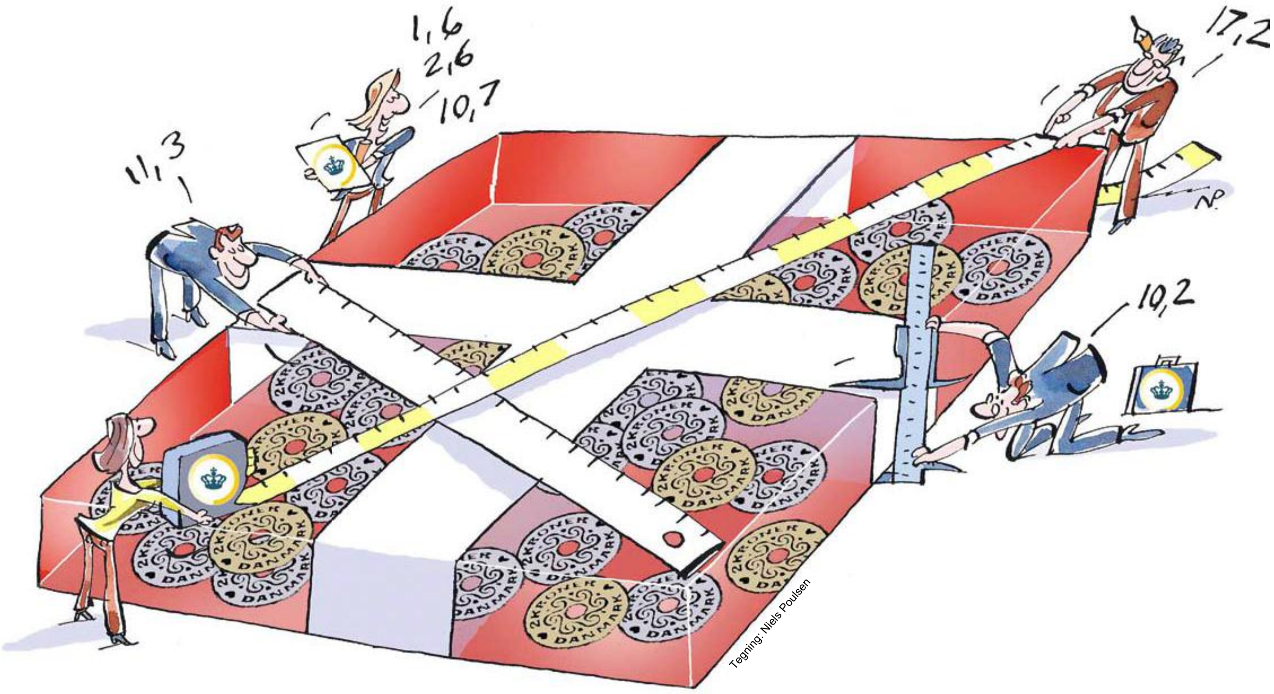
Compliance with tax rules by businesses in Denmark

Tax year 2008



SKAT

Report produced by

Danish Tax and Customs Administration
Department for Compliance and Enforcement

Østbanegade 123
DK-2100 Copenhagen

☎ +45 72 22 18 18
🖂 www.skat.dk

FOREWORD

In this report, the Danish Ministry of Taxation presents for the second time a systematic mapping of the ability of Danish businesses to make correct tax declarations. The extent of both errors and deliberate tax evasion has been identified for the tax year 2008. The first mapping of this kind was carried out for the tax year 2006, and the results were published in Danish on 12 May 2008.

The results for 2006 have already been extensively used in Denmark. Possibly the most significant effect was that they were used in the tax reform for 2010, with the result that as of 1 January 2010 it became obligatory for financial institutions to input purchase prices of shares and bonds. This means that SKAT, the Danish Tax and Customs Administration, can now calculate automatically the profits and losses on the values of such financial assets purchased in 2010 and onwards, and thus the amount of tax due or the correct deduction. The compliance study confirmed what many of the personnel at SKAT had felt for many years, namely that Danes have difficulty in correctly declaring profits and losses on shares and bonds.

The results of the study have also been used internally at SKAT as input in the annual risk analyses, as input in the design of special focus projects, to answer questions from Parliament, for various analyses of tax issues, etc.

Finally, the results of the compliance study for 2006, in the shape of the analysis of the errors made by businesses in their tax declarations, have formed an important contribution to fourteen proposals for legislation aimed at reducing the tax gap. This work is still in progress at the Ministry of Taxation.

The study for the tax year 2008 is based on an in-depth check of nearly 3,000 randomly selected businesses distributed across the whole of Denmark.

The study will contribute to SKAT's ability to focus resources in the relevant places and thus to ensure an efficient and equitable financing of the public sector. Many members of the staff of SKAT in all parts of Denmark have contributed considerable effort and expertise to the study.

