HM Revenue & Customs

Personal Incomes Statistics 2017 to 2018 Supporting documentation

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Background information

This is a National Statistics publication produced by HM Revenue and Customs (HMRC). For more information on National Statistics and governance of statistics produced by public bodies please see the UK Statistics Authority website (www.statisticsauthority.gov.uk).

The tables in this publication provide detailed breakdowns of individuals liable to UK Income Tax (taxpayers) and their incomes using sample based estimates.

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.

Sample Design

HMRC holds information about individuals who could be liable to UK Income Tax in three 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. NPS replaced the Computerisation of PAYE (COP) system.

2. The Computerised Environment for Self Assessment (CESA) system covers people with self-employment, rental or untaxed investment income. It also covers those with higher incomes 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.

3. The Claims system covers people without NPS or CESA records who have had too much tax deducted at source and claim a repayment.

Separate samples are drawn from each of these systems and then joined together to create the SPI.

For more information about how the SPI is constructed, its coverage and methodological changes from previous SPIs, please see the data sources and methodology section below.

What does this publication tell me?

All the statistics in this publication provide detailed information on individuals liable to UK Income Tax and their incomes, including gender, age, income source, income by source and tax distribution.

Tables are based on a sample of administrative data for the relevant tax year. Tax liabilities are modelled using the HM Revenue and Customs Personal Tax Model. Methods used to calculate Income Tax liabilities are described in Annex B of the latest Income Tax Liabilities Statistics bulletin, available at: https://www.gov.uk/government/collections/income-tax-statistics-and-distributions.

Who might be interested?

These tables would be of interest to policy makers in government, academics, journalists, think tanks, and other research bodies. They would be of use to individuals or organisations interested in the distributions of numbers and amounts of personal incomes, for example by taxpayer marginal rate or income band. Users may also like to view the tables on Income Tax Liabilities which are available at: https://www.gov.uk/government/collections/income-tax-statistics-and-distributions.

User engagement

We are committed to providing impartial quality statistics that meet our users' needs. We encourage our users to engage with us so we can improve our Official Statistics and identify gaps in the statistics that we produce.

Comments or queries on these statistics can be sent to the statistical contacts named at the end of this section, or through the feedback form link below. We will review user comments and use this information to influence the development of our Official Statistics.
https://www.gov.uk/government/organisations/hm-revenue-customs/about/statistics#contact-us

Publication and revision strategy

These Survey of Personal Incomes statistics are published annually, usually in January/February. The exact date of publication will be announced no less than four weeks before publication on the HMRC Gov.uk statistics page (Schedule of updates for HMRC's statistics).

Any changes to the publication date will be announced on the HMRC National Statistics website (Schedule of updates for HMRC's statistics).

Amendments to the 2017-18 tables

HMRC published the 2017-18 Personal Incomes Statistics tables 3.1-3.11, 3.16 and 3.17 on the 6th March 2020 and tables 3.12-3.15a on 2nd April 2020. The releases were revised on 26th June 2020.

During the quality assurance for subsequent SPI products an error was identified in the imputation process. The imputation process is the statistical technique we use to properly allow for missing data in the SPI. The error has a relatively small effect on the statistics and increases the overall number of taxpayers by 0.03% - around 10,000 out of a total of 31.2 million in 2017-18. The revision affects all tables originally published in March and April 2020, apart from tables 3.9 and 3.10.

The quality assurance process also identified that an adjustment to the age variable, which is required to estimate the number of women affected by the increase in female State Pension Age, had not been made to account for the specific profile modelled in 2017-18. This correction only affects table 3.12 which provides breakdowns of income and tax for individuals of State Pension Age. This correction increases the number of female taxpayers above State Pension Age by just over 4% (around 110,000 after rounding). The correction to the imputations also affects this table by reducing the number of males over State Pension Age by 0.8% (around 30,000 after rounding) and increasing the number of females over State Pension Age by 0.4% (around 10,000 after rounding). Therefore, the overall increase in females above State Pension Age is 4.6% (around 120,000 after rounding).

