SURVEY OF PERSONAL INCOMES
PUBLIC USE TAPE DOCUMENTATION

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Information about the Survey of Personal Incomes

What is the Survey of Personal Incomes?

The Survey of Personal Incomes (SPI) is based on information held by HMRC on individuals who could be liable to UK income tax. It is carried out annually by HMRC and covers income assessable to tax for each tax year.

Uses of the SPI

The SPI is compiled to provide a quantified evidence base from which to cost proposed changes to tax rates, personal allowances and other tax reliefs for Treasury Ministers. It is used to inform policy decisions within HMRC, the Treasury and the Devolved Administrations, as well as for tax modelling and forecasting purposes. In addition, it is used to provide summary information for the National Accounts that are prepared by the Office for National Statistics. Finally, it is used to provide information to Members of Parliament, other Government Departments, companies, organisations and individuals.

Please refer to the SPI usage agreement for the legal agreement for condition of use.

Comparability over time

Comparisons over time may be affected by changes in methodology. Notably, there was a revision to the grossing factors in the 2018 to 2019 publication, which is discussed in the commentary and supporting documentation for that tax year. For information on other changes, please refer to the supporting documentation for each year for detailed information or the background quality report for a summary of the most notable methodological changes over time.

Sample Design

HMRC holds information about individuals who could be liable to UK Income Tax in two operational computer systems.

1. The National Insurance and PAYE Service (NPS) system covers all employees and occupational pension recipients with a Pay As You Earn (PAYE) record.

2. The Computerised Environment for Self Assessment (CESA) system covers people with self-employment, rental or untaxed investment income. It also covers directors, those subject to higher rate tax and other people with complex tax affairs. Where people have both NPS and CESA records, their CESA record is selected because it provides a more complete picture of their taxable income.

Some individuals with a PAYE record are also in the SA system. These individuals are excluded from the PAYE population prior to sampling, as their SA record provides a more complete picture of their taxable income. Separate samples were drawn from each of these systems and different sampling strategies were used for each. The samples were structured as follows:

- the PAYE population from NPS was stratified by sex and by the sum of pay plus occupational pension income for the previous tax year. Where the previous year's income was not available, cases were stratified by sex and by whether they were a higher rate or additional rate taxpayer for the current tax year based on information available at the time the sample was drawn. The sampling fractions varied from 1 in 7 for individuals with high incomes and rare allowances to about 1 in 164 for people with low combined pay and pensions. In all, about 410,000 individuals were selected from NPS for inclusion in the SPI for tax year 2022 to 2023.

- for the SA population from CESA, the main source of income (self-employment or employment/ occupational pension) and ranges of income and tax were used to stratify the sample, with the sampling fraction varying from 1 in 1 for cases with very high income or Income Tax liabilities up to around 1 in 70 for employees and occupational pensioners with smaller income or tax. In all, about 500,000 individuals were selected from SA for inclusion in the SPI for tax year 2022 to 2023.

Once data was collected for the two constituent parts of the sample, the data sets were joined together. After allowing for non-response and for records that failed data validation tests, there were around 910,000 valid cases in the final SPI dataset for tax year 2022 to 2023.

Estimates and measures of precision

Population and sample design

The SPI aims to cover all individuals with a UK Income Tax liability. The sample drawn from HMRC operational computer systems will include some cases where income is less than allowances, so no tax liability arises. The section above explains how the records in each operational computer system are grouped (stratified) before the sample is selected and the proportion of taxpayers versus non-taxpayers. A random sample of records is drawn from each grouping (or stratum), where the proportion of cases selected varies from stratum to stratum.

Reliability of estimates

As with all sample surveys, estimates from the SPI have a sampling error attached to them. A statistic (e.g. an estimate of a mean or a total from a random sample) will be subject to sampling variation – its value will vary from one sample to the next if repeated random samples are drawn. The Standard Error of the statistic measures the extent of the variability. It reflects how much spread exists in the observations from the sample and the size of the sample.

In general, the larger the sample size, the smaller the Standard Error. To a lesser extent, the Standard Error of the statistic will decline as the proportion of the population surveyed increases, but only by taking measurements for the whole population can sampling error for the statistic be removed entirely.

