The Social Citizenship Indicator Program (SCIP)

GENERAL
CODING COMMENTS

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The Social Citizenship Indicator Program was initiated in the early 1980's to establish a theoretically relevant and empirically reliable set of institutional data for comparative research on welfare state developments. It is focused on citizens' rights and duties legislated in programs to alleviate economic needs characterising the human condition: old age, illness, unemployment, work accidents and family change. Rights and duties legislated in such social insurance programs form a key part of modern welfare states and of what Thomas H. Marshall termed social citizenship.

Social Citizenship Rights and Duties

1. Introduction

In the following we will describe the operationalisation of the multidimensional concept of *social rights* and *duties* as defined in national legislation on social insurance. This section gives a general account of specifications and distinctions, as well as restrictions, which have been made in the coding process. These general comments concern four major social insurances that have been included in the data-set, namely old-age pensions, work accident, sickness and unemployment insurance. Family benefits are not coded as a separate insurance scheme, but are included in the data-set as supplements for dependents or through taxation (see 7). Parental leave insurance and minimum income programs are also coded separately.

2. Structure

The coding comments are presented in the order of presentation of different variables in the original coding sheets. As legislative variation among countries is wide and detailed, country specific coding comments are given separately for all countries (available as individual sheets under “Country-specific coding sheets and comments”). These comments also include an account of the major legislative development in the different insurance fields to the extent they concern our coding, i.e. mainly the general scheme in the separate fields.

3. Sources and References

Sources and references used for each specific variable, country, insurance and year, are given in immediate connection to the specific coded value. Much effort has been given to be as comprehensive as possible in this aspect. Due to the character of and difficulties in obtaining early data sources, this ambition has not been entirely successful. All sources, including those used for coding specific variables as well as those used for the general country specific information, are to be compiled into a complete reference section and made available in the future.

4. Scope of Time Covered

Data has been collected for fourteen time points stretching over the period 1930-1995, the years being; 1930, 1933, 1939, 1947, 1950 and thereafter every fifth year from 1955 to 1995. Changes in legislation, which come into effect before the end of each year, are coded. Where not otherwise noted, coding refers to the end of the year (December 31).

5. Countries

18 OECD countries have been included; Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, the Netherlands, New Zealand, Norway, Sweden, Switzerland, Great Britain and the United States. The countries have been chosen by the strategy of "most similar cases", in that they are all capitalist countries with an uninterrupted political democracy since World War II and with populations above one million inhabitants.

6. Insurance Programs Included

Four main insurance programs are presented in the data-set; old-age pensions, sickness insurance, unemployment insurance, and work accident insurance. The basic principle for inclusion of a program is that benefits are granted through legislation at the national level, as a social right. This means that only programs which have been created through national legislation and/or programs where the conditions concerning entitlements are regulated by the state, and the state contributes to the financing, have been included. Voluntary members in legislated programs are also included. Where legislated programs have not yet come into force at the time point in question, they have not been included.

a. Sub-National Programs

Exceptions to the inclusion only of programs legislated on the national level are made in countries which are federations and have sub-national political organs able to enact social policy measures. We thus have included work accident programs in USA, Canada and Australia, where the insurance exists in all states in spite of the fact that these programs are not subject to national legislation. Sickness insurance programs found only in six states in the USA have however not been included. In some countries, social policy programmes are enacted at the municipal level, but these have not been included (e.g. Norwegian municipal pensions which for a long time have been paid out by a large proportion of the municipalities).

b. Programs concerning the Standard Worker with an Average Production Worker Wage (APWW)

In comparative research covering several countries and long time periods it is fruitful, in fact necessary, to have at least one standard point of reference in relation to which comparison can be made. In view of the purpose of this program and availability of data, as such a reference point we have chosen a model-typical average production worker case we labelled *Standard Worker*, here defined as a worker in manufacturing or the metal industry. In the following we have made assumptions about family composition, the age of family members, work- and contribution-careers etc. We have assumed that the Standard Worker has had earnings equal to what has been labelled the Average Production Worker's Wage (APWW).

When different programs cover different types of workers (e.g. industrial workers, agricultural workers, mine workers, seamen, salaried employees), the program with the largest coverage among workers in manufacturing (usually the metal workers) has been coded. In countries with separate programs for different occupational categories (such as salaried employees, artisans and farmers), programs covering salaried employees are used to establish maximum replacement rates. Where existing programs cover mainly civil servants or salaried employees and only small segments of manual workers (e.g. miners or seamen), replacement levels, duration, waiting days and other conditions have not been coded. Where replacement rates differ (e.g. between states or rural and urban areas) medians or averages have been estimated, or, if these are not available, the region with the largest population or the region with the largest city has been coded. However legislation concerning maximum or minimum benefit cases is also generally noted. Where details are given concerning e.g. duration length or benefit rates, if no other indication is noted these refer to the case of the Average Production Worker.

c. Collectively Bargained Programs
The presence of collectively bargained programs between associations of employers and employees has been included only in the cases involving:
1) state contributions to the financing of the program,
2) programs that have come into existence through a law, or have been initiated through the state and where the terms of the program can only be changed through legislation.

