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MIMOSIS: MIcrosimulation MOdel for Belgian Social Insurance Systems
Modelling rules for the module on personal income taxes

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Abstract

In this note we discuss the rules, used to simulate the personal income taxes in MIMOSIS.[1] The subset of MIMOSIS that covers the personal income tax computation rules, is called the PIT module.

The rules, discussed in this note, and implemented in the PIT module, are an interpretation of the personal income tax legislation of the tax year 2002 (income 2001). In appendix 1 we discuss the changes, necessary to simulate changes in the legislation of tax years 2003 until 2006.

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[1] The development of the MIMOSIS model was supported by Federal Science Policy within the framework of the AGORA programme, on the request of the F.P.S. Social Security, who is responsible for the management and the maintenance of the MIMOSIS model. The model is based on administrative data from the Datawarehouse Labour market and Social protection, managed and maintained by the CrossRoads Bank for Social Secruity.

Table contents

Introduction

In order to compute the personal income taxes we use a number of exogenous variables, obtained from an administrative data source. Next to this we also need to construct a number of endogenous variables. Some elements of the legislation are integrated in the module in a parametric form.

In the remainder of the text we point out which are the exogenous and endogenous variables and the parameters of the PIT module. Names of variables and parameters will appear with capital letters. The names of endogenous variables and parameters start with the string PIT_. Unless indicated otherwise, the default value of an endogenous variable is 0.

Most modules of MIMOSIS run on quarterly data. If a variable or parameter name ends with the string _QT this refers to registrations for the quarter that is being processed. A quarterly registration can either be an amount received during the given quarter, or a status that is assumed to apply throughout the quarter. Variables or parameters that contain registrations for preceding quarters are referred to with ending strings _QTMIN1, _QTMIN2, _QTMIN3 … referring respectively to the preceding quarter, two quarters ago and three quarters ago. Variables or parameters that contain registrations for a day, month or year, end with the string _DAY, _MONTH or _ANN respectively. In appendix 2 we provide a list of all variables and parameters used in this note.

In the first three sections of this note we suggest how the tax legislation rules of the tax year 2002 (income 2001) can be implemented on the data we assume to be available in the project. The tax rules of the tax year 2002 serve as the starting point here, since the available income data are registered for the year 2001.

We do not dispose of administrative data of the tax administration to simulate personal income taxes. Therefore the construction of the PIT module requires the execution of three distinct steps:

a) individuals in the initial sample should be regrouped into tax units, a concept evidently distinctive from sociological households,

b) the data for each reconstructed tax unit have to be processed such that we obtain an estimate of the personal income taxes paid by this tax unit,

c) and tax units that are liable to pay income taxes should be distinguished from those that are not liable to pay income taxes.

The reconstruction of tax units is described in the first section. The second section contains a description of the tax calculation process that can be applied on the available data for each reconstructed tax unit. In the third section we explain how the tax units that are liable to pay income taxes, will be identified.

1 RECONSTRUCTION OF TAX UNITS

The sample we dispose of initially is a sample of individuals living in a Belgian community on January 1st 2002. We do observe which individuals in the sample make up a single sociological household, but we do not observe how these household members are connected into tax units.

A tax unit is the set of people that jointly enter a single tax assessment for a certain tax year.[2] A tax unit consist of a single taxpayer or a legally married couple and the individuals that depend on the taxpayer or on one of the spouses according to the rules set by the tax legislator. The major part of the tax assessment comprises different items of taxable income, tax deductible costs and expenses that grant a tax credit. Only the taxpayer or, if married, the taxpayer and the spouse declare income and expense items on the tax form.

In order to make up a single tax unit according to the Belgian tax legislation, individuals should satisfy a number of conditions. In this section we describe how these tax legislation conditions, and the information we do observe for the individuals in our sample, are combined to reconstruct the different tax units within each sociological household. We address the application of the different conditions step by step below.

1.1 ARE THE INDIVIDUALS IN OUR SAMPLE LIABLE TO PAY INCOME TAXES IN BELGIUM?

The Belgian tax authority considers people that are registered in the National Register as Belgian citizens (Rijksinwoners) until there is a proof to the contrary.[3] Belgian citizens are subordinated to the Belgian tax legislation for their income earned in Belgium and abroad. The sample frame, used to construct our initial sample of individuals, is the set of all individuals in the National Register that have their main place of residence in Belgium on January 1st 2002. We will assume that all individuals in our sample are liable to pay income taxes in Belgium.

1.2 DO INDIVIDUALS IN OUR SAMPLE SATISFY FAMILY TIE CONDITIONS?

A person who is married makes up a single tax unit with its spouse in the year after the year of marriage.[4] Certain other household members can depend on other household members, according to the tax legislation, if the dependent

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[2] See Art 43,§1, 2° of "programmawet van 24 december 1993", See Juridat (2004).
[3] See Standaard Uitgeverij (2002), p. 10-11 and Taillieu (2003), section 7-2.
[4] See Standaard Uitgeverij (2002), p. 14 and Taillieu (2003), section 12-1.

members satisfy certain family tie conditions. Household members that satisfy one of the following conditions can be tax-dependent[5]:

a) descendants of the taxpayer or the spouse of the taxpayer,

b) children that are not descendants but for whom the taxpayer or the spouse of the taxpayer is responsible,

c) ascendants of the taxpayer or the spouse of the taxpayer,

d) relatives of the taxpayer or the spouse of the taxpayer in the second degree,

e) individuals from which the taxpayer was itself dependent, according to tax legislation, in the past.

In the tax legislation one further distinguishes between dependent children and other dependent persons.

We can apply the above family tie conditions on the available data, which then results in preliminary tax units. These created tax units are preliminary in the sense that some of the dependents can still be split up at a later stage because of other conditions that have to be satisfied as well by tax dependents.

We will reconstruct these potential tax units with the available information and store the rank of each member within the tax unit in the variable PIT_TURANK_ANN. This variable can take four values, apart from the default value 0, i.e. 1) head of the tax unit, 2) spouse of the head of the tax unit, 3) dependent child and 4) dependent other. Each tax unit member will also get a tax unit identification number. This number will be stored in the variable PIT_TUNUMB_ANN.

Construction rule for PIT_TURANK_ANN and PIT_TUNUMB_ANN:

In order to determine the values of the variable PIT_TURANK_ANN, we make use of the family relationship variables FAMREL_FAMILY, FAMREL_RELATION and FAMREL_COUPLE.[6]

The variable FAMREL_FAMILY contains a unique family identification number. The values of the variables FAMREL_RELATION and FAMREL_COUPLE are listed in Table 1 and Table 2.

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[5] See Standaard Uitgeverij (2002), p. 22-23.
[6] In Decoster, De Swerdt, Orsini and Van Camp (2007) we explain how these variables are constructed.

Table 1: Values and labels of FAMREL_RELATION

Value	Label
1	Head of the family
2	Partner of the head of the family
3	Child of the head of the family or of his partner
4	Ascendant in the first degree of the head of the family or of his partner
5	Ascendant in the second degree of the head of the family or of his partner
6	Relatives up till the third degree of the head of the family or his partner, other than ascendants or children
7	Other family members

Table 2: Values and labels of FAMREL_COUPLE

Value	Label
0	Individual is not part of a couple
1	Individual is part of a married couple
2	Individual is part of an unmarried couple

In some occasions we also need the variable NAREGNIS_RELATION for the construction of the tax units. The variable NAREGNIS_RELATION captures the relationship between the head of the sociological household and all other household members.

Each head of the family will be assumed to be the head of a tax unit (i.e. if FAMREL_RELATION is equal to 1, PIT_TURANK_ANN will be set equal to 1 as well). If the head of the tax unit is part of a married couple, i.e. FAMREL_COUPLE is equal to 1, both spouses are considered to be part of the same tax unit.[7] For the partner of the married head of the tax unit, PIT_TURANK_ANN will be set equal to 2.

If the head of the tax unit is part of an unmarried couple, i.e. FAMREL_COUPLE is equal to 2, the partner will be considered to be the head of a separate tax unit, i.e. PIT_TURANK_ANN will be set equal to 1 for this partner.

Children or grandchildren of a single family will be considered to be dependent children of the head of the family (i.e. if FAMREL_RELATION is equal to 3 or if FAMREL_RELATION is equal to 6 and NAREGNIS_RELATION is equal to 5, PIT_TURANK_ANN will be set equal to 3 and PIT_TUNUMB_ANN will get the same number as the one determined for the individual with FAMREL_RELATION equal to 1).

Ascendants of a single family will be considered to be dependent others of the head of the family (i.e. if FAMREL_RELATION is equal to 4 or 5, PIT_TURANK_ANN will be set equal to 4 and PIT_TUNUMB_ANN will get the same number as the one determined for the individual with

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[7] Remark that we assume here that married partners are legally married for more than one year.

FAMREL_RELATION equal to 1). Also brothers and sisters or brothers and sisters in law will be considered to be dependent others since they are relatives in the second degree of either the head of the tax unit or the spouse of the head (i.e. if FAMREL_RELATION is equal to 6 and NAREGNIS_RELATION is equal to 9 or 10, PIT_TURANK_ANN will be set equal to 4).

All other family members will be considered to be part of independent tax units. They are all considered to be head of their tax unit, i.e. if FAMREL_RELATION is equal to 6 or 7, PIT_TURANK_ANN will be set equal to 1 for these individuals).

1.3 DO THE OBSERVED INDIVIDUALS MAKE UP A HOUSEHOLD?

In order to be a dependent person according to the tax legislation, one should be a member of the household to which the tax unit belongs.[8] Being a member of the household implies that cohabitation with the other members of the tax unit should be of an enduring type. People being hospitalized or students living outside the household during the week, are still considered as members of the household according to the tax legislation, since the separation of the household is only considered as temporarily. The available data do not contain information on this household condition, set by the tax legislator.

> **Construction rule for PIT_TURANK_ANN and PIT_TUNUMB_ANN (continued):**
>
> We assume that all individuals that make up a sociological household according to the National Register on the 1st of January 2002, satisfy this cohabitation condition.

The tax legislator also provides the possibility that the tax advantage of a child is shared by two parents who live separated.[9] We do not have information on such possible co-parentship arrangements.

> **Construction rule for PIT_TURANK_ANN and PIT_TUNUMB_ANN (continued):**
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> We assume that the tax advantages of all dependent persons accrue to one of the other members of the sociological household. The construction rules, discussed so far, imply that the tax advantage of most dependent household members, will be assigned to the tax unit of the reference person.

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[8] See Standaard Uitgeverij (2002), p. 23.
[9] See Standaard Uitgeverij (2002), p. 26.

1.4 WHAT IS THE ORIGIN OF THE OBSERVED INCOME OF DEPENDENTS?

In order to be tax dependent, the dependent person should not receive income from the person he depends on, when the taxpayer deducts these payments as a cost.[10] If, for instance, a father pays his children to provide services to him, the children are no longer considered as tax dependent from the father if the father decides to deduct these payments as a cost. In available data set, the information on the origin of the income is not detailed enough to indicate that the income is paid by a household member.

> **Construction rule for PIT_TURANK_ANN and PIT_TUNUMB_ANN (continued):**
>
> We assume that none of the potentially dependent persons receives income from the household member he depends on.

1.5 WHAT INCOME SOURCES ARE TAKEN INTO ACCOUNT TO DETERMINE NET OWN MEANS OF DEPENDENTS?

The net own means a dependent person can dispose of, are limited by the tax legislator. In order to determine the total amount of net own means of an individual both taxable and non taxable income sources are taken into account.[11] Within the set of taxable income sources one can further distinguish four different types of income: a) occupational income (beroepsinkomen) b) real estate income (onroerend inkomen), c) income from movable property (roerend inkomen) and d) other income sources.

We will reconstruct the total amount of net own means of each individual and store the result in the variable PIT_NETOWN_ANN.

1.5.1 RULES APPLIED TO DETERMINE NET OWN MEANS OF OCCUPATIONAL INCOME

The tax legislator considers all the income sources that are filled out on the income tax form in sections IV, V, XII, XIII, XIV and XVI as occupational income.[12] This implies that wages, unemployment benefits, sickness and disability benefits, pensions and salaries and profits accruing to managers are all considered as occupational income.

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[10] See Standaard Uitgeverij (2002), p. 25.
[11] See Taillieu (2003), section 85.
[12] See Standaard Uitgeverij (2002), p. 11 and section IV of the Income Tax law of 1992 (See Juridat (2004)).

The basic rule here is to consider 80% of gross taxable occupational income as net own means. In the case of income related to a professional activity (beroepsactiviteit), such as wages, salaries and profits, one compares:

1. 80% of gross taxable income (hence, costs are assumed to be 20%)
2. gross taxable income minus costs made to obtain this income. These costs can be either real or of a lump sum (forfaitair) type.

The lowest amount of the comparison between a and b is taken then as the amount of net own means.

If one deducts real costs from gross occupational income, one should be able to prove these costs. Alternatively, one can make use of the rules, set by the tax legislator, to determine a lump sum amount of costs. The rule, applied to determine the lump sum costs for employees, differs from the one applied on income for managers (bedrijfsleiders).