Statistical contacts

Enquiries about these statistics should be directed to the statisticians who are responsible for this publication:

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Any media enquiries should be directed to the HMRC Press Office contacts below:

HMRC Press Office (Individuals): 03000 585 024
Out-of-hours: 07860 359 544

Data Sources and Methodology

The data sources and methods used to compile the statistics in this release are set out below:

The SPI is based on information held by HMRC on persons who could be liable to UK Income Tax for the Income Tax year. It is carried out annually and covers the income assessable for tax in each tax year. The tables in this publication are based on the surveys for tax year 2017 to 2018 and earlier.

Samples were selected from three HMRC operational computer systems, which are as follows:

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.

3. The Claims system covers people without NPS or CESA records who have had too much tax deducted at source and claim a repayment.

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:

(a) The PAYE population from NPS was stratified by gender 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 gender 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 9 for individuals with high incomes and rare allowances to about 1 in 250 for people with low combined pay and pensions. In all, about 393,000 individuals were selected from NPS for inclusion in the SPI for tax year 2017 to 2018.

(b) For the Self Assessment 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 tax up to about 1 in 249 for employees and occupational pensioners with smaller income or tax for tax year 2017 to 2018. In all, about 336,000 individuals were selected from SA for inclusion in the SPI for tax year 2017 to 2018.

(c) For claims cases, there were around 3,500 cases from the Claims system selected for the survey.

Once data was collected for the three 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 about 733,000 valid cases in the final SPI file for tax year 2017 to 2018.

Coverage of the SPI

Not all of the individuals in the SPI sample are taxpayers. About 25 per cent of sample cases (38 per cent grossed) have no Income Tax liability because deductions and reliefs and personal allowances exceed their total income. Where income exceeds the threshold for the operation of PAYE (£11,500 for tax year 2017 to 2018), the SPI provides the most comprehensive and accurate official source of data on personal incomes. However, as HMRC does not hold information for all people with personal incomes below the tax threshold, the SPI is not a representative data source for this part of the population and no attempt has been made to estimate the number of cases below the tax threshold or the amount of their incomes. Therefore the National Statistics in this publication - with the exception of tables 3.9 and 3.10 - only cover individuals liable to UK Income Tax (taxpayers) and their incomes.

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.

The coverage of investment income for the sample drawn from NPS is incomplete. This is because most taxpayers with savings income do not report this income to HMRC as it is covered by a combination of the Personal Savings Allowance, the

Personal Allowance, and the Starting Rate for Savings. Those that do need to pay tax on their savings income do so by contacting HMRC to report their savings income, where this information has not already been provided through Self Assessment. HMRC also collects information on savings income directly from Banks and Building Societies. In order to create a full picture of total income for this survey, it is necessary to impute values of bank and building society interest and dividends to some sample cases.

For interest and dividends imputation, the amount for each SPI case:

- is known for cases in Self Assessment from the amount declared on the Self Assessment Return
- can be inferred or estimated reasonably for NPS cases where there is an adjustment to the tax code for taxpayers
- is supplemented with information from interest paying institutions
- 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 (for example, the propensity to hold interest bearing accounts as indicated by household surveys).

For interest income, starting from control totals at UK level, for the number of cases with interest and the total amount of that interest, the numbers of cases and amounts of interest in Self Assessment cases and those 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. 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. 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 2018.

As with investment income, HMRC does not have complete information about pension contributions. Pension contributions can be made under two types of arrangement:

- Net pay schemes
- Relief at source schemes.

HMRC holds information on the value of employee pension contributions paid under “net pay arrangements” in Real Time Information (RTI) submissions by their employer. For the SPI for tax year 2017 to 2018, this data has been used to match SPI cases to “net pay” pension contributions, replacing previous methodology that was based on imputing information using the Annual Survey of Hours and Earnings produced by the Office for National Statistics. Pension schemes operating a net pay scheme are occupational pension schemes. However, some employers operate group schemes (“master trusts”), and some of these are not net pay schemes and thus will not be included in the net pay group.

