Rapport

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Tax gap report 2020

Background report for the annual report: the size and development of the tax gap

19/02/2021

Skatteverket

Foreword

The Swedish Tax Agency's 2020 appropriation directions contains a target and reporting requirement with regard to the tax gap:

The difference between the final and the theoretically correct amounts of taxes and other charges (the tax gap) must be as small as possible. The Swedish Tax Agency will assess the size of the tax gap and the extent to which it has changed.

The Swedish Tax Agency addresses the Swedish Government's reporting requirements in chapter 4 of our 2020 annual report. The purpose of this report is to outline the methods and results presented in the 2020 annual report.

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Solna, February 2021

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Table of contents

Glossary

Bottom-up	A method whereby the different parts of the tax gap are estimated on the basis of taxpayer data – usually based on follow-up data from audits that have been carried out.
Final tax	Taxes and other charges that are due
Non-verifiable tax gap	The tax gap that cannot, in practice, be detected through audits. This gap mainly arises from activities and transactions that leave no – or only very unclear – traces.
Verifiable tax gap	The tax gap that would be eliminated if all taxpayers were subject to audits using the methods available to the Swedish Tax Agency.
Target population	The wider population that a sample is meant to represent. For example, the target population for random audits includes all taxpayers who could be selected for these audits.
Field audit	An in-depth investigation that gives the Swedish Tax Agency more powers than a desk audit. A field audit is normally, at least in part, carried out on the taxpayer's premises.
Tax fraud	Intentional falsification of information to avoid tax.
Tax evasion	Tax fraud and tax avoidance schemes that are considered to be unlawful.
Tax avoidance schemes	Arrangements intended to reduce tax, where the legality of the arrangements is not immediately clear.
Desk audit	A tax investigation conducted without visiting the taxpayer's premises. The taxpayer is asked for the relevant facts, or receives a request or demand from the Swedish Tax Agency for certain documents.
Theoretical tax	The tax that would be final if all taxpayers were to declare their operations and transactions correctly.
Top-down	A method used for calculating a tax gap aggregate, based largely on estimates of taxable economic activity from sources other than tax data.
Collection losses	Final tax that goes unpaid.

Summary

This report addresses the Swedish Government's reporting requirements with regard to the tax gap, which are specified in the Swedish Tax Agency's 2020 appropriation directions: "The Swedish Tax Agency will assess the size of the tax gap and the extent to which it has changed." The main results of the background report are also summarised in chapter 4 of the Swedish Tax Agency's 2020 annual report.

This background report assesses the tax gaps for various parts of the economy and thus does not outline the total tax gap. The report does not either outline all tax gaps within the assessed areas; it covers mainly the tax gaps that can be verified by the selected methods. Other parts of the tax gap – which are either not verifiable or would need to be identified using other control methods – have not been assessed. It is therefore not yet possible to combine the assessed tax gaps and present an estimate of the overall tax gap for the whole economy.

To give an overall picture of the parts of the tax gap that the Swedish Tax Agency has assessed, we have compiled two summary tables. In table 1, we present the assessed tax gap for each tax category, and in table 2 we present the assessed tax gap for each customer group. The tax gaps presented in table 1 cannot be broken down into customer groups. This is because assessment of the tax gaps for VAT and excise duties is based on top-down methods that do not allow for this. Instead, table 2 includes an estimate of the VAT gap based on the Swedish Tax Agency's random audits of small and medium-sized enterprises (SMEs), and therefore constitutes only a partial assessment of the VAT gap.

Table 1 Assessment of average annual, mainly verifiable tax gaps per tax category

	Tax gap (SEK billion)	**Proportion of final tax[1)]**
Corporate tax, 2014 to 2018	3.0	3.4%
Social security contributions and self-employed contributions, 2014 to 2018	6.1	1.9%
Tax on income from employment and business activities, 2014 to 2018	10.2	1.3%
Tax on income from capital, 2016 to 2018[2)]	8.0	8.6%
VAT, 2018[2)]	15.1	3.4%
Excise duties: alcohol, tobacco and congestion charges, 2019[2)]	1.9	6.5%

Source: the Swedish Tax Agency's calculations
1) The final tax refers to average annual tax for the target population, for each tax category and time period.
2) The tax gap also includes parts of the non-verifiable tax gap.

Table 2 Assessment of average annual, mainly verifiable, tax gaps per customer group

	Tax gap (SEK billion)	**Proportion of final tax[1)]**
Large companies[2)], 2014 to 2018	2.4	1.2%
Small and medium-sized limited companies[3)], 2014 to 2018	6.3	1.7%
Sole traders, 2014 to 2018	7.2	20.5%
Partnerships and limited partnerships, 2014 to 2018	1.2	7.5%
Private individuals, 2016 to 2018[4)]	14.9	1.7%

Source: the Swedish Tax Agency's calculations
Note: Not all parts of the assessed tax gaps in Table 1 can be broken down into customer groups. The total tax gap is therefore not the same in both tables.
1) The final tax refers to average annual tax for the target population, for each tax category and time period.
2) Refers to private domestic non-financial companies that are part of a group in which at least one company has an annual salary total exceeding SEK 50 million.
3) Refers to private domestic non-financial companies that *are not* part of a group in which at least one company has an annual salary total exceeding SEK 50 million.
The tax gap also includes parts of the non-verifiable tax gap.

The assessment of the size of the tax gap has not yet reached the stage where time series data from previous tax gap assessments can be used to assess tax gap development. Instead, an indicator method is used to outline tax gap development. This method was developed by the Swedish Tax Agency. It has been used since 2015 in our assessment of tax gap development for the past three years, which is published in our annual report.

The indicator model points to favourable development between 2018 and 2020, with a reduction in the tax gap. However, the difference between 2019 and 2020 is significantly smaller than between 2018 and 2019. Given that the attitude surveys were carried out in the later part of 2020, and that the COVID-19 pandemic is deemed to have led to a number of new tax gap risks, the results can nevertheless be regarded as satisfactory – at least in the short term.

The Swedish Tax Agency's general assessment is, however, that it is not possible to draw any conclusions regarding short-term changes in the tax gap based on this year's indicators. The COVID-19 pandemic is considered to have affected both the economy and the behaviour of individuals and businesses in a manner that does not follow previous patterns, making it unclear how well the indicators reflect the development of the tax gap during this exceptional period.

1. Introduction

Since 2017, the Swedish Tax Agency has been required to conduct an annual assessment of the size and development of the tax gap in Sweden: a major task. Some parts of the tax gap can be assessed using a relatively precise method, while other parts are difficult to assess with certainty. Assessment difficulties arise, for example, where taxpayers actively attempt to hide their activities. Assessments of the various parts of the tax gap also require the use of several different methods, with varying requirements in terms of both data availability and time.

The Swedish Tax Agency has previously only assessed the tax gap for the whole economy once, which resulted in the publication of the report "Tax gap map for Sweden" (Swedish Tax Agency 2008:1). In 2014, the report "The development of the tax gap in Sweden 2007-12" (Swedish Tax Agency 8/1/2014) was published, in which parts of the tax gap assessment were updated. Since 2017, the Swedish Tax Agency has published assessments of the sizes of different parts of the total tax gap in its annual reports, but without making any assessment of the tax gap for the whole economy. In this report – which forms the basis for the reporting in the Swedish Tax Agency's 2020 annual report – parts of the tax gap have been assessed for the following categories:

- corporate tax
- social security contributions
- self-employed contributions
- tax on individuals' income from employment, business activities and capital
- VAT
- excise duty on alcohol, tobacco, and congestion charges

The tax gap for large companies has been assessed for the first time.

The report begins with a clarification of the term "tax gap" and an outline of the need for tax gap assessments. In chapter 3, we then outline the methods used in tax gap assessments. The results of the tax gap assessments are reported in chapters 4 to 6, broken down by tax category. Finally, we present the development of the tax gap in chapter 7. This assessment is made based on the Swedish Tax Agency's tax gap model. Chapter 7 also outlines assessments of changes in the tax gap over the long term. Annex A provides more detailed information on the results of the Swedish Tax Agency's random audits. The annex also provides the confidence intervals for the results, and a breakdown of the tax gap for individuals according to gender.

2. About the term "tax gap" and tax gap assessments

The term "tax gap" can be interpreted in different ways, and international organisations and tax authorities in countries other than Sweden have varying definitions. In this context, it is important to point out that the term "tax gap" is not synonymous with terms such as tax fraud and tax evasion, which refer to purposeful intent that can result in a tax gap, according to any of the common definitions. Deliberate tax evasion gives rise to a tax gap, but the term "tax gap" has a considerably broader scope. The Swedish Tax Agency has adopted the following definition[1]:

The tax gap is the difference between the tax that would have final if all taxpayers had accounted for their activities and transactions correctly, and the final tax after the Swedish Tax Agency's audits.

There are several possible causes of incorrect determination of tax. In many cases, there is no deliberate intent. Taxpayers may be unfamiliar with the tax rules, or misunderstand how they should be applied. Errors may also be due to carelessness or genuine mistakes when filling in tax returns. In such cases, the final tax may even be too high, which means that irregularities have a negative impact on taxpayers.

Sometimes, errors arise when the Swedish Tax Agency and the taxpayer interpret how to apply a tax rule in different ways, in which case a court ruling may be necessary. If a court supports the Swedish Tax Agency's assessment, the irregularity is corrected.

There are also cases where taxpayers deliberately provide incorrect information to the Swedish Tax Agency, or omit to report economic transactions to reduce their final tax.

Several further factors resulting from the definition of the tax gap are worth noting.

1. Taxes are not final when a tax return is filed, but after the Swedish Tax Agency has carried out a number of checks on the information provided. This means that if inaccurate details are corrected following checks by the Swedish Tax Agency, they no longer contribute to a tax gap. In other words, a tax gap that has been detected does not constitute a tax gap once the inaccurate details have been corrected.

2. In assessing the tax gap, no account is taken of collection losses (final tax that is not paid). This is because the assessment method compares the amount of final tax (not the amount paid) with the theoretically correct amount. In other words, the assessment of the tax gap remains unaffected – whether or not the final tax is ultimately paid.

   Collection losses are, however, very small in Sweden. These losses mainly occur when companies become insolvent and are declared bankrupt. The amount of collection losses is stated in the Swedish Tax Agency's annual report.

3. The tax gap should be regarded as a theoretical construction. The size of the tax gap does not correspond to the additional tax revenue that would be generated if there was no room for error in the reporting. In other words, it does not follow that tax revenues could potentially be increased by a corresponding amount. The reason is that some of the economic activities currently taxed at a level that is too low (due to incorrect or omitted reporting to the Swedish Tax Agency) would probably not have been undertaken at all if the taxpayers concerned had been aware of the tax rules from the start and intended to report their activities correctly. If there had been no potential for reporting errors, it can therefore be assumed that some of the activities and transactions underlying the tax gap would not have been carried out. Consequences of

[1] This definition is based on the Swedish Tax Agency's appropriation directions, which states that: "The difference between the final and the theoretically correct amounts of taxes and other charges (the tax gap) should be as small as possible. The Swedish Tax Agency will assess the size of the tax gap and the extent to which the tax gap has changed." (Excerpt from government decision Fi2019/04080/S3).

this type are sometimes referred to as dynamic effects, and they are difficult to determine.

4. In practice, it is impossible to eliminate the tax gap altogether. The Swedish Tax Agency is working actively to create the necessary conditions for all taxpayers to do things right from the start, while also carrying out extensive audits and controls. However, it would be economically indefensible, and impossible in practice, to carry out audits and to require supporting documentation for every detail in every tax return submitted to the Swedish Tax Agency. And, in the absence of the above measures, it would be an even greater challenge to monitor all taxable activities that should be declared.

2.1. Why do we assess the size of the tax gap?

Since 2017, the Swedish Government has required the Swedish Tax Agency to conduct an annual assessment of the size and development of the tax gap. The Government has repeatedly stressed the need for methodological development and continued efforts to assess a larger part of the total tax gap (see, for example, government proposal 2019/20:1, pp. 20 and 22, category 3). In view of this, the Swedish Tax Agency regards its assessment of the tax gap as an ongoing requirement and a long-term undertaking.

Beyond the Swedish Government's directive, the Swedish Tax Agency recognises the benefits of assessing the tax gap.

- It serves to increase transparency with regard to taxation.
- Assessment of tax gap size for different areas can provide policymakers with information on compliance within different parts of the tax system.
- This information also helps support the Swedish Tax Agency's decisions on resource allocation.
- Assessing the size of the tax gap gives the Swedish Tax Agency a greater understanding of where and how non-compliance occurs.
- In some cases, tax gap assessment can provide insights into the performance of different strategies to reduce the tax gap.
- In the long term, monitoring the development of the tax gap gives an idea of how well the tax system is functioning.

Although there are many benefits to assessing the tax gap, it is important to be cautious when interpreting the results. A variety of factors can affect the size of the tax gap, including: changes to tax regulations in Sweden or abroad; the economic climate; technological development; public motivation to pay taxes and trust in social institutions; the Swedish Tax Agency's audit and control measures; and so on. In other words, it is difficult to establish with certainty the factors determining the size of the tax gap and its development over time. In addition, any tax gap assessment is subject to considerable uncertainty: see section 2.3.1. The overall picture of the size and development of the tax gap should *not* therefore be used in evaluating a specific reason for the tax gap, such as the effectiveness of the tax system, social norms regarding taxation, or the Swedish Tax Agency's measures to reduce the tax gap.

The Swedish Tax Agency's efforts to assess the tax gap have intensified in recent years, although the COVID-19 pandemic has slowed progress to some extent. Much work remains to be done before an assessment of the tax gap for the whole economy can be presented, but the aim is to add assessments for additional areas each year, with particular focus on the most significant tax categories and customer groups.

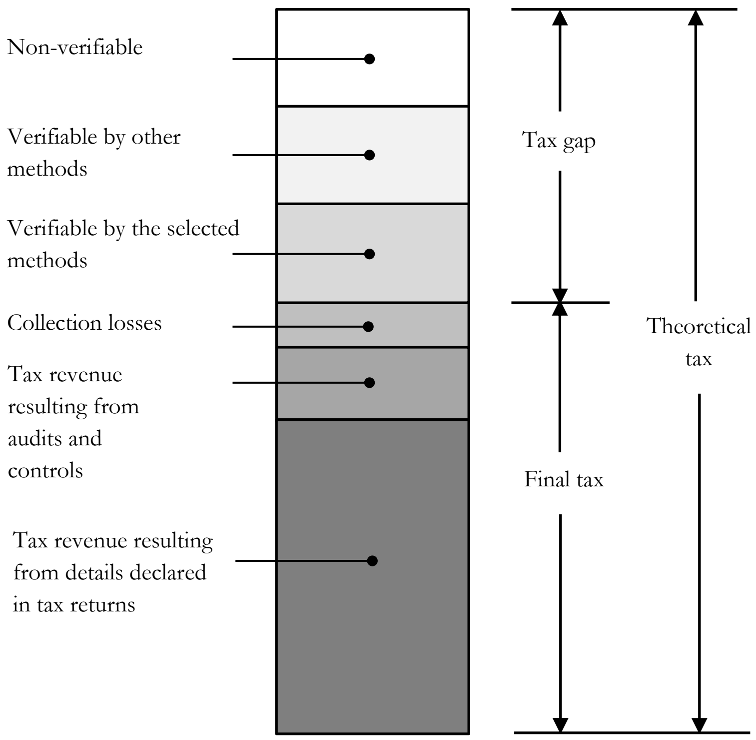
2.2. A breakdown of the tax gap

When assessing the size of a tax gap, we do not normally have access to optimal, comprehensive information about all the activities and transactions that may form its basis. This particularly applies when we assess the tax gap for an entire population, using a bottom-up method based on the results of tax audits (see section 2.6.1). To facilitate the assessment of the overall tax gap, we can divide it into three parts:

1. the tax gap that is verifiable by the selected methods (the tax gap that would be eliminated if all taxpayers were checked using the Swedish Tax Agency's control methods).
2. the tax gap that is verifiable by other methods (the tax gap that cannot be identified by the selected control methods, but could be identified by other methods): the main issue is that it is not possible for the Swedish Tax Agency to use the full arsenal of available control methods for each check.
3. the non-verifiable tax gap (the tax gap that, in practice, cannot be detected by available control methods): mainly due to activities and transactions that leave no – or only very unclear – traces.