In case of employees one applies the scheme in Table 3 on gross taxable occupational income.[13]

Table 3: Rates applied on gross taxable income of employees to determine a lump sum amount of expenses made to earn this income amount

Gross taxable income in EUR	Rate applied on gross taxable income
More than 0 but not more than 4.320,00	20%
More than 4.320,00 but not more than 8.580,00	10%
More than 8.580,00 but not more than 14.280,00	5%
More than 14.280,00 but not more than 57.780,00	3%
More than 57.780,00	0%

For managers, the lump sum amount of costs is determined as 5% of their gross taxable income, with a maximum amount of € 2.880,00.[14]

In order to determine net own means, one further imposes the additional restriction that the amount, deducted from gross taxable income related to professional activities, such as wages, salaries and profits, should be at least € 330,00.[15]

We will reconstruct an estimate of the net own means of occupational activities and refer to it as PIT_NETOWNOC_ANN.

Construction rule for PIT_NETOWNOC_ANN:

In order to check the above conditions, we will use the output from the CONTRIB module. The CONTRIB module produces a number of income concepts, net of social security contributions as output. We list the relevant income concepts, produced as output by the CONTRIB module, in Table 4.

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[13] See Standaard Uitgeverij (2002), p. 214.
[14] See Standaard Uitgeverij (2002), p. 214.
[15] See Standaard Uitgeverij (2002), p. 24.

Table 4: Values and labels of gross taxable income variables produced by the CONTRIB module

	Variable name	Label
1	CONTRIB_GTIPRIV_QT	Gross taxable labour income earned as wage earner on the private labour market
2	CONTRIB_GTIPUB_QT	Gross taxable labour income earned as wage earner on the public labour market
3	CONTRIB_GTISELF_QT	Gross taxable labour income earned as self employed
4	CONTRIB_GTIPENS_QT	Gross taxable pension benefits
5	CONTRIB_GTIEARNE_QT	Gross taxable early retirement benefits of the new type
6	CONTRIB_GTIEAROL_QT	Gross taxable early retirement benefits of the old type
7	CONTRIB_GTIOLDUN_QT	Gross taxable unemployment benefits of older unemployed with seniority supplement
8	CONTRIB_GTIOTHUN_QT	Gross taxable unemployment benefits, other than early retirement benefits
9	CONTRIB_GTIDISAB_QT	Gross taxable disability benefits of wage earners
10	CONTRIB_GTINDOCC_QT	Gross taxable benefits in case of industrial accidents or occupational diseases
11	CONTRIB_GTISICK_QT	Gross taxable benefits in case of sickness other than disability benefits
12	CONTRIB_GTIFAMAL_QT	Gross taxable income from family allowances

In the variables that are produced as output by the CONTRIB module the distinction is made, among other things, between unemployment benefits of older unemployed (age of 58 or above) that receive a seniority supplement[16], early retirement benefits of the old and new type[17] and all other unemployment benefits. This distinction is relevant for later treatment in the personal income tax system.

We will use these gross taxable income concepts, listed in Table 4, to determine the total amount of net own means of each individual.

To compute the total amount of net own occupational income, we require an estimate of three distinct net own means concepts, i.e. net own replacement incomes, net own income earned as an employee and net own income earned as self employed. We store these concepts respectively in the variables PIT_NETOWNRE_ANN, PIT_NETOWNEM_ANN and PIT_NETOWNSE_ANN.

Construction of PIT_NETOWNRE_ANN

We compute net own replacement income as 80% of the gross taxable pension benefits, the gross taxable sickness and disability benefits and the

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[16] See Ministerie van Financiën (2002), p. 36.

[17] Early retirement benefits of the old type are early retirement benefits that became operational before January 1st 1987 or are mandatory because of collecitve wage agreements contracted before January 1st 1986 (see Ministerie van Financiën (2002), p. 36).

gross taxable unemployment benefits. We integrate the value of 80% in the module in the form of the parameter PIT_CRATEREP_ANN. Hence, given the concepts listed in Table 4, we compute PIT_NETOWNRE_ANN as follows:

PIT_NETOWNRE_ANN =
(PIT_CRATEREP_ANN/100)*(CONTRIB_GTIPENS_QT +
CONTRIB_GTIEARNE_QT + CONTRIB_GTIEAROL_QT +
CONTRIB_GTIOLDUN_QT + CONTRIB_GTIOTHUN_QT +
CONTRIB_GTIDISAB_QT + CONTRIB_GTINDOCC_QT +
CONTRIB_GTISICK_QT)*4

Construction of PIT_NETOWNEM_ANN

To compute net own income earned as employee, we need an estimate of the deductible costs, made to earn this income. We do not observe real costs, related with employment income. Therefore, we compute these costs for employment income by applying the above lump sum rules on the relevant concept.

In the case of employees, we first apply the rate scheme, given in Table 3 on gross taxable income from employment. We refer to this cost variable as PIT_COSTRTEM_ANN. The values, listed in Table 3, are integrated in the module in the form of the parameter PIT_RALUMPEM_ANN which is a matrix with 3 columns and 5 rows.

We compare PIT_COSTRTEM_ANN with 20% of gross taxable income from employment and restrain the amount of deductible costs to the highest amount of the two. We store this result in the cost variable PIT_COSTEMP_ANN. The value of 20% is integrated in the module in the form of the parameter PIT_RATEEMP_ANN. Hence we compute PIT_COSTEMP_ANN as follows:

PIT_COSTEMP_ANN =
MAX(PIT_COSTRTEM_ANN ;
(PIT_RATEEMP_ANN/100)*(CONTRIB_GTIPRIV_QT+
CONTRIB_GTIPUB_QT)*4).

Although the preceding comparison is redundant with the parameters of the tax system for the tax year 2002 we still apply it, since this allows for flexibility in the use of the model later on.

If PIT_COSTEMP_ANN is lower than € 330,00, then the lump sum cost amount is set equal to € 330,00. The value of 330,00 is integrated in the module in the form of the parameter PIT_MINCOST_ANN.

We then determine net own means, earned as employee as the annual employment income minus the lump sum costs. If net own means would become negative because of the subtraction of the lump sum costs, we set net own means equal to 0. Hence, we determine PIT_NETOWNEM_ANN as follows:

PIT_NETOWNEM_ANN = MAX((CONTRIB_GTIPRIV_QT+
CONTRIB_GTIPUB_QT)*4 - PIT_COSTEMP_ANN;0).

Construction of PIT_NETOWNSE_ANN

To compute the net own means from an activity as self employed, we apply rules that are similar to the ones applied for employees. The only difference is that we do not apply the rate scheme in Table 3 on gross taxable income for self employed. Instead, we compute this lump sum amount as 5% of annual self employed income with a maximum amount of € 2.880,00. We store this result in the variable PIT_COSTRTSE_ANN. The values 5% and 2.880,00 are integrated in the module in the form of the parameters PIT_RALUMPSE_ANN and PIT_MAXSELF_ANN.

Hence, we compute PIT_COSTRTSE_ANN as follows:

PIT_COSTRTSE_ANN = MIN((PIT_RALUMPSE_ANN/100) *
CONTRIB_GTISELF_QT*4 ; PIT_MAXSELF_ANN).

We assume here that all self employed can be classified as managers (bedrijfsleiders) and thus that we can apply the 5% rule to compute lump sum costs of all self employed.

We compare PIT_COSTRTSE_ANN with 20% of self employed income and refer to the maximum of the two as PIT_COSTSELF_ANN. The value of 20% is integrated in the module in the form of the parameter PIT_RATESEL_ANN. Hence we compute PIT_COSTSELF_ANN as follows:

PIT_COSTSELF_ANN   =   MAX(PIT_COSTRTSE_ANN   ;
(PIT_RATESEL_ANN/100) * CONTRIB_GTISELF_QT*4).

If PIT_COSTSELF_ANN is lower than € 330,00, the lump sum costs are set equal to € 330,00. The value of 330,00 is integrated in the module in the form of the parameter PIT_MINCOST_ANN.

We then determine net own means earned as self employed as the annual self employment income minus the lump sum costs. If net own means would become negative because of the subtraction of the lump sum costs, we set net own means equal to 0. Hence, we determine PIT_NETOWNSE_ANN as follows:

PIT_NETOWNSE_ANN = MAX(CONTRIB_GTISELF_QT*4 -
PIT_COSTSELF_ANN;0).

Construction of PIT_NETOWNOC_ANN:

The sum of the three net own income concepts, constructed above, then determines the total amount of net own income resources from occupational activities, i.e.

PIT_NETOWNOC_ANN =
PIT_NETOWNRE_ANN + PIT_NETOWNEM_ANN + PIT_NETOWNSE_ANN.

1.5.2 RULES APPLIED TO DETERMINE NET OWN MEANS FROM OTHER INCOME SOURCES

Apart from occupational income, the tax legislator also takes into account net own means of other taxable income sources such as real estate income and income from movable property. Different rules are applied for real estate income, income from movable property and the other taxable income sources.[18] It is worth mentioning here that maintenance allowances, paid to children, are no longer taken into account as net own means of the child up to an amount of € 2.070,00 since the tax year 2002.[19]

The net own means from taxable income sources, other than occupational income, will be stored in the variable PIT_NETOWNOT_ANN.

Construction rule for PIT_NETOWNOT_ANN:

No data on income sources like real estate income, income from movable property or maintenance allowances are available in the data set we dispose of, nor will we reconstruct any of these concepts in the module. Therefore, we do not discuss the rules that should be applied to determine net own means from these income sources.[20] The value of PIT_NETOWNOT_ANN is set equal to 0 for all individuals.

Next to these other taxable income sources, the tax legislator also takes into account non taxable income sources to determine net own means. We do not dispose of an exhaustive list of the non taxable income sources that should be considered as net own means. But it should be noted that certain social assistance benefits are excluded explicitly from the net own means that should be taken into account. Examples of such social assistance benefits are family allowances, scholarships, allowances for handicapped, income earned by handicapped in sheltered workshops and special maintenance allowances.[21]

The net own means from non-taxable income sources will be stored in the variable PIT_NETOWNNT_ANN.

Construction rule for PIT_NETOWNNT_ANN:

We assume that none of the other income sources, that are either available as exogenous variable in the data set or simulated by the model, should be incorporated for this net own means test. Hence, we set the value of PIT_NETOWNNT_ANN equal to 0 for all individuals.

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[18] The only other taxable income sources that are taken into account to determine net own means are maintenance allowances and prizes attached to debenture bonds (loten van effecten van lening) (see Taillieu (2003), section 85).
[19] See Standaard Uitgeverij (2002), p. 366.
[20] See Standaard Uitgeverij (2002), p. 24 and Taillieu (2003), section 85.
[21] See art. 143 of the Income Tax law of 1992 (See Juridat (2004)).

1.5.3 DETERMINATION OF TOTAL AMOUNT OF NET OWN MEANS

The sum of the net own means of the different income sources determines the total amount of net own means that are used to determine whether an individual is still tax dependent yes or no. We will store this sum in the variable PIT_NETOWN_ANN.

Construction rule for PIT_NETOWN_ANN:

We determine PIT_NETOWN_ANN as the sum of PIT_NETOWNOC_ANN, PIT_NETOWNOT_ANN and PIT_NETOWNNT_ANN.

1.6 SPLITTING OF TAX DEPENDENTS FROM THE TAX UNIT CONDITIONAL ON THE HEIGHT OF THE NET OWN MEANS

The net own means that a dependent person can dispose of, are limited by the tax legislator. For the tax year 2002 (income 2001), the basic rule was that a dependent person could not have more than € 1.960,00 of net own means.[22] There are some exceptions to this rule.

If the individual is dependent on a taxpayer who is single, the total amount of net own means should not exceed the level of € 3.390,00 if the individual has no handicap and € 3.920,00 if the individual has a handicap.[23]

Also if a couple of (grand)parents are part of the household, different rules for the total amount of net own means are set. In that case the joint net own means of both (grand)parents have to be judged. If the net own means of both (grand)parents together do not exceed the amount of € 1.960,00, they both are dependent of another taxpayer. If their joint net own means are between € 1.960,00 and € 3.920,00 only the (grand)parent with the lowest amount of net own means is considered as a dependent of another taxpayer. If the joint net own means of the (grand)parents exceed the total amount of € 3.920,00 none of the (grand)parents is considered as dependent and the couple is treated as an independent tax unit.[24]

In order to check the above conditions, we need to know whether the dependent person is said to have a handicap yes or no. We will store an identification of this in the variable PIT_HANDICAP_ANN. This variable will be set equal to 1 if the person has a handicap.

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[22] See Standaard Uitgeverij (2002), p. 23.
[23] What a handicap is, is specified in Art. 135 of the Income Tax law of 1992. See Juridat (2004). The basic non indexed figures, mentioned here, are set in Art 28 van de Wet van 10 augustus 2001, See Juridat (2004).
[24] See Standaard Uitgeverij (2002), p. 24.

Construction rule for PIT_HANDICAP_ANN:

At this stage the available data set does not contain information on possible handicaps of people. Hence, the variable PIT_HANDICAP_ANN will be set equal to 0 for all individuals in the sample.

With the help of the variables PIT_HANDICAP_ANN, PIT_NETOWN_ANN, FAMREL_FAMTYPE and PIT_TURANK_ANN we can check the above conditions and adapt, if necessary, the value of PIT_TURANK_ANN. The variable FAMREL_FAMTYPE captures the type of family and will allow us to identify whether a couple of household members is either a couple of parents or grandparents of the head of the household.