Relief at basic rate is given at source for individual (and/or employee) contributions to personal pensions, and to employees in group schemes ("master trusts"; when not operated on a net pay basis). These types of scheme are referred to as "relief at source" (RAS) schemes. Since the basic rate tax relief is given automatically, HMRC does not need to collect RAS pension schemes' data for this group of taxpayers. To compile complete estimates for RAS pensions and total income for the SPI, a significant proportion of the amount of RAS pension contributions has been estimated using data from external data sources. The estimated value for this and for net pay contributions has been combined with other pension reliefs and included in these statistics.

For operational efficiencies R40 Claim forms have been migrated onto the National Insurance and PAYE system (NPS). However, the NPS data used for the survey only includes individuals with an employment active for at least 1 day in tax year 2017 to 2018 and such Claims cases are now included in the NPS component of the survey. As a consequence of this, the NPS data available excludes Claims cases which have no employment in tax year 2017 to 2018.

As with the survey for tax year 2016 to 2017, it has been necessary to impute the Claims component for tax year 2017 to 2018. This was carried out by selecting the Claims cases that had no employments from the tax year 2015 to 2016 survey. The income for these cases was then projected using Office for Budget Responsibility determinants to estimate the level of income for tax year 2017 to 2018. The tax due on this income is then calculated in the same way as other survey cases, by performing a tax calculation. This will have a minimal impact on the estimates created from the 2017 to 2018 tax year survey since the majority of Claims cases (over 96% of the tax year ending 2016 Claims population) are non-taxpayers and therefore excluded from the statistical tables in this publication.

For more information on the imputations process described in Annex B of the latest Income Tax Liabilities Statistics bulletin, available at:
https://www.gov.uk/government/collections/income-tax-statistics-and-distributions

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. A random sample of records is drawn from each grouping (stratum) – 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. Estimates of taxpayer numbers for low level geographical areas of the UK 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.

The table below gives an indication of the level of precision which may be assumed, with 95% confidence, for an estimate of taxpayer numbers from a simple random sample as large as the SPI. It shows that 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 (far right column). 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%).

Survey of Personal Incomes:
Confidence Intervals for estimates of taxpayer numbers[1]

Geographical area	Estimated value	Confidence Limits		95% Confidence Interval (+/-)	As % of estimate
		Lower limit	Upper limit		
	Number (thousands)	Number (thousands)		Number (thousands)	
Government Office Region (medium)	2,500	2,475	2,525	25.0	1.00%
County (large)	500	488	512	11.6	2.32%
County (small)	200	193	207	7.4	3.69%
Parliamentary Constituency					
Large	57	53	61	4.0	6.93%
Medium	46	42	50	3.6	7.72%
Small	34	31	37	3.1	8.98%

[1] Assumes a taxpayer population of 29 million, a simple random sample of 400,000.

In practice, estimates will reflect the more complex SPI sample design.

Broadly speaking, as sample size changes by a factor x, the Confidence Interval will change by a factor $1/\sqrt{x}$, so a fourfold increase in sample size will halve the Confidence Interval.

Year on year changes in published estimates of taxpayer numbers within small geographical areas (e.g. districts and constituencies) should be viewed with caution. They involve measuring small differences between two very small proportions. The Confidence Interval for the difference could be large relative to the measured difference, so any observed change may be due to sampling fluctuation alone.

Similar precision, or relative precision, to that shown in the table above in estimates for subsets of taxpayers (e.g. pensioners or higher rate taxpayers) in small geographical areas (e.g. districts and constituencies) requires even greater national samples, far in excess of the present sample size of the SPI. Estimates in such detail are not considered sufficiently reliable to be published.

Methodological Changes since the SPI for tax year 2016 to 2017

Changes to the PAYE Data

There were no substantial changes to the PAYE data in tax year 2017 to 2018.

Changes to the Self Assessment Data

Restricting finance cost relief for individual landlords

From 6 April 2017, relief for finance costs on residential properties was partially restricted to the basic rate of Income Tax. Finance costs include mortgage interest, interest on loans to buy furnishings and fees incurred when taking out or repaying mortgages or loans. No relief is available for capital repayments of a mortgage or loan.

