 $255 \times 230 = 58,650$ 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 $58,650 / 209,214 \times 100 = 28$. 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 $255 \times 307 = 78,285$ SEK. The daily compensation of 307 SEK is calculated as $0.7625 \times 104,607 = 79,763 / 260 = 306,78$ 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, 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 $78,285 / 104,607 \times 100 = 75$. 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 ($\frac{1}{2}$ 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 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 $7.5 \times 36,300 = 272,250$ SEK in 1997, 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 86,018 SEK. The max. number of 'pension points' which can be earned is 6.5, resulting in a max. additional pension of 138,739 SEK.

The basic pension consists of a basic amount of $36,300 \times .98 \times .90 = 32,017$ SEK and a supplement of $36,300 \times .98 \times 1.115 = 39,665$ 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 32,017 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 $85,922 / 136,994 \times 100 = 62.7$.

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 $36,300 \times .98 \times .90 = 32,017$ SEK plus a supplement of $36,300 \times .98 \times 1.115 = 39,665$ 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 $62,206 / 136,994 \times 100 = 45.4$.

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 $\frac{1}{2}$ 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 $36,300 \times .98 \times .725 = 25,791$ SEK and a supplement of $36,300 \times .98 \times 1.115 = 39,665$ 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 $65,456 / 104,607 \times 100 = 63$. 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 max. number of 'pension-points' which can be earned is 6.5, resulting in a max. 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 $36,300 \times .96 \times .98 = 34,151$ SEK (single pensioner) and a supplementary amount, $36,300 \times .555 \times .98 = 19,744$ 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 $87,328 / 136,994 \times 100 = 63.7$.

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 $53,895 / 136,994 \times 100 = 39.3$.

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 65 years old

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 86,018 SEK for the husband and 32,337 SEK for the wife, in total 118,355 SEK in 1997. The max. additional pension is 138,739 SEK for each spouse in 1997.

The basic pension is equal to the basic amount, i.e. $36,300 \times .785 \times .98 = 27,926$ 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 $136,796 / 209,747 \times 100 = 65.2$.

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 $(7,680 / 209,747) \times 100 = 3.7$ 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 $(15,360 / 209,747) \times 100 = 7.3$ 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 $(23,040 / 209,747) \times 100 = 11.0$ 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.

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 (1997) 75 per cent.

The *husband* has a wage reduction of $(209,214 / 365) \times 30 = 17,196$ SEK. He receives $209,214 \times .75 / 365 = 430$ SEK per day for 30 days, resulting in a 'parents allowance' of $30 \times 430 = 12,900$ SEK. Max. daily benefit is reached at an income level of $7.5 \times 36,300 = 272,250$ SEK.

The *wife* has a wage reduction of $(104,607 / 365) \times 330 = 94,576$ SEK. She receives $104,607 \times .75 / 365 = 215$ SEK per day for 330 days, resulting in a 'parents allowance' of 70,950 SEK. Max. daily benefit is reached at an income level of $7.5 \times 36,300 = 272,250$ SEK.

Combined the wage reduction is 111,772 SEK and the received compensation is 83,850 SEK.

The *gross compensation percentage* is $83,850 / 111,772 \times 100 = 75$. 360 days of maternity leave results in a disposable income of 205,379 SEK for the couple including 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 $225,107 - 205,379 = 19,728$ SEK or 8.8 per cent.

2. In this calculation the *common period* of 14 weeks maternity leave for the wife is used. Her wage reduction is $(104,607 / 365) \times 98 = 28,086$ SEK. She receives $104,607 \times .75 / 365 = 215$ SEK per day in 98 days that is 21,070 SEK in compensation. Max. benefit is reached at an income level of $7.5 \times 36,300 = 272,250$ SEK.

The *gross compensation percentage* is $21,070 / 28,086 \times 100 = 75$. 14 weeks of maternity leave results 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.	
<i>Standard deduction:</i>	
'Taxerad' income is in the bracket above $5.615 \times B$ ($B = 36,300$ SEK), the standard deduction is then calculated in this way:	
$0.24 \times B$	8,712
The standard deduction is rounded down to	8,700
<i>Social contributions:</i>	
Health insurance contribution:	
$0.0495 \times 209,200 = 10,355$ - rounded to	10,400
Pension insurance contribution:	
$0.01 \times 209,200 = 2,092$ - rounded to	2,100
All social contributions:	12,500
<i>Taxable income:</i>	
'Taxerad' income	209,200
– Standard deduction	8,700
– Health insurance	10,400
– Pension insurance	2,100
Taxable income	188,000
<i>Tax and social contributions:</i>	
State	200
Local tax: $0,3166 \times 188,000$	59,520
Total tax	59,720
<i>Social contributions:</i>	
Health insurance	10,400
Pension insurance	2,100
Tax and social contributions	72,220



Documentation of APW calculations for Finland, 1997

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	141,157 FIM
Tax and social security ²⁾	50,708 FIM
<i>Disposable income</i>	<i>90,449 FIM</i>

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	211,736 FIM
Tax and social security	68,808 FIM
<i>Disposable income</i>	<i>142,928 FIM</i>

- 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. 2,715 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 89,112 FIM.

The *decrease* in disposable income compared to the situation without illness is $90,449 - 89,112 = 1,337$ 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. 35,289 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 522.51 and 493.95 = 5.71 FIM/day, in total 281.61 FIM/day. The ceiling of the 42 per cent bracket is calculated as $90 \times 118 = 10,620$ 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. $141,157 : 12 \times 0.955 = 11,234$ FIM/month or on a daily basis $11,234 : 21.5 = 522.51$ 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 $\times 281.61$ FIM/day = 16,333 FIM. There is no maximum benefit, the minimum is 118 FIM/day.

The *gross compensation percentage* is $16,333 / 35,289 \times 100 = 46$. The disposable income of the APW is 81,618 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 $90,449 - 81,618 = 8,831$ FIM or 9.8 per cent.

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

There is no gross wage. The compensation is $260 - 7 = 253$ days $\times 281.61$ FIM/day = 71,247 FIM. There is no maximum benefit, the minimum is 118 FIM/day.

The *gross compensation percentage* is $71,247 / 141,157 \times 100 = 50$. The disposable income of the APW is 54,917 FIM when he or she is unemployed for the whole year.

The *decrease* in disposable income compared to the situation without unemployment is $90,449 - 54,917 = 35,532$ FIM or 39.3 per cent.

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

The reduction of the gross wage is 35,289 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 $\times 118$ 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 $6,844 / 35,289 \times 100 = 19$. The disposable income is 76,430 FIM in this situation.

The *decrease* in disposable income compared to the situation without unemployment is $90,449 - 76,430 = 14,019$ 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 \times 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 $29,854 / 141,157 \times 100 = 21$. The disposable income is 25,378 FIM in this situation.

The *decrease* in disposable income compared to the situation without unemployment is $90,449 - 25,378 = 65,071$ FIM or 71.9 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 261.26 and 118 = 60.17 FIM/day, in total 178.17 FIM/day. The entry of 261.26 FIM/day is calculated as 95.5 per cent of the actual monthly wage, i.e. 5,617 FIM or on a daily basis $5,617 : 21.5 = 261.26$ FIM/day. There is no 20 per cent component. The calculated daily benefit is paid for 5 days a week. There is a waiting period of 7 days (1 $\frac{2}{5}$ week), so the compensation is $260 - 7 = 253$ days \times 178.17 FIM/day = 45,077 FIM. There is no maximum benefit, the minimum is 118 FIM/day.

The *gross compensation percentage* is $45,077 / 70,579 \times 100 = 64$. The disposable income of the APW-couple is 127,841 FIM, when the wife is unemployed for the whole year in 1997 and usually is working part time ($\frac{1}{2}$ APW income).

The *decrease* in disposable income compared to the situation without unemployment is $142,928 - 127,841 = 15,087$ FIM or 10.6 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

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. 119,983 FIM.

The *gross compensation percentage* is thus 85. The disposable income in this case is 83,508 FIM.

The *decrease* in disposable income compared to the situation without injuries is $90,449 - 83,508 = 6,941$ FIM or 7.7 per cent.

2. Loss of $\frac{1}{3}$ of the working capability

The loss of income is 47,052 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 $0.85 \times 47,052 = 39,994$ FIM.

The *gross compensation percentage* is thus 85. The disposable income is 88,417 FIM, when the APW has lost 1/3 of the working capability.

The *decrease* in disposable income compared to the situation without injuries is $90,449 - 88,417 = 2,032$ FIM or 2.2 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 79,754 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 79,754 FIM in income related pension minus 22,902 FIM in personal taxation, in total 56,852 FIM.

The *net compensation percentage* is $56,852 / 90,449 \times 100 = 62.9$.

The *decrease* in disposable income is 37.1 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 $29,256 / 90,449 \times 100 = 32.3$.

The '*decrease*' in disposable income, relative to that of the APW, is 67.7 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 $\frac{1}{2}$ 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. 39,877 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 7,211 FIM of the basic pension. The total gross pension for the disability pensioner is $39,877 + 7,211 = 47,088$ FIM.

The *gross compensation percentage* for the wife is $47,088 / 70,579 \times 100 = 67$. The disposable income of the couple is 90,449 FIM for the husband (APW income) and 39,245 FIM for the wife receiving disability pension, in total 129,694 FIM.

The *decrease* in disposable income compared to the situation without disability pension is $142,928 - 129,694 = 13,234$ FIM or 9.3 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 $0.6 \times 141,157 = 84,694$ FIM.

The disposable income of the pensioner is 84,694 FIM in income related pension minus 25,162 FIM in personal tax, in total 59,532 FIM.

The *net compensation percentage* is $59,532 / 90,449 \times 100 = 65.8$.

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 $29,256 / 90,449 \times 100 = 32.3$.

The '*decrease*' in disposable income, relative to that of the APW, is 67.7 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. $0.6 \times 141,157 =$

84,694 FIM plus $0.6 \times 70,579 = 42,347$ FIM, in total 127,041 FIM. For the former part time working spouse, there will be an additional 5,976 FIM left from the means testing of the basic pension ($25,680 - 0.5 \times (42,347 - 2,940) = 5,976$). The total pension is $127,041 + 5,976 = 133,017$ 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 127,041 FIM in income related pension plus 5,976 FIM basic pension minus 33,575 FIM in personal tax, in total 99,442 FIM.

The *net compensation percentage* is $99,442 / 142,928 \times 100 = 69.6$.

The *decrease* in disposable income is 30.4 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 $(6,420 / 142,928) \times 100 = 4.5$ 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 $(6,420 + 7,884) / 142,928 \times 100 = 10.0$ 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 $(6,420 + 7,884 + 9,348) / 142,928 \times 100 = 16.5$ 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 $(141,157 / 312) \times 18 = 8,144$ FIM. He receives 5,616 FIM²⁾ in compensation. The benefit has no maximum. There is a minimum of 60 FIM/day.

2) In the husband's income bracket the daily allowance is calculated in this way: $308.65 + 0.4(0.955 \times 141,157 - 132,280) / 300 = 308.65 + 3.37 = 312.02$ FIM. For 18 days the compensation is $18 \times 312.02 = 5,616$ FIM.

The *wife* has a wage reduction of $(70,579 / 312) \times 263 = 59,494$ FIM. The benefit for this period is 41,362 FIM³⁾.

Combined the wage reduction is 67,638 FIM and the compensation received is 46,978 FIM.

The *gross compensation percentage* is $46,978 / 67,638 \times 100 = 69.5$. The disposable income of the couple with a combined leave of 281 days is 145,788 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 $157,232 - 145,788 = 11,444$ FIM 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 $(70,579 / 312) \times 84 = 19,002$ FIM. She receives 13,211 FIM in compensation. The benefit has no maximum. There is a minimum of 60 FIM/day.