Purely collectively bargained initiation and/or running of programs have not been included.

For example, in the *Netherlands*, we have excluded early postwar period pension programs including a tripartite board, in which the state, the unions and the employers' associations were represented. Excluded are also the sickness insurance programs in Norway introduced through collective bargaining in 1956. Here public health insurance bodies were used only for administrative purposes. The "wage continuation" introduced in Italy in 1973 is not included since the state did not participate in its financing and the conditions of the program were determined solely through collective bargaining. However, in *France* we have included the collectively bargained unemployment insurance organ when introduced in 1958.

d. Targeted Programs
Criteria for eligibility can be based on means-testing, contributions, citizenship (residence), or belonging to occupational categories. Traditional social assistance schemes, i.e. general programs in which eligibility for benefits is only based on means- or income-testing, are not included. In pension, sickness, and unemployment programs where means- or income-test exists, the concept of coverage is inapplicable and therefore put to zero. In such programs only replacement levels and conditions are coded. For work accident insurance our countries do not include any means-tested programs. Programs where eligibility for cash benefits is defined in terms of an income ceiling, excluding high income earners from compulsory insurance, are included.

e. Contributions and Citizenship
In addition to programs where entitlement is based on insurance contributions, we also include programs where entitlement to benefits is based on broad criteria such as citizenship or residence. The latter type of programs are however excluded if they involve any degree of income testing (e.g. unemployment support programs for those not eligible for the main unemployment insurance programs in Sweden 1973-81, as well as in Finland and France). Where entitlement is based on insurance contributions but benefits are reduced with reference to income from other sources (e.g. post-war unemployment insurance programs in Austria), they have been included.

7. The Standard Worker and the Average Production Worker's Wage

As noted above, the standard case chosen for comparisons is that of a "Standard Worker" with an Average Production Worker's Wage (APWW), where both a single person household and a family household are considered.

To reflect the most typical replacement level of the unemployment, sickness cash benefits and work accident insurance schemes of an average production worker in the manufacturing (metal-) industry, a single-person household is assumed to have the following characteristics;

a) thirty years of age,
b) worked for ten years all in all,
c) worked for five years at the present place of employment,
d) not unemployed during the past two years,
e) assumed not to be living with her/his family of origin.

The typical family situation refers to a married couple with one full-time wage-earner and two minor children aged 2 and 7.

To reflect the typical replacement level of an old-age pensioner, this person is assumed to have worked as an average production worker in the manufacturing (metal-) industry, and to have worked or made full-time contributions during 35 years. For a married couple, one spouse is assumed to have worked during 35 years, whereas the other spouse is assumed not to have worked at all. Some countries pay spouse supplements in their pension system. The spouse supplement is included when the eligibility condition of the spouse is based on citizenship. In both the single and the couple case, the old-age pensioner is assumed to be living without dependent children.

8. General Codes, Coding and Abbreviations; MD, no, APW/ W and rates

no	is coded when value is equal to zero
MD	is coded for missing data

APW	is abbreviation for Average Production Worker
APWW	is abbreviation for Average Production Worker’s Wage

9. General Coding Comments for Four Programs – Elaboration of Coding Procedures

In the following the various aspects describing social citizenship rights and duties are presented and the coding procedures elaborated. We begin with a section dealing with the coding of the old-age pensions. Thereafter follows a section presenting coding of unemployment insurance, sickness cash benefits and temporary work accident insurance. To facilitate separate reading of these two sections, we have repeated information valid for both sections.

Presentations follow the structure of the general coding sheets used for the insurance programs which is displayed in the beginning of each discussion. The same structure is also used in the database.

The discussions are general by nature, which means that exceptions for specific cases can be found in the country specific coding comments.

Coding Scheme: Old-Age Pensions

Country: Year: OLD-AGE PENSIONS (Date)

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1. *No. of insured ('000)*:

2. *Population 15-64 ('000)*:

3. *Coverage*:

4. *No. of old-age pensioners: ('000)*

5. No. of:
   a) *persons above 65 years of age*: *('000)*
   b) *persons above normal pension age*: *('000)*

6. Proportion pensioners in:
   a) *population above 65 years of age*:
   b) *population above normal pension age*:

7. Conditions:
   a) *reference period*:
   b) *contribution period*:
   c) *income ceiling*:
   d) *means test*:
   e) *residence test*:
   f) *other conditions*:

8. Financing:
   a) *insured person*:
   b) *state*:
   c) *employer*:
   d) *other*:

9. Replacement Single: (per year)
   a) *minimum benefit*:
   b) *standard worker*:
   c) *full benefit*:
   d) *maximum benefit*:

10. Replacement Couple: (per year)
    a) *minimum benefit*:
    b) *standard worker*:
    c) *full benefit*:
    d) *maximum benefit*:

11. *Average pensions paid*: (per year)

12. APWW/year:

13. Replacement Rate Single:
    a) *minimum benefit*:
    b) *standard worker*:
    c) *full benefit*:
    d) *maximum benefit*:

14. Replacement Rate Couple:
    a) *minimum benefit*:
    b) *standard worker*:
    c) *full benefit*:
    d) *maximum benefit*:

15. *Average Pension Replacement Rate*:

Variable 1 – Number of insured persons

The number of insured persons equals the sum of the insured persons included by the program or programs under study. Entitlements to benefits can be based either on contributions of insurance payments or on more general criteria such as residence or citizenship. As far as possible, exact estimates of the numbers of persons insured have been made.

In countries where there are different insurance schemes for different categories, the number of insured refers firstly to the basic and most general scheme. Thereafter additional programs are noted. The risk for double counting of persons insured in more than one scheme has been recognised and as far as possible avoided.

Inclusions and exclusions
Concerning the civil servants, benefit rights normally provided by social insurance programs are in several countries established through the employment contracts. In these countries civil servants are included among persons covered by pension insurance.

In pension programs the number of persons insured refers only to those insured in programs based on old age. To properly distinguish those with legal entitlement to a pension from those without legal entitlements, we can differentiate between three possible types of units or recipients:

1. Entitlements and benefit payments to *individuals* regardless of previous contribution record (e.g. post-war Scandinavia): All are included.
2. Entitlements and benefit payments to *married couples* as a legally defined unit. Here both wife and husband have a legal right to a pension (e.g. Switzerland, where couples are regarded as a legal unit): Both are included.
3. Where entitlements and benefits are *limited to contributors* or *heads of households*, only these are included. The spouse who has not contributed has no legally recognised independent right to a pension, e.g. Germany, the Netherlands, and the United Kingdom. In the Netherlands wives have long not had individual pension rights even if they have contributed.

In the first of the cases above all individuals are counted as pension receivers. In the second case both individuals in a married couple are counted. In the third case only the contributors or heads of households are counted.

Dependants are included only if they have the right to cash benefits. Thus, neither pensioners nor dependants have been counted as insured in the cases where they only have a right to health care but not to cash benefits.

Variable 2 – Reference population

The reference population equals the maximum number of persons in specific age intervals that can be covered by insurance. The definitions of age levels for social insurance programs are determined by the availability of population data and by the need to get comparability across years and countries. Sometimes this leads to anomalies. Thus e.g. universal programs covering those between 16 and 64 years will have less than total coverage when those 15-64 years are used as our definition of the relevant population. For old-age pensions the total population 15-64 years is noted.

Reference population data is normally not noted where no legislated insurance scheme exists or where only a means-tested scheme exists, since coverage in these cases automatically is set to zero.

Variable 3 – Coverage

Coverage refers to the proportion of a reference population that is covered by an insurance during a specific point in time (day, week or average during the year). It is calculated as the the number of insured persons (variable 1) divided by the reference population (variable 2).

For contribution based pension schemes three major steps in a maturation process can be observed, 1) when a law concerning the pension comes into force, 2) when those persons for whom the pensions are intended have “earned” the formal right to a minimum pension, and 3) when the first pensions are paid out to the pensioners. The delay between a) and b) can be a matter of some years, between a) and c) of some decades. In principle, coverage during a specific year refers to those who contribute to the scheme or who otherwise have the right to a future pension, i.e. stage 1 above.

Variable 4 – Number of old-age pensioners

The number of old-age pensioners refers to the number of persons actually receiving old-age pensions.

Excluded are pensions based on invalidity, accident, pre-retirement, war, or other pensions not based on old age. This was necessary due to the impossibility of estimating the proportion of such pensioners who are above normal pension age. In countries participating in the World Wars and having special war service pensions as well as programs for widows of persons with war service pensions, we thus tend to underestimate the take-up ratio.

Programs for civil servants are included. Also women above the normal pension age on widows' pension programs in occupationally based pension schemes have been included. Widows of invalidity, accident, and war pensioners above pension age are however not included if they remain on their separate programs.

Among married couples, in countries where only one spouse is legally entitled to a pension, only the spouse with a personal entitlement is regarded as a pension receiver.

Variable 5 – Take-up above normal pension age

The reference population in old-age pensions refers to the total number of persons that could receive old-age pension benefits. The two populations studied are defined,

a) population 65 years or older.
b) population above the normal pension age.

Where pension age is flexible, the reference population is defined by the lowest age at which the right to an old-age pension commences. In cases where normal pension age differs from 65, this is also noted under "other" conditions (see old-age pension variable 7, below).

Variable 6 – Proportion of pensioners in population

The proportion of pensioners is given for two cases. It is the number of pension receivers *(variable 4)* divided by firstly the population above 65 years of age *(variable 5a)* and secondly the population above normal pension age *(variable 5b)*.