Construction rule for PIT_TURANK_ANN and PIT_TUNUMB_ANN (continued):

If the head of the tax unit is part of a married couple, i.e. PIT_TURANK_ANN is equal to 1 and another individual with value PIT_TURANK_ANN equal to 2 makes part of the same tax unit, we check whether the value of PIT_NETOWN_ANN of potential dependent children and potential dependent others, i.e. individuals with a value of PIT_TURANK_ANN equal to 3 or 4, is larger than € 1.960,00. If this is the case, this individual is split of from the tax unit and considered to be an independent tax unit.

Otherwise if the head of the tax unit is not married we check whether the net own means of potential dependent children and potential dependent others are larger than either € 3.390,00 (if the individual has no handicap) or € 3.920,00 (if the individual has a handicap). The latter check is executed, conditional on the value of PIT_HANDICAP_ANN.

The values of 1.960,00, 3.390,00 and 3.920,00 are integrated in the module, in the form of the parameter PIT_MAXOWNNG_ANN, which is a vector with three lines containing the respective values.

If a couple of parents or grandparents of the head of the household is present within the sociological household, i.e. FAMREL_FAMTYPE of two individuals is equal to 3 or 4, we check the height of their joint net own means. If their joint net own means are larger than € 3.920,00 we do not change the composition of this tax unit. If their net own means are below € 1.960,00 we make both parents or grandparents tax dependents of the tax unit of the head of the sociological household, i.e. the tax unit of the individual with a value of NAREGNIS_RELATION equal to 1. If their net own means are larger than € 1.960,00 but smaller than € 3.920,00, we make only the individual with the lowest amount of net own means a tax dependent of the tax unit of the head of the sociological household.

The values of 1.960,00 and 3.920,00 are integrated in the module, in the form of the parameter PIT_MAXOWNG_ANN, which is a vector with two lines containing the respective values.

1.7 VARIABLES AVAILABLE AT THE TAX UNIT LEVEL

After the above construction rules have been applied, we can construct a number of variables at the level of the tax unit. We discuss these tax unit variables first, such that they can be used to explain the tax computation process later on.

A tax unit either consists of a single taxpayer or a married couple and the dependents of either the single or the couple. Hence, we can construct a variable at the tax unit level that indicates whether this tax unit comprises a married couple yes or no. We will refer to this variable later on as PIT_COUPLE_ANN. This variable takes the value 1 if it concerns a married couple and a value zero if the head of the tax unit is single.

The application of the above rules also results in a reconstruction of the number of dependent children and dependent others at the tax unit level. We will count the number of dependent children and dependent others, and store the results in the variables PIT_DEPCHILD_ANN and PIT_DEPOTHER_ANN respectively.

For each individual in the sample we also observe the date of birth in the variable NAREGNIS_DATBIRTH. From this we can derive the age of each individual, which in turn allows us to identify the number of dependent children that is below the age of 3. We will refer to this variable as PIT_DEPCHIL3_ANN.

Within each tax unit only the taxpayer and, if married, the married partner, declare taxable income. To reconstruct tax units on which the tax rules of the tax year 2002 apply, we transfer some of the reconstructed gross taxable income amounts, that we observe at the individual level, to the tax unit level. Each single taxpayer or, if married, each spouse is attributed 4 times the income value observed for the variables listed in Table 4.

To label these variables at the tax unit level, we replace the prefix CONTRIB by PIT and add the suffix SP1 and SP2 to each of these variable names, where SP1 and SP2 refer to spouse 1 and 2 respectively. The names, we thus obtain for spouse 1, are listed with their label in Table 5.

Table 5: Values and labels of gross taxable income variables produced by the PIT module for spouse 1

	Variable name	Label
1	PIT_GTIPRIV_ANN_SP1	Gross taxable labour income earned as wage earner on the private labour market by spouse 1 of the tax unit
2	PIT_GTIPUB_ANN_SP1	Gross taxable labour income earned as wage earner on the public labour market by spouse 1 of the tax unit
3	PIT_GTISELF_ANN_SP1	Gross taxable labour income earned as self employed by spouse 1 of the tax unit
4	PIT_GTIPENS_ANN_SP1	Gross taxable pension benefits of spouse 1 of tax unit
5	PIT_GTIEARNE_ANN_SP1	Gross taxable early retirement benefits of the new type of spouse 1 of tax unit
6	PIT_GTIEAROL_ANN_SP1	Gross taxable early retirement benefits of the old type of spouse 1 of tax unit
7	PIT_GTIOLDUN_ANN_SP1	Gross taxable unemployment benefits of older unemployed with seniority supplement of spouse 1 of tax unit
8	PIT_GTIOTHUN_ANN_SP1	Gross taxable unemployment benefits, other than early retirement benefits of spouse 1 of tax unit
9	PIT_GTIDISAB_ANN_SP1	Gross taxable disability benefits of wage earners of spouse 1 of tax unit
10	PIT_GTINDOCC_ANN_SP1	Gross taxable benefits in case of industrial accidents or occupational diseases of spouse 1 of tax unit
11	PIT_GTISICK_ANN_SP1	Gross taxable benefits in case of sickness other than disability benefits of spouse 1 of tax unit
12	PIT_GTIFAMAL_ANN_SP1	Gross taxable income from family allowances of spouse 1 of tax unit

When a taxpayer is single, i.e. the variable PIT_COUPLE_ANN is equal to 0, all the income variables with suffix SP2 are equal to zero.

The aforementioned variables are the only ones we have available at the tax unit level. We will apply the tax rules as far as possible on these tax unit data in order to determine the personal income taxes paid by each tax unit. The rules we intend to apply are discussed in the next section.

2 CALCULATION OF PERSONAL INCOME TAXES FOR RECONSTRUCTED TAX UNITS

The computation process of personal income taxes for singles is a simplified version of the process applied for couples. Therefore, we illustrate the computation of personal income taxes for couples in what follows.

A number of steps have to be taken in order to determine personal income taxes, paid by a tax unit. The first step is to determine net taxable income components by deducting costs from gross taxable income.

2.1 DETERMINATION OF NET TAXABLE INCOME

The different types of replacement income, filled out on the tax form, are not further reduced with a lump sum cost component.[25] Hence, gross and net taxable components are equal in the case of replacement income. This might seem surprising since one applies a cost reduction rule on replacement incomes to compute the net own means. But, these replacement income types generate a tax credit, as will be discussed later, and therefore no costs are deducted.

Gross taxable income earned through a professional activity can be reduced by either real or lump sum costs. The rules, applied to determine lump sum costs in the case of net taxable income, are the same as those used to determine lump sum professional costs when net own means are computed.

The sum of the net taxable income components from replacement income and professional activities is net taxable occupational income. We refer to the net taxable occupational income concepts of both spouses as PIT_NTOI_ANN_SP1 and PIT_NTOI_ANN_SP2 respectively.

Construction rule for PIT_NTOI_ANN_SP1 and PIT_NTOI_ANN_SP2:

To determine these net taxable occupational income components we have to deduct the possible costs from each of the gross taxable income components that appear on the reconstructed tax form.

<u>Net taxable replacement income</u>

No costs are deducted from the replacement income concepts. Hence, the gross and net income components are equal. Nonetheless we introduce notation to distinguish these net and gross replacement income concepts. We refer to these net replacement income concepts with PIT_NTIPENS_ANN_, PIT_NTIEARNE_ANN_, PIT_NTIEAROL_ANN_, PIT_NTIOLDUN_ANN_, PIT_NTIOTHUN_ANN_, PIT_NTIDISAB_ANN_, PIT_NTINDOCC_ANN_ and PIT_NTISICK_ANN_ and add the suffix SP1 and SP2 to refer to these sources for spouse 1 and 2 respectively.

<u>Net taxable income earned as employee</u>

Since we do not observe the real costs, related with the income earned by some professional activity, we apply the rules provided by the tax legislator for cases where these real costs are missing. Lump sum costs of employees are determined by applying the rate scheme, listed in Table 3, on gross taxable employment income of each spouse. Deductible costs can not be smaller than 0. We store these lump sum costs in the variables PIT_COSTRATE_ANN_SP1 and PIT_COSTRATE_ANN_SP2.

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[25] See Standaard Uitgeverij (2002), p. 59-64.

The values, listed in Table 3, are integrated in the module in the form of the parameter PIT_RALUMPEM_ANN which is a matrix with 3 columns and 5 rows.

We deduct the lump sum costs from gross taxable income, to obtain net taxable income. We store this result for spouse 1 in the variable PIT_NTIEMPL_ANN_SP1. Again this net taxable income is prevented to become negative. We thus compute net taxable employment income of spouse 1 as follows:

PIT_NTIEMPL_ANN_SP1 = MAX((PIT_GTIPRIV_ANN_SP1 +
PIT_GTIPUB_ANN_SP1) - MAX(PIT_COSTRATE_ANN_SP1;0,00);0,00)

Similar definitions apply for spouse 2.

<u>Net taxable income earned as self employed</u>

For managers, the lump sum amount of costs is determined as 5% of their gross taxable income, with a maximum amount of € 2.880,00.[26] The minimal amount of costs, in either cases, is € 0,00. We assume here that all self employed can be classified as managers (bedrijfsleiders) and thus that we can apply the 5% rule to compute lump sum costs of all self employed. Deduction of these lump sum costs from the respective gross taxable income concepts results in net taxable income. The latter result is also prevented to become negative.

We store this result for spouse 1 in the variable PIT_ NTISELFEM_ANN_SP1. Since the values 5% and 2.880,00 are integrated in the module in the form of the parameters PIT_RALUMPSE_ANN and PIT_MAXSELF_ANN, we can compute net taxable self employment income of spouse 1 as follows:

PIT_NTISELFEM_ANN_SP1 = PIT_GTISELF_ANN_SP1–
MAX(MIN((PIT_RALUMPSE_ANN/100) * PIT_GTISELF_ANN_SP1;
PIT_MAXSELF_ANN);0,00).

A similar definition applies for spouse 2.

<u>Net taxable occupational income</u>

The sum of all these net taxable income sources makes up net taxable occupational income for each spouse, i.e. PIT_NTOI_ANN_SP1 and PIT_NTOI_ANN_SP2. Hence, PIT_NTOI_ANN_SP1 will be computed as:

PIT_NTIPENS_ANN_SP1 + PIT_NTIEARNE_ANN_SP1 +
PIT_NTIEAROL_ANN_SP1 + PIT_NTIOLDUN_ANN_SP1 +
PIT_NTIOTHUN_ANN_SP1 + PIT_NTIDISAB_ANN_SP1 +
PIT_NTINDOCC_ANN_SP1 + PIT_NTISICK_ANN_SP1 +
PIT_NTIEMPL_ANN_SP1 + PIT_NTSELF_ANN_SP1.

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[26] See Standaard Uitgeverij (2002), p. 214.

The tax legislator applies a marital splitting rule on net taxable occupational income in case the taxpayer and his spouse make up a married couple.[27] The rule is that if one of the spouses earns less than 30% of the total amount of net taxable occupational income, income between spouses is redistributed such that it is as if one spouse earned 70% of the total amount of net taxable occupational income and the other earned 30%. This percentage rule is only applied up to a certain ceiling. The net taxable income of the partner with the lowest income can not be larger than maximal absolute amount of € 7.710,00 after application of the splitting rule.

Construction rule for PIT_NTOI_ANN_SP1 and PIT_NTOI_ANN_SP2 (continued):

We apply the sketched marital splitting rule on the reconstructed amounts of net taxable occupational income when the taxpayer and his spouse are part of a legally married couple, i.e. if PIT_COUPLE_ANN takes the value 1 for the head of the tax unit.

We compute the amount that can be transferred from one married partner to the other in the variable PIT_MARSPLIT_ANN. The amount PIT_MARSPLIT_ANN is then used to reduce the amount of net taxable occupational income of the partner with the highest income amount and increase the income of the other partner. This operation thus changes the content of the variables PIT_NTOI_ANN_SP1 and PIT_NTOI_ANN_SP2, previously constructed.

The values 30% and 7.710,00 are integrated in the module in the form of the parameters PIT_PERMASPL_ANN and PIT_ABSMASPL_ANN respectively.

After net taxable occupational income has been determined for both spouses, the tax legislator further adds the net taxable income components from other sources, such as real estate income and income from movable property, to the income of the spouse with the highest amount of net taxable occupational income.[28]

The net taxable income amounts one then obtains, can be reduced further for tax units who declare expenses on, among other things, interest paid on mortgage loans or charity gifts.[29] We refer to these final net taxable income amounts with PIT_NTI_ANN_SP1 and PIT_NTI_ANN_SP2 respectively.

Construction rule for PIT_NTI_ANN_SP1 and PIT_NTI_ANN_SP2:

We do not observe nor reconstruct any of the other income sources that could be added to the taxable occupational income figures. Nor do we observe any of the expenses that are eligible for a further reduction of taxable income of

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[27] See Standaard Uitgeverij (2002), p. 228.
[28] See Standaard Uitgeverij (1999), p. 263 and Standaard Uitgeverij (2002), p. 228.
[29] See Ministerie van Financiën (2002), p. 22-30.

both spouses. Hence, net taxable income of each spouse is equal to the amount of net taxable occupational income we obtain after the marital splitting rule has been applied. In the current version of the PIT module PIT_NTI_ANN_SP1 and PIT_NTI_ANN_SP2 are equal to PIT_NTOI_ANN_SP1 and PIT_NTOI_ANN_SP2 respectively.