A Confidence Interval for the statistic is constructed from the Standard Error. It gives an estimated range of values which is likely to include the estimated population size statistic. If independent samples are taken repeatedly from the same population and the Confidence Interval is calculated for each sample, then a proportion (known as the Confidence Level) of such intervals will include the unknown population parameter.

A 95% Confidence Interval is one that if compiled repeatedly would encompass the population parameter 19 times in 20. For a given sample size, narrower intervals can be compiled if a greater risk of failing to encompass the true population value is acceptable, whereas if greater certainty of including the true value is required, the interval will be wider.

The Upper and Lower boundaries of the Confidence Interval are called the Confidence Limits. They are a function of the statistic, the Standard Error of the statistic and the degree of confidence required of the interval.

The calculation of sampling errors assumes a simple random sampling method but can be extended to more complex sample designs. The sample for the SPI, as described earlier, is selected using a stratified sample.

Precision of estimates: sub UK areas

The population is not stratified by geographical area before the SPI sample is selected. The precision of estimates of taxpayer numbers for low level UK geographical areas depend on measuring the proportion of the UK population which belong to the area. Typically, these proportions are very small and to ensure high precision for any estimated proportion, the sample size across the UK needs to be large.

For estimated populations of 2.5 million or more, the estimate will be within 1% of the true population with 95% confidence. As the estimated population falls, the 95% Confidence Interval increases in size relative to the estimate. For a typical Parliamentary Constituency with an estimated taxpayer count of 46,000, the true figure may lie between 42,000 and 50,000. The error could be +/- 8% of this estimate. For a large Parliamentary Constituency, the error may be about 4,000 (7% of the estimate), while for a small constituency, the error may be 3,000 (about 9%).

Please see the Supporting documentation for the Personal Income statistics, for further details and illustrations of the confidence intervals for estimates of taxpayer numbers.

Coverage of the SPI

Not all of the individuals in the SPI sample are taxpayers. About 23 per cent of sample cases (32 per cent grossed) have no Income Tax liability because deductions and reliefs and personal allowances exceed their total income.

An individual with income below the personal allowance can still be a taxpayer in some circumstances. This can arise where individuals who have income liable to UK tax do not qualify for a personal allowance under the residence and/ or domicile rules. Some people who do qualify for the personal allowance choose to give up their personal allowance as part of the qualifying conditions for having their income taxed under the "remittance basis". These taxpayers may only have a small amount of income liable to UK tax (i.e. below where the personal allowance is set), but this income is still liable to tax and is charged at the starting, and/ or basic rates.

Most sources of income are liable for Income Tax and adding all these sources together will give an individual's total income assessable for tax for the tax year. There are some sources of income that are not liable for tax. As they do not contribute towards an individual's taxable income; they are excluded from the SPI. These sources include some social security benefits and income from some tax efficient savings vehicles (e.g. Individual Savings Accounts and some National Savings & Investment products).

Capital Gains arising from the disposal of assets are subject to Capital Gains Tax (CGT) and are not treated as income for Income Tax purposes, so gains from the disposal of assets are not included in the SPI.

Imputations

The coverage of investment income for the sample drawn from NPS is incomplete. This means that some values need to be imputed to the required levels.

Those income streams are set out in more detail below. For more information on the imputations process please refer to the supporting documentation accompanying the latest Income Tax Liabilities Statistics

1. Dividends

In order to create a full picture of total income for this survey, it is necessary to impute values of dividends to some sample cases. For the dividends imputation, the amount for each SPI case:

- is known for SA cases from the amount declared on the SA return
- can be inferred or estimated reasonably for NPS cases where there is an adjustment to the tax code for taxpayers
- is unknown for NPS cases where there is no coding adjustment

Where no information at case level is available from HMRC administrative systems, estimated values are imputed to cases so that the population as a whole has amounts consistent with evidence from other sources.