TABLE OF CONTENTS

Principal Results **1**
Differences between 2006 and 2008 1
The tax gap for businesses 1
The VAT gap for businesses 1
Levels of Compliance 2
Error Percentages 2
Adjustment Amounts 3

Introduction **4**

Delimitations and definitions **5**
The distinction between individual taxpayers and businesses 5
Net and numerical adjustment amounts 6
"Outliers" 7
The extent of checks and statistical uncertainty 7
Error percentage vs. percentage of adjustments after checks 9
SKAT's scale of compliance 10
Tax on earnings and VAT 11
The calculation of weighted averages 12
The tax gap 12

Levels of compliance, error percentages and adjustment amounts **18**

Differences between 2006 and 2008 18
The tax and VAT gaps, 2006 and 2008 20

Conformity with the regulations – tax on earnings 22

Compliance with the regulations – VAT 26

The tax and VAT gaps for businesses **29**

The tax gap 29

The VAT gap 34

Types of error **37**

Appendix 1. Error registration for businesses **44**

Appendix 2. Error types and tax rates applied for 2006 and 2008 for companies, the self-employed and VAT. **47**

Error types relating to VAT 59

Appendix figures **64**

Appendix tables **66**

INDEX OF TABLES

Table 1. The components of the total tax and duties gap. Taxpayers and tax types. 16

Table 2. Changes in error percentages and proportions of non-compliers between 2006 and 2008, exclusive of VAT 18

Table 3. Error percentages and proportions of non-compliers for 2006 and 2008, broken down by business sectors, exclusive of VAT 19

Table 4. Error percentages, adjustment amounts (numerical and net) and compliance ratings, broken down by regions and by forms of business ownership, exclusive of VAT 22

Table 5. Adjustments upward or downward, and average numerical adjustment amounts, exclusive of VAT..24

Table 6. Percentage distribution across levels of compliance from 0 to 6, for companies and the self-employed, exclusive of VAT.............24

Table 7. Error percentages, numerical adjustment amounts and ratings, by size of turnover, exclusive of VAT...............................25

Table 8. Error percentages, adjustment amounts (numerical and net) and compliance ratings, broken down according to number of employees in the business, exclusive of VAT................................26

Table 9. Error percentages, adjustment amounts (numerical and net) and compliance ratings, broken down by regions, VAT checks only..27

Table 10. Adjustments upward or downward, and average adjustment amounts, for VAT 28

Table 11. The tax gap for businesses in lost revenue, broken down by region, exclusive of VAT..30

Table 12. The tax gap in lost revenue, broken down between companies and the self-employed, exclusive of VAT 30

Table 13. The tax gap for businesses in lost revenue, broken down across the compliance scale, exclusive of VAT..............................31

Table 14. The tax gap for businesses as lost revenue, broken down by number of employees in a business, exclusive of VAT 31

Table 15. The tax gap for companies, broken down by business sectors, calculated in terms of lost revenue. Listed in descending order by size of contribution to the tax gap 33

Table 16. The tax gap for the self-employed, broken down by business sectors, calculated in terms of lost revenue. Listed in descending order by size of contribution to the tax gap..................34

Table 17. The VAT gap for businesses, broken down by region........35

Table 18. The VAT gap for businesses, broken down by business sector. 36

Table 19. The tax gap for companies, broken down by main error categories, calculated in terms of lost revenue. Listed in descending order by size of contribution to the tax gap 38

Table 20. The tax gap for the self-employed, broken down by main error categories, calculated in terms of lost revenue. Listed in descending order by size of contribution to the tax gap 40

Table 21. The VAT gap, broken down by main error categories, listed in descending order by size of contribution to the tax gap 42

Appendix tables

Appendix table 1. Number of businesses run by self-employed people and companies in the sample and in the whole of Denmark, by region 66

INDEX OF FIGURES

Figure 1. Breadth and depth of the checks in normal audits and the compliance audit 10

Figure 2. SKAT's scale of compliance for the ability of a taxpayer to abide by the rules. 10

Figure 3. Declarations of taxpayers' income and deductions 13

Figure 4. The tax gap in numerical and net terms 14

Figure 5. The composition of the total tax and duties gap in terms of different types of taxpayer. 15

Figure 6. The tax gap in lost revenue for 2006 and 2008, DKK billions (current prices) 21

Figure 7. The VAT gaps for 2006 and 2008, DKK billions (current prices) 22

Figure 8. Distribution of adjustment amounts before tax (histogram) 23

APPENDIX FIGURES

Appendix figure 1. Flow chart for establishing ratings 64

Appendix figure 2. Explanatory comments on compliance scale for businesses 64

Appendix figure 3. Distribution of adjustment amounts for companies and for businesses run by self-employed people, excluding VAT adjustments 65