Added to the final tax, these three elements, constitute the tax that would have been final if all activities and transactions had been correctly reported. This is known as the theoretical tax. In order to assess the overall tax gap, these three elements must be assessed for all areas. There are several possible ways to approach this task.

Figure **1** Schematic description of the different parts of the tax gap



The usefulness of this breakdown can be exemplified as follows. When conducting the random audits that form the basis for the assessment of the income tax gap for SMEs, for example, the Swedish Tax Agency has applied a selected control method. A detailed and thorough audit can provide more information on the extent of the tax gap, but also requires more resources from both the Swedish Tax Agency and the taxpayer being audited. The choice of control method can therefore be seen as a compromise between the efficient use of resources and comprehensive information gathering.

If all the assessments used in the audits could be perfect, the results would correspond to the tax gap that is verifiable using the selected method. However, it is likely that some detectable irregularities are not revealed by the audits, resulting in an underestimation of the tax gap that is verifiable by the selected method. There are also irregularities that the Swedish Tax Agency could, in theory, check for and detect, but which are not identified by the selected control method. For example, it may be that some supporting documentation is not checked, or that certain information is not requested from third parties. All of these irregularities are, in principle, excluded from the control results due to the choice of method. These issues make up the tax gap that is verifiable by other methods. To assess the extent of the total verifiable tax gap (the tax gap verifiable by the selected methods and the tax gap verifiable by other methods), it is therefore necessary to assess the following:

- the size of the tax gap that could have been revealed by the Swedish Tax Agency's audits but, for various reasons, was not detected
- the size of the tax gap that could have been detected but was not, due to the choice of method used in the audits

This problem is usually solved by multiplying the control results by one or more scaling factors. The size of the scaling factor depends on the control method selected and therefore varies between different audits. Several different methods can be used to determine relevant scaling factors, but these methods are still under development.

An assessment of the total tax gap for an area also requires knowledge of the extent of the non-verifiable tax gap, which is the part of the tax gap that the Swedish Tax Agency cannot determine effectively – apart from in exceptional cases. Here, the use of scaling factors is often inappropriate, as there is no clear link between the extent of the gap that can be detected by audits and the gap that remains undetected. The non-verifiable tax gap is largely determined by the powers of the Swedish Tax Agency, and the extent to which it is possible to hide activities from the Swedish Tax Agency. Work is underway to assess the non-verifiable tax gaps for different areas, but these efforts are not yet complete. Non-verifiable tax gaps are especially difficult to assess since many errors occur as a result of the deliberate withholding of information from public authorities.

2.3. Assessments

Tax gap assessments are generally subject to considerable uncertainty. Differences in assessment methods, for example, also make it difficult to compare tax gaps between different tax categories or countries. The following sections highlight a number of important factors to consider when interpreting and comparing tax gap assessments.

2.3.1. Uncertainty

Assessments of tax gap size are generally subject to very high levels of uncertainty. This is because the final tax for taxpayers is based on the information available to the Swedish Tax Agency regarding their financial activities. Every tax gap assessment therefore includes the consideration of factors that are unknown to the Swedish Tax Agency. For example, the

Swedish Tax Agency may need to obtain information about economic activities and transactions that we would not normally be aware of.

In certain cases, it is possible to assess the size of a tax gap with relative confidence. One such example is the assessment of the tax gap regarding individuals' deductions for travel to and from work. The Swedish Tax Agency is aware of all such deduction claims because they are submitted in the individuals' income tax returns. The burden of proof of the right to a deduction lies with the taxpayer. Based on random audits of such deduction claims, in which proof of the right to a deduction is requested, the Swedish Tax Agency can assess the tax gap with relative accuracy. However, there is still some uncertainty even in these cases. The Swedish Tax Agency may not detect irregularities in information provided by taxpayers, which could form the basis for tax decisions. For example, a taxpayer claiming deductions for travel expenses could provide credible proof of incurred costs for car journeys to and from work, such as receipts and documented mileage, even if he or she did not actually use the car to travel to and from work.

In many other cases, however, the burden of proof lies instead with the Swedish Tax Agency, and the assessment is subject to considerable uncertainty. This is especially true when taxpayers withhold information about their economic activities. In these cases, the Swedish Tax Agency is not aware of the activities themselves, and it is our responsibility to prove that the tax situation declared by such taxpayers is incorrect. Examples include income from assets held in tax havens that do not provide information to Sweden, and undeclared work that cannot be traced through accounting records. The uncertainty is often considerable in such situations, and their assessment should be regarded as an attempt to determine the magnitude of the tax gap. These assessments are often made using methods that are not based on the results of the Swedish Tax Agency's audits.

Statistical confidence intervals can be calculated for assessments of verifiable tax gaps based on random audits. However, these assessments do not correspond to the entire tax gap, even for the populations investigated. Statistical uncertainty is therefore only part of the overall uncertainty in assessments of overall tax gaps. For this reason, statistical confidence intervals are not reported in the assessments. However, for random audits, confidence intervals are set out in Annex A.

2.3.2. Tax gaps in absolute and relative terms

Tax gaps are assessed in both absolute and relative terms: in other words, both in sums of money and as a proportion of the final tax. Both measures have their benefits.

When comparing tax gaps for different parts of the economy, it can be important to know their absolute magnitudes. From a system perspective, tax gaps that are smaller in financial terms tend to be less important. It is also important to know the size of the tax gap in relation to the number of taxpayers responsible for it – not least from the point of view of resource prioritisation by the Swedish Tax Agency.

However, it is often more interesting to look at the relative tax gap, which is the total gap as a proportion of the final tax for a particular tax category and/or taxpayer group. Calculating the relative tax gap has several benefits:

- It facilitates comparisons of tax gaps between tax categories and taxpayer groups, although such comparisons are often difficult due to differences in methodology, for example (see also section 2.3.4).

- The relative tax gap is not dependent on inflation and changes in the size of the economy, which facilitates comparisons over time.

- The relative tax gap is less affected by fluctuations in the economy. Here, we can take corporate income tax as an example. Naturally, this can be significantly reduced when the economy is depressed. And with fewer companies making a profit, it is also likely that there will be fewer irregularities in corporate tax returns.

- The relative tax gap is relatively unaffected by changes in tax rules or tax rates. This means that, if all other conditions are unchanged, a reduction in corporate tax rates leads to a direct reduction in the corresponding tax gap in absolute terms, but not in relative terms.

A further advantage of the relative tax gap is that it facilitates comparisons between different countries. However, such comparisons are generally very difficult to make; careful consideration is required before any conclusions can be drawn regarding differences between countries (see section 2.3.4). Since both tax rates and the size of the economy vary between different countries, it is simpler and more informative to consider the relative tax gap in such comparisons.

2.3.3. Comparing tax gaps over time

As previously noted, tax gap assessments are subject to considerable uncertainty. It is therefore not possible to draw firm conclusions regarding the size of a tax gap. In practice, this is the case for all tax gap assessments. However, the Swedish Tax Agency strives as far as possible to use methods that are repeatable and that produce comparable results over time. This minimises the risk of changes to tax gap assessments due to error corrections. Consequently, the assessment of development of a tax gap over time may, in the long term, be less uncertain than the assessment of its actual size. In other words, it is unlikely for the assessment of a tax gap to be entirely correct. However, a clear trend over time in assessments of a particular area probably corresponds to a trend in the actual tax gap. Given the high level of uncertainty from the start, a tax gap trend must generally be both very clear and sustained over a longer period of time before conclusions can be drawn from it.

2.3.4. Comparing the tax gaps of different countries

Tax authorities in several other countries (including the UK, Australia, the US and Canada) are also working to assess tax gaps for all or parts of the economy, and to publish these in public reports. It is, however, very difficult to compare the tax gaps of different countries. This is due to differences in the underlying tax systems, and in the methods and conditions for tax gap assessment. For example, some countries lack an equivalent of Sweden's social security contributions, which may make it more difficult to compare the labour-related tax gaps of these countries. Relative tax rates may also differ, leading to a distorted picture when comparing tax gaps for specific taxpayer groups or tax categories. For example, there may be tax reasons for taxpayers in some countries to change the way certain income is taxed, such as by declaring it as a capital gain rather than income from employment. The resulting increase in declared capital gain may make the tax gap for this area appear very small. It is therefore essential to consider the tax system as a whole when interpreting differences between tax gaps.

Other differences are more difficult to take into account, such as the varying tax gap definitions used in different countries' assessments. For example, a country's tax gap calculations might include irregularities that are contrary to the intention behind a tax rule, even if these irregularities are not actually prohibited by law. However, in accordance with our definitions, these issues would not be included in tax gap assessments. Collection losses are also frequently included in tax gap calculations, despite the fact that the correct tax has actually been determined.

When comparing different countries' tax gaps, it is essential to consider data from the same year. In some cases, the statistics used in tax gap calculations are published some time after collection, or are not published annually. It may therefore be necessary to extrapolate from older data in order to estimate the tax gaps for more recent years. Methods such as this are used to some extent by all of the tax authorities that currently publish reports on the size of the total tax gap for specific periods of time. The results may vary depending on the extrapolation method used and the year selected for the assessment.

However, the main problem with country comparisons is that assessment methods differ widely. The choice of method is influenced by a variety of factors, including: data access; resources; legal possibilities for audits and data processing; the structure of tax authorities' control activities; and the design of tax rules. Differences in methodology can have a significant impact on assessment results. For example, it is not uncommon for the result of a tax gap assessment to differ by a factor of two when different methods are applied – even within the same country. This makes it very difficult to compare tax gaps between countries.

The most important international study done on a regular basis is the annual comparison of VAT gaps between EU countries, carried out on behalf of the European Commission. VAT gaps for all EU member states are assessed, based on national accounts data from the statistics offices in each country. Swedish data is provided by Statistics Sweden (SCB). The establishment of national accounts is in accordance with a consistent international standard: ESA 2010. All assessments are carried out by a designated institution (currently the Center for Social and Economic Research (CASE) in Warsaw), and the same method is applied for all countries. The VAT rules that apply are fairly similar in all EU countries, since they are governed by the EU VAT Directive. This comparison is therefore likely to constitute the most accurate picture currently available of tax gap differences between countries. Even so, the reliability of the actual figures is highly questionable.

In the light of all the above, great care should be taken when making international tax gap comparisons. Generally speaking, it is impossible to draw conclusions with any degree of certainty as to why assessments differ between countries.

2.3.5. The tax gap for a specific year

The Swedish Tax Agency's goal is to present an assessment of the tax gap for the entire economy for specific years. However, an annual assessment of the size of the tax gap for every part of the economy is a highly resource-intensive task, and the lack of available data sometimes makes the process impossible to undertake. The tax authorities of countries that report tax gaps annually sometimes need to extrapolate from data for previous years for certain tax categories or taxpayer groups. This is the case, for example, if it would take a long time to carry out a new assessment, or if annual assessments are not possible. Historical tax gaps can then be revised when additional data becomes available.

Since it has not yet been possible to undertake a consistent assessment of the tax gap for the whole Swedish economy, this report mainly presents the tax gaps for the specific years that have been assessed. Since data from various years has formed the basis of the assessments, it is not possible to add up the figures from the different assessments to obtain a total tax gap for the areas assessed. In order to achieve a unified assessment of each tax category, we have had to make certain assumptions. These assumptions are presented in the respective sections of the report. Before we can report the total tax gap, however, further assessments still need to be carried out in several major areas.

2.4. Assessment methods

A variety of methods must be applied in order to assess the tax gap for an entire economy – that is, for all tax categories and all taxpayers. The methods have different advantages and disadvantages in terms of what the results include and how they can be interpreted. They also place different demands on data, resources and time. This chapter outlines the two main groups of methods used, which are known as "top-down" and "bottom-up" methods. It also provides an overview of the methods used in the tax gap assessments for different tax categories and customer groups presented in this report.

2.5. Top-down and bottom-up methods

Two main methodological approaches are taken to obtain a basis for assessing the tax gap for a particular area. These are commonly referred to as "top-down" and "bottom-up" methods.

Top-down methods are used to estimate taxable economic activity, using data from sources other than tax returns. These methods are the basis for calculating a theoretical tax base from which a theoretical final tax is calculated. This theoretical liability is the final tax had all individuals and companies complied according with the law. The tax gap is then the difference between this estimate and total tax collected. Top-down methods thus provide an estimate of the total tax gap. Since we only observe the discrepancies between two aggregates, it is difficult to determine the causes of the tax gap without further inquiry into the factors driving those differences. These methods also require aggregated data. This data should provide a reliable picture of the actual tax basis, but should not include information that forms the basis for taxation. These requirements make it difficult to find the appropriate data for top-down tax gap assessments in many areas.

Bottom-up methods, on the other hand, address the problem from the other direction. They are used to estimate the different parts of the tax gap without first assessing the theoretical tax liability. Instead of aggregated data, bottom-up methods are based on data at the taxpayer level, typically using information from audits. Bottom-up methods are used to estimate the tax gap for the whole target population, based on the results of audits, which in practice are almost always carried out on a sample population of taxpayers. This presents at least two problems.

First, it is not obvious how the results can be scaled up to represent the whole population. In cases where audits have been made out of a random sample of the population, scaling-up is fairly simple and can be achieved with relative certainty by applying statistical methods. However, audits are often carried out on the basis of risk assessments, rather than at random. This means that the taxpayers selected for audits are not representative of the entire population, making it difficult to scale up the results. There are different ways to address this problem, depending on data availability and the design of the selection process. Possible approaches include post-stratification, statistical matching, and other more advanced statistical methods. In cases where data is insufficient or suitable statistical methods are not available, it is also possible to make different assumptions that are informed to varying degrees. However, this also increases the level of uncertainty in the results.

A second problem is that the data obtained through audits only relates to the part of the tax gap that is verifiable by the selected control method. In order to gain an understanding of the total tax gap for a group of tax payers or tax base, it is also necessary to assess those parts of the tax gap that cannot be detected by the selected control method (see section 2.2 for a discussion on how to breakdown the tax gap). This requires additional information, which may not be available. Again, varyingly informed assumptions may be required to assess the total tax gap.

The choice of assessment methods depends on several factors. Top-down methods are more appropriate for some areas, and bottom-up methods for others. Both methodological approaches complement each other and are required in order to assess the tax gap for the whole economy.

2.6. Methods used

The assessment of the tax gap for SMEs is based on random audits. The same applies to tax gaps that stem from incorrect deduction claims in private individuals' tax returns. In the case of tax gaps for large companies, several different methods have been required in each assessment. The methods used in these assessments are briefly described in sections 2.6.1 and 2.6.2. Other methods are outlined in the sections relating to the pertinent tax gap assessments.

2.6.1. Random audits

Since 2015 (for tax year 2014), the Swedish Tax Agency has carried out random audits on SMEs and individuals in order to improve the basis for tax gap assessments.

Small Medium Enterprises(SME)

For SMEs, tax gap assessments have been carried out through random audits and have been limited to the following taxes: income tax, VAT, social security contributions and self-employed contributions. In order to achieve consistency in the audits, a standardised audit programme has been developed. This programme covers most areas of a company's accounts. The audits initially focus solely on the companies' own accounts, without the use of other material such as bank transactions and balances. If an initial audit reveals irregularities, more detailed checks are carried out to clarify the scope and extent of the problem. If other control methods had been used (for example, if the auditors had initially had access to data other than the company's own accounts), further errors would probably have been detected. The audits, however, would also have demanded greater resources.