Starting from control totals at UK level for the number of cases and total amount of dividends, the SA and NPS cases with coding adjustments are deducted to leave targets for the remainder of the taxpayer population. These targets are at UK level – no attempt is made to control the targets to sub-UK geographical units. For dividend income, the number of non SA cases with dividend income and distribution of imputed amounts were inferred from Family Resources Survey data for tax year ending 2022. The cases to which amounts are attached by the imputation process and the amounts attached are determined by probabilistic methods with just the UK targets and distributions in mind.

2. Pension Contributions

Pension contributions can receive relief under three types of arrangement:

- net pay schemes
- relief at source
- salary sacrifice

HMRC does not have complete information about pension contributions. HMRC holds information on the value of employee pension contributions paid under net pay arrangements in Real Time Information (RTI) submissions by their employer. This data has been used to match SPI cases to net pay pension contributions. All net pay schemes are occupational pension schemes, but not all occupational pension schemes are net pay schemes: some are relief at source or salary sacrifice. Thus, net pay contribution figures do not include all occupational individual contribution figures. HMRC receives information from relief at source schemes on individual contributions via the APSS106 and RPSCOM100(Z). These contributions are made post-tax, relevant rate relief (equivalent to the rUK basic rate of Income Tax) is claimed on all individual contributions by scheme providers from HMRC. Individuals with higher marginal tax rates than the relevant rate can claim the additional relief from HMRC via SA by calling or writing to HMRC.

The RPSCOM100(Z) has been used to match relief at source pension contributions to cases in the SPI, including basic rate relief. Where applicable, information submitted via RTI and SA returns has been used. Individual contributions recorded in the different data sources have been adjusted, where necessary, to include basic rate relief. Some adjustments are made to align total contribution values with the APSS106. Additionally, the SPI includes contributions made to retirement annuity contracts and contributions made to employer’s schemes not deducted at source.

Employers, individuals, and scheme providers are not required to report individual contributions made using salary sacrifice to HMRC. These contributions represent an agreement between an employer and an individual, where an individual agrees to a lower gross salary, and the employer contributes more to the individual’s pension in return. Contributions made using salary sacrifice arrangements are not included in this publication.

For more info on these pensions data sources please refer to the latest methodology document for the Private pension statistics release.

3. Marriage Allowance

HMRC collects data regarding claimants (receivers and transferers) of Marriage Allowance through coding adjustments for those in NPS or via SA returns. The latest available administrative data is matched to the SPI sample data allowing for the calculation of tax liabilities adjusting for Marriage Allowance.

The SPI sample is not stratified around any subsets of populations including Marriage Allowance claimants, and therefore when grossed up and subset for just Marriage Allowance claimants it does not exactly match the population of claimants separately estimated and published using the collected administrative data. To calibrate to published Marriage Allowance claimants, estimated values are imputed to cases so that the population as a whole has amounts consistent with the evidence from these other sources.

Starting from published estimates at UK level for the number of cases, the SA and NPS cases with coding adjustments are deducted to leave targets for the remainder of the claimant population. These targets are at UK level – no attempt is made to control the targets to sub-UK geographical units. For Marriage Allowance, the number of eligible claimant cases were inferred from Family Resources Survey data for tax year ending 2022. The cases to which claims are received or transferred are attached by the imputation process to align to the published estimates of take up.

Methodological Changes this year

There have been no methodological changes to the Public Use Tape this year.

Devolved Income Tax

The Public Use Tape contains information reflecting the devolution of Income Tax to Scotland and Wales. They show estimates constructed from the SPI of the amount of tax that is due from non-savings/ non-dividend (NSND) income, that is, “earned income”.

Background to devolved Income Tax

Scottish Rates of Income Tax (SRIT)

The Scotland Act 2012 gave the Scottish Parliament the power to set a Scottish rate of Income Tax. The Scottish Rate of Income Tax (SRIT) regime applies to non-savings non-dividend (NSND) income. It allows the Scottish Government to change the amount of Income Tax that Scottish taxpayers pay and, as a result, the amount that the Scottish Government had to spend in Scotland.