When pension age is flexible, the take-up ratio tends to decrease, since all those above the lowest pension age make up the denominator.

Variable 7 – Conditions

In many countries eligibility is dependent on specific conditions, e.g. a certain number of weeks, months or years of contribution and or employment experience during a reference period. These conditions vary between individual programs. The conditions coded all refer to the case of the standard worker. In some cases additional information concerning other groups covered has also been noted.

Conditions refer to the rules determining replacement levels, i.e. not necessarily the rules used to determine coverage. In countries with more than one program for manual workers, the conditions for the metal workers fund or largest fund for industrial workers has been coded. The conditions coded below concerns the person who is eligible for *full* benefit and for a person pensioned the year coded:

a) *Reference period* (years)
The reference period refers to the period during which contributions can be made. If there is no specified reference period and the scheme is contributory, 50 years is coded.
b) *Contribution period* (years)
The contribution period refers to the number of years to which contributions are required during the reference period.
c) *Income ceiling* (earnings per year)
The income ceiling refers to whether there is a ceiling for exclusion from insurance. This does not relate to the maximum earnings for benefit calculation etc. Such a limit does not exclude persons with higher incomes from actual benefits, but limits the replacement levels to a certain specified amount lower than the actual earnings.
d) *Means test*
Coding here refers to whether the main program includes a means test (coded yes or no).
e) *Residence test*
Residence test refers to whether there is a conditional residence test for benefit eligibility (coded yes or no). For the countries that require a residence test, in most cases the necessary length of residence has been noted separately. Coding here refers to the main program. It can be noted here that the condition of citizenship is not the same as the condition of a residence-test, and therefore instead noted under “other conditions”.
f) *Other conditions*
If there are any additional rules that limit eligibility, these are noted here. Also, cases where pension age differs from 65 years, are noted here (as well as under the number of persons in the population above the normal pension age - old-age pension variable 5, above).

In the case where an old-age pension scheme has not matured, both the reference and contribution periods have been coded as the number of years since the implementation of the legislation.

Variable 8 – Financing

Coding of the financing of the insurance programs refers to the distribution of revenues coming from mainly three sources; the insured, the employer and the state (government). Also revenues from ‘other sources’, e.g. capital income and previously established funds, have been noted. Inconsistencies in available data concerning “other sources”, has however led us to only calculate proportions corresponding to the three main sources: insured, employer and state, so that they together make out 100% of the financing. Minor deviations to the total proportion of 1.0 are rounding off effects. This procedure is followed also in cases where other sources make out a rather large share of the financing, as e.g. in the Austrian old-age pension case in 1960, where "other sources" make out 0.128 of total contributory sources. Where no data has been available for other sources this has been coded (-) instead of (MD).

When sources on financing do not distinguish contributions from employers and employees, the total amount of these contributions (as well as the amount from the self-employed) has been separated according to the rules for contributions from employers and employees.

Variables 9 and 10 – Replacements for the Average Production Worker (APW)

The typical benefit levels chosen for comparisons are: standard, minimum, full, and maximum benefit levels. For old-age pensions comparisons concern yearly compensations.

The *standard* benefit refers to benefit received by the typical case of the Standard Worker with an APWW as specified below. The *full benefit* levels reflect the extent of fulfilment of all conditions affecting benefit levels, such as contribution time which has been possible for a worker to reach.

Minimum benefits reflect conditions in the major schemes where average production workers are included. *Maximum* benefit levels reflect stratification in terms of income-related benefits above those of the APWW. The minimum benefit reflects the floor to which a person can fall in case of lost earnings within the major scheme that includes the Standard Worker. Not only social insurance benefits but also means tested benefits may be included here. Information has also been noted in cases where minimum benefits (e.g. national legislated minimum benefits) exist separately of the major scheme covering typical production workers. We do not however, include public assistance etc. All benefit levels are determined under the assumption that the person has no property and no income from any other source.

The replacements for old-age pensions refer to one year and are given in country specific currency. The replacement level during the year in question refers to the right to replacement held by those who become pensioners at the end of the year, i.e. legislative changes which come into force by December 31 are included. Benefit levels have been calculated for two different family types, a single person **(variable 9)**, and a married couple without minor children, under the assumption that both spouses are above normal pension age but that only one of them has been gainfully employed **(variable 10)**.

The different levels of replacement studied are:

a) *Minimum benefit*

   The minimum old-age pension benefit, reflecting the floor to which a person can fall, also includes means tested benefits. Further explanation of the various kinds of minimum benefits are given below.

b) *Standard worker*
Standard old-age pension benefits refer to benefits given to the specific case of the average production worker whose eligibility status is detailed under the APWW-variable below.
c) *Full benefits*
This level reflects the extent to which conditions (such as contribution years) have been fulfilled according to rules relevant for the Standard Worker at the time of the year coded. It thus reflects the maturation of pension programs. For the married couple, the full benefit reflects the extent to which one spouse, with an APWW, has fulfilled the conditions possible at that particular point in time. The other spouse is assumed to have no entitlements to contributory pensions in her/his own right.
d) *Maximum benefits*
Maximum benefit levels reflect stratification in terms of income-related benefits above the APWW. For the married couple, see c) above.