The target population for audits comprises about 533,000 limited companies and sole traders, which is about half of the total number of active enterprises[2]. The target population has been limited to sole traders and limited companies with an annual turnover of more than SEK 100,000 and an annual salary total of less than SEK 50 million. Partnerships, limited partnerships, publicly owned companies, financial corporations and non-domestic companies have not been subject to random audits.

For each tax year, the tax gap is based on tax corrections determined by audit results. The estimated tax gap for SMEs is an average of the results for the tax years 2014 to 2018, and refers only to the part of the tax gap that is verifiable by the selected methods.

The results of the random audits have also been used to estimate tax gaps for certain taxpayer groups outside the target populations: mainly active sole traders and limited

[2] Active enterprises are defined as businesses with a declared annual turnover that is not zero.

companies that have not declared an annual turnover above SEK 100,000, as well as partnerships and limited partnerships. The estimate is based on the assumption that the proportion of tax return irregularities, in relation to the final tax, is the same for these enterprises as for the target population.

The audits have not included assessments of the total tax consequences for private individuals linked to the companies. However, an estimate has been made of the tax gap for private individuals as a direct consequence of incorrectly declared or undeclared salaries and benefits.

Private individuals

Audits of private individuals' income tax returns have, unlike those for SMEs, been carried out using desk-based audits. In order to ensure consistency in the audits, a standardised audit programme has been developed. This programme details the steps that administrators must follow when carrying out audits. It specifies how to perform the pre-audit, and what the subsequent enquiries should cover.

Each year, the Swedish Tax Agency selects a stratified random sample of individuals that have made changes or amendments to their pre-printed tax returns. In the case of individuals who have confirmed the pre-printed tax return details without any amendments, audits using the selected control method would not be expected to detect any irregularities. It is therefore assumed that there is no verifiable tax gap for these individuals. Individuals who do not file a tax return at all are subject to a discretionary assessment of its tax liabilities based on information available to the Swedish Tax Agency. This assessment is assumed to be the correct tax liability and it would therefore be difficult to detect irregularities with the selected control method, even in cases where the discretionary assessment were not correct. There is therefore assumed to be no verifiable tax gap for these individuals either.

Several taxpayer groups are not included in any of the target populations. These include deceased persons and their estates, individuals subject to special income tax on non-residents ("SINK"), individuals who have emigrated, individuals with protected identities, and individuals who are subject to special investigations. For an individual to be included in the target population, the amendments to their pre-printed tax return information must also affect taxation by a certain amount. For excluded groups and individuals whose tax return amendments affect taxation by only small amounts, separate assessments are made based on the results of audits among the target populations.

2.6.2. Large enterprises

Assessments of large enterprises are not based on random audits of the target population. Other methods were chosen because relevant random audits are typically difficult to carry out for this group. This is because the group comprises relatively few enterprises, which can be very different in nature. These enterprises operate in diverse sectors. They also vary in size and carry different tax risks. Certain types of irregularities occur only rarely among large enterprises, but they may be very significant when they do occur. The size and complexity of the enterprises also mean that investigations are considerably more time-consuming than for SMEs. Altogether, these factors make random audits of large enterprises very expensive to carry out, while yielding results that are subject to considerable statistical uncertainty. The methods selected are briefly outlined with the results in sections 4 and 5.

The group of large enterprises is defined here according to the Swedish Tax Agency's organisational classification, which includes companies that are part of a group where the annual salary total for at least one of the group companies exceeds SEK 50 million.[3] In order to assess the tax gap, the population has been further limited to private domestic non-financial companies. The target population has been limited for two main reasons. The first reason is to keep the population reasonably homogeneous. There is evidence that tax gaps differ between public and privately owned companies and entities. The same also applies to financial and non-domestic companies to some extent. The second reason is that this limitation corresponds to the target population for random audits on SMEs, where financial, public and non-domestic companies and entities are excluded.

3. Tax on individuals' earned income

The assessment of the verifiable tax gap for individuals' earned income is focused on two main categories:
– tax on income from employment and business activities
– social security contributions and self-employed contributions The size and details of the tax gap are presented below.

3.1. Tax on income from employment and business activities

In total, the verifiable tax gap for income from employment and business activities for individuals is assessed at SEK 10.2 billion per year for the period 2014 to 2018, which corresponds to approximately 1.3% of the final tax. This assessment is based on several different tax gap assessments.

The tax gap resulting from incorrect deductions regarding income from employment is estimated to be SEK 2.9 billion, of which women account for SEK 1 billion and men for SEK 1.9 billion. This would correspond to a 0.4% increase in the final income tax for individuals if the Swedish Tax Agency were to audit and correct all individuals' income tax returns (0.3% for women and 0.4% for men, when expressed as a proportion of the tax liabilities determined for each respective group). Investigations have found that incorrect deductions for travel to and from work are the biggest contributing factor to the verifiable tax gap. These irregularities account for about 80% of the verifiable tax gap for deductions relating to income from employment.

In addition to the tax gap estimated on the basis of random audits of private individuals, the Swedish Tax Agency has also assessed the tax consequences of incorrectly declared or undeclared salaries and benefits detected in random audits of companies. These errors are rarely detected in audits of employees' tax returns, but they can be revealed by audits on employers. The impact is assessed in section 3.2, based on the irregularities underlying the errors relating to employer contributions. The annual tax gap relating to income from employment is estimated at SEK 3.9 billion for employees of SMEs and SEK 0.2 billion for employees of large enterprises: a total tax gap of SEK 4.1 billion.

Irregularities relating to sole traders and individuals who are part-owners of partnerships constitute another factor in the tax gap for income from employment and business activities. Operating profits for both groups are taxed as income from business activities. On the basis of the random audits included in tax gap assessments, the Swedish Tax Agency has assessed the annual tax gaps for sole traders and part-owners of partnerships at SEK 2.9 billion and SEK 0.4 billion respectively.

[3] As of the 2018 tax year, the annual salary total was increased to SEK 75 million.

Irregularities arising from incorrectly declared salaries and benefits among public-sector, publicly owned, non-domestic and financial employers are not included in the assessment of the tax gap regarding income from employment. The same applies to those parts of the tax gap that are difficult to detect through tax returns, such as undeclared work. The results are summarised in table 3. The assessments are presented in more detail in the following sections.

Table 3 Assessment of the annual verifiable tax gap for income from employment and business activities, 2014 to 2018

	Tax gap (SEK billion)	Proportion of final tax[1)]	Proportion of final tax for respective income categories
Income from business activities	**3.3**	**0.4%**	**21.0%**
of which sole traders	2.9	0.4%	21.0%
of which partnerships (holdings of individuals)	0.4	0.1%	20.9%
Income from employment	**4.1**	**0.5%**	**1.3%**
of which tax consequences for employees of large enterprises[2)]	0.2	0.03%	0.1%
of which tax consequences for employees of SMEs	3.9	0.5%	2.7%
Incorrect deductions relating to income from employment in Income Tax Return 1[3)]	**2.9**	**0.4%**	**0.4%**
of which for women[3)]	1.0	0.1%	0.3%
of which for men[3)]	1.9	0.2%	0.4%
Total	**10.2**	**1.3%**	**1.3%**

Source: the Swedish Tax Agency's calculations
1) Final tax refers to average annual final tax for income from employment and business activities declared in Income Tax Return 1.
2) Refers to employees of private non-financial companies that are part of a group in which at least one company has an annual salary total exceeding SEK 50 million.
3) The tax gap has been adjusted so that the relative tax gap assessed for 2016 to 2018 in table 5 is also assumed to be valid for the 2014 to 2018 period.

3.1.1. Income from business activities

The verifiable tax gap regarding income tax for sole traders is estimated using the results of random audits. The tax gap for the target population for random audits is assessed at an average of SEK 2.5 billion for the 2014 to 2018 period. The average tax gap per sole trader is estimated at SEK 10,900. This tax gap can be viewed in relation to the final income tax for sole traders belonging to the target population, which was SEK 12.1 billion on average for the tax years 2014 to 2018. This means that the amount of final income tax for the target population would have been 21% higher if the Swedish Tax Agency had been able to run audits on all sole traders in the target population.

Table **4** Assessment of the annual verifiable income tax gap for sole traders, 2014 to 2018

Population	Tax gap average (SEK)	Population, number	Total tax gap (SEK billion)	Final tax (SEK billion)	Tax gap as a proportion of the final tax for each population[1)]
Sole traders	**5,600**	**520,400**	**2.9**	**13.8**	**21.0%**
of which target group	10,900	233,200	2.5	12.1	21.0%
of which non-target group	1,300	287,200	0.4	1.7	21.1%
Partnerships and limited partnerships	**12,600**	**32,000**	**0.4**	**1.9**	**20.9%**
Total	**-**	**-**	**3.3**	**15.7**	**21.0%**

Source: the Swedish Tax Agency's calculations
1) Final tax refers to average annual tax on income from employment and business activities for the target population, 2014 to 2018.

The target population for random audits does not include the smallest active sole trader businesses, with a turnover below SEK 100,000 for the tax year in question. Some other smaller groups are not included either.[4] The tax gap relating to income from these business activities must therefore be assessed on a different basis. The same applies to individuals' income from partnerships and limited partnerships. For all these income categories, the tax gap is instead assessed by assuming that the proportion of the tax gap for each year, in relation to the final tax, will be the same as for the target population in the random audits of sole traders in the same year.

For the sole traders not included in the target population for random audits, the annual verifiable tax gap is estimated at SEK 0.4 billion. The tax gap for income from partnerships and limited partnerships is also assessed in the same way at SEK 0.4 billion per year.

The annual verifiable income tax gap relating to sole traders' and individuals' income from partnerships and limited partnerships is thus assessed at a total of SEK 3.3 billion, which corresponds to approximately 21% of the final income tax for these groups.

3.1.2. Income from employment

The random audits of SMEs detect incorrectly declared or undeclared salaries and benefits. As a direct consequence, income tax is also adjusted for employees and business owners whose salaries or benefits have been incorrectly declared. The resulting income tax gap has been assessed as the value of the incorrectly declared salaries and benefits, multiplied by the average marginal tax rate in Sweden for each respective year. The verifiable tax gap has been assessed at an average of SEK 3.9 billion for the years 2014 to 2018. A corresponding calculation has been made based on the assessment of the tax gap relating to social security contributions among large enterprises. This indicates a tax gap for employees of large enterprises of SEK 0.2 billion for the years 2014 to 2018.

3.1.3. Incorrect deductions for work-related costs

Deductions for work-related costs are declared in Income Tax Return 1. The tax gap resulting from incorrect deduction claims has been estimated on the basis of random audits of individuals' income tax returns. The deductions have been divided into four categories:

- travels to and from work
- dual residence
- temporary work and return journeys
- business trips and other expenses

The tax gap for the target population for random audits has been estimated on the basis of the results of these audits. However, tax returns including deductions below certain size thresholds have not been included in the random audits. The tax returns of certain other groups – such as the estates of deceased persons – have also been excluded. For these groups, it is assumed that the proportion of the verifiable tax gap, in relation to the tax consequence on the group's deductions, is the same as for the target population for random audits. The results of the assessments are presented in table 5.

[4] These groups are audited within the framework of other actions.

Table 5 Estimate of the annual verifiable income tax gap for deductions relating to income from employment, 2016 to 2018

Target population	Total tax gap (SEK billion)	Tax gap as a proportion of the final tax	Tax gap average (SEK)	Population (number)	Tax gap as a proportion of debited tax1)
Journeys to and from work	**2.4**	**0.3%**	**2,700**	**908,000**	**44%**
of which target group	2.3	0.3%	3,400	693,000	-
of which non-target group	0.1	0.0%	500	215,000	-
Dual residence, temporary work and return journeys	**0.3**	**0.0%**	**4,600**	**67,000**	**33%**
of which target group	0.3	0.0%	5,300	53,000	-
of which non-target group	0.0	0.0%	2,100	14,000	-
Business trips	**0.2**	**0.0%**	**3,700**	**42,000**	**54%**
of which target group	0.1	0.0%	5,100	28,000	-
of which non-target group	0.0	0.0%	900	14,000	-
Other expenses	**0.1**	**0.0%**	**3,200**	**36,000**	**55%**
of which target group	0.1	0.0%	5,300	19,000	-
of which non-target group	0.0	0.0%	700	17,000	-
Total tax gap for deductions	**3.0**	**0.4%**	**-**	**-**	-

Source: the Swedish Tax Agency's calculations
1) Refers to the proportion of incorrect deductions, in relation to the value of the total deductions for each category.

Deductions for journeys to and from work account for the majority of the annual verifiable tax gap relating to incorrect deductions for work-related costs: SEK 2.4 billion, or about 80% of the tax gap of work-related costs. Of this figure, women account for SEK 0.9 billion and men for SEK 1.6 billion. The average tax gap is about SEK 2,700 per tax payer, which does not differ significantly from the tax gaps for other types of deductions. However, the large number of deductions result in a large contribution to the overall tax gap.

The annual verifiable tax gap for deductions for business trips is estimated at SEK 0.2 billion, of which women account for SEK 0.04 billion and men SEK 0.1 billion. This deduction is relatively uncommon; on average, only 42,000 people per year claimed deductions for business trips during the three-year period.

Regarding deductions for temporary work and return journeys, the verifiable tax gap is estimated at SEK 0.3 billion, of which women account for SEK 0.1 billion and men for SEK 0.2 billion. The number of deductions for this category has steadily decreased: from 74,000 deductions in 2014 when random audits began, to 65,000 deductions in 2018.

The tax gap regarding deductions for other expenses differs somewhat from the other categories. The average tax gap of SEK 3,200 per tax payer is in line with other deductions, and the number of deductions claimed is about the same as for deductions for business trips. However, more than 90% of the deductions audited have been incorrect to some extent. As the deductions are relatively few and small in size, the annual verifiable tax gap is estimated at only 0.1 billion.

3.2. Social security contributions and self-employed contributions

The verifiable tax gap for social security contributions and self-employed contributions has been assessed for private non-financial domestic companies. Tax gaps arising from public-sector or publicly owned employers, non-domestic companies and financial companies are therefore not included in the assessment. The assessments for SMEs and large enterprises have been carried out separately.

For the groups audited, the annual verifiable tax gap for social security contributions and self-employed contributions is assessed at SEK 6.1 billion, which corresponds to 1.9% of the social security contributions and self-employed contributions determined for the populations. For SMEs, the assessments are based on the results of random audits. The annual tax gap for this group is estimated at SEK 6.0 billion. The annual tax gaps for social security contributions and self-employed contributions amount to SEK 3.5 billion and SEK 2.5 billion respectively. For large enterprises, the annual verifiable tax gap for social security contributions is estimated at approximately SEK 140 million, which corresponds to 0.04% of the final tax for the assessed populations.

Table 6 Assessment of the annual verifiable tax gap for social security contributions and self-employed contributions, 2014 to 2018.

	Tax gap (SEK billion)	Proportion of final tax[1)]	Proportion of final tax for respective parties
Social security contributions	**3.6**	**1.1%**	**1.2 %[2)]**
of which large enterprises[3)]	0.1	0.04%	0.1%
of which small and medium-sized limited companies	3.4	1.0%	2.4%
of which sole trader businesses	0.1	0.02%	2.2%
of which partnerships	0.1	0.02%	2.3%
Self-employed contributions	**2.5**	**0.8%**	**24.9 %[2)]**
of which sole traders	2.2	0.7%	24.9%
of which partnerships (individuals' holdings)	0.3	0.1%	24.8%
Total	**6.1**	**1.9%**	**1.9%**

Source: the Swedish Tax Agency's calculations
Note 1) The final tax refers to the average annual social security contributions and self-employed contributions for all enterprises included in the population whose assessment results are presented in the table.
2) Refers to the proportion of social security contributions and self-employed contributions determined for all populations audited.
3) Refers to domestic private non-financial companies that are part of a group in which at least one company has an annual salary total exceeding SEK 50 million.