Landlords are no longer able to deduct all of their finance costs from their property income to arrive at their property profits. Instead they receive a basic rate (20%) reduction from their Income Tax liability for their finance costs.

The change will be gradual until the tax year 2020 to 2021, when all finance costs will be restricted to the basic rate of Income Tax:

- in tax year 2017 to 2018, 75% finance costs deduction and 25% given as a basic rate tax reduction
- in tax year 2018 to 2019, 50% finance costs deduction and 50% given as a basic rate tax reduction
- in tax year 2019 to 2020, 25% finance costs deduction and 75% given as a basic rate tax reduction
- from tax year 2020 to 2021 all financing costs incurred by a landlord will be given as a basic rate tax reduction

In tax year 2017 to 2018 deductions for finance costs were restricted to 75%, therefore the property income that was subject to tax in these tables is higher than in previous years. The remaining 25% of finance costs are given tax relief at basic rate which is accounted for in the total tax liability.

Further information on the policy changes can be found here:

https://www.gov.uk/government/news/changes-to-tax-relief-for-residential-landlords

https://www.gov.uk/guidance/changes-to-tax-relief-for-residential-landlords-how-its-worked-out-including-case-studies

New tax allowance for property and trading income

From 6 April 2017, two new annual tax allowances were introduced for individuals of £1,000 each, one for trading and one for property income. Where the allowances cover all of an individual's relevant income (before expenses) then they no longer have to declare or pay tax on this income. Those with higher amounts of income have the choice when calculating their taxable profits, of deducting the allowance from their receipts, instead of deducting the actual allowable expenses.

Changes to the Imputation Process

Data on pension contributions for net pay schemes are now based on RTI returns, matched directly with SPI cases, with no imputation. Data on pension contributions for relief at source schemes utilises third party data submitted to HMRC and has been improved to reflect changes made to other HMRC pension statistical publications.

Scottish Income Tax Tables

Tables 3.16 and 3.17 reflect the devolution of Income Tax to Scotland in the Scotland Act 2012 and the Scotland Act 2016. They show estimates constructed from the SPI of the amount of tax that is due from non-savings/ non-dividend (NSND) income, “earned income”. Background information on the powers in the Scotland Acts is explained below.

The powers in the 2016 Scotland Act were first in operation for tax year 2017 to 2018. The final outturn figure of £10.9bn for Scottish Income Tax in 2017 to 2018 is published in HMRC’s 2019 Annual Accounts and HMRC’s Scottish Income Tax Outturn Statistics. The Income Tax liabilities shown in tables 3.16 and 3.17 differ from this outturn figure due to a range of factors including data (the outturn is based on a 100% data extract, the SPI is based on a sample) and measurement of Income Tax.

There can be a difference between being a Scottish taxpayer as set out in the Scotland Acts and having a Scottish residential postcode - for example if someone moves to Scotland towards the end of the year. Tables 3.16 and 3.17 allow users to compare Income Tax due on earned income in tax year 2017 to 2018 for Scottish taxpayers and taxpayers who had a Scottish residential postcode at the end of the tax year. Tax year 2016 to 2017 was the first year in which Scottish taxpayers as defined in the Scotland Acts could be identified. Previously the residential postcode was used as a proxy for this. The comparison of these two definitions may therefore be of interest for users of these statistics.

Table 3.16 presents estimates of the number of taxpayers and Income Tax due on earned income for Scottish taxpayers and non-Scottish taxpayers. The definition of a Scottish taxpayer is set out in the Scotland Acts and discussed below. The figures presented in table 3.16 are for the 2017 to 2018 tax year.

Table 3.17 presents estimates of the number of taxpayers and Income Tax due on earned income based on the residential postcode of the taxpayer. It shows separate figures for taxpayers with a residential postcode in Scotland and those with a residential postcode not in Scotland. This table classifies each individual based on their residential postcode on 5th April 2018, the end of the 2017 to 2018 tax year.

Individuals who are not taxpayers are not included in tables 3.16 and 3.17. This is in line with other tables in this release except tables 3.9 and 3.10. Additionally, individuals without any tax due on earned income are not included in these tables.