Furthermore, the Scotland Act 2016 enhanced the Scottish Parliament’s tax powers, devolving all NSND income and allowing the Scottish Parliament to set and change its own tax rate bands and limits (but not the Personal Allowance) and introduce new ones. These enhanced powers were introduced from 6 April 2017.

In 2018 to 2019, SRIT was changed to introduce two new tax bands, the starter rate (19%) and the intermediate rate (21%) either side of the basic rate (20%). The higher and additional rates of tax were also increased by 1% for Scottish taxpayers increasing from 40% and 45% to 41% and 46% respectively. Whilst the rates of Income Tax have remained unchanged between the tax years 2019 to 2020 and 2022 to 2023, the incomes to which they apply have changed for the starter, basic and intermediate rates in Scotland. For further details of the Income Tax rates that apply to historic years, please refer to Income Tax rates and allowances for current and past years.

HMRC publishes statistics in the Scottish Income Tax Outturn.

Wales Rate of Income Tax (WRIT)

From April 2019, the UK government reduced each of the three main rates of Income Tax – basic, higher and additional rate – paid by Welsh taxpayers by 10 percentage points (ppts). The Wales Act 2014 enables the Welsh Government to control the three Welsh Rates of Income Tax (WRIT) which are added to the reduced UK Government rates. These are all set at 10 ppts for the 2022 to 2023 tax year. The combination of reduced UK rates plus the Welsh rates determines the overall rate of Income Tax paid by Welsh taxpayers, so the overall rates paid by Welsh taxpayers remained the same as elsewhere in the UK in the 2022 to 2023 tax year. HMRC publishes statistics in the Welsh Income Tax Outturn.

Comparing figures with the SPI

The Income Tax liabilities regarding devolution Income Tax differ from these outturn figures due to a range of factors including data (the outturn is based on a 100% data extract, however, the SPI is based on a sample) and measurement of Income Tax. In addition, there can be a difference between being a Scottish or Welsh taxpayer as set out in the Scotland and Welsh Acts and having a Scottish or Welsh residential postcode - for example if someone moves to Scotland or Wales towards the end of the year.

The SPI allow users to compare Income Tax liabilities for Scottish and Welsh taxpayers where tax is due versus where the taxpayer is a resident at the end of the tax year

The forecasts of Scottish and Welsh Income Tax that may be produced by the Office for Budget Responsibility, Scottish Fiscal Commission or Welsh Government and the outturn reported in the HMRC Accounts, may differ from what is shown the Public Use Tape for many reasons, including the following:

- Economic forecasting error: forecast assumptions such as earnings increases may prove incorrect, for example, if the economy grows more or less than expected
- Methodology and data: the Public Use Tape is based on a sample and therefore produces estimates rather than exact figures. These estimates have a margin of

sampling error associated with them as discussed above. The outturn figures published in HMRC's Annual Accounts are based on a 100% data

- Measurement of Income Tax: for example, the outturn figures include an adjustment for uncollected tax but the Public Use Tape doesn't perform these calculations.

Taxes confidentiality

The Taxes Acts impose special responsibilities on HMRC to safeguard the confidentiality of information on identifiable taxpayers. The legislation specified that such information can only be released outside the department in a very limited number of circumstances. We are allowed to pass employer names and addresses to the Office for National Statistics because this is specifically allowed by statute, but we are not allowed to give out any other information, which might be attributable to any identifiable individual, for statistical purposes, even to other Government departments. We have hence had to go through a number of stages to ensure that the data is suitably anonymised. In deciding how to do this we have had to take account of information on individuals' incomes which is already known to third parties, such as employers.

Steps taken to anonymise the 2022-23 SPI file

Stage 1

The first step is to round all sources of income, deductions and reliefs to three significant figures and use the dataset as input in the Personal Tax Model to calculate the tax amounts with rounded figures.

Stage 2

In the next stage, some variables are combined together to further ensure anonymity. For example, the original SPI file contains several variables relating to different types of pension relief. These variables are all combined into one variable holding all pension relief information. Details of the variables on the public use tape are given in Annex A.

Stage 3

The next stage of the anonymisation process is to identify all of the strata that were sampled more heavily than 1 in 60 in the original survey, and had populations less than 10,000. Further samples are then drawn from these strata to reduce the sampling fraction to no more than 1 in 60.