PRINCIPAL RESULTS [1]

DIFFERENCES BETWEEN 2006 AND 2008

- The proportion of errors increased from 42% for the tax year 2006 to 52% for 2008. At the same time, the proportion of "non-compliers" increased from 7% for 2006 to 10% for 2008.
- The percentage of errors for both 2006 and 2008 was clearly highest in Central Jutland and lowest in Northern Jutland.
- Among those businesses for which a check was also run on VAT declarations, there was an increase in the proportion with errors from 30% for 2006 to 40% for 2008 with regard to VAT alone.
- The tax gap, defined as adjustments upward to tax minus adjustments downward, was calculated to have increased from DKK 5.8 billion in lost revenue for 2006 to DKK 8.4 billion for 2008 in current prices, ignoring certain "outliers" in the calculations for both years. This increase is statistically significant.
- If, however, all adjustments are taken into account in the calculations, including the small number of "outliers", then the calculated tax gap actually fell from DKK 9.4 billion for 2006 to DKK 7.9 billion for 2008.
- The increase in the tax gap as calculated without taking "outliers" into account should be seen in the light of the facts that the proportion of errors increased, the average size of tax adjustments increased, and the number of businesses in Denmark increased.

THE TAX GAP FOR BUSINESSES

- The tax gap for businesses in lost revenue for 2008 is calculated as being DKK 8.4 billion, if a single very large negative adjustment in taxable income is ignored (that is to say, an instance where the business has "defrauded itself" on an exceptionally large scale). If all the adjustments are included, the tax gap works out at DKK 7.9 billion in lost revenue.
- The overall gap (excluding extreme outlying values from the calculation) arises from errors by both "compliers" and "non-compliers". From the point of view of SKAT, then, there are reasons to focus both on ensuring that the fraudulent do not escape and on helping compliers to make correct declarations through targeted efforts to provide information and guidance.
- Businesses with no employees, i.e. "one-person" businesses, are responsible for around half of the tax gap as calculated without the extreme cases.

THE VAT GAP FOR BUSINESSES

- The VAT gap for 2008 is calculated to be DKK 3.2 billion, if one very large negative adjustment is ignored. If all the adjustments are included, the VAT gap works out at DKK 2.7 billion.
- If the VAT gap for the year 2008 is compared with the total VAT revenue of DKK 120.5 billion – excluding revenue from firms employing more than 250

[1] A number of concepts used in this section are first defined later in the report. Most of the definitions can be found in the section entitled 'Delimitations and definitions'.

people – then the relative VAT gap was 2.2%, or 2.7% if the figure excluding "outliers" is used.

LEVELS OF COMPLIANCE

- The average *level of compliance* for all businesses in Denmark taken together was below 4.13.
- The underlying distribution showed that for 2008, 90% of all businesses could be viewed as compliers, while 10% were regarded as non-compliers. A very large majority of businesses thus made a genuine effort to follow the rules.
- The level of compliance was highest in Central and Southern Zealand, while Copenhagen, Northern Zealand and Southern Denmark were at about the same level of 4.10-4.15 on average. Compliance with the regulations was lowest in Central Jutland, which at a level of 3.90 was the only region with an average rating below 4. There was no real difference between the Eastern and Western halves of Denmark; 10% of all businesses east of the Great Belt were classed as non-compliers, while the level was 9.6% in the rest of the country.
- Companies were more compliant with the regulations than the self-employed. The average levels of compliance for the two groups were 4.29 and 4.05 respectively. The proportion of non-compliers was also a little greater among the self-employed at 10%, as opposed to 9% for companies.
- There was a clear tendency for the level of compliance to decline with increased levels of turnover. Conformity with the regulations also declined as the number of employees in the business increased.
- There was significant variation across business sectors in levels of compliance. The proportion of non-compliers was highest in the *Hotels and Restaurants* sector, at 23%. *Education* (specifically, *Driving Schools*) and *Construction* were also high on the list, with 19% and 17% non-compliers respectively. At the other end of the spectrum was *Finance and Insurance*, where the proportion of non-compliers was only 4%.

ERROR PERCENTAGES

- There was a 52% level of error occurrence among the businesses checked, excluding errors connected with VAT.
- Companies were less prone to error than the self-employed, with percentages of 46% and 54% respectively.
- The incidence of declarations with errors was clearly highest in Central Jutland at 59% and lowest in Northern Jutland with 46%. The larger number of errors in Central Jutland was reflected in the low compliance rating, as noted previously.
- The proportion of errors increased with the size of turnover. The error percentage was nearly twice as high among businesses with turnover above DKK 10 million as among those with zero turnover – 77% as against 40%.
- Where VAT was also checked, errors related to VAT alone were found in 40% of cases.
- The proportion of errors also varied considerably among business sectors. Errors occurred most frequently in four sectors: *Transportation*, *Hotels and Restaurants*, *Education* (especially *Driving Schools*) and *Construction*. In these sectors, errors were identified in 73%, 71%, 65% and 64% of cases respectively. The *Finance and Insurance* sector had the best record, with errors in less than one case in three.
- At the sector level, there was a clear correlation between high percentages of error and high proportions of non-compliers.