3.2.1. Social security contributions

Social security contributions are paid by all employers in connection with compensation for work. The average annual verifiable tax gap for social security contributions is estimated at approximately SEK 3.6 billion per year for the years 2014 to 2018. This figure refers to private domestic non-financial companies.

Large enterprises

The tax gap relating to social security contributions for large private domestic non-financial companies has been assessed at SEK 140 million per year for the 2014 to 2018 period. The average amount of social security contributions determined for this group during the period was almost SEK 170 billion per year, which means that the proportion of the tax gap, in relation to the social security contributions determined, is less than 0.1%.

The overall assessment is based on several different assessments, using different methods. The main approach is to extrapolate from the results of the random audits on SMEs regarding social security contributions. The results used for the extrapolation are first cleared of the types of irregularities that are mainly limited to SMEs. The remaining irregularities form the basis for a prediction model, where both the probability of an enterprise reporting incorrect information, and the magnitude of the error, are assumed to be determined by the size of the enterprise's total salary costs. The model is then used to estimate the probability and extent of irregularities, assuming that an irregularity applies to the entire population of large enterprises. This gives a tax gap for social security contributions of SEK 140 million per year.

Assessments based on this prediction model are uncertain. Their validity also depends on the correctness of the underlying assumptions regarding the assessment of the tax gap for social security contributions. The results have therefore been compared with other sources of information – mainly the results of audits carried out in the course of the Swedish Tax Agency's regular activities. In view of the confidentiality surrounding the Tax Agency's control activities, no detailed description of these audits can be provided. However, all these sources of information relate to audits of sub-populations of large enterprises, where the selection criterion put a relatively low weight on risk. The results of these audits are in line with what emerged from the extrapolation of the results of the random audits. Naturally, though, the results were not identical. Altogether, the Swedish Tax Agency has assessed the results of the extrapolation to be the most reliable.

SMEs

The verifiable tax gap regarding social security contributions for SMEs has been estimated on the basis of random audits of limited companies and sole traders. The tax gap relates only to enterprises that were subject to the audits and were registered as employers. Among the limited companies subject to random audits, 87% were registered as employers. The corresponding figure for sole traders was only 19%.

The average verifiable tax gap relating to social security contributions for the limited companies included in the target population for random audits is assessed at SEK 3.3 billion per year for the 2014 to 2018 period (see table 7). Using the same method, the average verifiable tax gap for social security contributions relating to sole traders with employees is estimated at SEK 0.1 billion per year for the same period. The significantly smaller tax gap for sole traders is due to the fact that they have fewer employees; in relative terms, the tax gaps represent 2.4% and 2.2%, respectively, of the social security contributions determined for limited companies and sole traders.

Some limited companies and sole traders have been excluded from the target populations – mainly because their annual turnover was below the threshold for random audits. Partnerships and limited partnerships have also been excluded from the audits. For limited companies not included in the target population, the tax gap has instead been assessed by assuming that the proportion of tax gap for each year, in relation to the social security contributions determined, will be the same as for the limited companies subject to random audits. For sole traders, partnerships and limited partnerships not included in the target population for random audits, the proportion of the tax gap, in relation to the final tax, has been assumed to be the same as for the sole traders in the target population. The tax gaps for limited companies and sole traders are only marginally affected by these assumptions. The annual verifiable tax gap relating to social security contributions for partnerships and limited partnerships is estimated SEK 0.06 billion.

In total, the verifiable tax gap relating to social security contributions for SMEs is estimated to be SEK 3.5 billion per year, or 2.4% of the social security contributions determined, for the 2014 to 2018 period.

Table 7 Assessment of the annual verifiable tax gap relating to social security contributions for SMEs, 2014 to 2018

Population	Tax gap average (SEK)	Population (number)	Total tax gap (SEK billion)	Final tax (SEK billion)	Tax gap as a proportion of the final tax(%)1)
Limited companies	**11,800**	**288,600**	**3.4**	**139.7**	**2.4**
of which target group	12,800	259,400	3.3	136.6	2.4
of which non-target group	2,600	29,100	0.1	3.1	2.4
Sole traders	**1,200**	**52,000**	**0.1**	**2.9**	**2.2**
of which target group	1,400	43,800	0.1	2.8	2.2
of which non-target group	200	8,200	0.0	0.1	1.4
Partnerships and limited partnerships	**4,100**	**13,500**	**0.1**	**2.4**	**2.3**
Total	**-**	**-**	**3.5**	**145**	**2.4**

Source: the Swedish Tax Agency's calculations
1) The final tax refers to average annual social security contributions for SMEs, 2014 to 2018.

3.2.2. Self-employed contributions

Sole traders' income, and individuals' income from partnerships and limited partnerships, is subject to self-employed contributions. The verifiable tax gap relating to self-employed contributions has been estimated on the basis of the results of random audits of sole traders. Sole traders with a turnover of more than SEK 100,000 during the tax year have been included in the target population for random audits. The verifiable tax gap for these companies is estimated at SEK 1.9 billion per year during the 2014 to 2018 period, which corresponds to 25% of the self-employed contributions determined.

For private individuals' income from partnerships and limited partnerships, and the income of sole traders not included in the target population for audits, the proportion of the tax gap, in relation to final tax, has been assumed to be the same as for the sole traders in the target population who were subject to audits. In this way, the verifiable tax gaps relating to self-employed contributions for small sole trader businesses, and for partnerships and limited partnerships, have been estimated to be SEK 0.2 and 0.3 billion per year respectively for the 2014 to 2018 period.

In total, the verifiable tax gap for self-employed contributions is estimated to be SEK 2.5 billion per year for the 2014 to 2018 period, which corresponds to 24.9% of the self-employed contributions determined. In comparison with the tax gap for social security contributions, this figure appears high. This can be explained by the fact that sole trader businesses are generally very small enterprises, and a large part of the tax gap for this group concerns private costs that have been declared within the business.

Table 8 Estimation of the annual verifiable tax gap regarding self-employed contributions for sole traders and individuals who are part-owners in partnerships or limited partnerships, 2014 to 2018

Tax payer category	Average tax gap (SEK)	Population, number	Total tax gap (SEK billion)	Final tax (SEK billion)	Tax gap as a proportion of the final tax for each population (%)[1)]
Sole traders	**4,200**	**520,400**	**2.2**	**8.7**	**24.9**
of which target group	8,300	233,200	1.9	7.7	25.0
of which non-target group	800	287,200	0.2	1.0	24.7
Partnerships and limited partnerships	**9,600**	**32,000**	**0.3**	**1.2**	**24.8**
Total	**-**	**-**	**2.5**	**10.0**	**24.9**

Source: the Swedish Tax Agency's calculations
Note: The tax gap as a proportion of the final tax, used to estimate the tax gap for populations not subject to audits, may differ between populations, as population sizes and proportions have varied for different years.
1) The final tax refers to the average annual self-employed contributions for sole traders and individuals who are part-owners of partnerships or limited partnerships, 2014 to 2018.

4. Capital gains and property tax

The verifiable tax gap for capital gains and property tax has been assessed for the purposes of corporate tax and taxation of private individuals' income from capital. The size of the overall tax gap, and details of the gaps for these taxes, are presented below.

4.1. Capital gains tax for private individuals

The assessment of the tax gap for capital gains for private individuals stems from two sources:

- random audits carried out for parts of the declared capital gains within Sweden
- a top-down evaluation of the tax gap arising from returns on undeclared foreign assets

The latter relates to hidden assets, which are very difficult to assess, leading to considerable uncertainty in the estimation of the tax gap.

The total assessment of the tax gap for private individuals' capital gains tax from these two areas amounts to SEK 8 billion, which corresponds to 8.6% of the final tax. However, the assessment does not provide a comprehensive picture of the tax gap for capital gains tax for private individuals. This is because, over and above the assessment of the international tax gap, no assessment is made of the tax gap for areas that are not monitored in the random audits; the tax gap that is verifiable using other methods; and other parts of the non-verifiable tax gap.

Table 9 Assessment of the annual tax gap for capital gains tax for private individuals, 2016 to 2018.

	Tax gap (SEK billion)	Tax gap as a proportion of the final tax[1)]
Incorrect capital gains deductions	3.6	3.9%
Returns on foreign assets[2)]	4.4	4.7%
Total	**8.0**	**8.6%**

Source: The Swedish Tax Agency's calculations
1) The final tax refers to average annual capital gains tax for private individuals, 2016 to 2018.
2) The international tax gap has been adjusted so that the relative tax gap assessed for 2017 is also assumed to be valid for the 2016 to 2018 period.

4.1.1. Incorrect capital gains deductions

Capital gains deductions are declared in the form Income Tax Return 1. The tax gap resulting from incorrect deduction claims on capital gains has therefore been assessed on the basis of random audits of private individuals' income tax returns. The deductions have been divided into five categories:

- sale of securities
- sale of residential houses
- sale of tenant-owned properties
- sale of commercial properties
- interest expenses

Individuals whose capital gains are below certain thresholds have been excluded from the target population for random audits. Certain smaller groups of taxpayers have also been excluded, such as the estates of deceased persons. For these groups, the proportion of the tax gap, relative to average deductions for the group, is assumed to be the same as for the target population. The results for all groups are presented in table 10.

Irregularities relating to residential house sales accounted for 61% of the verifiable tax gap for capital gains deductions among the target population for random audits. Sales of tenant-owned properties accounted for a further 27%. The average proportion of the tax gap, in relation to the tax consequence of the deduction claimed, was 23% for sales of houses and 33% for sales of tenant-owned properties.

The total verifiable tax gap for capital gains deductions is an estimated SEK 3.6 billion. This corresponds to 3.9% of the final capital gains tax. Changes relating to securities can be differentiated in that they involve a high proportion of adjustments that are to the taxpayer's advantage (about 30%). This results in a low average adjustment amount, and thus a small tax gap for the whole population. The tax gap would be larger if it had instead been defined in absolute terms. In other words, if increases and reductions had been treated in the same way and did not cancel each other out.

Table 10 Estimate of the annual verifiable income tax gap for capital gains deductions, 2016 to 2018.

Population	Total tax gap (SEK billion)	Tax gap as a proportion of the final tax	Average tax gap (SEK)	Population (number)	Proportion of tax gap per deduction[1)]
Sales of securities	**0.3**	**0.3%**	**700**	**352,000**	**1%**
Target population	0.2	0.3%	1,100	227,000	-
Non-target population	0.0		100	125,000	-
House sales	**2.2**	**2.4%**	**17,100**	**128,000**	**23%**
Target population	2.0	2.2%	18,000	112,000	-
Non-target population	0.2	0.2%	10,600	16,000	-
Sales of tenant-owned properties	**1.0**	**1.1%**	**6,800**	**146,000**	**32%**
Target population	0.9	1.0%	7,500	122,000	-
Non-target population	0.1	0.1%	3,000	24,000	-
Sales of commercial properties	**0.1**	**0.1%**	**5,500**	**24,000**	**22%**
Target population	0.1	0.1%	10,900	11,000	-
Non-target population	0.0	0.0%	900	13,000	-
Interest expenses without statement of earnings and deductions ("kontrolluppgift", KU)	**0.0**	**0.0%**	**500**	**76,000**	**11%**
Target population	0.0	0.0%	1,000	35,000	-
Non-target population	0.0	0.0%	100	41,000	-
Total	**3.6**	**3.9%**	**-**	**-**	–

Source: The Swedish Tax Agency's calculations
1) Refers to the tax gap as a proportion of the respective tax consequence of declared sales/interest deductions
2) Refers to the tax gap for interest expenses where no statement of earnings and deductions is available from a bank, for example.

4.1.2. Returns on foreign assets

The international tax gap for private individuals is defined in this report as the tax gap arising from taxation of private individuals' capital gains derived from financial assets held outside Sweden. The international tax gap is often considered difficult to verify; it is very hard to measure, since it is determined by several unknown parameters which have to be assessed on the basis of uncertain sources.

The tax gap for capital gains tax on private individuals' foreign assets has been assessed on the basis of an assessment of the global amount of assets held abroad. The assessment process is divided into the following four steps:

1) Estimate the total amount of foreign financial assets – that is: assets held outside the country in which the owner is liable for tax.
2) Estimate the proportion of these financial assets owned by private individuals who are liable for tax in Sweden.
3) Estimate the returns on foreign financial assets owned by private individuals who are liable for tax in Sweden.
4) Estimate the proportion of the returns that has not been declared and is therefore part of the tax gap.

Research by Alstadsæter et al. (2018) shows the estimated value of global foreign assets (owned by private individuals and held abroad at the end of 2014) to be USD 8,635 billion. A breakdown of the distribution of the foreign assets by country is provided in the researchers' article, based on a combination of information gathered from leaked HSBC files[5] and other sources, such as statistics provided by the Bank of International Settlements (BIS). In 2014, foreign assets with an estimated value of just over SEK 48 billion were owned by private individuals who were liable for tax in Sweden.

The researchers' analysis indicates that, on a global basis, foreign assets consistently accounted for around 8% of households' global net wealth during the 2001 to 2015 period. However, the Swedish share of this wealth was smaller than the global average, amounting to 2.4% in 2014. In order to estimate the value of foreign assets owned by Swedish private individuals in 2017, it has been assumed that these assets remained constant as a proportion of households' net wealth between 2014 and 2017. On a global basis, this proportion has been constant for a longer period. The foreign financial assets held by private individuals liable for tax in Sweden are thus assumed to amount to USD 61.6 billion[6], which is equivalent to SEK 526 billion.

Following the HSBC leak, it was concluded that 90% to 95% of all capital gains revealed in the leak had not been declared (Alstadsæter et al., 2018). The Swedish Tax Agency's assessment is that the proportion of properly declared assets has increased since the mid-2000s, but no data is available to help determine this proportion's size. In this analysis, a somewhat larger proportion (20%) is therefore assumed to have been properly declared. So the returns on SEK 421 billion (80% of USD 61.6 billion) worth of capital invested in foreign assets is assumed not to have been declared in Sweden.

In order to calculate the tax gap arising from foreign assets, the capital gains on the assets must first be estimated. The return depends to a large extent on the type of foreign asset that an individual holds. For the past 10 years, returns on bank assets have been very low in many parts of the world. We consider a return on bank assets of 1% per year to be a reasonable assumption. The increase in the value of shares and other types of financial instruments has been significantly greater. For example, US stock market (Standard & Poor's 500 index, or the S&P 500) returns increased by an average of just over 8% per year during the 2008 to 2018 period. In addition to the increase in stock value, the average dividend in 2017 was 1.8%. To assess the capital gain of a share of stock, we need to know: when it was bought; when it was sold; and the value increase between purchase and sale. When calculating the realised capital gain of an asset, we follow the assumptions made by the Canada Revenue Agency (2016) in its tax gap analysis.

1) Assume that the assets calculated for 2017 were acquired continuously over a 10-year period, with 10% of the total assets being added each year (2007 to 2017). Assume that the value increase of the assets matches the S&P 500.
2) Then assume that 20% of holdings were sold in 2017.
3) This results in a realised capital gain of 7.9% in 2017.
4) The total return on shares increases to 9.7% when dividends are included.

In its calculations, the Canada Revenue Agency assumed that about 50% of hidden assets were invested in shares and similar instruments, about 25% in bonds, and about 25% in bank accounts. If Swedes' assets abroad are assumed to be similarly invested – with 50% earning interest at a rate of 9.7% per year and the rest earning an annual investment return of 1% – the average return will be 5.4% per year.