Stage 4

Composite records are created for the following reasons:
Individuals with very large total incomes within each income stratum (Generally well in excess of £1,000,000 for taxpayers and above £150,000 for non taxpayers).
Stratums where sampling in close to 1 in 1, which would be disclosive.
Stratums where sample size is less than 30.

This is done by combining cases with similar characteristics and taking an average for each variable on the file. Taxpayer cases are combined according to their stratum and gender status, whereas non taxpayers are combined by PAYE/SA classification and gender status due to insufficient samples within stratums to create viable composite records. The designatory variables contain the value "-1", enabling easy recognition of the composite records.

Each composite record is given a description and a summary of information about each case has been provided at Annex B.

In order to provide more accurate estimates to be available from the PUT for Scottish and Welsh taxpayers the composite records have been created by combining either Scottish taxpayers, Welsh taxpayers or non-Scottish/ non-Welsh taxpayers into a single composite record. There are no composite records which include a mix of Scottish, Welsh and non-Scottish/ non-Welsh taxpayers. Scottish and Welsh taxpayers are identified by the Scottish and Welsh indicators held on the NPS system which identifies individuals who have been taxed under the Scottish or Welsh tax systems for a given tax year.

Stage 5

As a final step, all the remaining income figures are rounded to the nearest £5.

Please note that although we make our best efforts to anonymise the SPI file for the PUT release, it may still be possible that the dataset holds enough information to make a case distinct from all other cases.

The SPI file is based on a sample of the UK population. There is no guarantee that an individual that a user may believe they have identified is actually the correct representation of that person.

Please refer to the SPI usage agreement for the legal agreement for condition of use.

Annex A

List of variables on Public Use Tape 2022-23

Item	Description	Code/Item range
AGERANGE	Age range indicator	-1 Not classified 1 Under 25 2 25 – 34 3 35 – 44 4 45 – 54 5 55 – 64 6 65 – 74 7 75 and over
BPADUE	Blind persons allowance due (including any surplus allowance transferred from spouse)	0 – 5,200
CAPALL	Capital allowances used for all sources of self-employment income less balancing charges (negative values indicate a net balancing charge)	-295,000 – 6,246,360
COVNTS	Covenanted payments to charities	0 – 2,746,445
DEFICIEN	Deficiency relief amount	0 – 4,890
DIVIDENDS	Dividend Income from shares in UK companies and units trusts	0 – 14,751,430
DSHIPS	Directorship Indicator	1 Director of a close company 2 Director but not of any close company 3 Not a director 4 Director recorded from PAYE Data
EIDF	Earned income deductions due at full relief (same as PENSRLF)	0 – 2,780,530
EPB	Gross expenses payments and benefits	0 – 737,565
EXPS	Deductions for expenses from employment	0 – 552,395
FACT	Grossing factor – This variable must be applied to the sample in order to obtain figures for the whole UK population	10.1361 – 492.2562

Item	Description	Code/Item range
GIFTAID	Gift aid payments to charities	0 – 8,264,985
GIFTINV	Gifts of qualifying investment and property to charities	0 – 1,497,545
GORCODE	Government Office Region Indicator	1 North East 2 North West 3 Yorkshire and the Humber 4 East Midlands 5 West Midlands 6 East of England 7 London 8 South East 9 South West 10 Wales 11 Scotland 12 Northern Ireland 13 Address abroad 14 Address unknown or not available
IIDF	Investment income deductions due at full relief (sum of COVNTS, MOTHDED, GIFTAID, GIFTINV, DEFICIEN)	0 – 8,434,875
INCBBS	Net interest from UK banks, building societies and other deposit takers	0 – 1,126,720
INCPBEN	Taxable Incapacity Benefit	0 – 133,000
INCPROP	Net income from UK and overseas property (income - expenses)	0 – 681,000