ADJUSTMENT AMOUNTS

- The average adjustment amount before tax, defined as the average of adjustments upward minus adjustments downward, was DKK 28,000 for the country as a whole. If further correction is made for the fact that there were errors in 52% of cases, then the average adjustment across all the cases checked, rather than only for those where corrections were made, was DKK 14,500.
- The average net adjustment amount was nearly twice as high for companies than for the self-employed, at DKK 41,500 as opposed to DKK 22,600.
- Adjustments to taxable amounts were downward in around 13% of cases, and upward in the remainder. The average adjustment amounts were more or less the same for upward and downward adjustments (just under DKK 104,000).
- The average adjustment amount rose – perhaps not surprisingly – with the turnover of the business. It is interesting to note that the net adjustment amount for businesses without any declared turnover was over DKK 22,000. For businesses with a declared turnover from DKK 0 to DKK 10,000, the average net adjustment amounts ranged from DKK 11,000 to DKK 26,000.

INTRODUCTION

SKAT, the Danish Tax and Customs Administration, has now systematically mapped for the second time the ability of Danes to declare their taxable incomes correctly. In this study, the extent of both errors and deliberate tax evasion has been identified for the tax year 2008. The study involved in-depth checks on the tax affairs of around 7,500 businesses and private individuals in all corners of Denmark. This report presents the results of the study for businesses, including both companies and businesses run by the self-employed.

The basis for the study of businesses comprised almost 3,000 checks made by SKAT. In each of these instances, a thorough check was made of every tax-relevant aspect of the finances of the business. Where the businesses checked were VAT-registered, a check was also made of their VAT reporting. In general, the check involved visiting the firm in question by appointment.

In each case where errors were found in the tax declaration, the categories of the errors were recorded, and the overall change in taxable income calculated. The term *adjustment amount* is used for such alterations; the adjustment is to taxable income, and thus is not a measure of revenue from taxation.

A *level of compliance* was calculated for each taxpayer, this being a measure on SKAT's Scale of Compliance, which has levels from 0 to 6. The levels 0 to 2 were given to businesses categorised as *non-compliers*, firms that had deliberately made incorrect declarations despite possibly having the ability to have made correct declarations; the levels 3 to 6 were given to *compliers*, businesses that were willing to make correct declarations, but that possibly lacked the ability to do so. Actual placement on the scale was made primarily according to objective criteria.

The taxpayers in the study were selected so that the checks provided a representative picture of compliance across the entire country. Consequently, it was possible to calculate the total national tax gap for businesses on the basis of the total adjustment amount found in the study.

By coupling the recorded error types and the extent of the errors to the distribution of levels of compliance, it was possible to build up a picture of the areas which are found to be complicated with regard to tax declaration or which are particularly susceptible to deliberate under-declaration. A high proportion of errors in a particular area can be taken as an indication that work needs to be done there on reducing the possibility of error.

The report is structured as follows. The introductory section, which includes a review of important concepts and definitions, is followed by a presentation of average error percentages, levels of compliance and adjustment amounts. Then there is a presentation of the calculations of the tax and the VAT gaps for businesses. Finally, we examine more closely the error types identified, and consider the distribution of these across the different areas of legislation and sections of the regulations.

DELIMITATIONS AND DEFINITIONS

This section introduces much of the special terminology used in this report. The concepts are therefore not presented again in the other sections of the text. We also explain here some of the decisions made in relation to the delimitation of what was measured. Finally, we outline some of the methods used in calculating the various results.

The section is largely unchanged from the corresponding part of the report for the tax year 2006. It is repeated here so that the reader does not need to have the old report to hand in order to see the various definitions.

First, we describe the basic division between individual taxpayers and businesses. Then the term *adjustment amount* is introduced, with an explanation of the distinction between the *net* amount and the *numerical* amount. In connection with this, we discuss the significance of "outliers", i.e. outlying extreme values among the observations in the sample, and explain how we have dealt with this issue. Next, there is a description of the extent of the checks carried out and of the statistical uncertainty associated with the results. Then there is a definition of the *error percentage*, and its relationship to the *percentage of adjustments made after checks*, which was the measure previously used by SKAT. We then present the Scale of Compliance, which has been developed by SKAT in order to rank taxpayers' abilities to follow the regulations. Next follows a brief explanation of the principle for the division of the results between tax on earnings and VAT, and then a description of how the weighted averages are calculated. The section concludes with a definition of the *tax gap for businesses* and an outline of the process of calculating the gap on the basis of the adjustment amounts.