2.2 DETERMINATION OF GROSS PERSONAL INCOME TAXES

To determine gross personal income taxes per spouse, the tax scheme in Table 6, is applied on net taxable income of each spouse, i.e. PIT_NTI_ANN_SP1 and PIT_NTI_ANN_SP2.

Table 6: Rates applied on net taxable income of each spouse to determine gross personal income taxes[30]

Net taxable income in EUR	Rate applied on net taxable income
More than 0 but not more than 6.570,00	25,0%
More than 6.570,00 but not more than 8.710,00	30,0%
More than 8.710,00 but not more than 12.420,00	40,0%
More than 12.420,00 but not more than 28.540,00	45,0%
More than 28.540,00 but not more than 42.810,00	50,0%
More than 42.810,00 but not more than 62.790,00	52,5%
More than 62.790,00	55,0%

The rates and brackets, listed in Table 6, are integrated in the module in the form of the parameter PIT_RATSCHEM_ANN. This parameter is a matrix with 3 columns and 7 lines. The personal income tax concepts, obtained after applying these rates on the net taxable income concepts, are stored in the variables PIT_GPIT_ANN_SP1 and PIT_GPIT_ANN_SP2.

The gross amount of taxes, obtained after the application of the rates in Table 6, is not the final amount of taxes paid by each tax unit member. The additional manipulations, necessary to obtain the net amount of personal income taxes are discussed in the next subsection.

2.3 DETERMINATION OF TAX CREDITS

There are four types of tax credits that can reduce the gross amount of personal income taxes. These possible credits are:

1. Credits related to size and composition of the tax unit
2. Credits in case the taxpayer or the spouse receive replacement income
3. Credits related to expenses

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[30] See Standaard Uitgeverij (2002), p. 286.

4. Credits because of income earned abroad

2.3.1 CREDITS RELATED TO SIZE AND COMPOSITION OF THE TAX UNIT

The credits related to size and composition of the tax unit are set by the tax legislator in the form of exempted income, starting from the bottom up. This implies that the tax legislator determines an exempted income amount first and the tax credit is computed then by applying the brackets and rates, listed in Table 6, on this income amount.

The basic exemption in 2002 amounts to € 5.350,00 for a single person, and € 4.240,00 for each partner of a married couple. Dependent children push the exemption level up by € 1.140,00, € 1.780,00, € 3.630,00 and € 4.050,00 for the first, second, third and fourth child respectively. Each extra child increases the exemption level with another € 4.050,00.[31] For all dependent persons, other than children, a constant amount of € 1.140,00 is exempted. An additional amount of € 430,00 is exempted for each dependent child below the age of three for which the taxpayer does not declare costs for day care.

On top of these credits related to size, a number of additional exemptions exists.[32] We remark that none of these additional exemptions will be modelled because of a lack of data.

If the tax unit is a married couple, the rule is that only € 4.240,00 of the net taxable income of the lowest income earner is exempted. All the other exemptions accrue to the person with the highest amount of net taxable income. If the exemptions, that accrue to one of the partners, exceed the net taxable income of this partner, this additional amount is taken into account to settle the exemption level of the other individual.[33] We will reconstruct these exemptions and store them in the variables PIT_EXEMP_ANN_SP1 and PIT_EXEMP_ANN_SP2 respectively.

Construction rule for PIT_EXEMP_ANN_SP1 and PIT_EXEMP_ANN_SP2:

We observe whether the tax unit comprises a married couple yes or no, the number of dependent children, the number of dependent others and the number of dependent children below the age of 3 in the variables PIT_COUPLE_ANN, PIT_DEPCHILD_ANN, PIT_DEPOTHER_ANN and PIT_DEPCHIL3_ANN respectively. These variables and the net taxable income concepts in the variables PIT_NTI_ANN_SP1 and PIT_NTI_ANN_SP2 provide the necessary input to apply the exemption rules discussed above.

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[31] See Ministerie van Financiën (2002), p. 32-33.
[32] See Ministerie van Financiën (2002), p. 34.
[33] See Standaard Uitgeverij (2002), p. 285.

The exemptions for dependent children, i.e. the values 1.140,00, 1.780,00, 3.630,00 and 4.050,00 are integrated in the module in the form of the parameter PIT_EXEMSCH_ANN, which is a vector with 4 lines.

The exemption for children below the age of 3, i.e. the value 430,00, is integrated in the module with the parameter PIT_EXECHLA_ANN.

The basic exemptions for singles and married partners, i.e. the values 5.350,00 and 4.240,00 are integrated in the module in the form of the parameters PIT_EXEMPS_ANN and PIT_EXEMPC_ANN respectively.

The exemption for dependent others, i.e. the value 1.140,00, is integrated in the module with the parameter PIT_EXEOTH_ANN.

The family type credits, that correspond with the computed exemption amounts, should be subtracted from the gross amount of personal income taxes. The amount of personal income taxes, net of these credits, is prevented to become negative. We refer to these reduced personal income tax concepts for spouse 1 and spouse 2 with PIT_PITFAMC_ANN_SP1 and PIT_PITFAMC_ANN_SP2 respectively and to the sum of these concepts over both spouses with PIT_PITFAMC_ANN.

Construction rule for PIT_PITFAMC_ANN_SP1 and PIT_PITFAMC_ANN_SP2:

We first apply the brackets and rates, listed in Table 6, on the values observed in PIT_EXEMP_ANN_SP1 and PIT_EXEMP_ANN_SP2. The obtained tax credits are then subtracted from the gross amount of personal income taxes of both spouses, i.e. the values stored in PIT_GPIT_ANN_SP1 and PIT_GPIT_ANN_SP2. If more than the gross personal income taxes are exempted by this credit type, the personal income taxes are set to zero at this stage.

2.3.2 CREDITS IN CASE OF REPLACEMENT INCOME

In the Belgian tax system, that applied for the tax year 2002, credits in case of replacement income are granted only once per tax unit. We refer to the personal income tax concept at the tax unit level, obtained after applying these replacement income credits, as PIT_PITREP_ANN. The computation of this new personal income tax concept proceeds in a number of steps. We list these steps below.

Step 1: Computing the basic tax credit

To compute the basic tax reduction, one starts with the maximal tax credits that can be granted for replacement income. These maximal amounts differ between singles and couples and differ over different types of replacement income. We list these maximal amounts for singles and couples and for the different types of replacement income in Table 7.

The "other" replacement incomes, referred to in the last line of Table 7, consist of, among other things: the amount that the employer pays on top of the unemployment income if the employee is part time employed and part time unemployed and certain income amounts paid by unions in case of work stoppage.[34]

Table 7: Maximal amounts of tax credits in EUR set by the tax legislator for replacement income in tax year 2002[35]

	Type of replacement income	Single	Couple
1	Pension benefits and early retirement benefits of new type	1.550,00	1.810,00
2	Early retirement benefits of old type	2.800,00	3.060,00
3	Normal unemployment benefits	1.550,00	1.810,00
4	Unemployment benefits of older unemployed (age of 58 or above)	1.550,00	1.810,00
5	Sickness and disability benefits	1.990,00	2.250,00
6	Other replacement income	1.550,00	1.810,00

The amounts, given in Table 7, are <u>further reduced in</u> function of the <u>proportion</u> that the <u>replacement</u> income takes in <u>total income</u>. To compute these fractions, one should divide the net taxable amount of income, that grants the credit, by the total amount of net taxable income earned by the tax unit. These income fractions should be calculated at the level of the tax unit and not at the level of the individual spouses.[36] This is because the tax credit for replacement income, is granted only once per tax unit.

Since the tax legislator distinguishes six different possible tax credits per tax units, we have to determine six different fractions. We store these fractions in the variables PIT_FRACREP_ANN(i), where i runs from 1 to 6.

To know then the maximal tax credit that is granted for the given source of replacement income, one should multiply the figure in Table 7 with the relevant fraction, obtained in the previous step.[37] The result of this multiplication gives the basic tax credit for replacement income of type i for the tax unit under study. We refer to this basic tax credit of type i, later on as PIT_BTCREP_ANN(i).

Construction rule for PIT_FRACREP_ANN(i) and PIT_BTCREP_ANN(i):

The denominator of each fraction is always the sum of both spouses, i.e. the sum of PIT_NTI_ANN_SP1 and PIT_NTI_ANN_SP2. We refer to this sum later on as PIT_TNTI_ANN. In the last column of Table 8 we list the different income concepts that we take into account the compute numerator of each of the six different fractions we have to determine for each tax unit.

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[34] See Taillieu (2003), section 903.
[35] See Ministerie van Financiën (2002), p. 36.
[36] See Taillieu (2003), Part 13, Title 4, for an illustration of the calculation of these credits.
[37] See Ministerie van Financiën (2002), p. 37.

Table 8: Income concepts taken into account to compute the numerator of the fraction applied on the different possible tax credits for replacement income

	PIT_FRACREP_ANN(i)	Numerator
1	Fraction applied on pension benefits and early retirement benefits of new type	PIT_NTIPENS_ANN_SP1 + PIT_NTIEARNE_ANN_SP1 + PIT_NTIPENS_ANN_SP2 + PIT_NTIEARNE_ANN_SP2
2	Fraction applied on early retirement benefits of old type	PIT_NTIEAROL_ANN_SP1 + PIT_NTIEAROL_ANN_SP2
3	Fraction applied on normal Unemployment benefits	PIT_NTIOTHUN_ANN_SP1 + PIT_NTIOTHUN_ANN_SP2
4	Fraction applied on unemployment benefits of older unemployed (age of 58 or above)	PIT_NTIOLDUN_ANN_SP1 + PIT_NTIOLDUN_ANN_SP2
5	Fraction applied on sickness and disability benefits	PIT_NTIDISAB_ANN_SP1 + PIT_NTISICK_ANN_SP1 + PIT_NTIDISAB_ANN_SP2 + PIT_NTISICK_ANN_SP2 + PIT_NTINDOCC_ANN_SP1 + PIT_NTINDOCC_ANN_SP2
6	Fraction applied on other replacement income	No income variables available

To determine the value of PIT_BTCREP_ANN(i) we first take the maximal amount of a tax credit from Table 7 conditional on the fact whether the tax-payer is part of a married couple or not, i.e. the value of PIT_COUPLE_ANN. We then multiply this value with the value of PIT_FRACREP_ANN(i).

The values in Table 7 are integrated in the module in the form of the parameter PIT_MAXREPL_ANN, which is a matrix with 2 columns and 6 lines.

Step 2: Limitation of the basic tax credit in function of the total amount of net taxable income

The basic tax credit is further reduced in function of the height of net taxable income of the tax unit. The tax legislator designed a general rule to reduce the basic tax credit, obtained in the previous step, in function of the height of net taxable income. This general rule is applied on all types of replacement income except normal unemployment benefits.

The tax credit that is further reduced in function of the height of net taxable income will be stored in the variables PIT_RTCREP_ANN(i), where i again runs from 1 to 6.

In Table 9 we give the general rule, used to determine all reduced tax credits for replacement income, except that for normal unemployment benefits.

Table 9: General rule used to reduce basic tax credits for replacement income in function of the total amount of net taxable income[38]

Total amount of net taxable income in EUR	Rule used to compute credit limitation
PIT_TNTI_ANN less then 17.150,00	PIT_RTCREP_ANN(i) = PIT_BTCREP_ANN(i)
PIT_TNTI_ANN 17.150,00 or more but less then 34.310,00	PIT_RTCREP_ANN(i) = PIT_BTCREP_ANN(i)*1/3 + PIT_BTCREP_ANN(i)*2/3*(34.310,00-PIT_TNTI_ANN)/17.160,00
PIT_TNTI_ANN 34.310,00 or more	PIT_RTCREP_ANN(i)=PIT_BTCREP_ANN(i)*1/3

In case of normal unemployment benefits, the reduction rule, given in Table 10, is applied.

Table 10: Rule used to reduce basic tax credits for normal unemployment benefits in function of the total amount of net taxable income[39]

Total amount of net taxable income in EUR	Rule used to compute credit limitation
PIT_TNTI_ANN less then 17.150,00	PIT_RTCREP_ANN(i) = PIT_BTCREP_ANN(i)
PIT_TNTI_ANN 17.150,00 or more but less then 21.410,00	PIT_RTCREP_ANN(i) =PIT_BTCREP_ANN(i)*(21.410,00-PIT_TNTI_ANN)/4.260,00
PIT_TNTI_ANN 21.410,00 or more	PIT_RTCREP_ANN(i) = 0

We summarize the tax credit schemes, given in Table 9 and Table 10, graphically in Figure 1.

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[38] See Ministerie van Financiën (2002), p. 37.
[39] See Ministerie van Financiën (2002), p. 37.