Item	Description	Code/Item range
INDUSTRY07	Indicator of Industry - based upon Standard Industrial Classification code (SIC) 2007	**A** Agriculture, forestry and fishing **B** Mining and quarrying **C** Manufacturing **D** Electricity, gas, steam and air conditioning supply **E** Water supply; sewerage, waste management and remediation activities **F** Construction **G** Wholesale and retail trade; repair of motor vehicles and motor cycles **H** Transport and storage **I** Accommodation and food service activities **J** Information and communication **K** Financial and insurance activities **L** Real estate activities **M** Professional, scientific and technical activities **N** Administrative and support service activities **O** Public administration and defence; compulsory social security **P** Education **Q** Human health and social work activities **R** Arts, entertainment and recreation **S** Other service activities **T** Activities of households as employers; undifferentiated goods and services-producing activities of households for own use **U** Activities of extraterritorial organisations and bodies **1500** Other (income from financial investments, property, unemployment benefit, incapacity benefit, and other Social Security benefits) **1600** Income from pensions (includes pensioners and persons moving into pensions during the year). **1700** Claimants **1900** Individuals with no income from Pay, Pension and unemployment benefit, incapacity benefit and other Social Security benefits **Blank** Unknown

Item	Description	Code/Item range
LLIR_RESTRICT _AMT_TOT	Restricted land property finance cost (tax relief is included in TAX_CRED)	0 – 511,305
LOSSBF	Losses brought forward from earlier years and used against profits for all sources of self-employment income	0 – 579,000
MAINSRCE	Main Source indicator	1 Main source pay 2 Main source occupational pension 3 Main source sole trader 4 Main source partnership 5 Main source other 6 Claims case
MAR	Marginal rate of tax indicator	ST = Standard income NS = Non-Standard income (savings) DV = Dividends LR/SR/BR/IR/HR/AR = Tax band NONTP = Non Taxpayer
MAIND	Marriage allowance claimant indicator	-1 – Not classified 0 – No claims 1 – Claimant
MCAS	Married couple's allowance	0 – 9,415
MOTHDED	All other charges, deductions and reliefs not included elsewhere	0 – 885,000
MOTHINC	Any other income not shown elsewhere	-4,740 – 4,533,380
OSSBEN	Other taxable social security benefits	0 – 41,600

Item	Description	Code/Item range
OTHERINC	Other Income	0 – 32,000
OTHERINV	Other Investment Income[1]	0 – 1,065,030
PAS	Personal allowance (includes 10% marriage allowance transfer if applicable).	0 – 13,830
PAY	Pay from employment net of benefits and foreign earnings	0 – 23,418,855
PENSION	Occupational, personal, overseas and other pensions	0 – 561,000
PENSRLF	Sum of relief's due to different types of pension contributions	0 – 2,780,530
PROFITS	Gross profits assessable for all sources of self-employment income	0 – 89,196,995
PSAV_XS	Amount saved towards your pension, in the period covered by this tax return, in excess of the Annual Allowance	0 – 659,000
SCOT_TXP	Indicates whether the record is treated as Scottish, for tax purposes.	. Not a Scottish taxpayer 1 Scottish taxpayer
WELSH_TXP	Indicates whether the record is treated as Welsh, for tax purposes.	. Not a Welsh taxpayer 1 Welsh taxpayer
SEINC_NUM	Indicator for self-employed cases (those submitting pages in their tax return for income from trades or partnerships)	-1 Not classified 0 Not self employed 1 Self employed
SEX	Gender Indicator	0 Not attributable 1 Male 2 Female

Item	**Description**	**Code/Item range**
SPA	State Pension Age indicator	-1 Not classified 0 Non-state pension age 1 State pension age
SREF	Statistical Reference	1 – 17704319
SRP	State retirement pension (includes state retirement pension lump sum payment[2]) & widow's pension	0 – 231,000
TAXINC	Amount of taxable income	0 – 112,581,945
TAX_ST_SR_DEVO_TXP	Total tax liability, at starting rate on non-savings non-dividends income (based on SCOT_TXP or WELSH_TXP[5])	0 – 430
TAX_ST_BR_DEVO_TXP	Total tax liability, at basic rate on non-savings non-dividends income (based on SCOT_TXP or WELSH_TXP[5])	0 – 9,085
TAX_ST_IR_DEVO_TXP	Total tax liability, at intermediate rate on non-savings non-dividends income (based on SCOT_TXP or WELSH_TXP[5])	0 – 3,775
TAX_ST_HR_DEVO_TXP	Total tax liability, at higher rate on non-savings non-dividends income (based on SCOT_TXP or WELSH_TXP [5])	0 – 48,750
TAX_ST_AR_DEVO_TXP	Total tax liability, at additional rate on non-savings non-dividends income (based on SCOT_TXP or WELSH_TXP [5])	0 – 43,298,325