THE DISTINCTION BETWEEN INDIVIDUAL TAXPAYERS AND BUSINESSES

When the plans were being drawn up for the study of compliance with the regulations, priority was given to elucidating all aspects of the tax situation of individual taxpayers and businesses. In the checks made and the subsequent calculations for these two groups it was thus important not only that nothing was omitted, but also that nothing was counted twice, either for individual taxpayers or for businesses.

The auditing of the self-employed involved both their private and their business spheres, since the two cannot be separated in terms of tax in any meaningful way. Consequently, the self-employed – people with their own businesses – were not investigated together with private individuals, as it was taken that there was no separation between the individual and the business.[2]

The auditing of businesses registered as companies covered only the affairs of the company. The principal shareholder in the company was only covered by the audit to the extent that there were tax relationships between the company and the

[2] Spouses of the self-employed, on the other hand, were covered in the individual taxpayer section of the compliance project, since they are regarded in the same way as other individuals. This means in effect that a spouse who assists in the business of a self-employed person is regarded as being an employee of the firm – though with certain differences from normal employees. In connection with the auditing of a self-employed person, checks were made of the tax relationship between the business and the spouse, to the extent that this was considered relevant from the point of view of the probability of its being of significance. All other factors in relation to the spouse's tax declaration were dealt with through any check made of the spouse as an individual taxpayer.

shareholder, for example in the form of free use of a company car, intercompany accounts, disguised dividend payments, etc.

All other factors in relation to the principal shareholder's tax declaration were dealt with through any check made of the shareholder as an individual taxpayer. In other words, people who were principal shareholders in companies could be checked in the section of the study connected with individual taxpayers, since a company and its principal shareholder were regarded as two independent taxpayers.

In the case of jointly taxed company groups, only the specific company that was selected for compliance auditing was included in the study.

With respect to the obligations of a business to provide information concerning payments to employees in the form of salaries and other benefits, these were checked as a natural part of the audit of the business, regardless of whether it was organised as a company or as a business run by a self-employed person.

These delimitations were intended to ensure that all aspects of taxation were covered. In the survey of individual taxpayers, it was assumed that information concerning payments of salaries and other benefits were declared correctly by their employers. It was thus only the taxpayer's own actions that were checked.

In the survey of businesses, checks were made of the payments of salaries and other benefits, including payments to principal shareholders, to ensure that these were correct; it was thus an important part of the compliance check of businesses to ensure that such payments were accounted for correctly. Moreover, the actions of the firm itself were naturally checked with respect to taxation issues. If any errors were discovered in the accounting of salaries or other benefits paid out, these errors were ascribed to the business, since it was here that they originated.

A detailed description of the types of checks carried out with respect to businesses is presented in appendix 1.

Appendix Table 1 shows that, on the basis of the definitions of self-employed persons and companies which were used, there were 185,956 companies and 390,477 self-employed persons in Denmark at the time of the study. Companies thus made up 29% of the total of 548,401 businesses.

For both individual taxpayers and businesses, in cases where a person or a business was discovered no longer to exist, a new business or person was taken from a similarly randomly selected reserve list in order to ensure that the number of checks made in each region remained equal. This ensured both that the error percentage calculations were made on the basis of existing taxpayers and businesses, and that the level of uncertainty in the calculations of error percentages was the same for each region. Of the originally selected companies in the sample, 4.5% had to be replaced with companies from the reserve list. For the self-employed, 9.4% of the businesses in the original sample were replaced from the reserve list. The figures in Appendix Table 1 have been calculated after correction for this replacement; note that the final total population (N), i.e. the exact number of business actually existing in Denmark, is not known, in that it was only when checks were made that it was discovered that some businesses no longer existed.

NET AND NUMERICAL ADJUSTMENT AMOUNTS

When an error is detected in a tax declaration as a result of a check, SKAT amends the declared amount. The difference between the original and the revised amounts is called an *adjustment*. When the adjustment is positive, i.e. in favour of the tax authority, then this is referred to as an *increase*; conversely, a negative adjustment is referred to as a *reduction*.

When all the adjustment amounts for all taxpayers are combined, the sum can be calculated as either a *numerical* or a *net* amount. Increases minus reductions produces a *net* adjustment. This is of interest in the context of tax revenue effects. However, when we are interested in calculating the extent of lack of conformity with the regulations, the *numerical* adjustment is the one which is relevant.