The *gross compensation percentage* is $13,211 / 19,002 \times 100 = 69.5$. 14 weeks of maternity leave results in a disposable income of 154,130 FIM.

The *decrease* in disposable income compared to the situation, where the couple has two children is $157,232 - 154,130 = 3,102$ FIM or 2.0 per cent.

3) In the wife's income bracket the daily allowance is calculated in this way: $0.7 \times (0.955 \times 70,579) / 300 = 157.27$ FIM. For 263 days the compensation is $263 \times 157.27 = 41,362$ FIM.

Annex*Tax and social contribution calculation for single APW, 1997. FIM*

Gross wage income:	141,157
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Standard deduction:

Work related expenses, 3.0 per cent max.	1,800
Social contr. unemployment, 1.5 per cent	2,117
Social contr. occupational pension, 4.5 per cent	6,352
<hr/>	
Total	10,269

State taxable income:

Gross wage income	141,157
Total standard deductions	10,269
<hr/>	
State taxable income	130,888

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×(130,888 - 108,000)	5,951
<hr/>	
State tax	15,761

*Local Government taxable income:**1. Calculation of 'low income deduction'*

Gross wage income	141,157
Work related expenses	1,800
<hr/>	
Basis for calculation of deduction	139,357

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 $0.02 \times (139,357 - 43,000) = 1,927$ FIM.

The deduction is:

Full deduction	5,500
- reduction	1,927
<hr/>	
Low income deduction	3,573

2. Calculation of Local Government taxable income:

State taxable income	130,888
- low income deduction	3,573
Local Government taxable income	127,315

Local tax:

Average Local Government plus church tax rate: 18.73

Local tax: $0.1873 \times (127,315)$	23,846
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Social contributions:

Contributions for illness:

1.9 per cent (+ 0.45 per cent for income above 80,000 FIM).

$0.019 \times (80,000) =$	1,520
$0.0235 \times (127,315 - 80,000) =$	1,112
+ Soc. contr. unemployment	2,117
+ Soc. contr. occupational pension	6,352
All social contributions	11,101

Tax and social contributions:

State tax	15,761
Local tax	23,846
Social contributions	11,101
Tax and social contributions	50,708



Documentation of APW calculations for Austria, 1997

Single APW: The gross wage of the APW in 1996 has been projected to 1997 by an estimated wage increase of 2.5 per cent.

	1997 Insured ¹⁾
Gross wage	302,500 ATS
Tax and social security contribution ²⁾	88,240 ATS
<i>Disposable income</i>	<i>214,260 ATS</i>

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	453,750 ATS
Tax and social security contribution	117,959 ATS
<i>Disposable income</i>	<i>335,791 ATS</i>

- 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 302,500 ATS, i.e. 5,817 ATS. The compensation is 50 per cent or 2,909 ATS.

The *gross compensation percentage* is then 50. The disposable income of the APW after 1 week of illness is 212,633 ATS.

The *decrease* in disposable income compared to the situation without illness is $214,260 - 212,633 = 1,627$ 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 302,500 ATS, i.e. 75,625 ATS. The weekly income is 5,817 ATS which corresponds to a daily compensation of 330.50 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 $365 \times 330.50 = 120,633$ ATS. The compensation here is 1/4 of 120,633 ATS or 30,158 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 197,929 ATS.

The *decrease* in disposable income compared to the situation without unemployment is $214,260 - 197,929 = 16,331$ ATS or 7.6 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 120,633 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 120,633 ATS when the APW is unemployed for the whole of 1997.

The *decrease* in disposable income compared to the situation without unemployment is $214,260 - 120,633 = 93,627$ ATS or 43.7 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 1997), i.e. 27,745 ATS.

The *net compensation percentage* is close to $0.92 \times 56 = 51.5$. 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 1997 is 195,755 ATS.

The *decrease* in disposable income compared to the situation without unemployment is $214,260 - 195,755 = 18,505$ ATS or 8.6 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 1997).

The *net compensation percentage* is close to $0.92 \times 56 = 51.5$. The compensation is tax and contribution free so the disposable income in this case is $0.92 \times 120,633 = 110,982$ ATS.

The *decrease* in disposable income compared to the situation without unemployment is $214,260 - 110,982 = 103,278$ ATS or 48.2 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 2,909 ATS, which corresponds to a daily compensation of 188.20 ATS or 68,693 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 $68,693 + 214,260 = 282,953$ ATS when the wife is unemployed for the whole year in 1997 and usually is working part time ($\frac{1}{2}$ APW income).

The *decrease* in disposable income compared to the situation with no unemployment is $335,791 - 282,953 = 52,838$ ATS or 15.7 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 $33 \frac{1}{3}$ per cent.

1. Working capability completely lost

There is no gross income. The compensation is $\frac{2}{3}$ of the former gross wage, i.e. 201,667 ATS. In this case of severe disability there is a supplement of 20 per cent of the basis compensation, i.e. 40,333 ATS. The total compensation is 242,000 ATS.

The *gross compensation percentage* is $66.67 + 0.2 \times 66.67 = 80$. The compensation is non-taxable, but there is a social contribution of 3.75 per cent, so disposable income is $242,000 - 9,075 = 232,925$ ATS.

The *increase* in disposable income compared to the situation without injuries is $232,925 - 214,260 = 18,665$ ATS or 8.7 per cent.

2. Loss of 1/3 of the working capability

The gross wage is reduced by $\frac{1}{3}$, i.e. 100,833 ATS. The compensation in this case is $\frac{1}{3}$ of the basic compensation in the former case, that is 67,222 ATS.

The *gross compensation percentage* is 66.67. The disposable income of the APW losing $\frac{1}{3}$ of his or her working capability is 219,757 ATS.

The *increase* in disposable income compared to the situation without injuries is $219,757 - 214,260 = 5,497$ ATS or 2.6 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 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. $0.54 \times 295,000 = 159,300$ 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 159,300 ATS in disability pension minus 14,365 ATS in personal tax and social contributions, in total 144,935 ATS.

The *net compensation percentage* is $144,935 / 214,260 \times 100 = 67.6$.

The *decrease* in disposable income by becoming a disability pensioner is 32.4 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 $0.7 \times 110,418$ ATS = 77,293 ATS. The benefit is not taxed. The disposable income is 77,293 ATS.

The '*net compensation percentage*' (relative to the APW) is $77,293 / 214,260 \times 100 = 36.1$.

The '*decrease*' in disposable income, relative to that of the APW, is 63.9 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 $\frac{1}{2}$ 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 assumptions the total disability pension is $0.54 \times 147,500 = 79,650$ ATS.

The *gross compensation percentage* is $79,650 / 151.250 \times 100 = 53$. The disposable income of the couple is 290,923 ATS when the wife becomes a disability pensioner in 1997.

The *decrease* in disposable income compared to the situation with no disability is $335,791 - 290,923 = 44,868$ ATS or 13.4 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. $0.72 \times 295,000 = 212,400$ 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 212,400 ATS in pension minus 28,433 ATS in personal tax and social contributions, in total 183,967 ATS.

The *net compensation percentage* is $183,967/214,260 \times 100 = 85.9$.

The *decrease* in disposable income by retirement is 14.1 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 110,418 ATS in 1997. 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 110,418 ATS, the same as the gross pension.

The '*net compensation percentage*' (relative to the APW) is $110,418 / 214,260 \times 100 = 51.5$.

The '*decrease*' in disposable income, relative to that of the APW, is 48.5 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 1992 at the age of 60 years, the husband in 1997 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 8, i.e. he has a pension of 212,400 ATS in 1997. The wife retired in 1992. Her pension was then 72 per cent of the $\frac{1}{2}$ APW income in 1991, i.e. $0.72 \times 120,879 = 87,033$ ATS. This pension is indexed to 1997 level by a factor of 1,121, resulting in a pension of 97,564 ATS.

The disposable income for the pensioner couple is 309,964 ATS in pension minus 32,092 ATS in personal tax and social contributions, in total 277,872 ATS.

The *net compensation percentage* is $277,872/335,791 \times 100 = 82.8$.

The *decrease* in disposable income compared to the APW-couple is 17.2 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 refundable tax credit of 4,200 ATS and a cash benefit of 15,600 ATS, in total 19,800 ATS. Compared to the situation without children the *increase* in disposable income is $((19,800)/335,791) \times 100 = 5.9$ per cent with one child (6 years old).

For *child no. 2* (3 years old) there is a refundable tax credit of 6,300 ATS and a cash benefit of 15,600 ATS, in total 21,900 ATS. Compared to the situation without children the *increase* is $((19,800 + 21,900)/335,791) \times 100 = 12.4$ per cent with two children (6 and 3 years old).

For *child no. 3* (1 year old, assumed born in 1997) the refundable tax credit is 8,400 ATS and the cash benefit is again 15,600 ATS, in total 24,000 ATS. Compared to the situation without children the *increase* is $((19,800 + 21,900 + 24,000)/335,791) \times 100 = 19.6$ 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 max. 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, 1997. ATS.*

<i>Gross wage income</i>	302,500
of which for 12 months	259,286
of which for 2 months (13 and 14)	43,214
<hr/>	
<i>Social contributions</i>	
For 12 months:	
(0.0395 + 0.0300 + 0.1025 + 0,01) x 259,286	47,190
For 2 months:	
(0.0395 + 0.0300 + 0.1025) x 43,214	7,433
Total	54,623
<hr/>	
<i>Taxable income (12 months)</i>	
Gross wage income	259,286
- Basic allowance	819
- Work related allowance	1,800
- Social contributions (12 months)	47,190
Total	209,477
Rounded	209,500
<hr/>	
<i>Gross tax liability (12 months)</i>	
10 per cent of 50,000	5,000
+ 22 per cent of 100,000	22,000
+ 32 per cent of 59,500	19,040
Total	46,040
<hr/>	
<i>Net tax liability (12 months)</i>	
Gross liability	46,040
- General tax credit 1)	8,560
- Wage related tax credit	1,500
- Transportation related tax credit	4,000
Total	31,980
<hr/>	
<i>Taxable income (2 months)</i>	
Gross wage income	43,214
- Social contributions (2 months)	7,433
- Tax free amount	8,500
Total	27,281
<hr/>	
<i>Tax from 2 months income</i>	
6 per cent of 27,281	1,637
<hr/>	
To be continued	

Tax and social contributions	
Social contributions	54,623
+ Tax (12 months)	31,980
+ Tax (2 months)	1,637
Total	<u>88,240</u>

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 9.5 thousand so the reduction is $9.5 \times 29.47 = 280$ ATS. The tax credit is $8,840 - 280 = 8,560$ ATS.



Documentation of APW calculations for Germany, 1997

Single APW: The German Ministry of Finance has provided the information on the 1997 gross wage level.

	1997 Non-insured ¹⁾
Gross wage	58,338 DEM
Tax and social security ²⁾	24,989 DEM
<i>Disposable income</i>	<i>33,349 DEM</i>

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 Insured ¹⁾
Gross wage	87,507 DEM
Tax and social security	33,928 DEM
<i>Disposable income</i>	<i>53,579 DEM</i>

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

Nearly all employees in Germany still received their usual wages for the first 6 weeks of illness in 1997, 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, there is *no change* in disp. income in 1997, 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. 14,585 DEM. 3 months compensation equals 60 per cent of the lost net wage for the single APW with no children. The compensation is 4,867.20 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 31,119 DEM.

The *decrease* in disposable income compared to the situation with no unemployment is $33,349 - 31,119 = 2,230$ DEM or 6.7 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. $4 \times 4,867.20 = 19,468.80$ DEM.

The *net compensation percentage* is, as mentioned, 60. The compensation is non-taxable income. The disposable income is 19,469 DEM, when the APW is unemployed for the whole year.

The *decrease* in disposable income compared to the situation with no unemployment is $33,349 - 19,469 = 13,880$ DEM or 41.6 per cent.