Item	Description	Code/Item range
TAX_ST_BR_DEVO_WRIT	Devolved element of tax liability for Welsh taxpayers, at basic rate on non-savings non-dividends income (based on WELSH_TXP[5])	0 - 3,770
TAX_ST_HR_DEVO_WRIT	Devolved element of tax liability for Welsh taxpayers, at higher rate on non-savings non-dividends income (based on SCOT_TXP or WELSH_TXP [5])	0 – 11,560
TAX_ST_AR_DEVO_WRIT	Devolved element of tax liability for Welsh taxpayers, at additional rate on non-savings non-dividends income (based on SCOT_TXP or WELSH_TXP[5])	0 – 150,480
TAXPAYER	Taxpayer status indicator (rounding reduces some figures under 5 to zero, this indicates those with some tax liability before rounding)	1 Taxpayer 2 Non-taxpayer
TAXTERM	Taxable pay on termination of employment	0 – 305,000
TAX_CRED	Total tax credits excluding MCAS (tax covered/relief value)	0 – 3,132,425
TEI	Total earned income	0 – 110,834,305
TI	Total income (sum of TEI and TII)	0 – 121,017,875
TII	Total investment income	0 – 14,894,525
TOTTAX_DEVO_TXP	Total tax liability (including pension tax charge)[3] less tax credits[4] (Based on SCOT_TXP or WELSH_TXP [5])	0 – 47,036,615
UBISJA	Unemployment benefit, income support payments and jobseeker's allowance	0 – 22,200

Variable relationships

Variable	Calculation
Total earned income (TEI)	= max(0, PAY + EPB – EXPS) + INCPBEN + OSSBEN + TAXTERM + UBISJA + MOTHINC + OTHERINC + SRP + PENSION + max(0, PROFITS – CAPALL – LOSSBF)
Total investment income (TII)	= OTHERINV + DIVIDENDS + INCPROP + INCBBS
Deduction and Relief's	= COVNTS + MOTHDED + GIFTAID + GIFTINV + DEFICIEN + PENSRLF
Personal Allowances	= PAS + BPADUE
Tax Credits	= MCAS*0.1 + TAX_CRED
Employed Income	= max(0, PAY + EPB – EXPS) + INCPBEN + OSSBEN + TAXTERM + UBISJA + MOTHINC
Self Employed Income	= max(0, PROFITS – CAPALL – LOSSBF)
Pensions Income	= SRP + PENSION
Pension tax charge	= PSAV_XS * individuals marginal tax rate

Note:

[1] Other investment income comprises any other savings income and will include, for example, interest from National Savings products, interest on securities, interest from partnerships and from trusts, settlements and estates.

[2] State pension lump sum (one off lump sum payment) has been categorised as part of the State retirement pension (SRP) if it can be separately identified in source data. Any such amounts reported on the Self Assessment Short Tax Return cannot be separately identified and remain part of other pensions.

[3] Amount saved towards your pension, in the period covered by this tax return, in excess of the Annual Allowance (PSAV_XS). Tax charge on this is dependent on an individual's marginal rate.

[4] The tax credits referred to in the definition of TOTTAX_DEVO_TXP (total tax) refer to:

- Married couples allowance (Variable MCAS) given at a relief rate of 10%
- Venture Capital Trusts, Enterprise Investment Schemes, Seed Enterprise Investment Schemes, Community Investment tax relief, maintenance/alimony payments, Social

Investment Tax Relief, Foreign tax credit relief on income and Landlord tax relief. The total tax credit value of these variables is in TAX_CRED.