These two tables are being released as *Official Statistics.*

Comparison with Table 3.11

Table 3.11 shows income and tax, by gender, region and country. The information provided in tables 3.16 and 3.17 differs from that presented in table 3.11. Table 3.11 shows Income Tax due from all sources of income, whereas tables 3.16 and 3.17 show the amount of tax due on non-savings/non-dividend (NSND) income that was devolved to Scotland under the powers in the Scotland Act 2016.

Furthermore, the information provided in table 3.16 differs from the information provided in tables 3.11, 3.17 and the regional breakdowns in the separate annual release covering tables 3.12 to 3.15a. This difference is due to how they classify taxpayers. Tables 3.11 and 3.17 (and 3.12 to 3.15a) classify each individual to a country in the UK or one of the 9 English Regions based on their residential postcode on 5th April 2018, the end of the 2017 to 2018 tax year. In contrast table 3.16 uses the Scottish taxpayer indicator, which identifies individuals taxed as a Scottish taxpayer in 2017 to 2018.

There will be some individuals who are included in table 3.16 as a Scottish taxpayer who are living outside of Scotland at the end of the year and are therefore included in a different area in table 3.11 or as having a non-Scottish residential postcode in table 3.17. Similarly, there will also be some individuals who are not Scottish taxpayers for tax year 2017 to 2018 but will be living in Scotland on 5th April 2018 and included in the Scotland category in table 3.11 and 3.17.

A summary of the differences between these tables is shown below.

Summary of the differences between tables 3.11 and Official Statistics tables 3.16 and 3.17		
Table	**Taxpayer classification**	**Tax definition**
3.11	Residential postcode on 5th April 2018	Income Tax from all sources of income
3.16 (official statistics)	Scottish taxpayer indicator (individuals taxed under the Scottish tax system for a given tax year)	Non-savings/non-dividend (NSND) tax, following the definition of tax devolved to Scotland under the powers in the Scotland Act 2016
3.17 (official statistics)	Residential postcode on 5th April 2018	Non-savings/non-dividend (NSND) tax, following the definition of tax devolved to Scotland under the powers in the Scotland Act 2016

Background to devolved Income Tax

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 allowed 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.

SRIT replaced ten percentage points of each of the main UK rates of tax from the start of the 2016 to 2017 tax year. In that year the UK basic, higher and additional rates for NSND income were reduced by 10p in the pound for Scottish taxpayers.

This reduction was replaced by a Scottish rate set at ten percent, so the overall rates paid by Scottish taxpayers remained the same as elsewhere in the UK.

The Scotland Act 2016 further enhanced the Scottish Parliament's tax powers, devolving all NSND income (rather than the first 10p) 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 the start of tax year 2017 to 2018. From tax year ending 2018 Scotland has set its own thresholds and although 2017 to 2018 tax rates are the same across Scotland and the rest of the UK, the upper threshold for the Higher Rate band is lower for Scotland, at £43,000 compared with £45,000 for the rest of the UK.

The forecasts of Scottish Income Tax produced by the Office for Budget Responsibility and separately by the Scottish Fiscal Commission, and the outturn reported in the 2019 HMRC Accounts, may differ from what is shown in tables 3.16 and 3.17 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.
- Identification of taxpayers: taxpayers may have been classified based on their residential postcode as a proxy for identifying Scottish taxpayers, or alternatively by the Scottish taxpayer indicator directly where this was available (see details below).
- Methodology and data: the SPI 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 further in section 5. The outturn figure published in HMRC's Annual Accounts is based on a 100% data.
- Measurement of Income Tax: for example, the outturn figures include an adjustment for uncollected tax but the SPI tables in this document purely reflect taxpayers' tax liabilities.

Definition of a Scottish taxpayer

Table 3.16 reflects HMRC's estimates of the number of Scottish taxpayers. HMRC constructs a Scottish taxpayer identifier (sometimes known as the S flag). The Scottish indicator is sourced from the NPS system and identifies individuals who are Scottish taxpayers and have been taxed under the Scottish tax system for a given tax year.