Among various kinds of minimum replacements in old-age pensions as well as unemployment, sickness and work accident insurance we can discern the following types:

1. *Flat rate insurance benefit*
   This benefit can not be subject to any reductions, e.g. the Swedish “People’s Pension”.
2. *Reduced flat rate insurance benefit*
   This benefit reflects the fulfilment of contributions, other conditions or an explicit minimum insurance benefit (not means tested supplementary benefit), e.g. unemployment benefit in Britain in the post-war period.
3. *Means-tested pension*
   This is found when no insurance scheme exists, e.g. the Australian sickness and unemployment benefits.
4. *Means tested pension (two tiers)*
   This is when separate schemes co-exist, such as contributory and non-contributory pensions, or unemployment assistance and insurance, e.g. pensions in Britain in the 1930s.
5. A *combination* of flat rate insurance benefit and a means tested supplementary benefit, e.g. pensions in Finland in the 1950s, or in Sweden between the wars.

In sick pay or work accident benefits, there are no means tested supplementary or complementary benefits in our 18 countries. Thus only types 1 and 2 will appear in these two programs. In the case of unemployment, type 4 is also considered. In the case where the Standard Worker has the right to the minimum non means tested insurance benefit, this has been coded instead of the means tested benefit, e.g. the French unemployment insurance. Information on separate means tested insurance schemes is noted separately. As for old-age pensions, we find all different kinds of combinations. In order to interpret outcomes, the proportion of the minimum benefit that is means tested has been noted. In countries with only income tested benefits, which decrease to zero with increasing income, no minimum benefits are coded assuming no other income. This implies that they are equal to the pensions of the Standard Worker (e.g. Australia).

Where minimum benefits differ according to various insurance programs and the minimum daily benefit and duration is dependent on previous wage and length of contributions, coding here refers to the particular scheme covering a typical worker, but with shorter contribution record than the Standard Worker. This also holds where contributions have been made during the shortest period of time required for benefits, and with a wage belonging to the lowest wage class (e.g. in Denmark).

Variable 11 – Average pensions paid per year

For old-age pensions the average pension actually paid out to all old-age pensioners at the end of the year has been coded. Where the Standard Worker is not entitled to a pension, average pension is set equal to zero. Where civil servants have special programs, these programs have not been included (even if they also cover some manual workers). Where manual workers have separate programs, their average pension is used. Here it should be noted that the comparability of the variable is relatively low and sufficient quality control has not been made.

Variable 12 – Average Production Worker's Wage (APWW - per year)

Data concerning the APWW is given for all countries, all insurances and all years of coding, also in cases where there is no legislated insurance scheme or where only a means tested scheme exists. The two exceptions are Italy in 1939 and Germany in 1947.

Variables 13 and 14 – Replacements Rates (single person and family/couple)

The replacement rate reflects to what extent the insurance program replaces the Average Production Worker's Wage (APWW). The actual figure is here noted as a proportion of the APWW per year. It is calculated as the ratio of the replacement level (variables 13-14) divided by the Average Production Worker Wage (variable 12).

Variable 15 – Average Pension Replacement Rate

The Average Pension Replacement Rate is the proportion of the Average Pension Paid to the Average Production Worker Wage (detailed above), i.e. the ratio between the average pension paid (variable 11) and the APWW (variable 12).

Coding Scheme: Unemployment, Sickness, Accident Insurances

Country: Year: UNEMPLOYMENT INSURANCE
SICKNESS CASH BENEFITS
TEMPORARY WORK
ACCIDENT INSURANCE
(Date)

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1. No. of insured (‘000):

2. No. in:
   a) *labour force (‘000)*:
   b) *employees/population 15-64 (‘000)*:

3. Coverage:
   a) *labour force*:
   b) *employees/population 15-64*:

4. *Waiting days*:

5. *Duration*:

6. Conditions:
   a) *reference period*:
   b) *contribution period*:
   c) *income ceiling*:
   d) *means test*:
   e) *other conditions*:

7. Financing:
   a) *insured person*:
   b) *state*:
   c) *employer*:
   d) *other*:

8. Replacement Single: (per week after w.d.)
   a) *standard worker first week*:
   b) *standard worker first 26 weeks average*:
   c) *minimum benefit first 26 weeks average*:
   d) *full benefit first 26 weeks average*:
   e) *maximum benefit first 26 weeks average*:

9. Replacement Couple with two children:
   a) *standard worker first week*:
   b) *standard worker first 26 weeks average*:
   c) *minimum benefit first 26 weeks average*:
   d) *full benefit first 26 weeks average*:
   e) *maximum benefit first 26 weeks average*:

10. *APWW/week*:

11. Replacement Rates Single:
    a) *standard worker first week*:
    b) *standard worker first 26 weeks average*:
    c) *minimum benefit first 26 weeks average*:
    d) *full benefit first 26 weeks average*:
    e) *maximum benefit first 26 weeks average*:

12. Replacement Rates Couple with two children:
    a) *standard worker first week*:
    b) *standard worker first 26 weeks average*:
    c) *minimum benefit first 26 weeks average*:
    d) *full benefit first 26 weeks average*:
    e) *maximum benefit first 26 weeks average*:

Variable 1 – Number of insured persons

The number of insured persons equals the sum of the insured persons included in the program or programs under study. Entitlements to benefits can be based either on insurance contributions or on more general criteria such as residence or citizenship. Exact estimates of the numbers of persons insured have as far as possible been made.

In countries where there are different insurance schemes for different categories, the number of insured refers firstly to the basic and most general scheme. Thereafter additional programs are noted. The risk for double counting of persons insured in more than one scheme has been recognised and as far as possible avoided.

Inclusions and exclusions
Concerning the civil servants, benefit rights normally provided by social insurance programs are in several countries established through the employment contracts. Also if public employees have separate programs for sickness, unemployment and work accident, they are included in estimation of coverage. This has however sometimes involved rather rough estimation procedures (e.g. in Germany and Austria).

In health related insurance (sickness and work accident insurance) only those with the right to cash benefits as earnings replacement are included as insured.

Dependants are included only if they have the right to cash benefits, i.e. dependants have not been counted as insured in the cases where they only have a right to health care but not to cash benefits.

Variable 2 – Reference populations

The reference population equals the maximum number of persons in specific age intervals that can potentially be covered by insurance. The definitions of age levels for social insurance programs are determined by the availability of population data and by the need to get comparability across years and countries. Sometimes this leads to anomalies. Thus e.g. universal programs covering those between 16 and 64 years will have less than total coverage when those 15-64 years are used as our definition of the relevant population. The following populations have been studied.

a) total labour force
b) total population 15-64 years
c) total number of employees and workers (excluding employers, independents and assisting or unpaid family members).

For unemployment, sickness and work accident insurance, the total labour force is used as a reference population. For the unemployment insurance, the number of employees and workers is also used, and for sickness insurance the total population 15-64 years.

Reference population data is normally not noted where no legislated insurance scheme exists or where only a means-tested scheme exists, since coverage in these cases automatically is set to zero.

Variable 3 – Coverage

Coverage refers to the proportion of a reference population that is covered by an insurance during a specific point in time (day, week or average during the year). It is calculated as the ratio of the number of insured persons (variable 1) divided by the reference population (variable 2).

Variable 4 – Waiting days

The definition chosen to define waiting days is the number of days (after the day of reporting of work incapacity) a person has to wait until the first day for which he receives benefits.

All the conditions coded are those that apply to a Standard Worker (with the Average Production Worker's Wage - APWW) as defined below, but in countries where there is more than one program for manual workers, waiting days for the two programs with the largest coverage have been noted.

The determination of waiting days is complicated by the fact that the meaning of a stated number of days depends on the number of days for which benefits are paid as well as on the number of working days per week, and on whether waiting days include only working days or not. Problems arise especially where the waiting period is said to be one week. An *alternative definition* would have been e.g. the number of potential benefit days foregone. Unlike this definition the chosen one does not reflect the differences and changes in the length of the work week. Seven waiting days are thus coded where the waiting period is stated to be one week as well as where there are 6 waiting days in a 6-day working week or 5 waiting days in a 5-day working week. Where waiting days are specified to be for example 7 working days in the case of a six-day working week, we code 8 waiting days. Waiting days stated to be four or less are coded as they are given. Sometimes reliable information on these points is missing.

Special cases:

a) The reference period during which waiting days are counted can vary, e.g. waiting days are imposed only once a year. In such cases the number of waiting days during first spell of absence from work has been coded and the special conditions are noted in addition.
b) Where the employer by legislation continues to pay wages until the sickness (e.g. sick pay) or accident insurance comes into effect, waiting days are not coded. When there is a difference in replacement levels between sick pay and the insurance benefit, the usual average is calculated in order to establish the 26-week average benefit. In cases where there is no legislated sick pay but where it is stated that the employer "usually" or "generally" pays sick pay or wage continuation during waiting days, waiting days are coded (e.g. Netherlands sickness and accident insurance from 1967).
c) If waiting days are wavered or decreased when the period of absence from work lasts more than a specified number of days, waiting days are still counted. Thus if waiting days exist for a short period of absence from work but are wavered or decreased if the absence lasts a longer period, waiting days for the shorter period are coded. This is the case with e.g. United Kingdom's work accident insurance 1930-70, where benefits were paid from first day if incapacity lasted two weeks or more, or the Finnish work accident insurance in 1950-80, where the number of waiting days is coded 3, while the legislation states that benefits are paid from first day if duration lasts more than 3 days.
d) In sickness insurance an additional problem is how to handle the first day of illness. Where sickness insurance involves an employer period from the start, we have assumed that compensation begins with the cessation of earnings and have thus set waiting days to zero. In countries where benefits are paid only for the day after illness is reported (although, as e.g. in Sweden, the report could be made in the evening before the working day starts), we have coded one waiting day.