5 In 2022-23 Scotland has a different tax system to the rest of the UK on non savings non dividends income (See https://www.gov.uk/scottish-income-tax).

Scottish rates and bands on non savings non dividends income for 2022-23:

Band	Band Name	Rate
Over £12,570 to £14,732	Starter Rate	19%
Over £14,732 to £25,688	Basic Rate	20%
Over £25,688 to £43,662	Intermediate Rate	21%
Over £43,662 to £150,000	Higher Rate	41%
Over £150,000	Additional Rate	46%

England, Wales and Northern Ireland rates and bands on non savings non dividends income for 2022-23:

Band	Band Name	Rate
Over £12,570 to £50,270	Basic Rate	20%
Over £50,270 to £150,000	Higher Rate	40%
Over £150,000	Additional Rate	45%

REMOVED VARIABLES IN 2022-23

Occasionally variables become redundant in the dataset and are therefore removed. For the tax year 2022 to 2023, variables relating to COVID-19 support schemes have been removed. The Self-Employment Income Support Scheme and Coronavirus Job Retention Scheme had since ceased operation in 2021 to 2022 tax year.

Annex B

List of composite records on Public Use Tape 2022-23

Please refer to the separate Excel spreadsheet summary labelled “Annex B 202223”.

Annex C

Income Tax Personal Allowances and Reliefs, 1990-91 to 2022-23

Please refer to the separate Excel spreadsheet labelled “Annex C TA 1 202223.

Notes on personal allowances

1. Nearly everyone who lives in the UK is entitled to an Income Tax Personal Allowance (called single allowance before the introduction of independent taxation in 1990-91). The personal allowance is an amount you can receive without having to pay any tax and can be set against any type of income. Where an individual's total income is less than the allowance, their tax liability is reduced to nil. However any unused part of the personal allowance cannot be transferred to any other person.

2. Up to 1989-90, the married allowance was given to married men instead of a single allowance. With the introduction of independent taxation in 1990-91, each partner of the married couple is entitled to a personal allowance and one of them to an additional allowance called married couple's allowance. In the year of marriage the allowance is reduced by one twelfth for each complete month (beginning on the sixth day of each calendar month) prior to the date of marriage. The married couple's allowance, and allowances linked to it, i.e. the additional personal allowance and the widow's bereavement allowance, were restricted to 20 percent in 1994-95, 15 percent between 1995-96 and 1998-99 and 10 percent onwards. The amounts for the age related MCA in 1999-2000 were increased so that the value of this allowance was protected for people born before 5th April 1935 (and given as a 10% tax credit). From April 2000, the MCA for people born after 5 April 1935 has been withdrawn.

3. The amount of the personal allowance (single allowance before 1989-90) depends on the age of the individual taxpayer. The amount of the married couple's allowance (married allowance before 1989-90) depends on the age of the elder of the husband or wife. The maximum values of these age-related allowances will be given provided the individual taxpayer's total income is below the income limit shown. For incomes in excess of the limit, the allowance is reduced by £1 for each additional £2 of income (the marginal fraction was 2/3 from 1975-76 to 1988-89) until the basic levels of the personal and married couple's allowances are reached.

4. The additional personal allowance may be claimed by a single person who has a child resident with him or her during the year, or by a married man with children if his wife is totally incapacitated. From April 1997 it may also be claimed by married women with children if the husband is totally incapacitated. From April 2000, the additional personal allowance has been withdrawn.

5. Widow's bereavement allowance is due to a widow in the year of her husband's death and in the following year provided the widow has not remarried before the beginning of that year. This allowance has been withdrawn for deaths occurring after 5 April 2000.

6. You can claim the blind person's allowance if you are registered as blind within a local authority in England or Wales or live in Scotland or Northern Ireland and are unable to perform any work for which eyesight is essential. Surplus blind person's allowance may be transferred to a husband or wife.

Annex D

Rates of Income Tax, 1990-91 to 2022-23

Please refer to the separate Excel spreadsheet labelled "Annex D TA 2 202223".