This numerical adjustment amount is arrived at by calculating the total of increases plus reductions. Thus, whereas an increase of DKK 10,000 and a reduction of DKK 10,000 would be combined to produce a net adjustment of zero, the calculation of a numerical adjustment shows a total amount of error of DKK 20,000.

"OUTLIERS"

When averages and totals for an entire population are calculated on the basis of a sample of that population, there is always a danger that a small number of extremely high or low observations will weigh too heavily in the picture. If the business which is guilty of the greatest level of tax evasion in the country should chance to have been included in the sample, this will produce too high an average for the sample in relation to the true average for the country as a whole.

In order to avoid this effect it is normal procedure to cleanse data of extreme outlying observations also called "outliers". However, there is no generally accepted standard method of selecting the observations to be excluded. Given that the actual distribution of values in the whole population is, clearly, unknown, the problem is that it is difficult to assess whether the largest and smallest values in the sample are actually "outliers" in the context of the range for the whole country.

In the light of SKAT's many years of experience in performing checks, we are aware that every year there are cases where very large adjustments are made, and it is therefore difficult to state with certainty whether these extremes are "abnormal" and should be excluded, or whether the observations should be included.

In order to improve the identification of these "outliers", the Ministry of Taxation asked Anders Milhøj, senior lecturer at the Department of Economics, University of Copenhagen, for assistance. He prepared a study paper entitled "Outlier tests", which is available from the Ministry of Taxation on request (in Danish only).

Using the method put forward in the paper, two outlying observations were identified in the sample – one for taxable income, and one for VAT. The two observations did not relate to the same company.

The results of this study are in most cases presented without the inclusion of these "outliers", since results calculated without the outliers are probably more robust and more useful for tracking developments from year to year. However, the outliers were not of great significance in the calculation of the results for the 2008 study, as will be seen below.

THE EXTENT OF CHECKS AND STATISTICAL UNCERTAINTY

SKAT's compliance project has mapped conformity with the regulations for businesses in Denmark for the tax years 2006 and 2008. The results are based on checks made of a total of 11,462 businesses distributed across the entire country for the tax year 2006, and 2,992 businesses for the tax year 2008. The businesses section of the compliance survey includes both businesses that are organised on a personal level, i.e. run by self-employed people, and those that are registered as companies; but it excludes firms with more than 250 employees.[3]

The selected businesses were checked with respect to all aspects of taxation of earnings and VAT; neither transfer pricing nor customs and excise duties are covered by the analysis. Of the unweighted total number of checks made for 2008, 2,155 involved the self-employed and 837 were of companies. Thus, companies made up 28% of the businesses in the unweighted sample. In the weighted sample, companies made up 32% (See Appendix Table 1).

Businesses were selected entirely randomly, with an almost identical number of checks being made for each region (for the study of the tax year 2006, the sample was drawn equally from within each of 30 tax centres; in 2008 6 regions). This procedure ensured that representative pictures could be obtained for the whole of Denmark and for each region separately. It is thus possible to make statements about overall compliance with the rules at both these levels, though with more statistical uncertainty at the regional level.[4] The degree of uncertainty is generally smaller for error percentages and levels of compliance than it is for the amounts of money involved. This is because the variance in the observed values for amounts is significantly greater.

In addition to the checks related to taxation of earnings, coordinated checks were made on VAT for all VAT-registered businesses in the sample.[5]

At many points in the following, comparisons are made between, for example, error percentages or average adjustment amounts for the different regions, business sectors or forms of ownership of firms; and it is noted whether or not these differences are *significant*. In the remainder of this document, the term *significant* is used to indicate whether or not the observed differences, when evaluated in accordance with the relevant statistical tests and without other explanatory variables, are found to be statistically significant at the 5% level.[6] Those results which are

---

[3] SKAT has given consideration to the possibility of carrying out a compliance study for large companies. However, it would be extremely difficult to carry out such a study. For one thing, the companies that would be involved are very diverse in character, ranging from oil and gas extraction companies through medical companies to financial services providers. For another, the checks would be very costly. Finally, it would be difficult to make any kind of meaningful extrapolation from a random sample. It would not make any sense to deal with a company such as AP Møller-Mærsk, should it be selected in the sample, by allocating it a weighting factor, because the company is so massive.

[4] The level of uncertainty at **regional level** for the error percentages, for example, was approximately 4.4 percentage points. At **national level**, however, the uncertainty was only 1.8 percentage points.

[5] In the 2006 survey, fewer than one company in seven – 1,584 out of the 11,462 checked – was also checked in relation to VAT.

[6] The level of significance indicates the probability that the results have been arrived at by chance. The *null hypothesis* is the hypothesis that is being tested – for example, that the level of compliance is the same for Northern Jutland as for Northern Zealand. If that hypothesis can be rejected, then we can say that the levels of compliance for the two regions are significantly different. The level of significance is the accepted level of probability of rejecting the null hypothesis when it is in fact correct.