4. Unemployed for 3 months during the year, not eligible for insurance.

Single APW

The gross wage is reduced by 14,585 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 4,297.80 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 30,604 DEM.

The *decrease* in disposable income compared to the situation with no unemployment is $33,349 - 30,604 = 2,745$ DEM or 8.2 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 where employees are not eligible for insurance in the first place, and they will then receive the lower compensation in stead.

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. $4 \times 4,297.80 \text{ DEM} = 17,191.20 \text{ DEM}$.

The *net compensation percentage* is, as mentioned, 53. The compensation is non-taxable income. The disposable income is 17,191.20 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 $33,349 - 17,191 = 16,158 \text{ DEM}$ 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 8,455 DEM.

The *net compensation percentage* is, as mentioned 60, cf. also case 3. The compensation is non-taxable income. The disposable income is 47,009 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 $53,579 - 47,009 = 6,570 \text{ DEM}$ 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 $\frac{1}{3}$ of the working capability is lost.

1. Working capability completely lost

There is no gross wage. The compensation is $\frac{2}{3}$ of the former gross wage, that is 38,892 DEM in this case.

The *gross compensation percentage* is then 66.67. The compensation is non-taxable income. The disposable income is then 38,892 DEM.

The *increase* in disposable income compared to the situation without injuries is $38,892 - 33,349 = 5,543 \text{ DEM}$ or 16.6 per cent.

2. Loss of $\frac{1}{3}$ of the working capability

The gross wage is reduced by $\frac{1}{3}$, i.e. 19,446 DEM. The compensation in this case is $\frac{1}{3}$ of that in the former case, that is 12,964 DEM.

The *gross compensation percentage* is again 66.67. The disposable income of the APW losing $\frac{1}{3}$ of his or her working capability is 37,478 DEM.

The *increase* in disposable income compared to the situation with no injuries is $37,478 - 33,349 = 4,129 \text{ DEM}$ or 12.4 per cent.

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

Germany has (1997) two schemes for disability, one due to 'Erwerbsunfähigkeit' and another due to 'Berufsunfähigkeit'. The 'Erwerbsunfähigkeit' scheme has the highest benefit (Rentenfaktor) and has been assumed for the case here.

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 til 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 $36 \frac{2}{3}$ 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 22,350 DEM in 1997. The health and care insurance will be 7.65 per cent of the pension, i.e. 1,710 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 $22,350 - 1,710 = 20,640$ DEM.

The *net compensation percentage* is $20,640 / 33,349 \times 100 = 61.9$.

The *decrease* in disposable income for an APW becoming a disability pensioner is 38.1.

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 period there is no pension.

Disability pensioners without a former work record and without other means will receive social assistance. The basic rate is 538 DEM (average) 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 645.60 DEM per month or 7,747 DEM in 1997. This is also the disposable income.

The *'net compensation percentage'* (relative to the APW) is $7,747 / 33,349 \times 100 = 23.2$.

The *'decrease'* in disposable income, relative to that of the APW, is 76.8 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 $\frac{1}{2}$ of her husband's. On that assumption she will receive 50 per cent of the disability pension from case 8, i.e. 11,175 DEK. The health and care insurance is 7.65 per cent of the pension or 855 DEM. The taxable part of her pension depends on the age when she became a dis-

ability 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 11,175 DEM and 47 per cent is taxable, i.e. 5,252 DEM. The social contribution is deductible together with that of her husband.

The *gross compensation percentage* is $11,175 / 29,169 \times 100 = 38.3$. The disposable income of the couple is 48,127 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 $53,579 - 48,127 = 5,452$ DEM or 10.2 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 1997 is 27,430 DEM. The German pensioner has to pay for health and care insurance, half premium, i.e. 7.65 per cent of the pension, that is 2,098 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 $27,430 - 2,098 = 25,332$ DEM.

The *net compensation percentage* is $25,332 / 33,349 \times 100 = 76.0$.

The *decrease* in disposable income for the APW retiring at the age of 65 years is 24.0 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 538 DEM (average) per month plus 20 per cent for a single pensioner, in total 645.60 DEM per month or 7,747 DEM in 1997. This is also the disposable income.

The *'net compensation percentage'* (relative to the APW) is $7,747 / 33,349 \times 100 = 23.2$.

The *'decrease'* in disposable income, relative to that of the APW, is 76.8 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 8. 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. 13,715 DEM. On these assumptions the combined pension for the couple will be 41,145 DEM in 1997. The contribution to health and care insurance will be 7.65 per cent of the pension, i.e. 3,148 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 couple is $41,145 - 3,148 = 37,997$ DEM.

The *net compensation percentage* is $37,997/53,579 \times 100 = 70.9$.

The *decrease* in disposable income for the APW-couple retiring when both are 65 years is 29.1 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 2,640 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 14,426 DEM (before sol. tax). For the couple with one child they are 12,350 DEM (before sol. tax) when the deduction is applied. The difference is 2,076 DEM, which is less than the tax credit.

The *increase* in disposable income compared to the situation without children, where the disposable income is 53,579 DEM, is $2,640 + 156 = 2,796$ DEM (156 is a reduction in the sol.tax) or 5.2 per cent, when there is 1 child (6 years old).

For *the 2nd child* (3 years old) the tax credit is also 2,640 DEM.

Taxes for the couple without children are 14,426 DEM (before sol.tax). For the couple with two children they are 10,314 (before sol. tax) when the deduction is applied. The difference is 4,112 DEM, which is less than the tax credit of 5,280 DEM.

The *increase* in disposable income compared to the situation without children, where the disposable income is 53,579 DEM, is $5,280 + 308 = 5,588$ DEM (308 is a reduction in the sol. tax) or 10.4 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 14,426 DEM (before sol. tax). For the couple with three children they are 8,320 (before sol. tax) when the deduction is applied. The difference is 6,106 DEM, which is less than the tax credit of 8,880 DEM.

The *increase* in disposable income compared to the situation with no children, where the disposable income is 53,579 DEM, is $8,880 + 458 = 9,338$ DEM (458 is a reduction in the sol. tax) or 17.4 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 Denmark.

Germany has the shortest *ordinary* maternity leave, 14 weeks for the wife, of the 8 countries studied.

This period 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. 7,853 DEM.

The *net compensation percentage* is 100 and the disposable 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 1997. 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 new rule was implemented from 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, 1997. DEM*

<i>Gross wage income</i>	58,338
<i>Social contributions: 21.05 per cent of gross wage income</i>	12,280
<i>Deductions:</i>	
Social contributions	
1ST STEP:	
Default	6,000
- 16 per cent	9,334
Deduction 1st step	0
2ND STEP:	
Social contributions	12,280
- Deduction 1st step	0
Basis for deduction 2nd step	12,280
Deduction 2nd step: basis	12,280
Max. deduction 2nd step	2,610
3RD STEP:	
Social contributions	12,280
- Deduction 1st and 2nd step	2,610
Basis for deduction 3rd step	9,670
Deduction 3rd step: 50 per cent of basis	4,835
Max. 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
<i>Taxable income:</i>	
Gross wage	58,338
- Deductions	6,023
Taxable income (unrounded)	52,315
Taxable income (rounded)	52,272
<i>Taxes:</i>	
(Application of the formula)	
$x = \text{Taxable income, } y = \frac{x - 12,042}{10,000} = 4.0230$	
Tax: $(86.63 * y + 2,590) * y$	11,822
<i>Tax and social contributions:</i>	
Tax	11,822
Solidarity tax (7.5 per cent of tax)	887
Social contributions	12,280
Tax, solidarity tax and social contributions	24,989



Documentation of APW calculations for the Netherlands, 1997

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 and 9.9 per cent in 1997. 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 1997 wage level.

	1997 Insured ¹⁾
Gross wage incl. compensation allowance	57,600 NLG
Of this:	
Compensation allowance abbreviated C.A.	4,884 NLG
Gross wage excl. of C.A.	52,716 NLG
Tax and social security ²⁾	22,308 NLG
<i>Disposable income</i>	<i>35,292 NLG</i>

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 Insured ¹⁾
Gross wage incl. C.A.	86,383 NLG
C.A.	7,309 NLG
Gross wage excl. of C.A.	79,074 NLG
Tax and social security	31,004 NLG
<i>Disposable income</i>	<i>55,379 NLG</i>

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 1013.77 NLG. Calculated per day (5 days in a week) the reduction is 202.75NLG. 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 $202.75 \times 3 \times 0.7 = 425.78$ NLG.

The *gross compensation percentage* is $425.78 / 1013.77 \times 100 = 42$. The disposable income of the APW is 35,005 NLG, when he or she is ill for one week during 1997. The *decrease* in disposable income compared to the case with no illness is $35,292 - 35,005 = 287$ NLG or 0.8 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 13,179.00 NLG. The compensation is 70 per cent of the gross wage, that is 9,225 NLG.

The *gross compensation percentage* is therefore 70. The disposable income of the APW is 33,123 NLG when he or she is unemployed for 3 months during 1997.

The *decrease* in disposable income compared to the case with no unemployment is $35,292 - 33,123 = 2,169$ NLG or 6.1 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. 36,901 NLG.

The *gross compensation percentage* is therefore 70. The disposable income is 25,628 NLG, when he or she is unemployed for the whole of 1997.

The *decrease* in disposable income compared to the situation without unemployment is $35,292 - 25,628 = 9,664$ NLG or 27.4 per cent.

4. Unemployed for 3 months during the year, not eligible for insurance.**Single APW**

The reduction in gross wage is 13,179.00 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 23 years old) living alone, that is 16,712 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 4,178 NLG.

The *gross compensation percentage* is $4,178 / 13,179 \times 100 = 32$. The disposable income of the APW is 31,936 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 $35,292 - 31,936 = 3,356$ NLG or 9.5 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. 16,712 NLG per year, after tax.

The *gross compensation percentage* is $16,712 / 52,716 \times 100 = 32$. The disposable income of the APW is 16,712 NLG when he or she is unemployed for the whole of 1997 and the compensation is social assistance.

The *decrease* in disposable income compared to the situation with no unemployment is $35,292 - 16,712 = 18,580$ NLG or 52.6 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. 18,451 NLG.

The *gross compensation percentage* is therefore 70. The disposable income of the APW-couple is 49,716 NLG, 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 without unemployment is $55,379 - 49,716 = 5,663$ NLG or 10.2 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 $\frac{1}{3}$ 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 $52,716 \times 0.7 = 36,901$ 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 25,628 NLG.

The *decrease* in disposable income compared to the initial position is $35,292 - 25,628 = 9,664$ NLG or 27.4 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 $\frac{1}{3}$, that is by 17,572 NLG. The compensation in this case is 21 per cent of the total gross wage (excl. of C.A.), it is 11,070 NLG.

The *gross compensation percentage* is $11,070 / 17,572 \times 100 = 63$. The disposable income with compensation for loss of $\frac{1}{3}$ of his or her working capability is 31,643 NLG.

The *decrease* in disposable income compared to the initial position is $35,292 - 31,643 = 3,649$ NLG or 10.3 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 occurred), 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 $52,716 \times 0.7 = 36,901$ NLG.

The disposable income for an APW at full disability pension is 36,901 NLG minus 14,884 NLG in personal taxation plus 3,611 NLG in compensation allowance, in total 25,628 NLG.

The *net compensation percentage* is $25,628 / 35,292 \times 100 = 72.6$.

The *decrease* in disposable income is 27.4 per cent, exactly as in case 7 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. 16,712 NLG per year, after tax.

The '*net compensation percentage*' (relative to the APW) is $16,712 / 35,292 \times 100 = 47.4$.

The '*decrease*' in disposable income, relative to that of the APW, is 52.6 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 $\frac{1}{2}$ 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 $26,358 \times 0.7 = 18,451$ NLG.