Figure 1: Relation between total net taxable income and reduced tax credits for different replacement incomes for the tax year 2002 (income 2001).
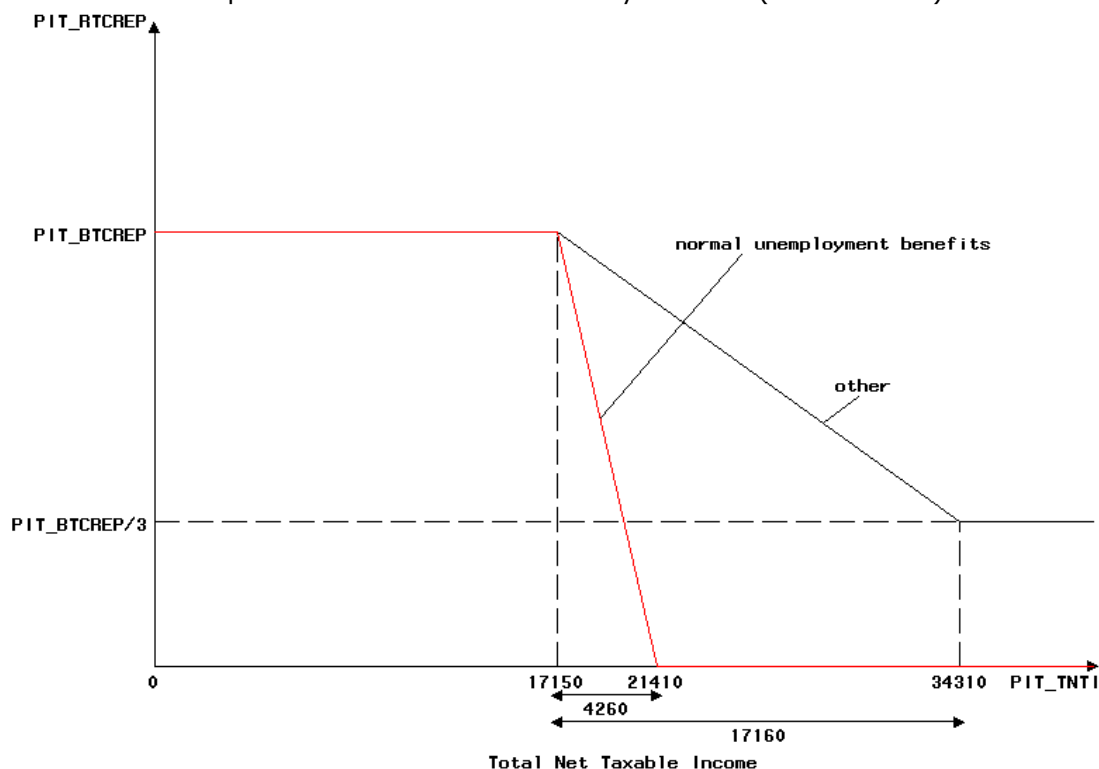
The brackets and rates in Table 9 and Table 10 are integrated in the module in the form of the parameters PIT_RREDUCE_ANN and PIT_RUNEMPL_ANN respectively. These are both matrixes with 4 columns and 3 lines.

Step 3: Limitation of the tax reduction in function of the income source

The tax credit, obtained after step 2, can not be higher than the proportion of personal income taxes that is paid because of the income source that grants the tax credit. In order to check this condition, one compares the reduced tax credit, obtained after step 2, with the amount obtained as the product of a) the personal income taxes that remain to be paid by the tax unit after the credits because of size and composition of the tax unit are applied and b) the fraction of the net income source that grants the tax credit in the total amount of net taxable income.[40]

> **Construction rule for PIT_RTCREP_ANN(i) (continued) and PIT_PITREP_ANN:**
>
> The personal income taxes that remain to be paid by the tax unit after the credits because of size and composition of the tax unit are applied, are stored in the variable PIT_PITFAMC_ANN. The fraction of the net income source that grants the tax credit in the total amount of net taxable income, is stored in

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[40] See Taillieu (2003), Part 13, Title 4.

PIT_FRACREP_ANN(i) with i going from 1 to 6, for the respective tax credits. Hence, if PIT_RTCREP_ANN(i) is larger than PIT_FRACREP_ANN(i)*PIT_PITFAMC_ANN, we set PIT_RTCREP_ANN(i)=PIT_FRACREP_ANN(i)*PIT_PITFAMC_ANN.

We then determine the amount of personal income taxes after application of tax credits for replacement income, i.e. PIT_PITREP_ANN, as PIT_PITFAMC_ANN minus the sum of credits that can be granted for the different replacement incomes. If PIT_PITREP_ANN turns out to be negative, we set it equal to 0.

Step 4: Reducing the total amount of taxes to zero

If the total amount of taxable income of the tax unit is of a pure replacement income type, it is possible that the total amount of taxes is further reduced to zero, after the tax reduction of step 3 has been applied.[41] Two conditions have to be satisfied for this. First of all, the total amount of net taxable income should come from only one specific type of replacement income. Second, this total amount of net taxable income should not exceed a certain level. The income ceilings that should not be exceeded differ from income type to income type and are listed in Table 11.

Table 11: Levels of net taxable income to determine tax credits in case there is a unique source of replacement income[42]

	Type of replacement income	Level of net taxable income in EUR
1	Pension benefits and early retirement benefits of new type	10.958,68
2	Early retirement benefits of old type	14.393,64
3	Normal unemployment benefits	10.958,68
4	Unemployment benefits of older unemployed (age of 58 or above)	12.105,11
5	Sickness and disability benefits	12.176,31
6	Other replacement income	10.958,68

Construction rule for PIT_PITREP_ANN (continued):

If one of the above replacement income types is the only income source of the tax unit , i.e. only the net taxable income components of this source are different from 0, and the total amount of net taxable income falls below the thresholds given in Table 11, then we set PIT_PITREP_ANN equal to 0.

The values, given in Table 11, are integrated in the module in the form of the parameter PIT_UNIQREPL_ANN. Which is a vector with 6 lines, where each line takes the income ceiling that should be linked to the relevant source of replacement income

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[41] See art. 154 of the Income Tax law of 1992 (See Juridat (2004)).
[42] See Ministerie van Financiën (2002), p. 38.

2.3.3 OTHER CREDITS

Some other tax credits are related to expenses made by the tax unit. These credits can be granted for, among other things, expenses on life insurance premia and repayments of mortgage loans. Another well know example of expenses that can grant a tax credit are expenses on private pension savings plans.[43] Next to these expense credits, there also exist credits for cases where income is earned abroad. The credits, granted in this case, vary with the country where the income was earned. We remark that we do not observe the expenses that can result in a tax credit, nor do we observe the country where the income is earned. Therefore, it is not discussed further how these credits should be implemented.

2.4 OTHER INTERVENTIONS TO DETERMINE THE FINAL PERSONAL INCOME TAX BILL

When gross personal income taxes are reduced with the aforementioned tax credits, one obtains net personal income taxes that emerge after the application of a tax scheme on an aggregate income concept. We refer to this net personal income tax concept as PIT_NETPITSC_ANN later on.

Construction rule for PIT_NETPITSC_ANN:

The value of PIT_NETPITSC_ANN is set equal to the value of PIT_PITREP_ANN since no other credits than those for tax unit composition and replacement income are reconstructed in the current PIT module.

It is possible that one has to pay income taxes on income components that are not part of the aggregate income concept on which the tax scheme is applied. Each of these separately taxed items are taxed at a uniform rate, but the rates differ from item to item.

Some occupational income items that are taxed separately are overdue wages (achterstallige lonen), holiday allowances paid in advance (vervroegd vakantiegeld) and capital from group insurance contracts, contracted through the employer for the employee.[44] Among the other items, taxed at a separate rate, one finds a number of income items coming from movable property, awards and certain subsidies.[45] We refer to the sum of the taxes, paid on separately taxed income items, as PIT_NETPITSE_ANN.

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[43] See Ministerie van Financiën (2002), p. 35.
[44] See Ministerie van Financiën (2002), p. 40.
[45] See Ministerie van Financiën (2002), p. 39-40.

Construction rule for PIT_NETPITSE_ANN:

We set PIT_NETPITSE_ANN equal to 0 in the current version of the module since none of the separately taxed income items is available in our data set, nor will they be reconstructed by the model.

The sum of both personal income tax concepts, i.e. PIT_NETPITSC_ANN and PIT_NETPITSE_ANN, will be referred to as PIT_NETPIT_ANN.

The tax legislator can still adapt this amount. These changes are induced by the advance payments of taxes that the tax unit has to do throughout the year. If too much was paid, the amount can still be reduced, or alternatively, the amount is increased if not enough prepayments on taxes were made throughout the year.[46] The tax concept, obtained after the latter manipulations have been applied, is the basic tax amount paid by the tax unit to the federal state. We refer to this concept as PIT_STATEPIT_ANN.

Construction rule for PIT_STATEPIT_ANN:

Again, we do not observe the information necessary to compute the reductions or increases of the PIT_NETPIT_ANN concept. Hence, PIT_STATEPIT_ANN and PIT_NETPIT_ANN are equal in the current version of the module.

The basic tax amount of personal income taxes, paid by the tax unit to the federal state then serves as the basis to compute some additional taxes.

One additional tax component that is added to this federal state tax is the regional tax.[47] This regional tax is collected by the federal state, but the rates are set by the regions or municipalities. The federal state funds this regional tax to the local authorities after it has been collected. We store this regional tax in the variable PIT_REGIOTAX_ANN.

Construction rule for PIT_REGIOTAX_ANN:

In the National Register data we do not observe the exact municipality, where the tax unit resides and hence we can not compute the additional regional tax with the data currently available. The value of PIT_REGIOTAX_ANN is set equal to 0 for all individuals.

The federal state tax is also used to compute a crisis surcharge. The crisis surcharge was introduced as a temporary measure in the tax year 1994, but was still levied in the tax year 2002. Originally, a uniform rate of 3% was set for all tax units. From the tax year 2000 on, a run down scenario for this crisis surcharge was introduced. The rates, necessary to compute the crisis surcharge for the tax year 2002, are in function of the total amount of net taxable income. We compute this crisis surcharge and store the result in the variable

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[46] See Ministerie van Financiën (2002), p. 40-43.
[47] See Standaard Uitgeverij (2002), p. 147-152.

PIT_CSAMOUNT_ANN. We summarize how the crisis surcharge is computed, according to the rules of the tax year 2002, in Table 12.

Table 12: Crisis surcharge in the tax year 2002[48]

Total amount of net taxable income in EUR	Rule used to compute crisis surcharge
PIT_TNTI_ANN less then 19.831,48	PIT_CSAMOUNT_ANN = 0
PIT_TNTI_ANN 19.831,48 or more but less then 21.070,95	PIT_CSAMOUNT_ANN = PIT_STATEPIT_ANN* (PIT_TNTI_ANN-19.831,48)/1.239,47
PIT_TNTI_ANN 21.070,95 or more but less then 29.747,22	PIT_CSAMOUNT_ANN = PIT_STATEPIT_ANN *0,01
PIT_TNTI_ANN 29.747,22 or more but less then 30.986,69	PIT_CSAMOUNT_ANN = PIT_STATEPIT_ANN* (0,01 + (PIT_TNTI-29.747,22)/1.239,47)
PIT_TNTI_ANN 30.986,69 or more	PIT_CSAMOUNT_ANN = PIT_STATEPIT_ANN*0,02

The brackets and rates in Table 12 are integrated in the module in the form of the parameter PIT_RATECRIS_ANN, which is a matrix with 4 columns and 5 lines.

Finally, the federal state tax can also serve as the starting point to compute fines in case of bad income tax filing. If the income tax form is filled out too late or if there has been incomplete income tax filing in the past, it can be that the tax legislator computes this fine as a percentage of federal state tax. Since, we do not have information on the quality of the filed income tax forms, we can not compute this extra fine.

After having constructed the crisis surcharge we can also compute the total amount of taxes paid by the tax unit. This result is stored in the variable PIT_FINTAX_ANN.

Construction rule for PIT_FINTAX_ANN:

We define PIT_FINTAX_ANN as the sum of the three tax variables, i.e. PIT_STATEPIT_ANN, PIT_REGIOTAX_ANN and PIT_CSAMOUNT_ANN.

3 TAX UNITS THAT ARE NOT LIABLE TO ENTER A TAX FORM

Not all tax units are liable to enter a tax form. If a tax unit is not obliged to enter a tax form, the tax legislator proposes a tax bill that can be rejected or accepted by the tax unit under consideration.[49] It is probable that tax units who are not liable to file income on an income tax form and that are not obliged to pay income taxes at the same time, are included in the aggregate tax statistics.

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[48] See Ministerie van Financiën (2002), p. 44.
[49] Art. 306 of the Income Tax law of 1992. See Juridat (2004).

Taxable income should not be filed on an income tax form, if one of the following four conditions is satisfied[50]:

5. The income of the tax units is earned in Belgium by a foreign civil servant who is working for a foreign country or for an international organisation that has tax agreements with the Belgian tax authority.

6. The tax unit has no occupational income and the total net taxable income of this tax unit is below the basic exempted level, i.e. € 5.350,00 for a single person or € 8.480,00 for a couple.

7. The only income source is real estate income from property that is not rented to somebody else.

8. The only income source of the tax unit are legal pensions (wettelijk pensioen). Hence, pensions coming from private pension plans or pension plans set between employee and employer should be filed.

If the tax unit is not liable to pay income taxes according to our data, we will set the variable PIT_TUNOLAB_ANN equal to 1. Otherwise this variable will be 0.

Construction rule for PIT_TUNOLAB_ANN:

With the information we assumed to be available, we can only check condition 2 out of the 4 mentioned above.