Variable 5 – Duration

The duration of benefits is equal to the number of weeks during which a recipient has the right to benefits. In countries where there is more than one program for manual workers, duration for the two programs with the largest coverage has been noted.

In unemployment, sickness and work accident programs, the number of days per week during which benefits are payable will affect the replacement level. This has lead us to calculate the replacement levels as the total amount of benefits received per week divided by the weekly earnings of the APW. Since the number of days during which benefits are payable is already reflected in replacement levels, duration is defined in terms of weeks with the number of days for which benefits are payable (decimals are rounded off). This is also normal practice in several countries.

The comparative benefit replacement rates refer to 26-week averages. Where duration is limited to a period less than 26 weeks, the benefits during the remaining period are set to zero, which lowers the average 26-week replacement levels. Cases with shorter duration periods make out rare cases in sickness and work accident insurances and are in these instances limited to earlier years of the coding period. However, in unemployment insurance such cases are much more frequent, where approximately a third of the countries had durations below 26 weeks well into the 1950s, and in a few cases also into the 1970s. In all cases where duration is shorter than 26 weeks, this is also specified by the coding of the replacements.

Sometimes benefits of limited duration in unemployment, sickness, and work accident insurance are continued in some fashion after exhaustion. In the cases where this continuation is “automatic” and “immediate”, the actual duration coded still refers to the initial insurance, but the duration of the continuing insurance is noted below. However, when calculating the average 26 week benefit, both benefits are considered. E.g. the Belgian sickness cash benefit (from 1944) was formally divided between sickness cash benefits during the first half year of illness and thereafter automatically continued by invalidity benefits without any income- or means-test, although the later paid at a lower rate. The average 26-week benefit in this case is an average of the first 25 weeks with sickness cash benefits at 60% of wage and thereafter one week of invalidity benefits at 40% of the wage.

In the other cases where the continuation of benefits is dependent upon an evaluation of the situation of the insured or the fulfilling of other new conditions, this is not considered to be an automatic continuation of benefits and therefore not included when calculating 26-week average benefits. Such regulations are in many cases expressed as e.g. “26 weeks for occupational injury benefit, after that disablement benefit can be claimed with an unlimited duration”.

It should also be noted that unlimited duration in the data-set itself has been coded 520 weeks (10 years) for practical reasons. This figure is far above the longest noted period of duration, which is 400 weeks in the United States work accident insurance in period 1933-60.

Variable 6 – Conditions

In many countries eligibility is dependent on specific conditions, e.g. a specific number of weeks, months or years of contribution and/or employment experience during a reference period. These conditions vary between individual programs. The conditions coded all refer to the case of the Standard Worker. In some cases additional information concerning other groups covered has also been noted.

For unemployment, sickness cash benefits, and work accident insurance the following distinctions are made.

a) *Reference period* (weeks)
The reference period refers to whether any specified employment experience, or membership in a fund, is required. The reference period is only coded in relation to a contribution period, so that in cases where no contributions explicitly are required, the reference requirement is coded "no". This is e.g. the case in the Italian sickness insurance of 1990 that requires "a regular job at least up to 60 days before the sickness event". The reference period is never coded shorter than the contribution period.

b) *Contribution period* (weeks)
Where there are any contribution requirements, the contribution period states during how many weeks such contributions must be paid.
Where contributory conditions require e.g., "26 weeks of work in the last three years", the reference period is coded 156 weeks, and the contribution period is coded 26 weeks (the Danish unemployment insurance from 1970). In cases where a general condition is stated, such as e.g. "one year of employment", this has been coded as a 52 week period.

c) *Income ceiling* (earnings per year):
The income-ceiling refers to whether there is an income ceiling above which exclusion from insurance occurs. This is not related to maximum earnings for benefit calculation etc, which does not exclude persons with higher incomes from actual benefits, but aims at limiting the replacement levels to a certain specified amount lower than the actual earnings.

d) *Means test*
Coding here refers to whether the main program includes a means test (yes) or (no). If additional programs to the main program exists, e.g. additional unemployment assistance program (most usually including a means test), this has been noted.

e) *Other conditions*
If there are any additional rules that limit the eligibility these are noted here, such as race, moral criteria, substance abuse, or lack of relevant citizenship disqualifying a claimant from benefits.