The *gross compensation percentage* is therefore 70 (lower for lower degrees of disability). The disposable income of the APW-couple is 49,716 NLG, when the wife becomes fully disabled in 1997 and is eligible for a full pension.

The *decrease* in disposable income compared to the initial situation is $55,379 - 49,716 = 5,663$ or 10.2 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 1997 is 19,616 NLG. The disposable income is 16,705 NLG.

The *net compensation percentage* is $16,705 / 35,292 \times 100 = 47.3$.

The *decrease* in disposable income is 52.7 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 19,616 NLG in 1997. For a couple (both pensioners) each pensioner will receive 13,633 NLG. The combined gross pension for the couple is 27,266 NLG. The disposable income is 23,952 NLG.

The *net compensation percentage* is $23,952 / 55,379 = 43.3$.

The *decrease* in disposable income is 56.7 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 1,459 NLG.

Compared to the initial position the *increase* in disposable income is $1,459 / 55,379 \times 100 = 2.6$ 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 3,078 NLG. Compared to the initial position the *increase* is $3,078 / 55,379 \times 100 = 5.6$ 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 4,419 NLG. Compared to the initial position the *increase* is $4,419 / 55,379 \times 100 = 8.0$ 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, 1997. NLG*

1. Gross wage income:	52,716
<i>Social contributions and compensation allowance:</i>	
2. ZFW, 1.35 per cent of 51,939	701
3. ZW/WW, 2.78 per cent of 52,716	1,466
4. WAO, 8.45 per cent of (52,716 – 26,622)	2,205
5. ZFW (employer) 5.55 per cent of 51,939	2,883
6. 1 – 3 – 4 + 5	51,928
7. Standard deduction, work related. 10 per cent max.	2,598
8. 6 – 7, basis for compensation allowance	49,330
9. Compensation allowance, 9.9 per cent of 8	4,884
<i>Taxable income:</i>	
10. 6 + 9	56,812
11. Standard deduction, work related. Max.	2,598
12. Basic allowance	7,102
13. 10 – 11 – 12, taxable income	47,112
<i>Taxes and social contributions:</i>	
14. 1st slice, 37.30 per cent of 45,960	17,143
15. 2nd slice, 50 per cent of (47,112 - 45,960)	576
16. Nominal ZFW	217
17. 2 + 3 + 4, other social contributions.	4,372
18. 14 + 15 + 16 + 17, tax and social contributions	22,308



Documentation of APW calculations for Great Britain, 1997

Single APW: The wage income is the provisional figure for 1997 from Inland Revenue.

	1997 Insured ¹⁾
Gross wage	16,700 GBP
Tax and social security ²⁾	4,200 GBP
<i>Disposable income</i>	<i>12,500 GBP</i>

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	25,050 GBP
Tax and social security	5,369 GBP
<i>Disposable income</i>	<i>19,681 GBP</i>

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. That 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 'The Tax/Benefit Position of Employees'. When the wage level projection is performed it is the development in the average wage level for the second quarter 1996 until the second quarter 1997 to the estimated average wage level for the second quarter 1997 until the second quarter 1998 which is used.

'Standard' income events

1. *Ill for one week. Single APW*

The gross wage is reduced by $1/52$, that is by 321 GBP. The maximum rate for compensation for illness in one week is 55.70 GBP (the rate for Statutory Sick Pay, SSP, in 1997 for weekly gross wages above 62 GBP. SSP can be paid for max. 28 weeks). The working week is 5 days 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 22.28 GBP ($2/5 \times 55.70$).

The employer can pay Occupational Sick Pay (OSP) as a supplement, cf. later.

The *gross compensation percentage* is $22.28 / 321 \times 100 = 6.9$. The disposable income of the APW is 12,297 GBP, when he or she is ill for one week during 1997. The *decrease* in disposable income compared to the situation without illness is $12,500 - 12,297 = 203$ 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 4,175 GBP. The compensation is 49.15 GBP a week (rate for persons 25 years or more) and is paid for 6 days a week. There is a waiting period of 3 days during the first week. Compensation for 13 weeks (3 months) is $13 \times 49.15 - 0.5 \times 49.15 = 614.37$ GBP.

The *gross compensation percentage* is $614.37 / 4,175 \times 100 = 14.7$. The disposable income of the APW is 10,111 GBP, when he or she is unemployed for 3 months during 1997.

The *decrease* in disposable income compared to the situation without unemployment is $12,500 - 10,111 = 2,389$ 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 $52 \times 49.15 - 0.5 \times 49.15 = 2,531.22$ 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 $2,531.22 / 16,700 \times 100 = 15.2$. The disposable income of the APW is 2,531 GBP (the personal allowance is larger than the income), when he or she is unemployed for the whole of 1997.

The *decrease* in disposable income compared to the situation with no unemployment is $12,500 - 2,531 = 9,969$ GBP or 79.8 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 4,175 GBP as in case 2. The compensation is calculated for a person 25 (or more) years old. The rate is 49.15 GBP a week (waiting period of 3 days during the first week). Compensation for 13 weeks (3 months) is $13 \times 49.15 - 0.5 \times 49.15 = 614.37$ GBP, just as in case 2. The difference is that the income based (IB) allowance is means-tested, that 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 $614.37 / 4,175 \times 100 = 14.7$. The disposable income of the APW is 10,111 GBP, when he or she is unemployed for 3 months during 1997.

The *decrease* in disposable income compared to the case with no unemployment is $12,500 - 10,111 = 2,389$ 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 $52 \times 49.15 - 0.5 \times 49.15 = 2,531.22$ GBP. With no net wealth and no other income JSA (C) and JSA (IB) identical.

The *gross compensation percentage* is $2,531.22 / 16,700 \times 100 = 15.2$. The disposable income is 2,531 GBP in this situation, just as in case 3.

The *decrease* in disposable income compared to the situation without unemployment is $12,500 - 2,531 = 9,969$ GBP or 79.8 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 $26 \times 49.15 = 1,277.90$ GBP.

The *gross compensation percentage* is $1,277.90 / 8,350 \times 100 = 15.3$. The disposable income of the APW-couple is 14,053 GBP, 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 $19,681 - 14,053 = 5,628$ GBP or 28.6 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 $\frac{1}{3}$ of the working capability is lost.

1. Working capability completely lost

There is no gross wage. The compensation is 101.10 GBP a week or 5,257 GBP a year. It is also possible to receive long term Incapacity Benefit plus an age

related addition (here assumed to be lower rate) of 62.45 + 6.60 GBP per week, 3,591 GBP a year. Total compensation is 8,848 GBP.

The *gross compensation percentage* is $8,848 / 16,700 \times 100 = 53$. The disposable income for an APW losing the working capability completely is 8,848 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 $12,500 - 8,848 = 3,652$ GBP or 29.2 per cent.

2. *Loss of 1/3 of the working capability*

The gross wage is reduced by 1/3, i.e. 5,567 GBP. The compensation is 30.33 GBP a week or $52 \times 30.33 = 1,577.16$ GBP a year, tax free.

The *gross compensation percentage* is $1,577 / 5,567 \times 100 = 28.3$. The disposable income for an APW losing 1/3 of the working capability is 10,348 GBP.

The *decrease* in disposable income compared to the initial position is $12,500 - 10,348 = 2,152$ GBP or 17.2 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 1997, receive 62.45 GBP/week in Incapacity Benefit and 6.60 GBP/week in age addition, in total 69.05 GBP/week or 3,591 GBP a year. This will also be the disposable income.

The *net compensation percentage* is $3,591 / 12,500 \times 100 = 28.7$.

The *decrease* in disposable income compared to the situation without disability is 71.3 per cent. There might be 'topping-up' from Income Support.

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 37.75 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 13.15 GBP/week. In total the disability pensioner can receive 50.90 GBP/week or 2,647 GBP a year from Severe Disablement Allowance. This will also be the disposable income.

The '*net compensation percentage*' (relative to the APW) is $2,647 / 12,500 \times 100 = 21.2$.

The '*decrease*' in disposable income, relative to that of the APW, is 78.8 per cent. The Severe Disablement Allowance can be 'topped-up' from Income Support.

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 ½ APW income. She is eligible for Incapacity Benefit. She will receive 62.45 GBP/week plus the age supplement of 6.60 GBP/week (assumed age is 35 years), in total 69.05 GBP/week or 3,591 GBP a year.

The *gross compensation percentage* for the wife is $3,591 / 8,350 \times 100 = 43.0$. The disposable income of the couple will be 3,591 GBP for the wife and 12,775 GBP for the husband, in total 16,366 GBP.

The *decrease* in disposable income compared to the situation without disability is $19,681 - 16,366 = 3,315$ GBP or 16.8 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 62.45 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 5.56 GBP a week in April 1997. (Information from the Department of Social Security).
- c) A SERPS pension introduced in 1978. According to estimates from the Department of Social Security, SERPS for the APW was 62.23 GBP a week, in 1997.

The pension after the maximum period of former occupation is: (Serps and graduated pensions are estimates)

	Week GBP	Year GBP
Flat rate	62.45	3,247.40
Graduated pension	5.56	289.12
Serps pension	62.23	3,235.96
Total	130.24	6,772.48

The disposable income for the APW-pensioner is 6,462 GBP.

The *net compensation percentage* is $6,462 / 12,500 \times 100 = 51.7$.

The *decrease* in disposable income is 48.3 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, which e.g. the wife can obtain via her deceased husband's contribution to SERPS

and graduated pension or income support of 68.80 GBP a week. In this calculation the income support is used, it is 3,578 GBP a year.

The *'net compensation percentage'* (relative to the APW) is $3,578 / 12,500 \times 100 = 28.6$.

The *'decrease'* in disposable income, relative to that of the APW, is 71.4 per cent by this kind of 'retirement'.

13. Pensioners with maximum period of former occupation. APW-couple

The two pensioners have the same age, the wife retired in 1992 at the age of 60 years, the husband in 1997 at the age of 65 years.

The husband is 'identical' to the single pensioner in case 11. Based upon information and estimates from the Department of Social Security the wife (and the couple) has the following pensions in 1997 (Serps and grad are estimates).

	Wife Week GBP	Husband Week GBP	Couple Week GBP	Couple Year GBP
Flat rate	62.45	62.45	124.90	6,494.80
Graduated pension	1.39	5.56	6.95	361.40
Serps pension	16.25	62.23	78.48	4,080.96
Total	80.09	130.24	210.33	10,937.16

The disposable income for the APW-couple is 10,937 GBP.

The *net compensation percentage* is $10,937 / 19,681 \times 100 = 55.6$.

The *decrease* in disposable income compared to the APW-couple is 44.4 per cent.

'Standard' income events in connection with children

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

The family allowance is 11.05 GBP a week for the first child and 9.00 GBP for each of the following children.

Child no 1 (6 years old). The family allowance is 11.05 GBP a week or $11.05 \times 52 = 574.60$ GBP a year. Compared to the situation without children the *increase* in disposable income is $574.60 / 19,681 \times 100 = 2.9$ per cent, when the family has 1 child (6 years old).

Child no 2 (3 years old). The family allowance is $9.00 \times 52 = 468.00$ GBP a year for this child. Compared to the situation without children the *increase* in disposable income is $(574.60 + 468.00) / 19,681 \times 100 = 5.3$ 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. 457.60 GBP a year. Compared to the situation without children the *increase* in

disposable income is $(574.60 + 468.00 + 468.00) / 19,681 \times 100 = 7.7$ 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*

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 2,890 GBP.

In compensation she receives:

The first 6 weeks:

$6/52$ of the gross wage $\times .9 = 867$ GBP.

The last 12 weeks:

In this period the compensation is 55.70 GBP a week, in total 668 GBP.

The compensation for *the whole period* is 1,535 GBP.