We can check that the tax unit does not obtain occupational income, by checking that PIT_NTOI_ANN_SP1 and PIT_NTOI_ANN_SP2 are both equal to 0. We can also check whether PIT_TNTI_ANN is smaller than either 5.350,00 or 8.480,00, conditional on the value of PIT_COUPLE_ANN. If both conditions are satisfied, we set PIT_TUNOLAB_ANN equal to 1.

The values 5.350,00 and 8.480,00 are integrated in the module in the form of the parameters PIT_BESINGLE_ANN and PIT_BECOUPLE_ANN respectively.

4 CONSTRUCTION OF PERSONAL INCOME TAX CONCEPTS TO BE EXCHANGED TO OTHER MODULES

Throughout the preceding sections we reconstructed several variables. Some of the other modules require some of these variables, produced by the PIT module, as input. In this section we discuss the variables that we will exchange to other modules.

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[50] See Juridat (2004), 9 MEI 1994. - Koninklijk besluit tot wijziging, ter zake van de <vrijstelling> van aangifteplicht, van het KB/WIB 92 and Standaard Uitgeverij (2002), p. 11.

4.1 VARIABLES CONSTRUCTED FOR THE **CONTRIB** MODULE

The module that reconstructs the social security contributions requires an estimate of the number of dependent children that are attributed to a taxpayer. Therefore we exchange the variable PIT_DEPCHILD_ANN to the CONTRIB module.

4.2 VARIABLES CONSTRUCTED FOR THE **SICK** MODULE

The module that reconstructs the sickness and disability benefits requires an estimate of the number of dependent children that are attributed to a taxpayer. Therefore we exchange the variable PIT_DEPCHILD_ANN to the SICK module.

4.3 VARIABLES CONSTRUCTED FOR THE **UNEM** MODULE

The module that reconstructs the unemployment benefits requires an estimate of the number of dependent children that are attributed to a taxpayer. Therefore we exchange the variable PIT_DEPCHILD_ANN to the UNEM module.

4.4 VARIABLES CONSTRUCTED FOR THE **MINIMEX** MODULE

The module that reconstructs the existence minima requires an estimate of the final amount of taxes, paid by the tax unit, and estimates of net occupational income after application of the marital splitting rule and net taxable income of both spouses.

Therefore we exchange the following variables to the MINIMEX module: PIT_FINTAX_ANN, PIT_NTOI_ANN_SP1, PIT_NTOI_ANN_SP2, PIT_NTI_ANN_SP1 and PIT_NTI_ANN_SP2.

5 REFERENCES

[1] FOD Sociale Zekerheid (2001), Beknopt overzicht van de sociale zekerheid in België (2001), http://socialsecurity.fgov.be/overzicht/2001/pdf/index.htm (19/11/2004).

[2] Juridat (2004), http://www.juridat.be/cgi_wet/wetgeving.pl.

[3] Ministerie van Financiën (2002), *Fiscaal Memento 2002*, Brussel: Ministerie van Financiën, Studie en Documentatiedienst.

[4] Ministerie van Financiën (2003), *Fiscaal Memento 2003*, Brussel: Ministerie van Financiën, Studie en Documentatiedienst.

[5] Decoster, A, De Swerdt, K, Orsini, K, and Van Camp, G. (2007), MIMOSIS: MIcrosimulation MOdel for Belgian Social Insurance Systems, Household Composition and family relationships, *(reference to be completed: web-page)*.

[6] Standaard Uitgeverij (1999), *standaard Belastingalmanak 1999*, Antwerpen: Standaard Uitgeverij.

[7] Standaard Uitgeverij (2002), *standaard Belastingalmanak 2002*, Antwerpen: Standaard Uitgeverij.

[8] Taillieu, L. (2003), Personenbelasting: Fiscaliteit nu, Aanslagjaar 2003 (inkomen 2002), Antwerpen: Standaard Uitgeverij.

APPENDIX 1: CHANGES IN TAX LEGISLATION SINCE THE TAX YEAR 2002

Above, we discussed tax rules that apply for a single tax year. Applying these rules on the available data should then result in an income tax figure that reflects the personal income taxes to be paid in the specified tax year. If one wants to obtain the taxes that correspond with the legislation of other tax years, one should implement other tax rules. Therefore, we discuss in this section the changes that most likely will become effective in the tax years from 2003 till 2005.[51] The discussion of these new rules is structured along the same lines as those used to discuss the setup of the tax year 2002.

Some of the tax legislation elements, mentioned throughout the above text, simply change from year to year, because a different index is applied on some basic nominal figure. In the previous sections we mentioned the indexed amounts that apply to the tax year 2002. In the following section we mention the non indexed amounts that most likely will apply in the different tax years.

RECONSTRUCTION OF TAX UNITS

In section 1.5 we mentioned the nominal amounts that are used to check whether an individual can still be considered to be dependent on the basis of his net own means. As far as we are informed, no changes in the non indexed basic amount are foreseen between the tax years 2002 and 2005. In Table 13 we therefore mention the non indexed amounts that most likely will be used to determine these net own means thresholds for the different tax year from 2002 till 2005.

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[51] See Ministerie van Financiën (2003), p. 47-53 and Standaard Uitgeverij (2002), p. 365-369.

Table 13: Maximal height of the observed net own means of dependents in different tax years

	Non-Indexed amount Tax year 2002[52]	Non-Indexed amount Tax year 2003	Non-Indexed amount Tax year 2004	Non-Indexed amount Tax year 2005
For children of couples	1.500,00	1.500,00	1.500,00	1.500,00
For children of singles – non handicapped	2.600,00	2.600,00	2.600,00	2.600,00
For children of singles – handicapped	3.000,00	3.000,00	3.000,00	3.000,00

The rules to determine lump sum expenses of employees, will change within the period 2002 till 2005. In the first column of Table 3 we list the non indexed amounts that applied for the tax year 2002 and most likely will apply for all the other tax years as well.

Table 14: Rates and non indexed amounts, applied on gross taxable income of employees to determine a lump sum amount of expenses for the tax year 2002[53]

Gross taxable income in EUR	Rate applied on gross taxable income
More than 0 but not more than 3.750,00	20,0%
More than 3.750,00 but not more than 7.450,00	10,0%
More than 7.450,00 but not more than 12.400,00	5,0%
More than 12.400,00	3,0%
Maximal amount of lump sum expenses	€ 2.500,00

We already know that the rate, applied on the first bracket will change in two steps throughout the tax years 2002 till 2005. For the tax year 2003 this rate will increase from 20% to 23% and in the tax year 2004 this rate will further increase from 23% to 25%.

In principle, the maximal non indexed amount of lump sum expenses will remain constant at € 2.500,00 for employees and managers.

The minimal, non indexed, amount of lump sum expenses, related to professional activities, that normally applies within this period is € 250,00.[54]

From the tax year 2005 on, one also considers two people that are registered officially as cohabitating spouses as two individuals that make up a single tax unit.[55] We remark that we do not dispose of a registered variable that allows us to identify cohabitating spouses, but that with the available data we can reconstruct de facto couples under some assumptions.[56]

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[52] See Art 28 of "de Wet van 10 augustus 2001", See Juridat (2004).
[53] See Standaard Uitgeverij (2002), p. 348.
[54] See Art 1 van het KB van 20 juli 2000, See Juridat (2004).
[55] See Standaard Uitgeverij (2002), p. 368.
[56] See Decoster, De Swerdt, Orsini and Van Camp (2007).

CALCULATION OF PERSONAL INCOME TAXES FOR RECONSTRUCTED TAX UNITS

DETERMINATION OF NET TAXABLE INCOME

The rules, applied to determine lump sum expenses related to professional activities, differ over the tax years from 2002 till 2005 (see section 2.1).

Construction rule:

In order to implement the tax rules for the tax years 2003 and 2004, the rates used to construct PIT_COSTRATE_ANN_SP1 and PIT_COSTRATE_ANN_SP2 will have to be adapted, with the rates and levels mentioned in section 2.1.

From the tax year 2005 on, the way couples will be treated, will change considerably. From then on, the marital splitting rule will only be applied if it results in a tax advantage.[57] Furthermore, all income sources that give rise to the net taxable occupational income concept on which the marital splitting rule is applied, should be redistributed from one partner to the other, using the proportion that the different income sources take in the income of highest income earner.[58]

Construction rule:

In order to check the condition whether the application of the marital splitting rule results in a tax advantage, it is necessary to compute personal income taxes of each tax couple both with and without the application of this splitting rule and then compare the results.

The amount PIT_MARSPLIT_ANN is still computed by applying the 70%-30% rule on the total amount of net taxable occupational income of the couple. The maximal non indexed amount that is transferred, is set on € 6.700,00.

In order to illustrate the proportional reduction of each income source, we assume here that spouse 1 has the highest amount of net taxable occupational income, i.e. PIT_NTOI_ANN_SP1 = MAX(PIT_NTOI_ANN_SP1,PIT_NTOI_ANN_SP2).

In that case, each income source that is taken into account to compute PIT_NTOI_ANN_SP1, should be expressed as a fraction of PIT_NTOI_ANN_SP1. We refer to these fractions as PIT_NTOIFRAC_ANN_SP(i), where i indexes the different income sources. Then, for instance, PIT_NTIPENS_ANN_SP1 should be reduced by PIT_NTOIFRAC_ANN_SP1(index number PIT_NTIPENS_ANN_SP1) *PIT_MARSPLIT_ANN. All income sources of spouse 1 should be reduced in a

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[57] See Standaard Uitgeverij (2002), p. 368.
[58] See Ministerie van Financiën (2003), p. 50.

similar way. The income amounts that reduce income of spouse 1, should be used then to increase the corresponding income sources of spouse 2.

Before the tax year 2005, all income sources, other than net taxable occupational income, are added to the net taxable occupational income of the spouse with the highest amount of net taxable occupational income after application of the marital splitting rule. From the tax year 2005 on, one will add these other income sources to the income of the spouse that earns the income. On top of this, one will also apply different rules to determine real estate income, income from movable property and other income sources.[59] Because one heads for separate taxation of both partners from the tax year 2005 on, one will apply the non indexed ceiling of € 250.000,00 for charity gifts on both partners separately.[60]

Construction rule:

Since we do not observe these additional income sources and the expenses made by the tax unit, we will not discuss these different rules in more detail. Hence, the separate taxation of both partners has no consequences for the tax calculation process described here, because of a lack of data.

DETERMINATION OF GROSS PERSONAL INCOME TAXES

The tax rate scheme, applied on the net taxable income sources will be adapted in several steps. Some rates will be abolished or adapted and the income brackets will be adapted through time. In Table 15 we list the rates and brackets that apply on the different tax years. Table 15 should be compared with Table 6, but note that from the tax year 2003 on, the rate of 52,5% has diminished to 52%.

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[59] See Ministerie van Financiën (2003), p. 49.
[60] See Ministerie van Financiën (2003), p. 51.

Table 15: Rates applied on net taxable income of each spouse to determine gross personal income taxes in the different tax years[61]

Rate applied on net taxable income	Non indexed amount of Net taxable income in EUR	Non indexed amount of Net taxable income in EUR	Non indexed amount of Net taxable income in EUR
	Tax year 2003	Tax year 2004	Tax year 2005
25,0%	More than 0 but not more than 5.705,00	More than 0 but not more than 5.705,00	More than 0 but not more than 5.705,00
30,0%	More than 5.705,00 but not more than 7.565,00	More than 5.705,00 but not more than 8.120,00	More than 5.705,00 but not more than 8.120,00
40,0%	More than 7.565,00 but not more than 10.785,00	More than 8.120,00 but not more than 12.120,00	More than 8.120,00 but not more than 13.530,00
45,0%	More than 10.785,00 but not more than 24.800,00	More than 12.120,00 but not more than 24.800,00	More than 13.530,00 but not more than 24.800,00
50,0%	More than 24.800,00 but not more than 37.185,00	More than 24.800,00	More than 24.800,00
52,0%	More than 37.185,00	abolished	abolished
55,0%	Abolished	abolished	abolished

DETERMINATION OF TAX CREDITS

Credits related to size and composition of the tax unit

The exemption for both partners of a tax couple will be increased to the level of a single in two steps. In the tax year 2004, one will increase the non indexed amount for each partner from € 3.250,00 to € 3.390,00 and in the tax year 2005 this amount will be further increased to € 4.095,00.[62]

From the tax year 2003 on, one will divide the exemptions from the bottom up, into three classes. The *basic exemptions* which consist of the basic exempted amount of each tax payer eventually increased in cases of a handicap. We will refer to these amounts as PIT_BASICEX_ANN_SP1 and PIT_BASICEX_ANN_SP2. Next to these basic exemptions one groups the *exemptions for dependent children*, including increases for handicaps if necessary, in another variable. This variable also includes the exemptions for each dependent child below the age of three for which the taxpayer does not declare costs for day care.[63] We will refer to this tax unit variable as PIT_EXEMPDEP_ANN. Finally, there is a third exemption variable which contains *exemptions for special household conditions*

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[61] See Standaard Uitgeverij (2002), p. 365-369.
[62] See Ministerie van Financiën (2003), p. 52.
[63] From tax year 2006, this age is increased from 3 to 12. See art. 113, §1, 1° and 3° of the Income Tax law of 1992 (See Juridat (2004)).

such as dependent other persons or exemptions for singles with dependent children. We refer to this variable as PIT_EXEMSPEC_ANN.[64]

From the tax year 2003 on, the exemption for singles with dependent children will be given a broader interpretation as compared to before. Until the tax year 2002 only very specific singles, such as non remarried widowers with dependent children, could benefit from the tax exemption. From the tax year 2003 on, all single tax payers with dependent children benefit from an exempted non indexed income amount of € 870,00.[65]

In order to calculate the tax equivalent of the exempted income amount one first adds the exemptions for dependent children and exemptions for special household conditions to the basic exemption of the highest income earner. If the exempted amount is larger than the income of the highest income earner, the remaining exemptions are transferred to the other partner and there added to the basic exemption. If the exempted income level exceeds the income of the second partner, credits for dependent children become refundable to the tax payer.