A rejection of the null hypothesis is thus not the same as saying that the null hypothesis is incorrect. It simply means that on the basis of the observed data, it cannot reasonably be maintained. Selecting a low level of significance thus reduces the risk of drawing incorrect conclusions by rejecting a hypothesis which is in fact true. The level of significance is thus a measure of the degree of agreement between the data and the postulated null hypothesis.

found to be significant can be considered to be very robust. Much more weight can be placed on such results than on those which are not statistically significant.

ERROR PERCENTAGE VS. PERCENTAGE OF ADJUSTMENTS AFTER CHECKS

This section introduces the concept of the *error percentage*. It is important to distinguish between this concept and the concept often used in the past by SKAT, "percentage of adjustments made after checks".

If an adjustment is made to the amount declared, whether positive or negative, in this document we say that an *error* has been made. The *error percentage* is the proportion of cases in which there were errors. The error percentage is calculated in relation to the total tax base. The decision not to use the term *percentage of adjustments made after checks* was made because the two concepts differ in several significant respects. The use of the same term in this presentation could therefore easily lead to misinterpretation.

The percentage of adjustments made after checks is not directly comparable with the error percentage. There are several reasons for this. First, the entity used in calculations for the compliance project with respect to checks of self-employed people is the person (as listed at the Central Office of Civil Registration) and not the business (the Central Business Register). In the normal calculations of the percentage of adjustments after checks, the unit of calculation is the number of audits carried out. If a self-employed person has more than one registered business, and there are errors found in the accounts of one business but not in a second, then in SKAT's normal calculations of percentage of adjustments after checks this is recorded as a percentage of 50%, whereas in the compliance study this would represent a 100% level of error.

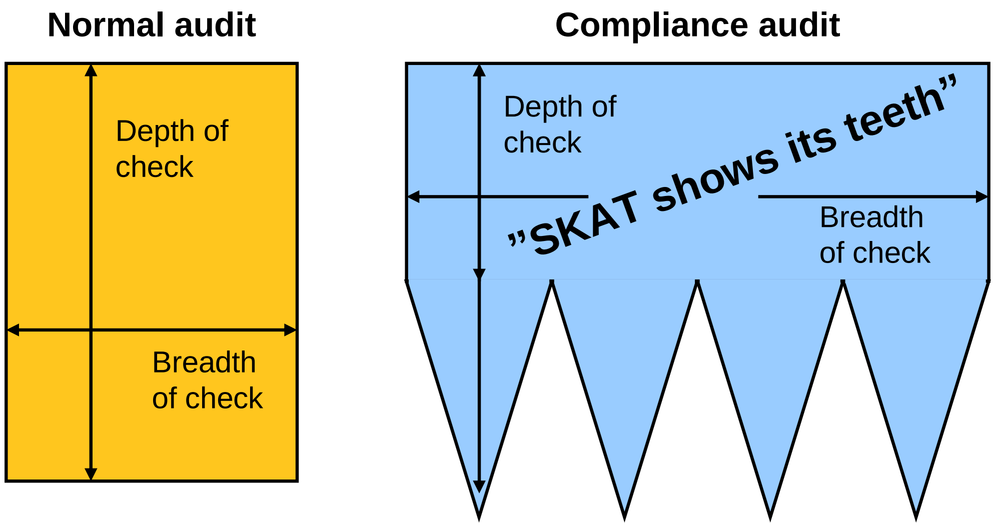
The second reason is that many more areas of legislation were included in the compliance project checks. In the normal checks, the audit is typically limited to one specific area, such as VAT or employment. In contrast, the compliance check was a full-scale audit. The check on tax covered tax on the earnings of the business, employment aspects, and all subsidiary areas within the field of taxation, including relationships to the principal shareholders and investments in other businesses, for example as a sleeping partner (in Danish "anpartsprojekter"). In the case of the self-employed, the compliance check included both taxation of the earnings of the business and taxation of the private sphere.

The third reason is that the compliance audit was broader in scope than the normal type of check. In this context, the breadth of the audit refers to the number of sections and fields in the tax assessment that are included in the check of the business concerned. In the compliance audit, there was no option – as there is in the ordinary checks – of ignoring some sections and fields on the grounds that there was less likelihood of significant error with them. The compliance check was thus an all-round audit, where every aspect of a business's balance sheet and statement of profit and loss was checked.

The greater breadth of the compliance check thus inclined towards the detection of a larger number of cases where there were errors than are revealed by the regular checks. On the other hand, there was also a tendency for a greater number of minor errors to be detected.