The *gross compensation percentage* is $1,535 / 2,890 \times 100 = 53.1$. Eighteen weeks of maternity leave during 1997 results in a disposable income of 19,788 GBP for the couple including 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 2 children (3 and 1 year) is $20,724 - 19,788 = 936$ GBP or 4.5 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 2,248 GBP. She receives $(867 + 446) = 1,313$ GBP in compensation.

The *gross compensation percentage* is $1,313 / 2,248 \times 100 = 58.4$. The disposable income is 20,079 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 $20,724 - 20,079 = 645$ GBP or 3.1 per cent.

Annex*Tax and social contribution calculation for single APW, 1997. GBP**Taxable income:*

Gross wage income	16,700
- Personal allowance	4,045

Taxable income	12,655

Tax:

20 per cent of 4,100 GBP	820
23 per cent of (12,655 - 4,100)	1,968

Total tax	2,788

Social contributions:

2 per cent of 62 GBP/week in 52 weeks	64
10 per cent of (16,700 / 52 - 62) GBP/week in 52 weeks	1,348

Total social contributions	1,412

Tax and social contributions:

Tax	2,788
Social contributions	1,412

Tax and social contributions	4,200



Documentation of APW calculations for Canada, 1997

Single APW: The gross wage of the APW (or AE) in 1997 is from 'The Tax/Benefit Position of Employees', OECD, 1998 edition.

	1997 Insured ¹⁾
Gross wage	34,412 CAD
Tax and social security ²⁾	9,262 CAD
<i>Disposable income</i>	<i>25,150 CAD</i>

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	51,618 CAD
Tax and social security contribution	12,697 CAD
<i>Disposable income</i>	<i>38,921 CAD</i>

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. 662 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 24,776 CAD in 1997.

The *decrease* in disposable income compared to the situation with no illness is $25,150 - 24,776 = 374$ 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. 8,603 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 $11/13 \times 0.55 \times 8,603 = 4,004$ CAD. Maximum insurable earnings are 39,000 CAD in 1997. The *gross compensation percentage* is $4,004 / 8,603 \times 100 = 46.5$. The disposable income of the APW with 25 per cent unemployment is 22,735 CAD in 1997.

The *decrease* in disposable income compared to the situation with no unemployment is $25,150 - 22,735 = 2,415$ CAD or 9.6 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. $45/52 \times 0.55 \times 34,412 = 16,379$ 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 16,379 CAD from the employment insurance and 225 CAD from S.A., in total 16,604 CAD. The *gross compensation percentage* is $16,604 / 34,412 \times 100 = 48$. The disposable income of the APW who is unemployed for the whole year is 14,088 CAD in 1997. The *decrease* in disposable income compared to the situation with no unemployment is $25,150 - 14,088 = 11,062$ 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 8,603 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 $585 / 8,603 \times 100 = 7$. Disposable for an APW with 3 months of unemployment receiving social assistance is 20,373 CAD. The *decrease* in disposable income compared to the situation with no unemployment is $25,150 - 20,373 = 4,777$ 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 $12 \times 195 = 2,340$ CAD on the assumption that the unemployed single person receives social assistance during the unemployment period.

The *gross compensation percentage* is $2,340 / 34,412 \times 100 = 7$. 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 $25,160 - 2,340 = 22,810$ or 90.7 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. $39/52 \times 0.55 \times 17,206 = 7,097$ 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 7,097 CAD.

The *gross compensation percentage* is $7,097 / 17,206 \times 100 = 41$. The disposable income for the APW-couple is 32,084 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 $38,921 - 32,084 = 6,837$ 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 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 $.9 \times 25,150 = 22,635$ CAD which is also the disposable income.

The *net compensation percentage* is thus 90.

The *decrease* in disposable income is $25,150 - 22,635 = 2,515$ 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. 11,471 CAD. The compensation would be approx. 1/3 of that in case 7.1, i.e. 7,545 CAD.

The *net compensation percentage* is thus 90. The disposable income is 25,327 CAD in case of loss of 1/3 of the working capability (disregarding lump sum payments).

The *increase* in disposable income is $25,327 - 25,150 = 177$ CAD or 0.7 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 96 per cent of the max. pension in 1997, i.e. $0.96 \times 8,842 = 8,488$ CAD, cf. case 11. The earnings related component will be $.75 \times 8,488 = 6,366$ CAD. The flat rate component is 3,966 CAD in 1997, in total 10,332 CAD. This is also the disposable income, because the tax credits more than outweigh the gross tax liability.

The *net compensation percentage* is $10,332 / 25,150 \times 100 = 41.1$.

The *decrease* in disposable income compared with the situation without disability is 58.9 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 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 $6,192 / 25,150 \times 24.6$.

The *'decrease'* in disposable income, relative to that of the APW, would be 75.4 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. 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, 3,183 CAD. The flat rate component is 3,966 CAD, in total 7,149 CAD, which will also be the disposable income of the wife.

The *gross compensation percentage* is $7,149 / 17,206 \times 100 = 42$. The disposable income of the APW-couple is 32,299 CAD, when the wife becomes a disability pensioner in 1997.

The *decrease* in income compared to the situation with no disability is $38,921 - 32,299 = 6,622$ CAD or 17.0 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 ($34,412 / 35,800 = 0.96$) in 1997 is also valid for the past, the pensioner will receive 96 per cent of the max. pension in 1997, i.e. 8,488 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 1,503 (GIS) plus 8,488 CAD (CPP) minus 868 CAD in personal tax, in total 13,959 CAD. The *net compensation percentage* is $13,959 / 25,150 \times 100 = 55.5$.

The *decrease* in disposable income compared to the APW is 44.5 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 $10,583 / 25,150 \times 100 = 42.1$.

The *'decrease'* in disposable income is 57.9 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. 96 per cent of the max. CPP rate, 8,488 CAD, is used for the husband, and the wife having a long working record

earning $\frac{1}{2}$ APW income receives half of that, i.e. 4,244 CAD in CPP pension. The combined GIS, 7,488 CAD, is means tested against the combined CPP pension for the couple, 12,732 CAD, leaving 1,122 CAD in GIS for the couple.

The disposable income for the pensioner couple is 9,672 (OAS) plus 1,122 (GIS) plus 12,732 (CPP) minus 648 in personal tax in total 22,878 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 $22,878 / 38,921 \times 100 = 58.8$.

The *decrease* in disposable income at retirement is 41.2 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': $0.025 \times (51,618 - 25,921) = 642$ CAD, child benefit : $1,020 + 213 - 642 = 591$ CAD. Compared to the situation without children the increase in disposable income is $591 / 38,921 \times 100 = 1.5$ 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': $0.05 \times (51,618 - 25,921) = 1,285$ CAD, child benefits: $2,040 + 426 - 1,285 = 1,181$ CAD. Compared to the situation without children the increase in disp. income is $1,181 / 38,921 \times 100 = 3.0$ 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 1,285 CAD just as in the case with 2 children. Child benefits: $3,060 + 639 + 75 - 1,285 = 2,489$ CAD. Compared to the situation without children the increase in disp. income is $2,489 / 38,921 \times 100 = 6.4$ 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 1997. The scheme is a part of the 'Employment Insurance' scheme.

The wife has a wage reduction of 27/52, i.e. 8,934 CAD. The compensation is $25/27 \times 8,934 \times 0.55 = 4,550$ CAD. This compensation leaves the couple with a gross income (disregarding the family allowance) of 47,234 CAD which is the basis for calculation of the 'tax back' of the family allowance. The 'tax back' here is $0.05 \times (47,234 - 25,921) = 1,066$ CAD, where it in the full employment case was 1,285 CAD, a difference of 219 CAD which is added to the benefit of 4,550 CAD, in total 4,769 CAD.

The *gross compensation percentage* is $4,769 / 8,934 \times 100 = 53$. 27 weeks of maternity leave (for the wife alone) results in a disposable income of 37,453 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 $40,102 - 37,453 = 2,649$ 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. 4,632 CAD. The compensation is $12/14 \times 4,632 \times 0.55 = 2,184$ CAD. The difference in 'tax back' of the family allowance is 123 CAD in this case. The result is a total benefit of 2,307 CAD.

The *gross compensation percentage* is $2,307 / 4,632 \times 100 = 50$. 14 weeks of maternity leave results in a disposable income of 38,608 CAD.

The *decrease* in disposable income compared to the situation, where the couple has two children is $40,102 - 38,608 = 1,494$ CAD or 3.7 per cent.

Annex*Tax and social contribution calculation for single APW, 1997. CAD.*

Gross wage income:	34,412
<i>Taxable income:</i>	34,412
<i>Basic federal tax liability:</i>	
17 per cent of 29,590 CAD	5,030
26 per cent of (34,412 - 29,590)	1,254
Total basic liability	6,284
<i>Social contributions:</i>	
Pensions (CPP): $0.03 \times (34,412 - 3,500)$	927
Unemployment (E.I.): $0.029 \times 34,412$	998
Total social contributions	1,925
Associated tax credit: $0.17 \times 1,925$	327
<i>Federal taxes:</i>	
Basic tax liability	6,284
– Basic personal tax credit	1,098
– Social contribution tax credit	327
Basic federal tax	4,859
+ Surtax: $0.03 \times 4,859$	146
Total federal taxes	5,005
<i>Local taxes¹⁾:</i>	
48 per cent of 4,859, total local taxes	2,332
<i>Tax and social contributions:</i>	
Federal taxes	5,005
Local taxes	2,332
Social contributions	1,925
Total tax and social contributions	9,262

1) The tax rate of Ontario has been selected.

APPENDIX 2***Documentation of family type (APW)
calculations for Sweden 1991–1996,
'correct' data***

General note: From 1992 the employers cover the illness benefit for the first two weeks (in 1997 four weeks) of an illness spell. There are no specific rules for precisely how the compensation is calculated. Here it is assumed that the procedure is the same as before 1992, when the insurance covered for this period of illness. Other procedures might result in slightly different results.





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
<i>Disposable income</i>	<i>116,852 SEK</i>

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 Non-insured ¹⁾
Gross wage	243,600 SEK
Tax and social security	65,148 SEK
<i>Disposable income</i>	<i>178,452 SEK</i>

- 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 $162,400 \times .65 = 105,560 / 260 = 406$ SEK) for the first 3 days and 80 per cent for the remaining 2 (on a daily basis that is $162,400 \times .80 = 129,920 / 260 = 499.69$ SEK, rounded 500 SEK). The compensation is $(3 \times 406) + (2 \times 500) = 2,218$ SEK.

The *gross compensation percentage* is $2,218 / 3,123 \times 100 = 71$. 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 $13 \times 5 \times 543 = 35,295$ SEK.

The *gross compensation percentage* is $35,295 / 40,600 \times 100 = 87$. 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 $52 \times 5 \times 543 = 141,180$ SEK.

The *gross compensation percentage* is $141,180 / 162,400 \times 100 = 87$. The disposable income of the APW is 102,921 SEK, when he or she is unemployed for the whole 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 $13 \times 5 \times 191 = 12,415$ SEK.

The *gross compensation percentage* is $12,415 / 40,600 \times 100 = 31$. 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 $52 \times 5 \times 191 = 49,660$ 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 $49,660 / 162,400 \times 100 = 31$. 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 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. $81,200 \times 0.9 = 73,080 / 260 = 281.08$ SEK, rounded 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 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 $7.5 \times$ 'basbeloppet', that is 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 $32,200 \times .96 = 30,912$ SEK (single pensioner) and a supplementary amount, $32,200 \times .54 = 17,388$ 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 $80,263 / 116,852 \times 100 = 68.7$.

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 $48,300 / 116,852 \times 100 = 41.3$.

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 65 years old

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 8. The wife is assumed to have had half the income of her husband all the time, it 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. $32,200 \times .785 = 25,277$ 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 $124,870 / 178,452 \times 100 = 70.0$.