Variable 7 – Financing

Coding of the financing of the insurance programs refers to the distribution of revenues coming from mainly three sources; the insured, the employer and the state (government). Also revenues from 'other sources', e.g. capital income and previously established funds, have been noted. Inconsistency availability of data concerning other sources has however led us to only calculate proportions corresponding to the three main sources: insured, employer and state, so that they together make out 100% of the financing. Minor deviations to the total proportion of 1.0 are due to rounding off effects. This procedure is also followed in cases where other sources make out a rather large share of the financing, as e.g. in the Austrian old-age pension case in 1960, where "other sources" make out 0.128 of total contributory sources. Where no data has been available for other sources this has been coded (-) instead of (MD).

When sources on financing does not distinguish contributions from employers and employees, the total amount of these contributions, as well as the amount from the self-employed has been separated according to the rules for contributions from employers and employees.

In sickness insurance, only the financing of sickness insurance, such as cash benefits, medical costs and doctors' fees have had to be included. Excluded are financing of public health or hospital services.

Variables 8 and 9 – Replacements for the Standard Worker

The typical benefit levels chosen for comparisons are: standard, minimum, full and maximum benefit levels. For unemployment, sickness, and work accident insurance comparisons refer to the first 26-week benefit averages, with the exception of standard benefits, where the first week average is also coded. In cases were duration is less than 26 weeks, the benefit during the remaining weeks is set to zero (see further information under duration variable below).

The *standard* benefit refers to benefit received by the typical case of the Standard Worker with an APWW as specified below. The *full benefit* levels reflect the extent of fulfilment of all conditions affecting benefit levels, such as contribution time which has been possible for a worker to reach.

Minimum benefits reflect conditions in the major schemes where average production workers are included. *Maximum* benefit levels reflect stratification in terms of income-related benefits above those of the APWW. Correspondingly the minimum benefit reflects the floor to which a person can fall in case of lost earnings within the major scheme that includes the Standard Worker. Not only social insurance benefits but also means tested benefits may be included here. Information has also been noted in cases where minimum benefits (e.g. national legislated minimum benefits) exist separately of the major scheme covering typical production workers. We do not however, include public assistance etc. All benefit levels are also determined under the assumption that the person has no property and no income from any other source.

In cases where the replacement level is stated as a percentage of preceding years earnings (e.g. Belgium work accident insurance), the replacement rate calculated still refers to the Average Production Worker Wage during the particular year of coding.

For unemployment, sickness and work accident insurance the replacement level per week (in country specific currency) is based on the total amount of benefits received during a week. Since the number of days during which cash benefits are paid can vary from 5 to 7, the number of days for which benefits are collected have been noted. All replacement rate levels are calculated after waiting days.

Benefit levels have been calculated for two different family types, a single person **(variable 8)** and a couple with one full-time wage-earner and two children aged 2 and 7 **(variable 9)**.

The different levels of replacements studied are:

a) *Standard Worker* (first week)
   Standard benefits refer to benefits given to the specific case of the average production worker whose eligibility status is detailed below. The benefit has here been calculated for the first week after waiting days.
b) *Standard Worker* (first 26 weeks average)
   As above, but benefits have here been calculated as an average for the first 26 weeks after waiting days.
c) *Minimum benefit* (first 26 weeks average)
   The minimum benefit sets a floor below which a worker cannot fall. These benefits can be income tested. Benefits here refer to the average benefit paid during the first 26 weeks.
d) *Full benefit* (first 26 weeks average)
   Full benefit refers to the highest benefit the Average Production Worker is entitled to when eligibility conditions, such as contribution periods or time worked, are fulfilled to the extent this has been possible for someone with an APWW at the end of the year coded. Benefits here refer to the average benefit paid during the first 26 weeks.
e) *Maximum benefit* (first 26 weeks average)
   These benefits reflect the presence of a ceiling above which the benefit of an insured personr can not exceed irrespective of earnings above the APWW. Maximum benefits may thus reflect not only levels of earning but also the length of contribution periods (longer than that stipulated for the Standard Worker) etc. Benefits here refer to the average benefit paid during the first 26 weeks.

For work accident insurance there are generally two different benefits paid to the injured person depending on the nature of the injury; firstly benefits paid due to temporary incapacity and secondly benefits paid due to permanent incapacity. Here our coding always refers to the case of temporary incapacity.

Variable 10 – Average Production Worker's Wage (APWW – per week)

Data concerning the APWW is given for all countries, all insurances and all years of coding, also in cases where there is no legislated insurance scheme or where only a means tested scheme exists. The two exceptions are Italy in 1939 and Germany in 1947.

Variables 11 and 12 – Replacements Rates (single person and family/couple)

The replacement rate reflects to what extent the insurance program replaces the Average Production Worker's Wage (APWW). The actual figure is here noted as a proportion of the APWW per week. It is calculated as the ratio of the replacement level (variables 11-12) for unemployment, sickness and work accident insurance divided by the Average Production Worker Wage (variable 10).