To calculate the refundable part, one has to compute the difference between a) the income taxes to be paid by the second spouse and b) the tax equivalent of the exempted amount of income.[66] We refer to the absolute equivalent of this difference as PIT_REFUND_ANN. This amount is limited in function of the number of dependent children. The maximal amount of tax credits that is refunded, is limited to a non indexed amount of € 250,00 for each child. Hence, to compute the maximal amount that is refundable one has to multiply the indexed equivalent of 250,00 with the number of dependent children. We refer to this amount as PIT_REFMAXL_ANN. The refunded amount then is the minimum of PIT_REFUND_ANN and PIT_REFMAXL_ANN. The tax credit will only be refunded if the refundable amount exceeds the amount of € 2,50.[67]

Credits in case the taxpayer or the spouse receive replacement income

The basic amounts, used to compute the tax reductions for replacement income, do not differ over the different tax years, except for changes in the index-figure, applied on nominal amounts in the tax system. Therefore, we list the non indexed amounts, that will be used in the different tax years in lines 1, 2, 4, 5 and 6 in Table 16. From the tax year 2005 on, one will treat those that enter early retirement different from those that entered it before. The non indexed amounts, applied for these new early retired, are listed in line 3 of Table 16.

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[64] See Ministerie van Financiën (2003), p. 52 and Standaard Uitgeverij (2002), p. 367.
[65] See Standaard Uitgeverij (2002), p. 347.
[66] The description of the calculation process of these refundable credits is an interpretation based on a suggestion given on p. 367 of Standaard Uitgeverij (2002).
[67] Standaard Uitgeverij (2002), p. 367.

Table 16: Maximal non indexed amounts of tax credits in EUR set by the tax legislator for replacement income used in tax year 2002 till 2005[68]

		Reduction applied for each spouse	Non-indexed Maximal amounts of tax credits		Degressivity
	Type of replacement income		Single	Couple	
1	Pension benefits, early retirement benefits of new type and other replacement income	Yes	1.344,57	1.569,96	1/3
2	Early retirement benefits of old type	Yes	2.434,66	2660,07	1/3
3	Early retirement benefits introduced after income year 2003 (from tax year 2005 on)	No	1.344,57	1.569,96	1/3
4	Normal unemployment benefits	No	1.344,57	1.569,96	0
5	Unemployment benefits of older unemployed (age of 58 or above)	No	1.344,57	1.569,96	1/3
6	Sickness and disability benefits	Yes	1.725,98	1.951,39	1/3

In the last column of Table 16 we list the degressivity parameter, which indicates to what amount the basic amount of replacement income is reduced in function of the total amount of net taxable income.

The principles remain the same as those applied for the tax year 2002, but the nominal figures that mark the region within which the rates are applied might change because of changes in the index. One starts to apply the degressivity factor on the basic amounts of replacement incomes other than the normal unemployment benefits, from € 14.900,00 on (non indexed figure). The basic amount is reduced to 1/3 if net taxable income is € 29.800,00 or above. For normal unemployment benefits one also starts to reduce the basic amount from € 14.900,00 on. This amount reduces to zero if net taxable income is € 18.600,00 or above.[69]

From the tax year 2005 on, one will compute the tax reductions of some income types for each spouse while others are still computed at the tax unit level. In the third column of Table 16, we differentiate the income types for which the tax reduction will be computed at the individual level or at the tax unit level. In case the tax reduction is to be computed at the individual level one should compute the income fractions PIT_FRACREP_ANN(i) at the individual level by dividing each

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[68] See Ministerie van Financiën (2003), p. 53 and Standaard Uitgeverij (2002), p. 349-350.

[69] Standaard Uitgeverij (2002), p. 350.

income source that is included in the net taxable income concept of each spouse by the total amount of net taxable income of each spouse. If one of these income sources would result in more credits than there are taxes paid on this income source, this does not result in a refundable tax credit.

Tax credit for low labour income

This refundable credit is awarded only to people with labour income and is computed for each spouse separately. In order to compute the credit one takes into account the total amount of net taxable labour income of each spouse before the marital splitting rule is applied. We refer to these income concepts as PIT_NETLABI_ANN_SP1 and PIT_NETLABI_ANN_SP2 respectively.

In principle, these income concepts are computed as the total amount of occupational income minus replacement income. One does not take into account part time labour income if this labour activity makes up 1/3 or less of the time necessary to be full time unemployed. Income from self employed is not taken into account if it concerns self employed income from a sideline self employed activity. If the income amount, earned by a taxpayer, is fixed through some lump sum rules, this labour income tax credit is not awarded to the taxpayer.

Construction rule:

We do observe income variables that indicate whether the income was earned through part time employment. But, these variables do not distinguish the degree of part time activity as compared to full time employment. Hence, we therefore assume that all labour income from part time activity is earned within an activity that takes more than 1/3 of the time of a full time activity.

We do observe whether self employed income comes from a sideline self employed activity.

We do not have information on the tax units for which income is fixed in a lump sum way. Therefore, we only use the observed labour income variables to reconstruct net taxable labour income. In order to compute these net taxable labour income concepts we will use the previously mentioned net taxable income components on employed and self employed activity. For spouse 1 this implies the following definition:

PIT_NETLABI_ANN_SP1 = PIT_NTIEMPL_ANN_SP1 + PIT_NTISELFEM_ANN_SP1.

A similar definition applies for spouse 2.

The income concepts PIT_NETLABI_ANN_SP1 and PIT_NETLABI_ANN_SP2 are used by the tax legislator to compute the refundable tax credit for each spouse. We refer to these credits with PIT_TACRLAB_ANN_SP1 and PIT_TACRLAB_ANN_SP2 respectively. In Table 17 we illustrate the computation

of this tax credit for spouse 1 if spouse 1 does not receive any replacement incomes.

In the formulas used in Table 17, BTCLAB_ANN refers to the basic amount of the labour income tax credit paid in a certain tax year, G1 to the lowest income level of the bracket within which one observes PIT_NETLABI_ANN_SP1 and G2 to the highest income level of the bracket within which one observes PIT_NETLABI_ANN_SP1.

The income brackets, and the corresponding tax credit, applied in the tax year 2003, are given in Table 17.

Table 17: Non indexed income brackets used to compute tax credit for low labour income[70]

Net labour income	Non indexed amount of tax credit
More than 0 but not more than 3.260,00	0
More than 3.260,00 but not more than 4.350,00	$PIT\_TACRLAB\_ANN\_SP1 = BTCLAB\_ANN * (PIT\_NETLABI\_ANN\_SP1-G_1)/(G_2 – G_1)$
More than 4.350,00 but not more than 10.880,00	BTCLAB
More than 10.880,00 but not more than 14.140,00	$PIT\_TACRLAB\_ANN\_SP1 = BTCLAB\_ANN * (G_2 -PIT\_NETLABI\_ANN\_SP1)/(G_2 - G_1)$
More than 14.140,00	0

For the tax year 2003 the amount of BTCLAB_ANN is set at € 78,00. In the two following tax years this amount is increased to € 220,00 and € 440,00 respectively.[71]

If an individual receives replacement income, the refundable tax credit is limited to the fraction of net taxable labour income in the total amount of net taxable occupational income.[72]

Construction rule:

As illustrated in section 2.1, we can calculate PIT_NTOI_ANN_SP1 before the marital splitting rule is applied. We can use this income concept to compute the fraction of labour income in the total amount of occupational income. This fraction can be used then to limit the refundable tax credit as follows:

PIT_TACRLAB_ANN_SP1 = PIT_TACRLAB_ANN_SP1 *
PIT_NETLABI_ANN_SP1/PIT_NTOI_ANN_SP1.

A similar definition applies for spouse 2.

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[70] See Ministerie van Financiën (2003), p. 41.
[71] See Ministerie van Financiën (2003), p. 53.
[72] See Ministerie van Financiën (2003), p. 41.

Tax credit for energy savings

From the tax year 2004 on, the tax legislator introduces a new non refundable tax credit for expenses, made by the tax unit, that stimulate energy savings. Among other things, these expenses include expenses because of an upgrade from an old to a new model of fuel burner for house warming and expenses on glazing if one opts for double glazing.

Construction rule:

We do not observe tax unit expenses. Hence, these credits for energy savings will not be reconstructed in the model.

TAX UNITS THAT ARE NOT LIABLE TO ENTER A TAX FORM

We are not aware of structural changes in the legislation that determines whether a tax unit is liable to pay income taxes. The only condition that certainly will change over time, is the second condition mentioned in section 3. This condition says that tax units that have no occupational income and the total net taxable income of this tax unit is below the basic exempted level for a single person or a couple. These basic exemption levels will change over time (see "Credits related to size and composition of the tax unit" in section 2.2). Hence, to apply this condition, the exemption levels, relevant for the tax year under study, should be applied.

APPENDIX 2: CLASSIFICATION OF VARIABLES AND PARAMETERS

Throughout the main text we mentioned the names of variables and parameters that are used for the computation of personal income taxes with the PIT module. Within the set of variables one can further distinguish endogenous from exogenous variables. Endogenous variables are variables that are constructed within the PIT module itself. Exogenous variables are variables that either come from a source outside the whole model or from another module and that are used as input of the PIT module and therefore remain fixed throughout the PIT module. Parameters are those elements of the module that will be offered to the user of the microsimulation model as something that can be manipulated.

In what follows we provide three tables with the exogenous and endogenous variables and the parameters of the PIT module respectively. Each table consists of two columns that contain the following elements:

1. the name of the variable;
2. a label for this variable in English.

EXOGENOUS VARIABLES

Name	Label
From datawarehouse	
NARGENIS	
NAREGNIS_HH_ID	Anonymised identification number of the household to which the individual belongs
NAREGNIS_SEX	Sex of the individual on 1 January 2002
NAREGNIS_DATBIRTH	Birth date of the individual in year and month
NAREGNIS_RELATION	Link between the individual and the head of the household on 1 January 2002
CONSTRUCTED	
MIMOSIS_WEIGHT	Sample weight correction for non random selection
MIMOSIS_GRINC_HOUR	Constructed income earned per hour
MIMOSIS_GRINC_QT	Constructed income earned per quarter
From other modules	
FAMREL_FAMILY	Unique identifier identifying the family to which the individual belongs
FAMREL_RELATION	Relation of the individual with respect to the head of the family
FAMREL_FAMTYPE	Type of family to which the individual belongs
FAMREL_COUPLE	Type of couple to which the individual belongs
CONTRIB_GTIPRIV_QT	Gross taxable labour income earned as wage earner on the private labour market
CONTRIB_GTIPUB_QT	Gross taxable labour income earned as wage earner on the public labour market
CONTRIB_GTISELF_QT	Gross taxable labour income earned as self employed
CONTRIB_GTIPENS_QT	Gross taxable pension benefits
CONTRIB_GTIEARNE_QT	Gross taxable early retirement benefits of the new type
CONTRIB_GTIEAROL_QT	Gross taxable early retirement benefits of the old type
CONTRIB_GTOLDUN_QT	Gross taxable unemployment benefits of older unemployed with seniority supplement
CONTRIB_GTIOTHUN_QT	Gross taxable unemployment benefits, other than early retirement benefits
CONTRIB_GTIDISAB_QT	Gross taxable disability benefits of wage earners
CONTRIB_GTINDOCC_QT	Gross taxable benefits in case of industrial accidents or occupational diseases
CONTRIB_GTISICK_QT	Gross taxable benefits in case of sickness other than disability benefits
CONTRIB_GTIFAMAL_QT	Gross taxable income from family allowances