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 $(9,000 / 178,452) \times 100 = 5.0$ 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 $(18,000 / 178,452) \times 100 = 10.1$ per cent with two children (6 and 3 years old).

For *child no. 3* (1 year old) the allowance is $1.5 \times 9,000 = 13,500$ SEK. Compared to the situation without children the *increase* is $(31,500 / 178,452) \times 100 = 17.7$ 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 $(162,400 / 365) \times 60 = 26,696$ SEK. He receives $162,400 \times .9 / 365 = 400$ SEK per day. For 60 days the 'parents allowance' is $60 \times 400 = 24,000$ SEK.

The *wife* has a wage reduction of $(81,200 / 365) \times 300 = 66,740$ SEK. She receives $81,200 \times .9 / 365 = 200$ SEK per day. For 300 days the 'parents allowance' is $300 \times 200 = 60,000$ 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 results 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 $(81,200 / 365) \times 98 = 21,802$ SEK. She receives $98 \times 200 = 19,600$ 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	171,000 SEK
Tax and social security	47,901 SEK
<i>Disposable income</i>	<i>123,099 SEK</i>

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	256,500 SEK
Tax and social security	68,518 SEK
<i>Disposable income</i>	<i>187,982 SEK</i>

- 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 $171,000 \times .75 = 128,250 / 260 = 493.27$ SEK, rounded 493 SEK) for the first 3 days and 90 per cent for the remaining 2 (on a daily basis that is $171,000 \times .90 = 153,900 / 260 = 591.92$ SEK, rounded 592 SEK). The compensation is $(3 \times 493) + (2 \times 592) = 2,663$ SEK.

The *gross compensation percentage* is $2,663 / 3,288 \times 100 = 81$. 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 $13 \times 5 \times 564 = 36,660$ SEK.

The *gross compensation percentage* is $36,660 / 42,750 \times 100 = 86$. 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 $52 \times 5 \times 564 = 146,640$ SEK.

The *gross compensation percentage* is $146,640 / 171,000 \times 100 = 86$. The disposable income of the APW is 107,058 SEK, when he or she is unemployed for the whole 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 $13 \times 5 \times 198 = 12,870$ SEK.

The *gross compensation percentage* is $12,870 / 42,750 \times 100 = 30$. 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 $52 \times 5 \times 198 = 51,480$ 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 $51,480 / 171,000 \times 100 = 30$. 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. $85,500 \times 0.9 = 76,950 / 260 = 295.96$ SEK, rounded = 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 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 $7.5 \times$ 'basbeloppet', that is 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 $33,700 \times .96 = 32,352$ SEK (single pensioner) and a supplementary amount, $33,700 \times .54 = 18,198$ 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 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 32,352 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 $84,096 / 123,099 \times 100 = 68.3$.

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 $50,550 / 123,099 \times 100 = 41.1$.

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 65 years old

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 8. The wife is assumed to have had half the income of her husband all the time, that 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. $33,700 \times .785 = 26,454.5$ 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 $130,872 / 187,982 \times 100 = 69.6$.

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 $(9,000 / 187,982) \times 100 = 4.8$ 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 $(18,000 / 187,982) \times 100 = 9.6$ per cent with two children (6 and 3 years old).

For *child no. 3* (1 year old) the allowance is $1.5 \times 9,000 = 13,500$ SEK. Compared to the situation without children the *increase* is $(31,500 / 187,982) \times 100 = 16.8$ 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 $(171,000 / 365) \times 60 = 28,110$ SEK. He receives $171,000 \times .9 / 365 = 422$ SEK per day. For 60 days the 'parents allowance' is $60 \times 422 = 25,320$ SEK.

The *wife* has a wage reduction of $(85,500 / 365) \times 300 = 70,274$ SEK. She receives $85,500 \times .9 / 365 = 211$ SEK per day. For 300 days the 'parents allowance' is $300 \times 211 = 63,300$ 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 results 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 $(85,500 / 365) \times 98 = 22,956$ SEK. She receives $98 \times 211 = 20,678$ 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
<i>Disposable income</i>	<i>122,654 SEK</i>

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 Non-insured ¹⁾
Gross wage	260,850 SEK
Tax and social security	73,687 SEK
<i>Disposable income</i>	<i>187,163 SEK</i>

- 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 $173,900 \times .75 = 130,425 / 260 = 501.63$ SEK, rounded 502 SEK)

for the next 2 days and 90 per cent for the remaining 2 (on a daily basis that is $173,900 \times .90 = 156,510 / 260 = 601.96$ SEK, rounded 602 SEK). The compensation is $(2 \times 502) + (2 \times 602) = 2,208$ SEK.

The *gross compensation percentage* is $2,208 / 3,344 \times 100 = 66$. 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 $0.8 \times 173,900 = 139,120 / 260 = 535.08$, rounded 535 SEK. For 13 weeks (5 days each) with a waiting period of 5 days the compensation is $12 \times 5 \times 535 = 32,100$ SEK.

The *gross compensation percentage* is $32,100 / 43,475 \times 100 = 74$. 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 $255 \times 535 = 136,425$ SEK.

The *gross compensation percentage* is $136,425 / 173,900 \times 100 = 78.5$. The disposable income of the APW is 98,243 SEK, when he or she is unemployed for the whole 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 $12 \times 5 \times 198 = 11,880$ SEK. There is a waiting period of 5 days also in this scheme.

The *gross compensation percentage* is $11,880 / 43,475 \times 100 = 27$. 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 $255 \times 198 = 50,490$ 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 $50,490 / 173,900 \times 100 = 29$. 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. $86,950 \times 0.8 = 69,565 / 260 = 267.54$ SEK, rounded = 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 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 $7.5 \times$ 'basbeloppet', that is 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 $34,400 \times .96 \times .98 = 32,364$ SEK (single pensioner) and a supplementary amount, $34,400 \times .555 \times .98 = 18,710$ 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 $84,324 / 122,654 \times 100 = 68.7$.

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 $51,074 / 122,654 \times 100 = 41.6$.

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 65 years old**

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 8. The wife is assumed to have had half the income of her husband all the time, that 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. $34,400 \times .785 \times .98 = 26,464$ 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 $131,335 / 187,163 \times 100 = 70.2$.

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 $(9,000 / 187,163) \times 100 = 4.8$ 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 $(18,000 / 187,163) \times 100 = 9.6$ per cent with two children (6 and 3 years old).

For *child no. 3* (1 year old) the allowance is $1.5 \times 9,000 = 13,500$ SEK. Compared to the situation without children the *increase* is $(31,500 / 187,163) \times 100 = 16.8$ 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 $(173,900 / 365) \times 60 = 28,586$ SEK. He receives $173,900 \times .9 / 365 = 429$ SEK per day. For 60 days the 'parents allowance' is $60 \times 429 = 25,740$ SEK.

The *wife* has a wage reduction of $(86,950 / 365) \times 300 = 71,466$ SEK. She receives $86,950 \times .9 / 365 = 214$ SEK per day. For 300 days the 'parents allowance' is $300 \times 214 = 64,200$ 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 results 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 $(86,950 / 365) \times 98 = 23,345$ SEK. She receives $98 \times 214 = 20,972$ 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 1994 is from 'The Tax/Benefit Position of Production Workers', OECD, 1995 edition.

	1994 Non-insured ¹⁾
Gross wage	183,100 SEK
Tax and social security	56,198 SEK
<i>Disposable income</i>	<i>126,902 SEK</i>

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 Non-insured ¹⁾
Gross wage	274,650 SEK
Tax and social security	81,199 SEK
<i>Disposable income</i>	<i>193,451 SEK</i>

- 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 $183,100 \times .75 = 137,325 / 260 = 528.17$ SEK, rounded 528 SEK)

for the next 2 days and 90 per cent for the remaining 2 (on a daily basis that is $183,100 \times .90 = 164,790 / 260 = 633.81$ SEK, rounded 634 SEK). The compensation is $(2 \times 528) + (2 \times 634) = 2,324$ SEK.

The *gross compensation percentage* is $2,324 / 3,521 \times 100 = 66$. 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 $0.8 \times 183,100 = 146,480 / 62260 = 563.38$, rounded 563 SEK. For 13 weeks (5 days each) with a waiting period of 5 days the compensation is $12 \times 5 \times 563 = 33,780$ SEK.

The *gross compensation percentage* is $33,780 / 45,775 \times 100 = 74$. 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 $255 \times 563 = 143,565$ SEK.

The *gross compensation percentage* is $143,565 / 183,100 \times 100 = 78$. The disposable income of the APW is 101,387 SEK, when he or she is unemployed for the whole 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 $12 \times 5 \times 245 = 14,700$ SEK. There is a waiting period of 5 days also in this scheme.

The *gross compensation percentage* is $14,700 / 45,775 \times 100 = 32$. 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 $255 \times 245 = 62,475$ 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 $62,475 / 183,100 \times 100 = 34$. 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. $91,550 \times 0.8 = 73,240 / 260 = 281.69$ SEK, rounded = 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 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 $7.5 \times$ 'basbeloppet', that is 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 $35,200 \times .96 \times .98 = 33,116$ SEK (single pensioner) and a supplementary amount, $35,200 \times .555 \times .98 = 19,145$ 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 $85,502 / 126,902 \times 100 = 67.4$.

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 $52,261 / 126,902 \times 100 = 41.2$.

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 65 years old**

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 8. The wife is assumed to have had half the income of her husband all the time, that 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. $35,200 \times .785 \times .98 = 27,079$ SEK for each of the pensioners, in total 54,158 SEK. The couple will not receive any supplementary 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 $133,640 / 193,451 \times 100 = 69.1$.

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 $(9,000 / 193,451) \times 100 = 4.7$ 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 $(18,000 / 193,451) \times 100 = 9.3$ per cent with two children (6 and 3 years old).

For *child no. 3* (1 year old) the allowance is $1.5 \times 9,000 = 13,500$ SEK. Compared to the situation without children the *increase* is $(31,500 / 193,451) \times 100 = 16.3$ 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 $(183,100 / 365) \times 60 = 30,099$ SEK. He receives $183,100 \times .9 / 365 = 451$ SEK per day. For 60 days the 'parents allowance' is $60 \times 451 = 27,060$ SEK.

The *wife* has a wage reduction of $(91,550 / 365) \times 300 = 75,247$ SEK. She receives $91,550 \times .9 / 365 = 226$ SEK per day. For 300 days the 'parents allowance' is $300 \times 226 = 67,800$ 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 $(91,550 / 365) \times 98 = 24,581$ SEK. She receives $98 \times 226 = 22,148$ SEK in compensation.

The *gross compensation percentage* is again 90. 14 weeks maternity leave results 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
<i>Disposable income</i>	<i>128,228 SEK</i>

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
<i>Disposable income</i>	<i>195,770 SEK</i>

- 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 appr. 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 (appr. 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 ($0.75 \times 190,260 = 142,695 / 260 = 548.83$, rounded 549 SEK) for the next 2 days and 90 per cent for the remaining 2 days ($0.90 \times 190,260 = 171,234 / 260 = 658.59$, rounded 659 SEK). The compensation is $(2 \times 549) + (2 \times 659) = 2,416$ SEK.

The *gross compensation percentage* is $2,416 / 3,659 \times 100 = 66$. 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 $0.80 \times 190,260 = 152,208 / 260 = 585.42$, rounded 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 $60 \times 564 = 33,840$ SEK.

The *gross compensation percentage* is $33,840 / 47,565 \times 100 = 71$. 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 $255 \times 564 = 143,820$ SEK in the 'standard' year used here.

The *gross compensation percentage* is $143,820 / 190,260 \times 100 = 76$. The disposable income of the APW is 99,155 SEK, when he or she is unemployed for the whole 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 $60 \times 245 = 14,700$ SEK. There is a waiting period of 5 days also in this scheme.

