Limitations

1. General limitations

The simple approach of comparing the tax/benefit position of example families avoids many of the conceptual and definitional problems involved in more complex international comparisons of tax burdens and transfer programmes. However, a drawback of this methodology is that the earnings of an average worker will usually occupy a different position in the overall income distribution in different economies, although the earnings relate to workers in similar jobs in various OECD member countries.

Because of the limitations on the taxes and benefits covered in the Report, the data cannot be taken as an indication of the overall impact of the government sector on the welfare of taxpayers and their families. Complete coverage would require studies of the impact of indirect taxes, the treatment of non-wage labour income and other income components under personal income taxes and the effect of other tax allowances and cash benefits. Complete coverage would also require that consideration be given to the effect on welfare of services provided by the state, either free or below cost, and the incidence of corporate and other direct taxes on earnings and prices. Such a broad coverage is not possible in an international comparison of all OECD countries. The differences between the results shown here and those of a full study of the overall impact on employees of government interventions in the economy would vary from one country to another. They would depend on the relative shares of different kinds of taxes in government revenues (see Annex I) and on the scope and nature of government social expenditures.

The Report shows only the formal incidence of taxes on employees and employers. The final, economic incidence of taxes may be quite different, because the tax burden may be shifted from employers onto employees and *vice versa* by market adjustments to gross wages.

The income left at the disposal of a taxpayer may represent different standards of living in various countries because the range of goods and services on which the income is spent and their relative prices differ as between countries. In those countries where the general government sector provides a wide range of goods and services (generous basic old age pension, free health services, public housing, university education, etcetera), the taxpayer may be left with less cash income but may enjoy the same living standards as a taxpayer receiving a higher cash income but living in a country where there are fewer publicly provided goods and services.

As mentioned in Part O and detailed in the Special Feature of the 2005 edition of *Taxing Wages*, second earners who are earning 33% of the average wage are very likely to be working part-time, although the *Taxing Wages* methodology generally assumes that they are working full-time. However, this only affects the accuracy of the results in *Taxing Wages* for one family type in Belgium (married couple where a second earner is earning 33% of average wages). Therefore, one should be cautious when interpreting the results for this family type for Belgium. In addition, for all countries with hour-based rules (see the 2005 Special Feature), caution should be used in applying the results in this Report to other household types.

2. Some specific limitations on the income tax calculation

The exclusion of non-wage income and the limited number of tax reliefs covered imply that the average rates of income tax in the tables in this publication will not necessarily reflect the actual rates confronting taxpayers at these levels of earnings. Actual rates may be lower than the calculated rates because the latter do not take into account non-standard expense-related reliefs. On the other hand, actual rates may be higher than calculated rates because the latter do not take into account tax on non-wage income received by employees.

The decision not to calculate separately average rates of income tax taking into account the effect of non-standard tax reliefs was taken because:

- in many cases, expense-related reliefs are substitutes for direct cash subsidies. To take into account these reliefs while ignoring any corresponding direct subsidies would distort comparisons of take-home pay plus cash transfers;
- the special tax treatment of certain expenses may be linked to special treatment of any income associated with these expenses (*e.g.* the tax treatment of social security contributions and pension income) which is beyond the scope of this study;
- a few countries were unable to estimate the value of these reliefs and even those countries which could do so could not limit their estimates to taxpayers with the characteristics assumed in the above part on methodology; and,
- not all countries could calculate separately the reliefs available to different family-types. Where a split is provided between single individuals and families with children, there are large differences in the value of the reliefs typically received by these two categories of households.

3. Limitations to time-series comparisons

The Calculations of the tax burden on labour income in OECD countries reported in previous editions of *Taxing Wages*, including the 2004 edition, are based on an average earnings measure calculated for manual full-time workers in the manufacturing sector (the "average production worker"). From 1996 onwards there are time-series results covering all 8 family types, whereas there are results from 1979 onwards for two of these family-types: single individuals without children and married one-earner couples with two children with earnings equal to those of an average production worker.

Any analysis of the results has to take into account the fact that the earnings data do not necessarily relate to the same taxpayer throughout the period. The average earnings are calculated for each year. As such, the results do not reflect the changing earnings and tax position of particular individuals over time but rather to the position of workers earning a wage equal to average earnings in the covered industry sectors in each particular year. This, in turn, may mean that the earnings levels referred to may be at different points in the income distribution over the period covered and changes in tax rates may be influenced by these trends.

From the 2005 edition, *Taxing Wages* has reported tax calculations under a broadened average worker definition that includes all full-time employees covering industry Sectors C-K (reference to ISIC Rev. 3.1). The implications of adopting this new definition for time-series comparisons are discussed in the 2005 edition of *Taxing Wages*. As of the 2010 edition of the *Taxing Wages* Report, many countries have started reporting average wage earnings for full-time employees covering industry Sectors B-N of the ISIC Rev. 4 industry classification (which broadly corresponds to Sectors C-K in ISIC Rev. 3.1).

Despite the focus on the years since 2000 in the main body of the Report, Annex D also reports figures since 1979 for single individuals without children and married one-earner couples with two children with earnings equal to those of an average production worker under the old definition of average worker.

It should, however, be noted that there are a number of additional limitations which apply to the interpretation of the results for the period from 1979-2004 (Tables in Annex D).

- For technical reasons, the procedures countries follow to determine the benchmark earnings level of the national average production worker may change over time. For instance, in the time-series from 1979 onwards on needs to be aware of the fact that the average worker wage level in France as of 1997 is based on improved statistical data, which lead to a one-off additional increase in the average worker's wage level of 5 to 7 per cent in that year. In the same vein, starting with the 1999 edition, the Netherlands assumes that the wage for manual workers in industry is on average equal to 90 per cent of the wage for all industrial workers, including white collar workers and supervisors.
- In certain cases, the taxes covered for a given country may differ over the years. For example, in the time-series from 1979 onwards on needs to be aware of the fact that Korea extended the coverage of its social security contributions as of 1997. This extended coverage largely explains why the wedge between labour costs and net take-home pay of a single average production worker in the case of Korea doubles from 6.3 per cent (1996) to 12.4 per cent (1997). Another example is the reporting of payroll taxes. In Australia, the payroll taxes are only included in the calculations from 2003; and in Austria from 1998.
- In some of the countries with state and/or local income taxes, the rates of tax applied to an average worker refer to a typical region. Consequently, if movements in tax rates in this region are unrepresentative of changes in income taxes elsewhere in the country, they will provide a poor indication of how country-wide average rates of taxes are evolving.

Particular care is required in interpreting the results where many of the limitations set out above apply to one particular country since, while taken individually, each limitation may not significantly distort the results, but cumulatively the impact may be important.

To conclude, the data are comparable for the specific situations referred to and the results show the proportion of gross wage earnings retained. This net cash income (including universal cash benefits) is the amount over which the household is able to exercise a free choice in the allocation of its expenditure.