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5 In 2007, an HSBC Private Bank Switzerland employee leaked comprehensive internal documentation relating to 30,412 of the bank's clients.

6 Adjusted for exchange rate changes between 2014 and 2017.

To assess the tax gap, the applicable tax rate must also be assumed. In Sweden, private individuals' capital gains are taxed at 30%. However, the tax rate may be affected if there is a tax convention between Sweden and the country in which the assets are located. The taxation rules of different tax conventions vary. Most Swedish tax conventions are negotiated on the basis of the OECD Model Tax Convention on Income and on Capital (established by the Organisation for Economic Co-operation and Development), which allocates taxation rights for different income types and specifies how double taxation should be eliminated. With regard to interest, this model states that taxation in the source state must be limited to 10% of the gross amount of interest. However, many agreements – such as the Nordic Multilateral Tax Treaty – give Sweden full tax powers with regard to interest income. The rules are more complex with regard to income from dividends and the sale of shares. They vary according to which type of company stock the owner holds.

Another factor affecting the average tax rate is that it is permitted to offset foreign capital gains against capital losses in Sweden. However, no data is available regarding the location of assets or whether it is possible to offset them against capital losses. Based on the way Sweden's tax conventions are structured, we therefore consider 20% to be a reasonable average rate for capital gains tax on foreign assets.

Given these assumptions, the Swedish Tax Agency estimates that the tax gap for capital gains tax on Swedes' assets abroad was SEK 4.6 billion in 2017, which is 4.7% of the determined capital gains tax for private individuals.

4.2. Corporate income tax

The verifiable corporate tax gap for Swedish private non-financial companies is an estimated average of SEK 3 billion for the 2014 to 2018 period. This assessment is based on two separate estimates calculated using different methods. The assessment of small and medium-sized enterprises (SMEs) is based on random audits during the 2014 to 2018 period, and is presented in section 4.2.1. The assessment of the tax gap for large limited companies is for the same period, and is presented in section 4.2.2.

Table **11** Assessment of annual corporate tax gap for Swedish private non-financial companies. Average for the 2014 to 2018 period.

	Tax gap (SEK billion)	Proportion of final tax[1)]	Proportion of final tax for respective profits'
Large companies[2)]	2.2	2.5%	6.3%
Small and medium-sized limited companies[3)]	0.7	0.8%	1.4%
Total	**3.0**	**3.4%**	**3.4%**

Source: The Swedish Tax Agency's calculations
1) Final tax refers to the average annual income tax of the companies included in the population assessed in the table.
2) Refers to Swedish private, non-financial companies that are part of a group in which at least one company has a total annual wage bill exceeding SEK 50 million.
3) The result also includes limited companies' share of partnership profits.

As shown in Table 11, the tax gap for large companies is about three times higher than for small and medium-sized companies, even though large companies account for only 40% of the final corporate tax for the populations investigated. However, when comparing the corporate tax gap between these parties, it is important to take into account that irregularities in reporting both private costs and employee benefits are more common for SMEs than for large enterprises. Such irregularities lead to increases in social security contributions for companies, which in turn lead to increased deductible costs and a reduced corporate tax gap. If such consequential errors are excluded, the residual corporate tax gap attributable to direct errors regarding the taxable profits of SMEs is significantly larger than the SEK 0.7 billion reported in Table 11. However, the tax gap for large enterprises remains essentially unaffected by such a calculation.

The assessments of the verifiable corporate tax gap for the two groups are outlined in more detail in the following section.

4.2.1. Small and medium-sized enterprises (SMEs)

The verifiable corporate tax gap has been assessed for SMEs on the basis of random audits of small and medium-sized limited companies. For the companies included in the target population for random audits, assessment is based on the direct results of the audits. On this basis, the verifiable corporate tax gap has been estimated at SEK 0.7 billion per year for the 2014 to 2018 period, which corresponds to 1.3% of the corporate tax established for these companies.

In addition to this, there are tax gaps from two other sources: SMEs not included in the target population (mainly those with a turnover below SEK 100,000); and income declared incorrectly by partnerships and limited partnerships owned by SMEs.

For limited companies not included in the target population, the tax gap as a proportion of the final tax is assumed to be the same as for limited companies in the target population. This assumption extends the tax gap by a further SEK 0.02 billion.

With regard to the tax gap arising from errors made by partnerships and limited partnerships owned by limited companies (and thus not audited during the random audits carried out on public limited liability companies), it is assumed that the proportion of the tax gap, in relation to surplus corresponds to the proportion of the tax gap, in relation to taxable profit, for the limited companies in the random audit population. This assumption means there is a tax gap of SEK 0.06 billion per year for the 2014 to 2018 period. The results are presented in table 12.

As mentioned in the introduction to section 4.2, tax gaps for other tax categories often lead to a reduction in the surplus declared by companies as tax costs increase. This happens, for example, when business owners attribute private costs to their companies. During the random audits carried out, the median corporate tax adjustment made was SEK -2,100. This means that corporate tax was *reduced* for the majority of the companies for which an adjustment was made.

Table 12 Assessment of annual verifiable corporate tax gap for SMEs, 2014 to 2018

Population	Average tax gap (SEK)	Population (number)	Total tax gap (SEK billion)	Final tax (SEK billion)	Tax gap as a percentage of the final tax for each respective population
Limited company	**1,900**	**354,400**	**0.7**	**52.3**	**1.3%**
Target population	2,200	299,900	0.7	50.6	1.3%
Non-target population	300	54,500	0.02	1.7	1.1%
Partnerships and limited partnerships	**8,900**	**6,500**	**0.1**	**4.0** 1)	**1.5%**
Total	**-**	**-**	**0.7**	**56.3** 2)	**1.3%**

Source: The Swedish Tax Agency’s calculations
1) Refers to the tax consequence of partnerships’ and limited partnerships’ profits on the parent company.
2) All taxation takes place within the limited companies.

Based on the results of random audits, the tax gap has also been estimated for SMEs excluded from the target population. These SMEs include the smallest active companies, with an annual turnover of less than SEK 100,000 in the tax year in question, and certain other relatively small groupings. These estimates are based on the assumption that these companies make just as many errors per tax category, in relation to their determined tax, as the companies in the target population. The tax gap is estimated at SEK 0.02 billion.

4.2.2. Large enterprises

The corporate tax gap for large enterprises is estimated at approximately SEK 2.2 billion per year for the 2014 to 2018 period. The population is limited to Swedish private non-financial companies. This estimate is based on several different sources of information (see also section 2.6.2) and should be considered highly uncertain.

In order to estimate the corporate tax gap for large enterprises, this tax gap has been divided into two parts, which have been assessed separately: gaps caused by inadequate internal business practices; and gaps relating to tax avoidance schemes. The difference between these two types of gaps is not always clear. However, "gaps relating to tax avoidance schemes" are errors that contravene tax rules and result from arrangements deliberately designed to avoid taxation.

The tax gap has mainly been estimated on the basis of careful follow-up of audits carried out by the Swedish Tax Agency in the ordinary course of our activities. In order to obtain a clear picture as fairly as possible – in particular with regard to the existence of tax avoidance schemes – audits had to be quite comprehensive. It was also important for the sample not be overly guided by risk assessments. These conditions significantly limit the information available for assessment. Since the tax arrangements referred to here are uncommon compared with tax gaps caused by inadequate internal business practices, the results are derived from a small number of observations. This is compounded by the fact that the tax gaps can be very large, leading to extremely uncertain estimates. For tax avoidance schemes, the tax gap has been estimated at 4.8% of the final tax. In view of the confidential nature of the Swedish Tax Agency's activities relating to audits and controls, it is not possible to provide a more detailed description of the methods used.

With regard to the tax gap caused by inadequate internal business practices, this assessment is also based on the follow-up of various audits and controls, including random audits on companies on the borderline between large and medium-sized enterprises (companies with an annual salary total of SEK 50-75 million), as well as audits and controls on other sub-populations of large enterprises. The results gained from several different sources of information have been broadly consistent, and the assessment is that the tax gap for this part is around 1.5% of the final tax. The assessment of the corporate tax gap may be considered somewhat less uncertain in relation to inadequate internal business practices. This part of the overall gap is, however, relatively small.

In total, the verifiable corporate tax gap is estimated at 6.3% of the final tax annually during the 2014 to 2018 period. The total corporate tax for the target population during this period was SEK 35.5 billion per year on average, which means that the verifiable tax gap is estimated at an average of SEK 2.2 billion per year during this period.

5. Value added tax (VAT)

In this section, two estimates are presented of the total tax gap for VAT based on top-down calculations made by Statistics Sweden (SCB) and the Center for Social and Economic Research (CASE). In order to give a more detailed picture of the VAT gap, the tax gap for SMEs is also reported, based on the results of the random audits. The latter estimate represents only part of the total tax gap. It does not include all the elements of the total tax gap, since it is based only on an assessment of the tax gap for the areas included in the random audits. On the other hand, the total tax gap is based on the aggregate financial flows within the economy, which are considered to provide a good overall picture of the gap. However, the calculations cannot be allocated to different parties in the same way as the results of the random audits.

The Swedish Tax Agency's overall estimate of the VAT gap is based on Statistics Sweden's VAT gap calculations. The estimates for 2016 to 2018 are presented in table 13.

Table 13 The Swedish Tax Agency's assessment of the VAT gap.

	2016	2017	2018
SEK billion	13.7	16.1	15.1
Proportion of tax determined	3.4%	3.8%	3.4%

Source: Calculations by Statistics Sweden and the Swedish Tax Agency.

5.1. The total VAT gap

The Swedish Tax Agency has not made its own calculation of the total VAT gap. The overall assessment is based on calculations made by Statistics Sweden and CASE[7].

5.1.1. The VAT gap based on calculations made by CASE

CASE makes calculations of the VAT gaps for EU member states on an annual basis, on behalf of the European Commission (EC). These calculations are made using a top-down method, where theoretical VAT liability is calculated on the basis of the consumption of goods and services reported in national accounts. The theoretical VAT liability is then compared with the VAT payments made. The difference between these figures is the VAT gap, which is then expressed as a percentage of the theoretical VAT liability. Sweden was considered by CASE to have the lowest VAT gap in the EU in 2018 (CASE, 2020). The VAT gap was calculated to be 0.7% of the theoretical VAT liability (see table 14).

Table 14 The VAT gap as a percentage of the theoretical VAT liability for 2016 to 2018 calculated by CASE

	2016	2017	2018
Proportion of theoretical VAT liability	1.5%	1.9%	0.7%

Source: CASE (2020).

CASE's definition of the tax gap differs slightly from the Swedish Tax Agency's definition and the definition used in our appropriation directions. Some of the final taxes are never paid, which results in collection losses. Collection losses are the difference between final tax statement and taxes paid. The Swedish Tax Agency's definition of the tax gap does not include collection losses, whereas they are included in CASE's calculations. In Sweden, however, the difference between final taxes and paid taxes is generally small, and collection losses are minor. CASE's results are also presented as a proportion of theoretical tax liability, whereas the other results in this report have been calculated as a proportion of the final tax.

[7] CASE's calculations are made on behalf of the European Commission.

5.1.2. The VAT gap based on calculations by Statistics Sweden

Statistics Sweden also makes an annual calculation of the VAT gap, using the statistics that form the basis of Sweden's national accounts. The method used differs slightly from CASE's, but is based on the same principle of calculating a theoretical tax liability based on financial flows registered within the economy. Statistics Sweden has access to more detailed statistics than CASE, and can therefore take more aspects of the tax gap into account. The VAT gap calculated by Statistics Sweden can be split into two components: the gap arising from companies that reported income and VAT to the Swedish Tax Agency but went bankrupt before paying the VAT; and the gap arising as a result of other VAT irregularities.

This breakdown makes it possible to assess the VAT gap according to the Swedish Tax Agency's tax gap definition, which does not include collection losses. The results of Statistics Sweden's calculations are presented in table 15.

Table 15 Results of Statistics Sweden's VAT gap calculations

	2016	2017	2018
Theoretical VAT (SEK billion)	420.3	443.1	461.4
VAT paid	405.2	424.9	445.2
VAT gap including collection losses (SEK billion)	15.1	18.2	16.2
of which bankruptcy VAT (SEK billion)	1.5	2.1	1.1
of which remaining VAT gap (SEK billion)	13.7	16.1	15.1
Tax gap according to the Swedish Tax Agency's definition (SEK billion)	13.7	16.1	15.1
Tax gap as a proportion of theoretical tax liability	3.2%	3.6%	3.3%
Tax gap as a percentage of the final tax	**3.4%**	**3.8%**	**3.4%**

Source: calculations by Statistics Sweden and the Swedish Tax Agency

5.1.3. Assessment of the VAT gap

It is difficult to compare Statistics Sweden's and CASE's assessments due to the different methods applied in their calculations. In the past, the Swedish Tax Agency has based its final assessment of the VAT gap on the average of these two calculations. For this year's assessment, the Swedish Tax Agency has chosen to rely mainly on Statistics Sweden's calculations. However, CASE's assessments have made it possible to put the final assessment into a European perspective, since the same method has been applied to all EU countries.

The decision to use Statistics Sweden's calculations was primarily based on the fact that Statistics Sweden has reviewed both its calculations of the theoretical tax liability and the way this is used in the national accounts system. This is considered to have improved the level of accuracy. The Swedish Tax Agency has also concluded that Statistics Sweden's calculations are based on more disaggregated statistics, making it easier to consider the different rules that apply within the VAT system. Further, Statistics Sweden's results can be broken down to enable calculation of the VAT gap according to the Swedish Tax Agency's tax gap definition. On this basis, the total VAT gap for 2018 is estimated at SEK 15.1 billion, which corresponds to 3.4% of the final VAT.

5.2. The verifiable VAT gap for SMEs

The verifiable VAT gap for SMEs has been assessed on the basis of the random audits of these enterprises. The total VAT gap is estimated at an average of SEK 4.5 billion per year for the 2014 to 2018 period. (See table 16) This corresponds to around 2.3% of the final VAT for SMEs. SMEs are divided into limited companies, sole traders and partnerships.

The VAT gap for sole traders and limited companies is estimated to be approximately SEK 2 billion for each group. However, the VAT determined for sole traders is significantly less than for limited companies, which means that, as a proportion of the final VAT, the VAT gap is significantly larger for sole traders than for SMEs. Sole traders' limited degree of compliance with the rules can mainly be explained by the fact that their businesses are often smaller than limited companies, and it is more common for smaller companies to claim deductions for private costs. The results are presented in table 16 and the assessments are discussed in more detail below.

Table 16 Assessment of annual verifiable VAT gap for SMEs, 2014 to 2018

Population	Average tax gap (SEK)	Population (number)	Verifiable VAT gap (SEK billion)	Final VAT (SEK billion)	VAT gap as a proportion of the final VAT[1)]
Limited companies	**6,200**	**344,800**	**2.1**	**179.4**	**1.2%**
of which target population	7,200	292,300	2.1	177.0	1.2%
of which non-target population	1,100	52,500	0.1	2.4	2.4%
Sole traders	**4,300**	**460,500**	**2.0**	**9.6**	**20.4%**
of which target population	8,300	212,600	1.8	9.0	19.5%
of which non-target population	800	247,900	0.2	0.6	33.6%
Partnerships and limited partnerships	**10,300**	**35,300**	**0.4**	**6.4**	**5.7%**
Total	**5,300**	**840,600**	**4.5**	**195.4**	**2.3%**

Source: the Swedish Tax Agency's calculations

The verifiable VAT gap for SMEs has been assessed on the basis of the random audits of such enterprises. These have been carried out for both sole traders and limited companies, of which 91% and 97% respectively were registered for VAT in the fiscal years in question. Based on these audits, the verifiable VAT gap has been estimated at SEK 2.1 billion for limited companies and SEK 1.8 billion for sole traders in the target population for random audits. This corresponds to 19.5% and 1.2% of the final VAT for sole traders and limited companies respectively.