In order for an individual to be a Scottish taxpayer, they **must** be UK resident for tax purposes – an individual who is not UK tax resident cannot be a Scottish taxpayer

There are a number of tests to determine Scottish taxpayer status. If, in the course of a tax year, an individual is UK resident for tax purposes, they will be a Scottish taxpayer, for that tax year, if they satisfy any of three tests:

1. They are a Scottish Parliamentarian.

2. They have a ‘close connection’ to Scotland through either:

    - having only a single ‘place of residence’, which is in Scotland
      or
    - where they have more than one ‘place of residence’, having their ‘main place of residence’ in Scotland for at least as much of the tax year as it has been in any **one** other part of the UK.

3. Where no ‘close connection’ to Scotland or any other part of the UK exists (either through it not being possible to identify any place of residence or a main residence) - through day counting.

UK Standard Industrial Classification of Economic Activities 2007 (SIC2007)

For Table 3.9, the industry categories are based on UK Standard Industrial Classification of Economic Activities 2007 (SIC2007). Most categories comprise one or several of the 21 Sections from SIC2007. The exception is that Section M (Professional, Scientific and Technical Activities) has been split into two parts so that Legal and Accounting activities, a significant component of self-employment activity, can be separately identified.

The table below shows the SIC2007 Section letter and range of SIC2007 5-digit codes that form each industry category in table 3.9.

Table 3.9 Category	Section	SIC2007 codes
Agriculture, Forestry and Fishing	A	01110 – 03220
Manufacturing	C	10110 - 33200
Construction	F	41100 - 43999
Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles	G	45110 – 47990
Transportation and Storage	H	49100 – 53202
Accommodation and Food Service Activities	I	55100 – 56302
Information & Communication	J	58110 – 63990
Financial, Insurance and Real Estate Activities	K, L	64110 - 68320
Legal & Accounting Activities	M	69100 – 69203
Other Professional, Scientific and Technical Activities	M	70100 – 75000
Administrative and Support Service Activities	N	77110 – 82990
Education	P	85100 – 85600
Human Health and Social Work Activities	Q	86100 - 88990
Arts, Entertainment and Recreation	R	90010 – 93290
Other Industries	B, D, E, O, S, T and U	05100 – 09900 35110 – 39000 84110 – 84300 94110 – 99000
Unknown Industries		Blank or invalid values

More information about SIC2007 can be found on the ONS website at:
http://www.ons.gov.uk/ons/guide-method/classifications/current-standard-classifications/standard-industrial-classification/index.html

Glossary of Terms

This section aims to explain acronyms, abbreviations and terms associated with personal incomes and Income Tax liabilities.

Allowances

The amount of income which an individual can receive before being liable for Income Tax. The personal allowance is an example of an allowance.

Average rate of tax

The ratio of Income Tax liability to total income, where income is measured before deductions, reliefs and allowances.

Basic rate limit

The highest income point for taxable income (after allowances) at which basic rate Income Tax is charged.

CESA (Computerised Environment for Self Assessment)

The computer system used to administer Self Assessment from which SA data for the SPI has been extracted since 1996 to 1997. See Self Assessment (SA).

COP (Computerisation of PAYE)

The computer system which used to administer PAYE until it was replaced by NPS and from which PAYE data for the SPI was extracted for tax years 1997 to 1998 to 2007 to 2008 inclusive.

Deductions and Reliefs

Amounts deducted from total income, along with personal allowances to arrive at the amount of taxable income subject to an Income Tax charge. This includes amounts for contributions to occupational and personal pensions, and a variety of other Deductions and Reliefs including charitable giving and loss relief etc.

Dividend Income

Income derived from shares.

Geographical Areas

Some tables present information for sub-UK areas described as Government Office Region, County, District and Parliamentary Constituency. Administrative and Political geographical areas are not held on taxpayers' records. For the SPI, the areas are attached by matching the individual's postcode to the Office for National Statistics Postcode Directory.