The *gross compensation percentage* is $14,700 / 47,565 \times 100 = 31$. 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 $255 \times 245 = 62,475$ 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 $62,475 / 190,260 \times 100 = 33$. 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 $255 \times 293 = 74,715$ SEK. The daily compensation of 293 SEK is calculated as $0.8 \times 95,130 = 76,104 / 260 = 292.71$ SEK, rounded 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 $74,715 / 95,130 \times 100 = 78.5$. 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 ($\frac{1}{2}$ 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 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 $7.5 \times$ 'basbeloppet', that is 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 $7.5 \times$ '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 $35,700 \times .96 \times .98 = 33,587$ SEK (single pensioner) and a supplementary amount, $35,700 \times .555 \times .98 = 19,417$ 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 $86,363 / 128,228 \times 100 = 67.4$.

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 $53,004 / 128,228 \times 100 = 41.3$.

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 65 years old

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 8. The wife is assumed to have had half the income of her husband all the time, that 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. $35,700 \times .785 \times .98 = 27,464$ 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 $135,090 / 195,770 \times 100 = 69.0$.

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 $(9,000 / 195,770) \times 100 = 4.6$ 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 $(18,000 / 195,770) \times 100 = 9.2$ 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 $(29,400 / 195,770) \times 100 = 15.0$ 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 $(190,260 / 365) \times 60 = 31,276$ SEK. He receives $190,260 \times .9 / 365 = 469$ SEK per day for 30 days, resulting in a 'parents allowance' of $30 \times 469 = 14,070$ SEK. For the remaining 30 days he receives $190,260 \times .8 / 365 = 417$ 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 $(95,130 / 365) \times 300 = 78,189$ SEK. She receives $95,130 \times .9 / 365 = 235$ SEK per day for 30 days, resulting in a 'parents allowance' of $30 \times 235 = 7,050$ SEK. For the remaining 270 days she receives $95,130 \times .8 / 365 = 209$ 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 $90,060/109,465 \times 100 = 82$. 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 $(95,130 / 365) \times 98 = 25,542$ SEK. She receives $95,130 \times .9 / 365 = 235$ SEK per day in 30 days, that is 7,050 SEK plus 209 SEK per day in 68 days, that is 14,212 SEK, in total 21,262 SEK in compensation. The *gross compensation percentage* is $21,262 / 25,542 \times 100 = 83$. 14 weeks maternity leave results 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
<i>Disposable income</i>	<i>135.645 SEK</i>

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	307,071 SEK
Tax and social security	99,457 SEK
<i>Disposable income</i>	<i>207,614 SEK</i>

- 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 appr. 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 (appr. 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 ($0.75 \times 204,714 = 153,536 / 260 = 590.52$, rounded 591 SEK) for the next 4 days. The compensation is $4 \times 591 = 2,364$ SEK.

The *gross compensation percentage* is $2,364 / 3,937 \times 100 = 60$. 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 $0.75 \times 204,714 = 153,536 / 260 = 590.52$, rounded 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 $60 \times 564 = 33,840$ SEK.

The *gross compensation percentage* is $33,840 / 51,179 \times 100 = 66$. 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 $255 \times 564 = 143,820$ SEK in the 'standard' year used here.

The *gross compensation percentage* is $143,820 / 204,714 \times 100 = 70$. The disposable income of the APW is 97,976 SEK, when he or she is unemployed for the whole 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 $60 \times 230 = 13,800$ SEK. There is a waiting period of 5 days also in this scheme.

The *gross compensation percentage* is $13,800 / 51,179 \times 100 = 27$. 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 $255 \times 230 = 58,650$ 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 $58,650 / 204,714 \times 100 = 29$. 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 $255 \times 295 = 75,225$ SEK. The daily compensation of 293 SEK is calculated as $0.75 \times 102,357 = 76,768 / 260 = 295.26$ SEK, rounded 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 $75,225 / 102,357 \times 100 = 73.5$. 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 ($\frac{1}{2}$ 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 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 $7.5 \times$ 'basbeloppet', that is 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 $7.5 \times$ '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 $36,200 \times .96 \times .98 = 34,057$ SEK (single pensioner) and a supplementary amount, $36,200 \times .555 \times .98 = 19,689$ 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 $87,702 / 135,645 \times 100 = 64.4$.

The *decrease* in disposable income by retirement is 35.6 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. 53,746 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 $53,746 / 135,645 \times 100 = 39.6$.

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 65 years old**

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 8. The wife is assumed to have had half the income of her husband all the time, that 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. $36,200 \times .785 \times .98 = 27,849$ 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 $136,624 / 207,614 \times 100 = 65.8$.

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 $(7,680 / 207,614) \times 100 = 3.7$ 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 $(15,360 / 207,614) \times 100 = 7.4$ 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 $(23,040 / 207,614) \times 100 = 11.1$ 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 $(204,714 / 365) \times 60 = 33,652$ SEK. He receives $204,714 \times .85 / 365 = 477$ SEK per day for 30 days, resulting in a 'parents allowance' of $30 \times 477 = 14,310$ SEK. For the remaining 30 days he receives $204,714 \times .75 / 365 = 421$ 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 $(102,357 / 365) \times 300 = 84,129$ SEK. She receives $102,357 \times .85 / 365 = 238$ SEK per day for 30 days, resulting in a 'parents allowance' of $30 \times 238 = 7,140$ SEK. For the remaining 270 days she receives $102,357 \times .75 / 365 = 210$ SEK per day, resulting in a 'parents allowance' of 56,700 SEK. In total she receives 63,840 SEK.

Combined the wage reduction is 117,781 SEK and the received compensation is 90,780 SEK.

The *gross compensation percentage* is $90,780/117,781 \times 100 = 77$. 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 $(102,357 / 365) \times 98 = 27,482$ SEK. She receives $102,357 \times .85 / 365 = 238$ SEK per day in 30 days, that is 7,140 SEK plus 210 SEK per day in 68 days, that is 14,280 SEK, in total 21,420 SEK in compensation.

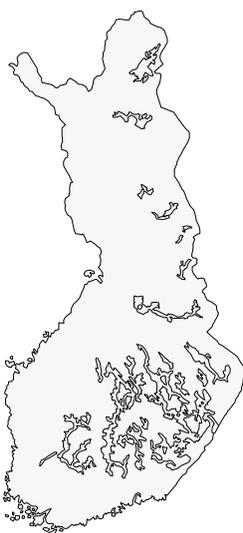
The *gross compensation percentage* is $21,420 / 27,482 \times 100 = 78$. 14 weeks maternity leave results in a disposable income of 218,505 SEK.

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.

APPENDIX 3***Documentation of family type (APW)
calculations for Finland 1994–1996,
'correct' data***

General note: Compared to the first edition of this documentation there are a few changes:

1. All income related unemployment benefits are now calculated on a daily basis. The decrease in disposable income is marginally lower than before.
2. 1996 has been recalculated on basis of a slightly lower local tax rate than was used before. There are only marginal changes in the results.





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
<i>Disposable income</i>	<i>76,578 FIM</i>

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	61,495 FIM
<i>Disposable income</i>	<i>121,379 FIM</i>

- 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 $90 \times 116:21.5 = 485.58$ 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 $\times 258.80$ FIM/day = 15,528 FIM.

The *gross compensation percentage* is $15,528 / 30,479 \times 100 = 51$. 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 $\times 258.80$ FIM/day = 65,994 FIM.

The *gross compensation percentage* is $65,994 / 121,916 \times 100 = 54$. 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 $12 \times 5 \times 116 = 6,960$ FIM, there is also a waiting period of 5 days in this scheme.

The *gross compensation percentage* is $6,960 / 30,479 \times 100 = 23$. 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 $51 \times 5 \times 116 = 29,580$ FIM for a whole year when the unemployed APW is not insured.

The *gross compensation percentage* is $29,580 / 121,916 \times 100 = 24$. 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 \times 163.04 FIM/day = 41,575 FIM.

The *gross compensation percentage* is $41,575 / 60,958 \times 100 = 68$. 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 ($\frac{1}{2}$ APW income).

The *decrease* in disposable is $121,379 - 109,589 = 11,790$ 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 70,298 FIM.

The *decrease* in disposable income is $76,578 - 70,298 = 6,280$ FIM or 8.2 per cent.

2. *Loss of 1/3 of the working capability*

The loss of income is 40,639 FIM. The compensation is $\frac{1}{3}$ of the 'full pension', i.e. equivalent to 85 per cent of the lost income assuming $\frac{2}{3}$ of the wage is maintained. The compensation is $0.85 \times 40,639 = 34,543$ FIM.

The *gross compensation percentage* is thus 85. The disposable income is 74,849 FIM, when the APW has lost $\frac{1}{3}$ of the working capability.

The *decrease* in disposable income is $76,578 - 74,849 = 1,729$ FIM or 2.3 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 $12 \times 437 = 5,244$ FIM plus $0.6 \times 121,916 = 73,150$, in total 78,394 FIM (the supplementary amount is means tested to zero).

The *gross compensation percentage* is $78,394 / 121,916 \times 100 = 64$. The disposable income of the pensioner is 52,689 FIM.

The *net compensation percentage* is $52,689 / 76,578 \times 100 = 68.8$.

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 $28,476 / 76,578 \times 100 = 37.2$.

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. $0.6 \times 121,916 = 73,150$ FIM for the husband plus $0.6 \times 60,958 = 36,575$ 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 $123,107 / 182,874 \times 100 = 67$. The disposable income of the pensioner couple is 89,179 FIM.

The *net compensation percentage* is $89,179 / 121,379 \times 100 = 73.5$.

The *decrease* in disposable income is 26.5 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 $(6,840 / 121,379) \times 100 = 5.6$ 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 $(6,840 + 8,640) / 121,379 \times 100 = 12.8$ 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 $(6,840 + 8,640 + 10,920) / 121,379 \times 100 = 21.8$ 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 $(121,916 / 312) \times 18 = 7,034$ FIM. He receives 4,925 FIM⁴⁾ in compensation.

The *wife* has a wage reduction of $(60,958 / 312) \times 263 = 51,384$ FIM. The benefit for this period is 38,687 FIM⁵⁾.

Combined the wage reduction is 58,418 FIM and the compensation received is 43,612 FIM.

The *gross compensation percentage* is $43,612 / 58,418 \times 100 = 75$. 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 128,535 FIM.

The *decrease* in disposable income compared to the situation where the couple has two children (3 and 1 year) is $136,859 - 128,535 = 8,324$ FIM or 6.1 per cent.

4) In the husband's income bracket the daily allowance is calculated in this way: $269.13 + 0.4 (0.965 \times 121,916 - 114,290) / 300 = 269.13 + 4.48 = 273.61$ FIM. For 18 days the compensation is $18 \times 273.61 = 4,925$ FIM.

5) In the wife's income bracket the daily allowance is calculated in this way: $101.13 + 0.66 (0.965 \times 60,958 - 37,930) / 300 = 101.13 + 45.97 = 147.10$ FIM. For 263 days the compensation is $263 \times 147.10 = 38,687$ FIM.

2. In this calculation the *common period* of 14 weeks maternity leave for the wife is used. Her wage reduction is $(60,958 / 312) \times 84 = 16,412$ FIM. She receives $14 \times 6 \times 147.10 = 12,356$ FIM in compensation.

The *gross compensation percentage* is $12,356 / 16,412 \times 100 = 75$. 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 $136,859 - 134,425 = 2,434$ FIM or 1.8 per cent.