Limited companies and sole traders with an annual turnover below SEK 100,000 were not included in the target population for random audits. Partnerships and limited partnerships were not included either. Instead, the assessment for the smallest limited companies, and for partnerships and limited partnerships owned by limited companies, is based on the assumption that the verifiable VAT gap, calculated as a proportion of the sum of these companies' input and output VAT, is equal to the corresponding gap for the limited companies in the target population for random audits. For the smallest sole trader businesses, and for partnerships and limited partnerships owned by natural persons, a corresponding assumption was made on the basis of the gap for sole traders in the target population for random audits. The VAT gaps for sole traders and limited companies outside the target populations for random audits have been estimated in this way at SEK 0.2 billion and SEK 0.1 billion per year respectively for the 2014 to 2018 period. For partnerships and limited partnerships, the verifiable VAT gap is estimated at SEK 0.4 billion per year for the same period.

6. Excise duties

The excise duty gap has been assessed for excise duty on alcohol products, tobacco products and congestion charges. The excise duty gap for these excise duties is estimated to amount to SEK 1.9 billion for 2019. This corresponds to 6.5% of the excise duty determined for these three categories. However, these are very uncertain estimates.

Table 17 Estimated excise duty gaps for 2019, SEK billion

Excise duty type	Estimated excise duty gap (SEK billion)	Final VAT (SEK billion)	Excise duty gap as a percentage of the final excise duty
Excise duty on alcohol products	1.7	15.0	11.1%
Excise duty on tobacco products	0.2	11.8	2.1%
Congestion charges[1)]	0.01	2.7	0.4%
Total final excise duties	**1.9**	**29.5**	**6.5%**

Source: the Swedish Tax Agency's calculations
1) The excise duty gap for congestion charges has been adjusted so that the relative gap assessed for 2018 is also assumed to be valid for the 2016 to 2019 period.

6.1. Excise duty on alcohol and tobacco

Excise duty on alcohol products is volume based; the rate of duty is determined by the type of alcohol product. Cigarettes are taxed at a unit rate per cigarette plus a percentage of the retail price. VAT is added to the price of alcohol and tobacco products after the excise duty has been applied.

The assessment of the excise duty gap for alcohol products is based on data from the Sweden Monitor Survey – a project aimed at monitoring consumption trends for alcohol and other drugs, run by the Swedish Council for Information on Alcohol and Other Drugs (CAN) since 2013.[8] Every month, around 1,500 randomly selected people are asked about their alcohol and tobacco consumption, and the origins of the alcohol and tobacco products they consume. The selected group includes individuals between 17 and 84 years of age, who can be interviewed in Swedish, and who have either a fixed or mobile telephone subscription. To minimise memory errors, interviewees are only asked about their purchases and consumption over the past month. CAN also scales up reported alcohol consumption volumes, since self-reported consumption tends to be lower than actual consumption. Alcohol consumption is scaled up by a factor determined by the difference between self-reported estimates of alcohol products purchased at Systembolaget (the Swedish alcohol retailing monopoly) and Systembolaget's sales figures.[9]

The excise duty gap is calculated based on information collected during surveys regarding alcohol products that are smuggled, illegally distilled, or purchased on the internet. Separate calculations are also made to estimate the excise duty gap arising from alcohol products brought into Sweden by individuals travelling from other countries. These calculations are made separately because it is difficult to distinguish between alcohol products that are legally and illegally brought into Sweden in the quantity assessment.

With regard to the excise duty gap for tobacco products, only estimates for cigarettes are reported. This is because there is insufficient data available on tobacco products other than

[8] Prior to 2013, the project was run by the Centre for Social Research on Alcohol and Drugs (SoRAD) at Stockholm University.

[9] The scale factor also allows for the fact that major consumers are likely to be underrepresented in surveys. For a complete outline of how scaling factors are determined, please see the appendices to the CAN reports: https://www.can.se/publikationer/tobaksvanor-i-sverige-2003-2019/, https://www.can.se/publikationer/alkoholkonsumtionen-i-sverige-2019/

cigarettes, such as moist snuff ("snus"). However, it is likely that loss of excise duty on cigarettes constitutes the major part of the excise duty gap for tobacco products, since the majority of registered tobacco consumption in Sweden is related to cigarette smoking. As with alcohol products, the excise duty gap for cigarettes brought into Sweden by individuals travelling from other countries is assessed through a separate calculation. CAN extrapolates the estimated cigarette consumption to correspond to total Swedish consumption, and makes an adjustment, as for alcohol consumption, to compensate for the tendency for self-reported consumption to be lower than actual consumption. This adjustment is based on the difference between self-reported purchases of registered cigarettes and registered taxable sales of cigarettes in Sweden. On the basis of this difference, a weight is calculated which is used to adjust self-reported travel import of cigarettes and smuggled cigarettes.

The figures for registered cigarette and alcohol sales are based on preliminary figures reported in the Ministry of Finance's calculation conventions[10] for each respective year. This means that the weights, and thus the figures for smuggled alcohol or tobacco, among other things, can be changed for specific years in subsequent CAN reports. Sometimes CAN also makes changes to its methodology. For example, in 2018, the questionnaire changed slightly regarding issues related to cigarettes.

The lost excise duty on alcohol products is estimated at SEK 1.14 billion for 2019 if illegal travel imports are omitted. However, if *all* travel imports of alcohol products are included as if they should have been subject to excise duty, the excise duty gap for alcohol products increases to SEK 3.75 billion. Revenue from excise duty on alcohol products amounted to SEK 14.99 billion in 2019, which means that the excise duty gap for alcohol products represents approximately 7.6% of the duty determined for these goods if travel imports are not included. But if it is instead assumed that excise duty has been applied to all travel imports, the gap is about 25% of the final excise duty on alcohol products. In reality, the excise duty gap is probably somewhere between these figures, since travellers are allowed to bring alcohol products into Sweden for private purposes and are not required to declare them and pay excise duty. In the absence of empirical evidence of the proportion of travel imports that should be subject to excise duty, it is assumed that 20% of travel imports are illegal. The excise duty gap for alcohol products is then SEK 1.66 billion, which corresponds to 11.1% of the final excise duty.

The lost excise duty on cigarettes is estimated at SEK 0.16 billion if no travel imports are assumed to be illegal, and SEK 0.6 billion if all travel imports are assumed to be illegal. The excise duty revenue for tobacco products was SEK 11.81 billion in 2019, which means that the excise duty gap represents approximately 1.4% of the tobacco products duty due if all travel imports are assumed to be legal, and about 5.1% if all travel imports are assumed to be illegal. As for alcohol products, in the absence of empirical evidence, it is assumed that 20% of travel imports are illegal. The excise duty gap for cigarettes is then SEK 0.25 billion, which corresponds to 2.1% of the excise duty determined.

6.2. Congestion charges

Congestion charges are fees applied for travelling on a specific road at a particular time. The aim is to reduce traffic in heavily burdened areas. Stockholm introduced congestion charges

[10] Sweden's Ministry of Finance publishes a yearly report that outlines how public financial effects resulting from changes in the rules regarding taxes and other charges are calculated and reported: "Beräkningskonventioner 2020" ("Calculation Conventions 2020"), Ministry of Finance, 25 September 2019. https://www.government.se/4a7785/contentassets/eab519d5ad4ade95b02390c700b2ff/conventions-2020.pdf

in 2007, following a trial period in 2006 ("Stockholmsförsöket"). Gothenburg introduced congestion charges in 2013.

The congestion charge gap has been assessed by multiplying the estimated charge per passage by the number of passages of cars with non-identifiable registration number. Registration numbers may be unidentifiable due to deliberate manipulation or other factors. These statistics are collected by the Swedish Transport Agency ("Transportstyrelsen"), which reports the categories separately but states that it is not possible to make a precise distinction. The expected charges are estimated by calculating an average charge for a passage, based on passage statistics for different points in time. In 2018, the average charge was approximately SEK 18.9 for Stockholm and approximately SEK 13.4 for Gothenburg.

The congestion charge gap due to unidentifiable registration numbers was approximately SEK 6.7 million in 2018 in Stockholm. Covered or manipulated number plates corresponded to a congestion charge gap of approximately SEK 340,000. The corresponding figures for Gothenburg were approximately SEK 3.5 million and SEK 320,000 respectively. The total congestion charge gap for 2018 amounted to approximately SEK 10.9 million, which corresponds to 0.4% of the congestion charges due.

7. The development of the tax gap

The reporting requirements of our appropriation directions relate to both the size of the tax gap and the extent by which it changes. Due to both the uncertainty of most tax gap assessments presented in this report and the limited period of time for examination, an indicator method has been used to outline the development of the tax gap. The method was developed by the Swedish Tax Agency. Since 2015, it has been used in our assessment of the development of the tax gap for the previous three years, which is published in our annual report. This chapter presents the indicator method and the results of its application for the 2018 to 2020 period.

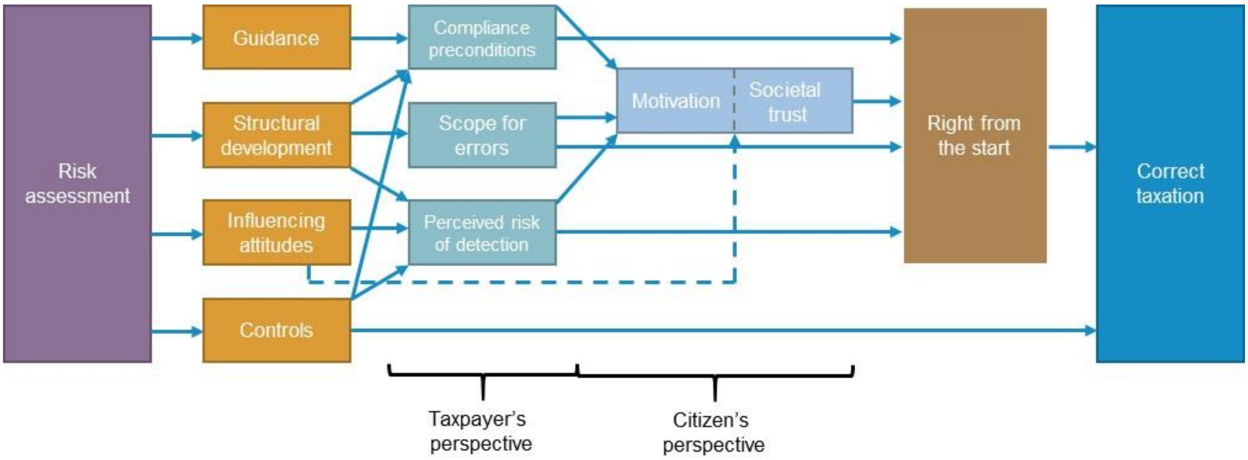
7.1. Tax gap indicators

An indicator is a measurement or value that provides insight into a situation, or points towards a likelihood or trend. Indicators can be used when assessing success in relation to goals or policies.[11] Indicators are used, for example, when results could be interpreted in different ways. They can provide an indication that a goal has been achieved, or that things are going in the right direction. They can be weighted differently, depending on how far apart the indicator and the goal are in the cause and effect chain.

The cause and effect chain used by the Swedish Tax Agency to describe assumptions and analyse how different measures affect the tax gap is a theoretical model called the tax gap model.

[11] The Swedish National Financial Management Authority (ESV): https://www.esv.se/statens-ekonomi/redovisning/resultatredovisning/resultatindikatorer/

Figure 2 The tax gap model as a cause and effect chain



The model outlines the mechanisms behind the tax gap in terms of five tax gap factors:

- Compliance preconditions
- Scope for errors
- Perceived risk of detection
- Motivation
- Social trust

In the model, the measures that the Swedish Tax Agency can take to minimise the tax gap are divided into four categories:

- Guidance
- Structural development
- Influencing attitudes
- Audits

By clarifying the interplay between the Swedish Tax Agency's actions and other societal factors, the model outlines the conditions surrounding the Swedish Tax Agency's task of collecting the tax that has been assessed while minimising the tax gap. While its purpose is not to designate a method for measuring the tax gap, the model can be used systematically to compile information that can contribute to an assessment of the development of the tax gap.

Several indicators have been developed in order to assess the development of the tax gap. Some of these directly indicate non-compliance and are indicators of the tax gap itself. Others relate to the five underlying tax gap factors in the tax gap model. The indicators selected are mainly derived from the Swedish Tax Agency's annual questionnaire surveys of individuals and companies, but also to some extent from follow-up data in the processing of tax returns. The closer the indicators reflect the tax gap and the different tax gap factors, the more accurate the assessment of the development of the tax gap. The assessment places the greatest emphasis on direct indicators of the tax gap (see section 7.1.1), and less emphasis on indicators relating to the development of the five underlying tax gap factors (see section 7.1.2).

7.1.1. Tax gap development indicators

The Swedish Tax Agency conducts annual attitude surveys of individuals and businesses, and we have developed tax gap development indicators based on these. A tax gap indicator is calculated as an average of the responses to a number of statements regarding knowledge of non-compliance and tax morale. In previous years, only three statements were included in the tax gap indicator. To reflect a broader range of perspectives, eight statements regarding individuals and six regarding businesses have been included since 2020. For the same reason, a number of statements regarding tax evasion are now presented separately. The statements used are presented in table 18.

Table 18 Statements made in the Swedish Tax Agency's annual attitude surveys, which are used as tax gap indicators

Respondent	Statements	Included in composite indicator	Reported as separate indicator
Private individuals	I personally know one or more individuals who evade taxes	X	X
	I know someone who has done undeclared work during the past year	X	X
	I know someone who has hired someone to do undeclared work during the past year	X	X
	I would consider doing undeclared work or otherwise evading tax if I knew that no one would find out (new)	X	
	It's OK for people to do undeclared work (new)	X	
	I feel I have a moral duty to comply with the tax rules (new)	X	
	People around me would think I was doing something wrong if I did undeclared work (new)	X	
	You have the right to try to get away with claiming various deductions in your tax return (new)	X	
Businesses	I personally know business owners who evade taxes	X	X
	Our company is exposed to significant competition from companies in the industry that evade taxes	X	X
	Undeclared wages are common in our industry (new)	X	
	I feel I have a moral duty to comply with the tax rules (new)	X	
	You have the right to try to get away with deductions in your tax return if the distinction between business and private costs is unclear (new)	X	
	I accept that business owners might occasionally claim a corporate tax deduction for private expenses (new)	X	

Source: The Swedish Tax Agency's annual attitude surveys, 2018 to 2020

The results of the direct tax gap indicators from the annual attitude surveys 2018 to 2020 are presented in table 19.

Table 19 Direct tax gap indicators: percentage and average

	Agree (percentage)		
	2018	2019	2020
Private individuals' perspective			
I personally know one or more individuals who evade taxes	10%	6%	6%
Women	*9%*	*4%*	*5%*
Men	*11%*	*8%*	*8%*
I know someone who has done undeclared work during the past year	26%	19%	18%
Women	*23%*	*14%*	*16%*
Men	*28%*	*24%*	*19%*
I know someone who has hired someone to do undeclared work during the past year	22%	16%	15%
Women	*21%*	*14%*	*15%*
Men	*24%*	*19%*	*14%*
Business owners' perspective			
I personally know business owners who evade taxes	10%	8%	7%
Our company is exposed to significant competition from companies in the industry that evade taxes	21%	22%	18%
Tax gap development indicators			
Private individuals' perspective1)	4.21	4.37	4.39
Women1)	*4.32*	*4.51*	*4.46*
Men1)	*4.10*	*4.24*	*4.32*
Business owners' perspective1)	4.37	4.38	4.34

Source: The Swedish Tax Agency: Results of the annual attitude surveys, 2018 to 2020.
1) The tax gap development indicator is an average of values between 1 and 5 which is calculated so that a favourable result for the Swedish Tax Agency and the tax system corresponds to a high average score for eight questions in the attitude survey.