ENDOGENOUS VARIABLES

Name	Label
Reconstruction of tax units	

PIT_TURANK_ANN	Rank of the individual within the tax unit the individual belongs to
PIT_TUNUMB_ANN	Unique identification number of the tax unit
PIT_NETOWN_ANN	Net own means of the individual (variable for testing tax dependency)
PIT_NETOWNOC_ANN	Net own means of occupational income sources (variable for testing tax dependency)
PIT_NETOWNRE_ANN	Net own replacement income of the individual (variable for testing tax dependency)
PIT_NETOWNEM_ANN	Net own means of activity as employee (variable for testing tax dependency)
PIT_NETOWNSE_ANN	Net own means of activity as self employed (variable for testing tax dependency)
PIT_COSTRTEM_ANN	Estimate of costs made to earn income as employee, estimated with cost rates (variable for testing tax dependency)
PIT_COSTEMP_ANN	Final estimate of costs made to earn income as employee (variable for testing tax dependency)
PIT_COSTRTSE_ANN	Estimate of costs made to earn income as self employed, estimated with cost rates (variable for testing tax dependency)
PIT_COSTSELF_ANN	Final estimate of costs made to earn income as self employed (variable for testing tax dependency)
PIT_NETOWNOT_ANN	Net own means from taxable income sources other than occupational income (variable for testing tax dependency)
PIT_NETOWNNT_ANN	Net own means from non-taxable income sources (variable for testing tax dependency)
PIT_HANDICAP_ANN	Identification of having an handicap (yes = 1, no = 0)
Variables at tax unit level before personal income tax computation	
PIT_COUPLE_ANN	Head of the tax unit is legally married with a partner that is comprised by the tax unit as well
PIT_DEPCHILD_ANN	Number of children that are dependent according to the personal income tax legislation
PIT_DEPOTHER_ANN	Number of individuals, other than children, that are dependent according to the personal income tax legislation
PIT_DEPCHIL3_ANN	Number of children below the age of 3 that are dependent according to the personal income tax legislation
PIT_GTIPRIV_ANN_SP1	Gross taxable labour income earned as wage earner on the private labour market by spouse 1 of the tax unit
PIT_GTIPUB_ANN_SP1	Gross taxable labour income earned as wage earner on the public labour market by spouse 1 of the tax unit
PIT_GTISELF_ANN_SP1	Gross taxable labour income earned as self employed by spouse 1 of the tax unit
PIT_GTIPENS_ANN_SP1	Gross taxable pension benefits of spouse 1 of tax unit
PIT_GTIEARNE_ANN_SP1	Gross taxable early retirement benefits of the new type of spouse 1 of tax unit
PIT_GTIEAROL_ANN_SP1	Gross taxable early retirement benefits of the old type of spouse 1 of tax unit

PIT_GTOLDUN_ANN_SP1	Gross taxable unemployment benefits of older unemployed with seniority supplement of spouse 1 of tax unit
PIT_GTIOTHUN_ANN_SP1	Gross taxable unemployment benefits, other than early retirement benefits of spouse 1 of tax unit
PIT_GTIDISAB_ANN_SP1	Gross taxable disability benefits of wage earners of spouse 1 of tax unit
PIT_GTINDOCC_ANN_SP1	Gross taxable benefits in case of industrial accidents or occupational diseases of spouse 1 of tax unit
PIT_GTISICK_ANN_SP1	Gross taxable benefits in case of sickness other than disability benefits of spouse 1 of tax unit
PIT_GTIFAMAL_ANN_SP1	Gross taxable income from family allowances of spouse 1 of tax unit
PIT_GTIPRIV_ANN_SP2	Gross taxable labour income earned as wage earner on the private labour market by spouse 2 of the tax unit
PIT_GTIPUB_ANN_SP2	Gross taxable labour income earned as wage earner on the public labour market by spouse 2 of the tax unit
PIT_GTISELF_ANN_SP2	Gross taxable labour income earned as self employed by spouse 2 of the tax unit
PIT_GTIPENS_ANN_SP2	Gross taxable pension benefits of spouse 2 of tax unit
PIT_GTIEARNE_ANN_SP2	Gross taxable early retirement benefits of the new type of spouse 2 of tax unit
PIT_GTIEAROL_ANN_SP2	Gross taxable early retirement benefits of the old type of spouse 2 of tax unit
PIT_GTOLDUN_ANN_SP2	Gross taxable unemployment benefits of older unemployed with seniority supplement of spouse 2 of tax unit
PIT_GTIOTHUN_ANN_SP2	Gross taxable unemployment benefits, other than early retirement benefits of spouse 2 of tax unit
PIT_GTIDISAB_ANN_SP2	Gross taxable disability benefits of wage earners of spouse 2 of tax unit
PIT_GTINDOCC_ANN_SP2	Gross taxable benefits in case of industrial accidents or occupational diseases of spouse 2 of tax unit
PIT_GTISICK_ANN_SP2	Gross taxable benefits in case of sickness other than disability benefits of spouse 2 of tax unit
PIT_GTIFAMAL_ANN_SP2	Gross taxable income from family allowances of spouse 2 of tax unit

Determination of net taxable income

PIT_NTOI_ANN_SP1	Net taxable occupational income of spouse 1 of the tax unit
PIT_NTIPENS_ANN_SP1	Net taxable pension benefits of spouse 1 of tax unit
PIT_NTIEARNE_ANN_SP1	Net taxable early retirement benefits of the new type of spouse 1 of tax unit
PIT_NTIEAROL_ANN_SP1	Net taxable early retirement benefits of the old type of spouse 1 of tax unit
PIT_NTIOLDUN_ANN_SP1	Net taxable unemployment benefits of older unemployed with seniority supplement of spouse 1 of tax unit
PIT_NTIOTHUN_ANN_SP1	Net taxable unemployment benefits, other than early retirement benefits of spouse 1 of tax unit
PIT_NTIDISAB_ANN_SP1	Net taxable disability benefits of wage earners of spouse 1 of tax unit

PIT_NTINDOCC_ANN_SP1	Net taxable benefits in case of industrial accidents or occupational diseases of spouse 1 of tax unit
PIT_NTISICK_ANN_SP1	Net taxable benefits in case of sickness other than disability benefits of spouse 1 of tax unit
PIT_COSTRATE_ANN_SP1	Lump sum costs of spouse 1 deductible of employment income
PIT_NTIEMPL_ANN_SP1	Net taxable employment income of spouse 1 of the tax unit
PIT_NTISELFEM_ANN_SP1	Net taxable self employment income of spouse 1 of the tax unit
PIT_NTI_ANN_SP1	Total amount of net taxable income of spouse 1 of the tax unit
PIT_NTOI_ANN_SP2	Net taxable occupational income of spouse 2 of the tax unit
PIT_NTIPENS_ANN_SP2	Net taxable pension benefits of spouse 2 of tax unit
PIT_NTIEARNE_ANN_SP2	Net taxable early retirement benefits of the new type of spouse 2 of tax unit
PIT_NTIEAROL_ANN_SP2	Net taxable early retirement benefits of the old type of spouse 2 of tax unit
PIT_NTIOLDUN_ANN_SP2	Net taxable unemployment benefits of older unemployed with seniority supplement of spouse 2 of tax unit
PIT_NTIOTHUN_ANN_SP2	Net taxable unemployment benefits, other than early retirement benefits of spouse 2 of tax unit
PIT_NTIDISAB_ANN_SP2	Net taxable disability benefits of wage earners of spouse 2 of tax unit
PIT_NTINDOCC_ANN_SP2	Net taxable benefits in case of industrial accidents or occupational diseases of spouse 2 of tax unit
PIT_NTISICK_ANN_SP2	Net taxable benefits in case of sickness other than disability benefits of spouse 2 of tax unit
PIT_COSTRATE_ANN_SP2	Lump sum costs of spouse 2 deductible of employment income
PIT_NTIEMPL_ANN_SP2	Net taxable employment income of spouse 2 of the tax unit
PIT_NTISELFEM_ANN_SP2	Net taxable self employment income of spouse 2 of the tax unit
PIT_NTI_ANN_SP2	Total amount of net taxable income of spouse 2 of the tax unit
PIT_MARSPLIT_ANN	Amount of taxable income that can be transferred from one spouse to the other because of marital splitting rule
Determination of gross personal income taxes	
PIT_GPIT_ANN_SP1	Gross amount of personal income taxes of spouse 1 after applying the global tax rate scheme on net taxable income
PIT_GPIT_ANN_SP2	Gross amount of personal income taxes of spouse 2 after applying the global tax rate scheme on net taxable income
Determination of tax credits	
PIT_EXEMP_ANN_SP1	Income amount of spouse 1 that is used to compute the tax credit for family composition
PIT_EXEMP_ANN_SP2	Income amount of spouse 2 that is used to compute the tax credit for family composition
PIT_PITFAMC_ANN_SP1	Personal income taxes of spouse 1 net of tax credits for family composition

PIT_PITFAMC_ANN_SP2	Personal income taxes of spouse 2 net of tax credits for family composition
PIT_PITFAMC_ANN	Personal income taxes at the tax unit level net of tax credits for family composition

Credits in case of replacement income

PIT_PITREP_ANN	Personal income taxes at the tax unit level net of tax credits for family composition and credits for replacement income
PIT_FRACREP_ANN1	Fraction applied on pension benefits and early retirement benefits of new type
PIT_FRACREP_ANN2	Fraction applied on early retirement benefits of old type
PIT_FRACREP_ANN3	Fraction applied on normal unemployment benefits
PIT_FRACREP_ANN4	Fraction applied on unemployment benefits of older unemployed (age of 58 or above)
PIT_FRACREP_ANN5	Fraction applied on sickness and disability benefits
PIT_FRACREP_ANN6	Fraction applied on other replacement income
PIT_BTCREP_ANN1	Basic tax credit granted for pension benefits and early retirement benefits of new type
PIT_BTCREP_ANN2	Basic tax credit granted for early retirement benefits of old type
PIT_BTCREP_ANN3	Basic tax credit granted for normal unemployment benefits
PIT_BTCREP_ANN4	Basic tax credit granted for unemployment benefits of older unemployed (age of 58 or above)
PIT_BTCREP_ANN5	Basic tax credit granted for sickness and disability benefits
PIT_BTCREP_ANN6	Basic tax credit granted for other replacement income
PIT_TNTI_ANN	Total net taxable income of the tax unit
PIT_RTCREP_ANN1	Reduced tax credit granted for pension benefits and early retirement benefits of new type
PIT_RTCREP_ANN2	Reduced tax credit granted for early retirement benefits of old type
PIT_RTCREP_ANN3	Reduced tax credit granted for normal unemployment benefits
PIT_RTCREP_ANN4	Reduced tax credit granted for unemployment benefits of older unemployed (age of 58 or above)
PIT_RTCREP_ANN5	Reduced tax credit granted for sickness and disability benefits
PIT_RTCREP_ANN6	Reduced tax credit granted for other replacement income

Other interventions to determine the final personal income tax bill

PIT_NETPITSC_ANN	Personal income taxes at the tax unit level net of all tax credits and obtained after application of a tax rate scheme on an aggregate income concept
PIT_NETPITSE_ANN	Sum of all personal income taxes due to tax rates applied on separate income components
PIT_NETPIT_ANN	Sum of all personal incomes taxes: rate scheme taxes and separate taxes
PIT_STATEPIT_ANN	Personal income taxes to be paid to the federal state

PIT_REGIOTAX_ANN	Personal income taxes to be paid to other entities than the federal state
PIT_CSAMOUNT_ANN	Amount of crisis surcharge
PIT_FINTAX_ANN	Total amount of taxes paid by the tax unit
Tax units that are not liable to enter a tax form	
PIT_TUNOLAB_ANN	Indicator whether the tax unit is liable to enter a tax form yes or no (no = 1, yes = 0)

PARAMETERS

Name	Label
Reconstruction of tax units	
PIT_CRATEREP_ANN	Fraction used to determine net own replacement income
PIT_RALUMPEM_ANN	Brackets and rates applied on gross taxable income of employees to determine a lump sum amount of expenses made to earn this income amount
PIT_RATEEMP_ANN	Fixed fraction used to determine expenses made to earn employment income
PIT_MINCOST_ANN	Minimal amount of costs that can be made to earn employment income
PIT_RALUMPSE_ANN	Rate applied on gross taxable income of self employed to determine a lump sum amount of expenses made to earn this income amount
PIT_MAXSELF_ANN	Maximal amount of costs that can be made to earn self employment income
PIT_RATESEL_ANN	Fixed fraction used to determine expenses made to earn self employment income
PIT_MAXOWNNG_ANN	Income ceilings used to compare net own means of potential tax dependents (other than parents and grandparents)
PIT_MAXOWNG_ANN	Income ceilings used to compare net own means of parents and grandparents
Determination of net taxable income	
PIT_PERMASPL_ANN	Percentage of net taxable income that can be redistributed from one spouse to the other in case of the marital splitting rule
PIT_ABSMASPL_ANN	Maximal absolute amount that can be redistributed between spouses in case of the marital splitting rule
Determination of gross personal income taxes	
PIT_RATSCHEM_ANN	Tax rate scheme applied on net taxable income to determine gross personal income taxes
Determination of tax credits	
PIT_EXEMSCH_ANN	Tax exemption levels for children that vary with the rank of the child
PIT_EXECHLA_ANN	Tax exemption for children below the age of three for which

	the taxpayer does not declare deductible costs
PIT_EXEMPS_ANN	Basic tax exemption in case the taxpayer is single
PIT_EXEMPC_ANN	Basic tax exemption for each partner if the taxpayers are a couple
PIT_EXEOTH_ANN	Basic tax exemption for tax dependent persons other than children
Credits in case of replacement income	
PIT_MAXREPL_ANN	Maximal amounts of tax credits that can be applied on different types of replacement income
PIT_RREDUCE_ANN	Rates used to determine reduced tax credits on replacement income other than normal unemployment benefits
PIT_RUNEMPL_ANN	Rates used to determine reduced tax credits on replacement income of normal unemployment benefits
PIT_UNIQREPL_ANN	Levels of net taxable income to determine tax credits in case of a unique source of replacement income
Other interventions to determine the final personal income tax bill	
PIT_RATECRIS_ANN	Rates used to determine the crisis surcharge
Tax units that are not liable to enter a tax form	
PIT_BESINGLE_ANN	Tax exempted level of income of the tax unit if taxpayer is single
PIT_BECOUPLE_ANN	Tax exempted level of income of the tax unit if taxpayer is married