Annex*Tax and social contribution calculation for single APW, 1994. FIM*

Gross wage income:	121,916
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Standard deduction:

Work related expenses, 3.0 per cent max.	2,100
Social contr. unemployment, 1.87 per cent	2,280
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 × (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 $0.05 \times (119,816 - 80,000) = 1,991$ 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
	113,870

Local tax:

Average Local Government plus church tax rate: 18.83	
Local tax: $0.1883 \times (113,870)$	21,442

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, $0.0345 \times (80,000) =$	2,760
$1.9 + 3.45 = 5.35$ per cent, $0.0535 \times (113,870 - 80,000) =$	1,812
+ Soc. contr. unemployment	2,280
+ Soc. contr. occupational pension	3,657
	10,509

Tax and social contributions:

State tax	13,387
Local tax	21,442
Social contributions	10,507
	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
<i>Disposable income</i>	<i>82,114 FIM</i>

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
<i>Disposable income</i>	<i>130,305 FIM</i>

- 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 $90 \times 118: 21.5 = 493.95$ 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 \times 274.48 FIM/day = 16,469 FIM.

The *gross compensation percentage* is $16,469 / 33,133 \times 100 = 50$. 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 \times 274.48 FIM/day = 69,992 FIM.

The *gross compensation percentage* is $69,992 / 132,533 \times 100 = 53$. The disposable income 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 $12 \times 5 \times 118 = 7,080$ FIM, there is also a waiting period of 5 days in this scheme.

The *gross compensation percentage* is $7,080 / 33,133 \times 100 = 21$. 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 $51 \times 5 \times 118 = 30,090$ FIM for a whole year when the unemployed APW is not insured.

The *gross compensation percentage* is $30,090 / 132,533 \times 100 = 23$. 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 (1 week), so the compensation is $260 - 5 = 255$ days $\times 171.47$ FIM/day = 43,725 FIM.

The *gross compensation percentage* is $43,725 / 66,267 \times 100 = 66$. 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 76,022 FIM.

The *decrease* in disposable income is $82,114 - 76,022 = 6,092$ FIM or 7.4 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 $0.85 \times 44,178 = 37,551$ FIM.

The *gross compensation percentage* is thus 85. The disposable income is 80,304 FIM, when the APW has lost $1/3$ of the working capability.

The *decrease* in disposable income is $82,114 - 80,304 = 1,810$ FIM or 2.2 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 $12 \times 445 = 5,340$ FIM plus $0.6 \times 132,533 = 79,520$, in total 84,860 FIM (the supplementary amount is means tested to zero).

The *gross compensation percentage* is $84,860 / 132,533 \times 100 = 64$. The disposable income of the pensioner is 57,157 FIM.

The *net compensation percentage* is $57,157 / 82,114 \times 100 = 69.6$.

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 $29,016 / 82,114 \times 100 = 35.3$.

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. $0.6 \times 132,533 = 79,520$ FIM for the husband plus $0.6 \times 66,267 = 39,760$ 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 1,699 FIM 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 $131,659 / 198,800 \times 100 = 66$. The disposable income of the pensioner couple is 95,319 FIM.

The *net compensation percentage* is $95,319 / 130,305 \times 100 = 73.2$.

The *decrease* in disposable income is 26.8 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 $(6,840 / 130,305) \times 100 = 5.2$ 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 $(6,840 + 8,640) / 130,305 \times 100 = 11.9$ 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 $(6,840 + 8,640 + 10,920) / 130,305 \times 100 = 20.3$ 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 $(132,533 / 312) \times 18 = 7,646$ FIM. He receives 5,169 FIM¹⁾ in compensation.

The *wife* has a wage reduction of $(66,267 / 312) \times 263 = 55,860$ FIM. The benefit for this period is 41,333 FIM²⁾.

Combined the wage reduction is 63,506 FIM and the compensation received is 46,502 FIM.

The *gross compensation percentage* is $46,502 / 63,506 \times 100 = 73$. 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 136,719 FIM.

The *decrease* in disposable income compared to the situation where the couple has two children (3 and 1 year) is $145,785 - 136,719 = 9,066$ FIM or 6.2 per cent.

1) In the husband's income bracket the daily allowance is calculated in this way: $272.96 + 0.4 (0.955 \times 132,533 - 115,920) / 300 = 272.96 + 14.20 = 287.16$ FIM. For 18 days the compensation is $18 \times 287.16 = 5,169$ FIM.

2) In the wife's income bracket the daily allowance is calculated in this way: $102.57 + 0.66 (0.955 \times 66,267 - 38,470) / 300 = 102.57 + 54.59 = 157.16$ FIM. For 263 days the compensation is $263 \times 157.16 = 41,333$ FIM.

2. In this calculation the *common period* of 14 weeks maternity leave for the wife is used. Her wage reduction is $(66,267 / 312) \times 84 = 17,841$ FIM. She receives $14 \times 6 \times 157,16 = 13,201$ FIM in compensation.

The *gross compensation percentage* is $13,201 / 17,841 \times 100 = 74$. 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.

Annex*Tax and social contribution calculation for single APW, 1995. FIM*

Gross wage income:	132,533
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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
+ $.27 \times (123,254 - 102,000)$	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 $0.05 \times (131,033 - 80,000) = 2,552$ 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
	<hr/>
Local Government taxable income	123,254

Local tax:

Average Local Government plus church tax rate: 18.83

Local tax: $0.1883 \times (123,254)$	23,209
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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, $0.0245 \times (80,000) =$	1,960
$1.9 + 2.45 = 4.35$ per cent, $0.0435 \times (123,254 - 80,000) =$	1,882
+ Soc. contr. unemployment	2,478
+ Soc. contr. occupational pension	5,301
	<hr/>
All social contributions	11,621

Tax and social contributions:

State tax	15,589
Local tax	23,209
Social contributions	11,621
	<hr/>
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
<i>Disposable income</i>	<i>85,551 FIM</i>

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
<i>Disposable income</i>	<i>135,599 FIM</i>

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. 2,636 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 $85,551 - 84,288 = 1,262$ 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 $90 \times 118 = 10,620$ 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. $137,046 : 12 \times 0.955 = 10,907$ 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 $\times 278.57$ FIM/day = 16,714 FIM.

The *gross compensation percentage* is $16,714 / 34,262 \times 100 = 49$. 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 $\times 278.57$ FIM/day = 71,035 FIM.

The *gross compensation percentage* is $71,035 / 137,046 \times 100 = 52$. The disposable income 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 $12 \times 5 \times 118 = 7,080$ FIM, there is also a waiting period of 5 days in this scheme.

The *gross compensation percentage* is $7,080 / 34,262 \times 100 = 21$. 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 $51 \times 5 \times 118 = 30,090$ FIM for a whole year when the unemployed APW is not insured.

The *gross compensation percentage* is $30,090 / 137,046 \times 100 = 22$. 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 \times 174.96 FIM/day = 44,615 FIM.

The *gross compensation percentage* is $44,615 / 68,523 \times 100 = 65$. 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 ($\frac{1}{2}$ 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 78,019 FIM.

The *decrease* in disposable income is $85,551 - 79,019 = 6,532$ FIM or 7.6 per cent.

2. *Loss of 1/3 of the working capability*

The loss of income is 45,682 FIM. The compensation is $\frac{1}{3}$ of the 'full pension', i.e. equivalent to 85 per cent of the lost income assuming $\frac{2}{3}$ of the wage is maintained. The compensation is $0.85 \times 45,682 = 38,830$ FIM.

The *gross compensation percentage* is thus 85. The disposable income is 83,604 FIM, when the APW has lost $\frac{1}{3}$ of the working capability.

The *decrease* in disposable income is $85,551 - 83,604 = 1,947$ FIM or 2.3 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 $0.6 \times 137,046 = 82,228$ FIM (the basic pension is means tested to zero).

The *gross compensation percentage* is $82,228 / 137,046 \times 100 = 60$. The disposable income of the pensioner is 57,244 FIM.

The *net compensation percentage* is $57,244 / 85,551 \times 100 = 66.9$.

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 $29,088 / 85,551 \times 100 = 34.0$.

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. $0.6 \times 137,046 = 82,228$ FIM for the husband plus $0.6 \times 68,523 = 41,114$ FIM for the wife. There will be no national pension for the husband. The national pension for the wife, $12 \times 446 = 5,352$ FIM and $12 \times 1,681 = 20,172$ 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 $129,769 / 205,569 \times 100 = 63$. The disposable income of the pensioner couple is 96,419 FIM.

The *net compensation percentage* is $96,419 / 135,599 \times 100 = 71.1$.

The *decrease* in disposable income is 28.9 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 $(6,420 / 135,599) \times 100 = 4.7$ 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 $(6,420 + 7,884) / 135,599 \times 100 = 10.5$ 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 $(6,420 + 7,884 + 9,348) / 135,599 \times 100 = 17.4$ 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 $(137,046 / 312) \times 18 = 7,907$ FIM. He receives 5,481 FIM¹⁾ in compensation.

The *wife* has a wage reduction of $(68,523 / 312) \times 263 = 57,761$ FIM. The benefit for this period is 40,157 FIM²⁾.

Combined the wage reduction is 65,668 FIM and the compensation received is 45,638 FIM.

The *gross compensation percentage* is $45,638 / 65,668 \times 100 = 69.5$. 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 138,759 FIM.

The *decrease* in disposable income compared to the situation where the couple has two children (3 and 1 year) is $149,903 - 138,759 = 11,144$ FIM or 7.4 per cent.

1) In the husband's income bracket the daily allowance is calculated in this way: $303.33 + 0.4 (0.955 \times 137,046 - 130,000) / 300 = 303.33 + 1.17 = 304.50$ FIM. For 18 days the compensation is $18 \times 304.50 = 5,481$ FIM.

2) In the wife's income bracket the daily allowance is calculated in this way: $0.7 \times (0.955 \times 68,523) / 300 = 152.69$ FIM. For 263 days the compensation is $263 \times 152.69 = 40,157$ FIM.

2. In this calculation the *common period* of 14 weeks maternity leave for the wife is used. Her wage reduction is $(68,523 / 312) \times 84 = 18,449$ FIM. She receives $14 \times 6 \times 152.69 = 12,826$ FIM in compensation.

The *gross compensation percentage* is $12,826 / 18,449 \times 100 = 69.5$. 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.

Annex*Tax and social contribution calculation for single APW, 1996. FIM*

Gross wage income:	137,046
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<i>Standard deduction:</i>	
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
<hr/>	
<i>State taxable income:</i>	
Gross wage income	137,046
Total standard deductions	9,449
State taxable income	127,597
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<i>State tax:</i>	
State taxable income is in the bracket 104,000 - 163,000 FIM.	
Then the state tax is calculated this way:	
Fixed amount:	10,060
+ $.27 \times (127,597 - 104,000)$	6,371
State tax	16,431
<hr/>	
<i>Local Government taxable income:</i>	
<i>1. Calculation of 'low income deduction'</i>	
Gross wage income	137,046
Work related expenses	1,500
Basis for calculation of deduction	135,546
<hr/>	
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 $0.05 \times (135,546 - 80,000) = 2,777$ 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
	127,597
Local Government taxable income	127,597

Local tax:

Average Local Government plus church tax rate: 18.81	
Local tax: $0.1881 \times (127,597)$	24,001

Social contributions:

Contributions for illness:
 1.9 per cent (+ 1.45 per cent for income above 80,000 FIM).

$0.019 \times (80,000) =$	1,520
$0.0335 \times (127,597 - 80,000) =$	1,594
+ Soc. contr. unemployment	2,056
+ Soc. contr. occupational pension	5,893
	11,063
All social contributions	11,063

Tax and social contributions:

State tax	16,431
Local tax	24,011
Social contributions	11,063
	51,495
Tax and social contributions	51,495

Elements of Social Security

Elements of Social Security contains an overview of important benefit schemes in Denmark, Sweden, Finland, Austria, Germany, the Netherlands, Great Britain and Canada. The schemes are categorized according to common sets of criteria and compared. Stylized cases illustrate the impact on disposable income of different 'events' such as illness, unemployment, disability and retirement. Maternity benefits and family allowances are also included. The information is up-dated on an annual basis, that of this 7th edition is for 1997.

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