The results of the survey of private individuals indicate that awareness of tax evasion and people doing undeclared work, or hiring people to do undeclared work, decreased between 2018 and 2020. The differences in the results for 2018 and 2020 are statistically significant for all three statements – on an overall level and for men and women separately. The differences between the results for 2019 and 2020 are not statistically significant for these indicators. The combined tax gap development indicator shows a statistically significant improvement for private individuals between 2018 and 2020. The difference between 2019 and 2020 is not statistically significant overall, or for women. However, it is statistically significant for men during that period.

The results of the survey of business owners indicate no significant difference in the experience of unfair competition. However, business owners' personal awareness of other business owners evading taxes decreased slightly between 2018 and 2020.

The combined tax gap development indicator for businesses shows no statistically significant differences between these years.

Overall, the results of the 2020 attitude survey indicate a positive trend over time. The strong results seen in the 2019 survey with regard to awareness of tax evasion and undeclared work have been maintained, both for individuals and for businesses, and the combined indicators remain at relatively high levels.

7.1.2. Development indicators for the tax gap factors

The five tax gap factors (compliance preconditions; scope for errors; perceived risk of detection; motivation; and social trust) are factors that affect the tax gap in the Swedish Tax Agency's model. Indicators have been developed to show how each tax gap factor has changed over the past three-year period. Some of the indicators are based on follow-up data from the Swedish Tax Agency's activities, while others are based on perceptions of private individuals and business owners that can be ascertained from responses provided in the Swedish Tax Agency's annual attitude surveys between 2018 and 2020. The indicators are assigned a value from 1 to 5, based on an average for responses to several different statements. The higher the value of the indicator, the better the result. The structure of the various indicators, and the results for each year, are presented below.

Compliance preconditions

The indicators for the tax gap factor "compliance preconditions" should reflect how easy it is to do things right from the start. This factor is connected to measures relating to the development of different types of support systems, and measures reflecting perceptions among private individuals and business owners regarding the conditions for doing the right thing.

The preconditions for compliance include the complexity of the regulations, and taxpayers' ability to deal with this complexity. Increased regulatory complexity can be balanced out by the development of system support, so that the preconditions for complying with the regulations do not worsen. Digital tax returns[12] are used as a measure for this, combined with a measure to reflect the extent of formal errors. An example of a formal error is when details in a PAYE tax return are inadvertently filled in incorrectly. If digital tax returns include a large proportion of accurate pre-filled data, taxpayers have fewer changes to make and the number of formal errors decreases.

An average of the responses to a number of statements in the annual attitude survey is used as an indicator of the compliance preconditions. The statements are presented in table 20.

[12] Income tax returns, Income Tax Return 1, for private individuals and sole traders, as well as VAT and PAYE returns.

Table 20 The statements on which the indicators for "compliance preconditions" are based

Private individuals	Businesses
1. It is easy to complete a tax return	1. It is easy for businesses to provide details regarding different taxes
2. It is easy to find things on the Swedish Tax Agency's website	2. For a business to do the right thing with regard to taxes, the time it takes and the associated costs are reasonable
3. Sufficient information was provided on the Swedish Tax Agency's website to resolve my issue	3. It is easy to get information from the Swedish Tax Agency
4. It is easy to get in touch with the Swedish Tax Agency (new)	4. It is easy to find things on the Swedish Tax Agency's website
5. The Swedish Tax Agency's representatives listen to me (new)	5. The Swedish Tax Agency's website provided sufficient information to resolve my issue
6. The Swedish Tax Agency's representatives tell me how I can solve my problems (new)	6. The Swedish Tax Agency's representatives listen to me (new)
7. The Swedish Tax Agency's representatives assume that I want to do the right thing (new)	7. The Swedish Tax Agency's representatives tell me how I can solve my problems (new)
8. I trust that the answers I get from the Swedish Tax Agency's representatives are correct (new)	8. The Swedish Tax Agency's representatives assume that I want to get things right (new)
9. It is easy to use e-services on the Swedish Tax Agency's website (new)	9. I trust that the answers I get from The Swedish Tax Agency's representatives are correct (new)
10. If I need help, I can turn to the Swedish Tax Agency with confidence (new)	10. It is easy to use services on the Swedish Tax Agency's website (new)
	11. The Swedish Tax Agency's e-services have worked when I have needed to use them (new)
	12. It is easy to get in touch with the Swedish Tax Agency (new)
	13. The Swedish Tax Agency makes it clear which rights and obligations apply to my business (new)
	14. It is easy to distinguish between business and private costs (new)
	15. If I need help, I can turn to the Swedish Tax Agency with confidence (new)

Scope for errors

"Scope for errors" refers to the technical margin in different parts of the tax system for calculating taxes on an incorrect basis. Pre-filled third-party data in tax return forms reduces the technical margin for error. The greater the proportion of final tax that can be determined on the basis of pre-filled data, the smaller the technical margin for error, and thus the risk of tax errors. The Swedish Tax Agency's controls also have an effect on the scope for errors. The more audits that are carried out, and the more effective they are, the smaller the scope for errors.

The percentage of the Income Tax Return 1 forms filed without amendments is used as an indicator of the scope for errors[13]. A potential flaw in this indicator is that there is no possibility to take into account any differences in control procedures between the years.

The annual attitude surveys contain questions about the possibility for private individuals and business owners to evade taxes. However, the results are not deemed to be as reliable as the percentage of tax returns without amendments, and they are therefore not used as indicators.

Perceived risk of detection

The tax gap factor "perceived risk of detection" mainly concerns taxpayers' perception of the risk of incorrectly declared details being detected. Results from the annual attitude

[13] Percentage of all income tax returns (Income Tax Return 1) for individuals, where the box for business ownership has not been pre-checked, and where the final tax has been determined on the basis of unamended pre-filled data.

surveys are therefore used as indicators, based on an average of the extent to which respondents agree with a number of statements.

Table 21 Statements comprising the indicator for perceived risk of detection

Private individuals	Businesses
1. It is likely that the Swedish Tax Agency would find out if someone I know evaded taxes	1. It is likely that the Swedish Tax Agency would find out if a business in my industry evaded taxes
2. The Swedish Tax Agency is good at combating tax evasion	2. The Swedish Tax Agency is good at combating tax evasion among businesses
3. There are many opportunities for someone in my financial position to withhold income	3. There are many opportunities for companies to evade taxes
4. There are many opportunities for someone in my financial position to claim incorrect deductions	4. If a business in my industry evades taxes and is discovered, there will be serious consequences for the business (new)
5. If someone I know evades taxes and is discovered, there will be serious consequences for this individual (new)	

Motivation

The fourth tax gap factor, "motivation", relates to taxpayers' perceptions and is therefore measured on the basis of the results of annual attitude surveys. Many things can affect taxpayers' motivation to declare activities correctly and pay the right tax, and the indicators are therefore calculated as an average of the extent to which respondents agree with a number of statements.

Table 22 Statements comprising the indicator for motivation

Private individuals	Businesses
1. I have been treated fairly by the Swedish Tax Agency (new)	1. The Swedish Tax Agency has treated my business fairly (new)
2. The Swedish Tax Agency treats all taxpayers fairly (new)	2. The Swedish Tax Agency treats all businesses fairly (new)
3. In Sweden, everyone – or almost everyone – pays the tax they are liable to pay (new)	

Social trust

"Social trust" refers to individuals' and businesses' trust in society's institutions in a broad sense. The indicators are therefore based on responses to statements in annual surveys about confidence in how the Swedish Tax Agency fulfils its mission, and confidence in Swedish public authorities in general. The indicators correspond to the average of the extent to which respondents – both individuals and businesses – agree with these statements.

Table 23 Statements comprising the indicator for social trust

Private individuals	Businesses
1. I have confidence in the way the Swedish Tax Agency fulfils its mission	1. I have confidence in the way the Swedish Tax Agency fulfils its mission
2. I have confidence in Swedish public authorities in general	2. I have confidence in Swedish public authorities in general
3. I trust most people (new)	3. I have confidence in the Swedish Tax Agency's handling of data relating to my business (new)
4. I have confidence in the Swedish Tax Agency's handling of my personal data (new)	

Results

The indicators for the different tax gap factors are shown in the table below. The survey results are presented as averages[14] of the responses to statements that an indicator comprises, for individuals and businesses respectively.

The response scale is an agreement scale from 1 to 5 for all statements derived from the Swedish Tax Agency's annual attitude surveys. For negative statements – in other words, when the desired result is that individuals or companies do not agree – a standard value has been calculated (6 minus the original value), so that a favourable result for the Swedish Tax Agency and the tax system is always a high number.

With regard to the development of compliance preconditions, the proportion of digital returns (for the forms Income Tax Return 1, Income Tax Return 2 and VAT returns) increased during the three-year period. The proportion of formal errors regarding VAT remains unchanged. With regard to employers' contributions, the proportion of formal errors increased significantly between 2018 and 2019 but had decreased by 2020. This is a result of the introduction of PAYE tax returns at the individual level. From 2019, irregularities in PAYE tax returns have been included that were not previously reported as formal errors, which means that the figures for 2018 are not comparable with those for 2019 and 2020. Between 2019 and 2020, the proportion of formal errors decreased from 5% to 4.2%.

The proportion of unamended pre-filled income tax returns is increasing, which indicates a decrease in the scope for errors.

With regard to tax gap factor indicators based on survey responses, there was a favourable development in responses from private individuals between 2018 and 2020. The difference between 2018 and 2020 is statistically significant for all results, with the exception of the indicator for motivation. However, this does not apply to the difference between 2019 and 2020. With regard to social trust, the results for businesses also improved, and the differences between the years are statistically significant. However, business owners' perceptions of the compliance preconditions, perceived risk of detection and motivation were largely unchanged compared to previous years.

[14] Previously, individuals or businesses were not included in the average if they responded "no opinion" to one or more statements. Since the number of statements was significantly increased for several of the indicators, the averages are now calculated based on these individuals' responses too. The values of the historical indicators have been recalculated in the same way, and may therefore differ from previously published results for these years.

Table 24 Indicators for tax gap factors

Proportion/average	2018	2019	2020
Compliance preconditions[1)]			
Proportion of digital tax returns, private individuals	87%	88%	90%
Proportion of digital tax returns, businesses (The form Income Tax Return1)	45%	48%	52%
Proportion of digital tax returns, businesses (The form Income Tax Return2)	50%	56%	58%
Proportion of digital VAT returns	87%	91%	93%
Proportion of formal errors for the total number of preliminary decisions, VAT	0.5%	0.3%	0.3%
Proportion of formal errors for the total number of preliminary decisions, social security contributions	0.3%	5.0%	4.2%
Proportion of formal errors for the total number of preliminary decisions, debited tax	0.4%	0.5%	0.3%
Private individuals' perspective[2)]	4.15	4.26	4.25
Business owners' perspective[2)]	3.90	3.98	4.10
Scope for errors			
Proportion of unamended pre-filled income tax returns (not business owners)	76.3%	76.5%	77.2%
Perceived risk of detection			
Private individuals' perspective[2)]	3.97	4.14	4.08
Business owners' perspective[2)]	3.77	3.89	3.92
Motivation			
Private individuals' perspective[2)]	3.91	3.85	4.04
Business owners' perspective[2)]	4.49	4.31	4.40
Social trust			
Private individuals' perspective[2)]	3.74	3.92	3.97
Business owners' perspective[2)]	3.92	4.09	4.24

Source: The Swedish Tax Agency: Results from the 2018 to 2020 annual attitude surveys and the Guppi monitoring system.
1) As of 1 January 2019, PAYE tax returns must be filed at the individual level via the "Arbetsgivardeklaration" e-service on the Swedish Tax Agency's website. The proportion of digital PAYE tax returns is therefore excluded as an indicator. The proportion of returns via the service increased to 100% for 2020.
2) The response scale is 1 to 5. The tax gap development indicator is an average: a favourable result for the Swedish Tax Agency and the tax system corresponds to a high average score for all questions.

7.2. Changes in the tax gap over the long term

In 2019, the Swedish Tax Agency carried out two analyses that gave an indication of longer-term changes in the tax gap. These analyses were also presented in the Swedish Tax Agency's 2019 annual report. The first of these studies covered households' deliberate black-market purchases, while the second covered the extent of verifiable undeclared work in the broad sense. The analyses replicated studies conducted by the Swedish Tax Agency just over 10 years ago. The results give a picture of how deliberate black-market purchases and undeclared work have changed between the two periods analysed. This longer-term analysis complements the picture of short-term tax gap changes based on the indicators presented in section 7.1. The long-term analysis indicates that the tax gap has decreased, at least in relation to the type of tax evasion that is observable to private individuals and business owners.

7.2.1. Households' deliberate black-market purchases in 2005 and 2019

In 2019, the Swedish Tax Agency commissioned a survey of households' deliberate purchases of black-market services[15]. The survey included questions that corresponded to the questions asked in a survey conducted in 2005. The questions were asked in "DemoskopPanelen"[16], which is a comprehensive national study of values and lifestyles

[15] The Swedish Tax Agency (2020), "Hushållens medvetna köp av svarta tjänster 2005 och 2019", Rapport 16/1/2020.
[16] For more information about the study, please visit: https://demoskop.se/erbjudandet/demoskoppanelen

undertaken by Swedish analyst company Demoscope. Interviews are conducted with a large number of people in Sweden aged 18 to 89 (2,312 respondents in 2005; 6,874 respondents in 2019). Demoscope has subsequently weighted the answers so that the results reflect the whole Swedish population as accurately as possible.

The study aims to measure how the behaviour relating to undeclared work may have developed between 2005 and 2019, and to establish a base level for household consumption of black-market services. Extrapolating the survey results to all households in Sweden indicates a decrease in households' deliberate consumption of black-market services: from SEK 11.3 billion in 2005 to SEK 3 billion in 2019. This can be considered a lower bound for the extent of household black-market purchases. Underestimations are typical as there are various difficulties in assessing the extent of black-market purchases via surveys.

The proportion of respondents who replied that they had purchased a black-market service during the past year decreased from 32% in 2005 to 13% in 2019. The proportion who replied that they would try to hire undeclared labour for a job in their home also fell significantly. The proportion who replied "Probably" or "Definitely" fell from 37% to 9% between 2005 and 2019. The differences between 2005 and 2019 are statistically significant for all the above changes. In general, there are only small differences between the various demographic groups with regard to the proportion who purchased a black-market service in 2019. There were greater differences between groups in 2005.

The studies do not indicate why black-market purchases have declined. During the period, there have been several changes that may have affected the level of black-market purchases. The introduction of ROT (repairs, conversion and extension) and RUT (cleaning, maintenance and laundry) deductions has affected the relative prices of legitimate and black-market purchases for various services, while the introduction of registered cash registers and staff registers has reduced opportunities for selling black-market services. Decreasing use of cash may also have affected the extent of both actual and deliberate black-market purchases. Tax reductions, such as earned income tax credit and reduced corporate tax, may also have affected relative prices. Added to these factors are the efforts of the Swedish Tax Agency and other public authorities to counteract the black economy.

There is a significant difference in survey participants' reporting of their own purchases of black-market services between 2005 and 2019. However, there is a smaller difference in the perception of the occurrence of black services in society, and the responses vary widely. In the 2019 survey, 43% believed that no more than a quarter of households had purchased black-market services in the past year (up from 31% per cent in 2005), while 26% believed that more than half of all households had bought black-market services (down from 37% in 2005). The belief that others cheat to some extent is probably an idea that lingers on, despite what appears to be a major change in behaviour.