Industry

Industry categories are based on UK Standard Industrial Classification of Economic Activities 2007 (SIC2007). Income from self-employment (sole trade and partner) is assigned an industry using the business text descriptions supplied on Self Assessment returns.

National Insurance and PAYE System (NPS)

NPS is the computer system HMRC uses to administer PAYE. It replaced COP and is the source of PAYE data for SPI for tax year 2008 to 2009 onwards.

National Insurance Recording System 2 (NIRS2)

The computer system used to monitor payment of National Insurance (NI) contributions and to calculate and prove entitlement to contributory benefits. These include Job Seekers Allowance (JSA) and the National Insurance Pension. It provides contribution information to a number of government departments.

P14s

Form P14 is an End of Year summary for an employment that is submitted by the employer to HMRC, showing pay, tax and NI contributions for the year. The employer provides similar information to the employee on an end of year certificate, form P60.

Pay As You Earn (PAYE)

PAYE is the system used by HMRC to collect and account for Income Tax on earnings from employment and pensions. Income Tax and National Insurance Contributions are deducted by the employer and paid over to HMRC on behalf of the individual for each pay period.

Personal Allowance

The amount of income you can receive for the tax year without having to pay tax on it.

Real Time Information (RTI)

The RTI data used in this release come from HMRC's PAYE RTI system. It covers the whole population rather than a sample of people or companies.

Savings Income

A particular class of income that includes interest on bank and building society accounts.

Self Assessment (SA)

SA is a system where an individual declares their income and can calculate their own Income Tax due after the end of the tax year. Taxpayers included in SA can be higher earners, self-employed and taxpayers with complex tax affairs.

Starting rate limit/Starting rate for savings limit

The highest income point for taxable income (after allowances) at which starting rate Income Tax is charged. From tax year 2008 to 2009 the starting rate was abolished for non-savings income and applied only to non-dividend savings income. From tax year 2015 to 2016 the starting rate of tax for savings income was reduced from 10% to 0%, and the amount of savings income that the new 0% rate applies to was increased from £2,880 to £5,000. For more information please see the following briefing: https://www.gov.uk/government/publications/issue-briefing-starting-tax-rate-for-savings-interest/issue-briefing-starting-tax-rate-for-savings-interest

Superannuation contributions

The regular amounts paid by an employee into an employer occupational pension fund; these are deducted from the employee's salary. Superannuation contributions to an authorised fund or scheme are not liable to Income Tax and the employer would deduct the amount of superannuation contributions from the gross pay before assessing the Income Tax liability through PAYE.

Survey of Personal Incomes (SPI)

An annual survey of individuals who could be liable for Income Tax derived from HMRC administrative systems holding data on persons within PAYE, SA and Income Tax claims.

Tax liabilities

The amount of Income Tax due on taxable income after applying tax rates to the tax base. The Income Tax liability for each sample case in SPI is calculated by reference to the amounts of income by type, deductions and reliefs and the tax regime parameters that apply for the year. The calculated liability for a tax year will differ from the amount of tax receipts collected in a financial year.

Tax receipts

The amount of Income Tax collected by HMRC. The SPI measures the amount of Income Tax liability for a tax year, but not the amount of receipts in the financial year.

Taxable income

Income assessable to Income Tax after allowances.

Taxpayer

An individual calculated to have a positive Income Tax liability for the tax year, based on the income, allowances, reliefs and deductions for the year.

Total income

The sum of an individual's components of income taken into account in calculating Income Tax. This includes earnings from employment, profits from self-employment, pension income, some social security benefits, savings income, income from shares (dividends), rental income, and income paid from trusts. It excludes:

- gains from the disposal of assets that are classified as capital gains
- interest, dividends or bonuses from tax exempt investments (for example, ISAs and National Savings & Investments Savings Certificates)

- interest and terminal bonuses from Save As You Earn Schemes
- Premium Bond, National Lottery and gambling prize winnings

Total income is calculated before relief for contributions to occupational and personal pensions, other deductions and reliefs or personal allowances.

In the tax system, income is streamed into three main categories: dividends; savings income (not dividends); and non-savings income as different rules apply.