7.2.2. The development of undeclared work: comparison of audit results

The black economy includes income derived from legal economic activities that should be declared and taxed in Sweden, but which are either entirely or partly undeclared. Undeclared income may result from deliberate strategies such as tax avoidance and tax evasion, but also from negligence and involuntary errors. In this context, undeclared work refers to incorrectly declared or undeclared employee salaries, and incorrectly declared or undeclared business income for sole traders and individuals who are owners in partnerships. The Swedish Tax Agency has auditing tools that make it possible to identify some of the errors that lead to undeclared income. For example, it is generally possible to detect when owners' or employees' private costs have been deducted as business costs rather than being borne by the individual. Such irregularities probably represent the majority of the issues that are verifiable by the methods available to the Swedish Tax Agency, which form the basis for our calculations. Other types of undeclared income may be more difficult to identify during audits.[17]

In its report "Purchasing and performing undeclared work in Sweden" ("Svartköp och svartjobb i Sverige", Skatteverket 2006), the Swedish Tax Agency estimated undeclared income based on audits relating to the income years 1995 to 2003. The figures were updated in 2020, based on audits relating to the income years 2010 to 2016, and published in the Swedish Tax Agency's report "Undeclared earnings: calculations based on the Swedish Tax Agency's audits" ("Svarta arbetsinkomster: beräkningar baserade på Skatteverkets revisioner"). Both analyses included audits carried out on a random selection, but the majority of audits were based on risk-based selections and cannot be considered representative of the Swedish population. It is therefore not possible to draw general conclusions with statistical significance. However, the results of the study are comparable to the results of the 2006 study.

Method

Given that the decision to carry out an audit is usually based on risk indicators, it is reasonable to assume that the businesses audited by the Swedish Tax Agency are more likely to fail to comply with the rules than all businesses on average. In order to partially counteract this lack of representativeness, the audit method outlined by the Organisation for Economic Co-operation and Development (OECD, 2002) has been employed. The aim of this audit method is to compensate for the above-mentioned selection bias by retroactive stratification of the selection according to legal form, size, sector and/or activity (SNI code).

Based on 28,173 audits, the Swedish Tax Agency has estimated the verifiable income from undeclared work for the whole economy. In order to distribute the estimated value of income from undeclared work for the whole economy, we have based our calculations on the various strata, calculated the proportion of the change in the amount audited (amount of compensation for employees, and profit/loss for sole traders and individuals who are part-owners of partnerships). We have assumed that the proportion of income from undeclared work, in relation to the level of compensation or income, is the same as for the corresponding stratum within the population.

Results

The analysis yields an estimate of the total income from undeclared work at an average of SEK 91 billion per year for the 2010 to 2016 period.[18] This corresponds to about 6% of total income from work and 2.3% of GDP. In the Swedish Tax Agency's 2006 report, undeclared work was estimated at an average of SEK 71 billion per year for the 1995 to 2003 period, which corresponds to 7% of income from work and 3% of GDP.[19] The difference in results between the two analyses is largely explained by changes in the methodology for extrapolating audit results to the population. Applying the methodology used for the analysis

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[17] One example is if compensation is paid in cash or transferred directly to a private account without being invoiced.

[18] This figure of SEK 91 billion excludes income from undeclared work identified through the audits, since this income is no longer undeclared.

[19] In the Swedish Tax Agency's report "Tax Gap Map for Sweden" (2008:1B) ("Skattefelskarta för Sverige", 2008:1), income from undeclared work was estimated at SEK 115-120 billion, including undeclared work that cannot be estimated through audits. This resulted in a tax gap of SEK 66 billion. In this report, we do not use estimates of undeclared work to determine the tax gap. The Swedish Tax Agency's 2020 report "Undeclared earnings: calculations based on the Swedish Tax Agency's audits" ("Svarta arbetsinkomster: beräkningar baserade på Skatteverkets revisioner") outlines the problems associated with calculating tax gaps based on undeclared work.

in the Swedish Tax Agency's 2006 report results in a higher overall level of income from undeclared work for the later study. However, the percentage of GDP (3%) remains unchanged.

It can therefore be noted that, while income from undeclared work appears to have increased in absolute terms, the estimate will vary depending on the calculation method employed. The relative development of income from undeclared work as a proportion of GDP, or of income from work as a whole, is therefore difficult to assess. However, the analysis indicates that these proportions have not increased since the Swedish Tax Agency's 2006 report.

Although the analyses in the reports differ in methodology for practical reasons, many of the overall findings of the 2006 report still apply. One notable example is the fact that the different business types' relative contributions to declared income are almost identical. However, the analysis reveals some structural changes that cannot be explained by the choice of method. A significant difference compared with the previous report is that the relative contribution of sole traders and owners in partnerships to income from undeclared work decreased from 52% to 13% – a decline of almost 40 percentage points. A shift has taken place between this group and limited companies with a salary total of between SEK 1 million and SEK 5 million, for which the share of total undeclared work increased from 11% to 43%.

There are several possible explanations for this development. For example, the relative proportion of declared income for sole traders and partnerships has decreased from 4% to 3%, and partnerships have also become much less common as a business type. One possible explanation for the reduction in income from sole traders and partnerships is that other company types may currently be perceived as more advantageous. A number of reforms, such as changes in the rules for close companies, a reduction in capital requirements for limited companies, the abolition of the requirement for small companies to appoint an accountant, and successive reductions of the corporate tax rate, have made the limited company a more attractive form of business.[20] It is also possible that the Swedish Tax Agency's work to counteract tax evasion has had the greatest impact among sole traders and less impact among medium-sized companies.

Enterprises in the sectors "operations providing legal support services for businesses" (SEK 18.2 billion), "construction industry" (SEK 17.6 billion), and "other wholesale and retail trade" (SEK 11 billion) contribute most *in absolute terms* to undeclared income, despite a relatively small proportion of income from undeclared work relative to declared income. Together, these industries contributed about 50% of undeclared income. In the Swedish Tax Agency's previous report, the corresponding industries represented an estimated 40% of total income from undeclared work. The sectors that account for the largest proportion of total undeclared income are "operations providing legal support services for businesses" and "the construction industry", with approximately 20% each. While this proportion has remained unchanged for operations providing legal support services for businesses, it is a notable development for the construction industry, which previously contributed around 9% of undeclared income. A similar unfavourable development regarding undeclared work within the construction industry has also been reported in the Swedish Tax Agency's annual survey of businesses. The highest *proportion* of income from undeclared work in relation to

[20] See Alstadsæter and Jacob, Expert Group on Public Economics (ESO): *2012:4 Income Shifting in Sweden – An empirical evaluation of the 3:12 rules*. Some of the statistical data underlying the conclusions of the report has been criticised by Ericson and Fall – Economic debate No.1 (2013), p.39 ff. "*3:12 reglerna i allsidig[are] belysning*". Reply to Alstadsæter and Jacob.

income from declared work is found in the "haircare and hair salons" sector, where undeclared work accounted for 30%. The second-highest proportion, 25%, is found in the fisheries and agriculture sector.

7.2.3. Knowledge of tax evasion and perception of unfair competition

Some surveys conducted by the Swedish Tax Agency (most recently in 2016 for private individuals and in 2017 for companies) indicate that the knowledge of tax evasion declined by approximately 50% between 2002 and 2016/2017. The proportion of businesses that experienced unfair competition within their industry sectors decreased from 31% to 21%. All differences are statistically significant.

Table 25 Direct tax gap indicators

	Agree		
	2002	**2016**	**2017**
Private individuals' perspective			
I personally know one or more people who evade taxes	30%	13%	
Women	26%	12%	
Men	35%	14%	
I know someone who has done undeclared work during the past year	47%	22%	
Women	43%	20%	
Men	50%	23%	
I know someone who has hired someone to do undeclared work during the past year	44%	25%	
Women	42%	23%	
Men	47%	26%	
Business owners' perspective			
I personally know business owners who evade taxes	25%		10%
Our business is exposed to significant competition from businesses in the industry that evade taxes	31%		21%

Source: The Swedish Tax Agency (2017) and the Swedish Tax Agency (2018)

It is important here to be aware that tax evasion can take place in ways that the public does not notice. The Swedish Tax Agency's 2006 study of undeclared work revealed that private individuals primarily associate undeclared work with purchases linked to the home or domestic services, and that only about 10-15% of the total income from undeclared work was picked up on in the interviews that were carried out at the time.

7.3. Other relevant factors

The COVID-19 pandemic is likely to affect the size of the tax gap in 2020. This is due to changes in the behaviour of individuals and businesses during times of uncertainty and financial stress, changes in the composition of the economy, and new situations arising as a result of the pandemic that present tax risks. For example, changes in behaviour regarding business travel, people's avoidance of commuting to work, and the increase in working from home, may lead to major irregularities in deductions claimed for travel expenses and other costs in income tax returns. Among small companies, the effects of the pandemic may increase incentives for ascribing private costs to the company, while at the same time limiting the opportunities to do so. Since the COVID-19 pandemic has affected different industries to varying degrees, it is also likely that the tax gap will also be affected indirectly, since it differs between industry sectors. However, tax liabilities for 2020 have not yet been assessed, so it would be premature to comment on the effects of the pandemic on the tax gap.

In the longer term, the pandemic is expected to affect the size of the tax gap to a greater extent if it has a lasting effect on public confidence in society's institutions, social trust, and motivation to comply. The tax gap indicators presented in section 7.1 do not indicate any decline in these areas in the short term, but the pandemic is still ongoing and the long-term effects are difficult to predict.

7.4. Assessment of the development of the tax gap

The indicators that provide a direct measure of the tax gap were largely unchanged between 2019 and 2020. Between 2018 and 2020, on the other hand, there was a statistically significant improvement in most of the direct tax gap indicators. The development of indicators for indirect tax gap factors also suggests a favourable trend since 2018. However, most changes were relatively small between 2019 and 2020. Despite the fact that the attitude surveys were carried out in the later part of 2020, and that the COVID-19 pandemic is deemed to have led to a number of new tax gap risks, the results can be regarded as satisfactory – at least in the short term.

However, the Swedish Tax Agency's assessment is that it is not possible to draw any conclusions regarding short-term changes in the tax gap based on this year's indicators. The COVID-19 pandemic is considered to have affected both the economy and the behaviour of people and businesses in a manner that does not follow previous patterns, making it uncertain to what extent the indicators reflect the development of the tax gap during this year.

8. References

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Annex A: Results from the Swedish Tax Agency's random audits

Table A1 Summary of results from random audits of SMEs, averages for 2014 to 2018.

	Tax gap average (SEK)			Total tax gap (MSEK)			Final tax (MSEK)	Tax gap as a proportion of the final tax		
	Estimate	Confidence interval 95%		Estimate	Confidence interval 95%			Estimate	Confidence interval 95%	
Income tax										
Sole traders, target population	10,903	8,580	13,226	2,543	2,001	3,084	12,098	21%	16.5%	25.5%
Social security contributions										
Limited companies, target population	12,783	10,794	14,772	3,317	2,801	3,833	136,637	2.4%	2%	2.8%
Sole traders, target population	1,417	350	2,484	62	15	109	2,785	2.2%	0.6%	3.9%
Social security contributions										
Sole traders, target population	8,282	6,784	9,781	1,931	1,582	2,281	7,739	25%	20.4%	29.5%
VAT										
Limited companies, target population	7,155	4,174	10,137	2,092	1,220	2,963	177,012	1.2%	0.7%	1.7%
Sole traders, target population	8,276	6,780	9,772	1,760	1,442	2,078	9,035	19.5%	16%	23%
Corporate tax										
Limited companies, target population	2,203	-861	5,267	661	-258	1,580	50,643	1.3%	0.5%	3.1%

Note: The number of audits carried out each year varies between 161 and 684 for limited companies, and between 162 and 291 for sole traders. A total of 1,922 audits of limited companies and 1,027 audits of sole traders have been carried out and included in the analysis.

Table A2 Summary of results from random audits of income tax returns for private individuals, averages for 2016 to 2018. Refers to deductions for income from employment.

	Tax gap average		**Tax gap**			**Tax gap as a proportion of the final tax**[1)]		
	SEK	**Proportion**[2)]	**Estimate**	**Confidence interval 95%**		**Estimate**	**Confidence interval 95%**	
Journeys to and from work	**3,359**	**43.9%**	**2.3**	**2.1**	**2.6**	**0.3%**	**0.3%**	**0.3%**
Women	2,899	42.8%	0.8	0.7	0.9	0.2%	0.2%	0.3%
Men	3,665	44.7%	1.5	1.3	1.7	0.3%	0.3%	0.4%
Dual residence, temporary work and journeys home	**5,268**	**32.8%**	**0.3**	**0.2**	**0.3**	**0.03%**	**0.03%**	**0.04%**
Women	5,053	35.2%	0.1	0.1	0.1	0.02%	0.02%	0.03%
Men	5,371	31.6%	0.2	0.1	0.3	0.04%	0.03%	0.06%
Business trips	**5,070**	**54.2%**	**0.1**	**0.1**	**0.2**	**0.02%**	**0.01%**	**0.02%**
Women	4,422	52.0%	0.04	0.0	0.1	0.01%	0.01%	0.01%
Men	5,328	55.1%	0.1	0.1	0.1	0.02%	0.02%	0.03%
Other expenses	**5,346**	**55.3%**	**0.1**	**0.1**	**0.1**	**0.01%**	**0.01%**	**0.02%**
Women	5,340	50.9%	0.04	0.03	0.05	0.01%	0.01%	0.01%
Men	5,350	58.1%	0.1	0.04	0.1	0.01%	0.01%	0.02%

1) Refers to final tax for income from employment, total for women and men respectively.
2) Refers to the tax gap as a proportion of the taxable value of the deductions in each category.

Table A3 Summary of results from random audits of income tax returns for private individuals, averages for 2016 to 2018. Refers to deductions for income category "capital".

	Tax gap average		Tax gap			Tax gap as a percentage of the final tax[1)]		
	SEK	**Proportion[2)]**	**Estimate**	**Confidence interval 95%**		**Estimate**	**Confidence interval 95%**	
Sales of tenant-owner properties	7,502	31.6%	0.9	0.3	1.6	1.0%	0.3%	1.7%
Women	5,622	25.2%	0.3	0.1	0.6	1.1%	0.3%	1.8%
Men	9,290	37.7%	0.6	0.03	1.2	1.0%	0.05%	2.0%
Sales of commercial properties	10,860	21.6%	0.1	0.05	0.2	0.1%	0.1%	0.2%
Women	18,426	39.9%	0.1	0.01	0.2	0.3%	0.04%	0.5%
Men	5,732	9.1%	0.04	0.01	0.1	0.1%	0.02%	0.1%
House sales	18,007	23%	2.0	1.6	2.4	2.2%	1.7%	2.6%
Women	16,325	21.7%	0.9	0.6	1.2	2.8%	2%	3.7%
Men	19,625	24.2%	1.1	0.8	1.4	1.9%	1.3%	2.4%
Sales of financial assets	1,060	0.5%	0.2	0.1	0.4	0.3%	0.1%	0.4%
Women	1,120	1.1%	0.1	0.02	0.1	0.2%	0.1%	0.4%
Men	1,034	0.3%	0.2	0.02	0.3	0.3%	0.04%	0.5%
Interest expenses	966	10.6%	0.03	0.02	0.1	0.04%	0.02%	0.1%
Women	795	11.2%	0.01	0.00	0.02	0.03%	0.00%	0.1%
Men	1,067	10.2%	0.02	0.01	0.04	0.04%	0.01%	0.1%

1) Refers to final tax for capital gains, total for women and men respectively.
2) Refers to the tax gap as a proportion of the taxable value of the deductions in each category.