While the compliance check had greater breadth, the degree of depth used was generally less than with the regular checks. Every aspect of the affairs of the business was checked through a number of samples. If an error was found within a particular area, the depth of the check was increased for that specific area, but that did not normally have any effect on the other checks made on the business. If errors were discovered in other areas, these too were subjected to a fuller audit. Figure 1 presents this procedure graphically. The depth of checking in the compliance study might thus have been either less or greater than is the case for the regular checks, but this could not be predicted before the audit began.

Figure 1. Breadth and depth of the checks in normal audits and the compliance audit

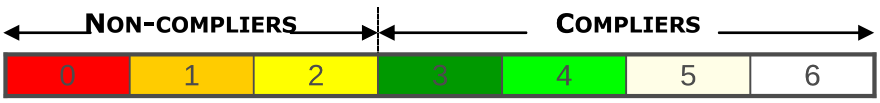


For all these reasons, the traditional measure of percentage of adjustments after checks cannot be used to make comparisons with the error percentages reported in the compliance study. It is thus quite deliberate that we use the term *error percentage* in this document to indicate the proportion of cases where adjustments have to be made to taxable income.

SKAT'S SCALE OF COMPLIANCE

In the compliance checks, when the field worker had completed a case, he or she had to assess the degree to which the regulations had been complied with. This evaluation of the case was expressed in a single figure – the *level of compliance*. This is a method of grading on a scale from 0 to 6, where the higher the grade, the greater the degree of conformity with the regulations (see Figure 2). This grading system was first used in the compliance study for the tax year 2006.

Figure 2. SKAT's scale of compliance for the ability of a taxpayer to abide by the rules.



An overarching distinction is made between taxpayers who are *non-compliers* and those who are *compliers*. *Non-compliers* include all those who have consciously sought to evade taxes, irrespective of whether or not they understood the rules. The other group, the *compliers*, have the will to make a correct declaration, but are not necessarily able to do so. In the case of the latter group, then, an incorrect declaration is assessed as being the result of an unconscious error and not deliberate evasion. The compliance scale is further nuanced through the use of seven different levels. Thus, it is possible to be a non-complier or a complier in varying degrees: non-compliers are graded on the compliance scale at a level of between 0 and 2, while compliers are categorised with a value between 3 and 6. Actual placement on the scale is made primarily according to objective criteria.

An important aim of the scale is thus to provide an explicit measurement of the degree to which an individual taxpayer is a non-complier or a complier. This is something which cannot be seen from the adjustment amount alone. Comparison of the levels of compliance and the adjustment amounts for the various types of error can highlight areas where the problems are greatest, and thus provide a good starting point for planning future initiatives.

If the errors are mainly the result of misunderstanding or ignorance of the rules – i.e. are connected with a high level of willingness to comply – then there may be a need for more information and guidance, or even a simplification of the rules in the area. If on the other hand the errors come from a deliberate attempt to cheat – i.e. are connected with low levels of willingness to comply – then the need may be for targeted checks and the use of sanctions, or the tax evasion behaviour may be discouraged by restricting or removing the opportunities for fraudulent declaration. This could be done, for example, by legally requiring more information to be entered by third parties.

Appendix Figure 1appendix figure 1 presents a flow chart used by all case workers to place businesses on the scale of compliance after each check had been completed. Appendix Figure 2 gives a more detailed description of the various categories on the scale of compliance.

When in the following we compare regions or business sectors, for example, we often refer to average levels of compliance. Such averages offer the great advantage of expressing the degree of conformity to the regulations in a single figure. It is important, however, to remember that there is variation in the figures that are expressed through such averages. For example, in an instance of a business sector where half the taxpayers are assessed as dark green and the other half as off-white, the average level of 4.0 is the same as for a region where all the taxpayers are categorised as pale green. In other words, identical average levels of compliance are not necessarily the same in their underlying composition.

It is also important to note that an absolute difference of only 0.1 in the average level of compliance is equivalent to 10% of the taxpayers in question being moved one category on the scale of compliance. Thus, even very small differences in the average level of compliance between regions or age groups, for example, can definitely be quite significant in their underlying basis.

It is also important to view error percentages, adjustment amounts and levels of compliance in context. High percentages of error may not be very worrying if they occur in combination with high degrees of compliance and/or small adjustment amounts. Such cases may simply indicate that more information and guidance is required.

For businesses where checks were made for both tax on earnings and VAT, only one rating is given, and it is not possible to divide up the level of compliance according to the two different types of taxation. Conformity with the regulations is calculated in such cases as an overall assessment of the situation of the business with regard to tax on earnings and VAT.

TAX ON EARNINGS AND VAT

The results for businesses are calculated both *excluding VAT* and *for VAT*. The *excluding VAT* tables show adjustments made with respect to the taxable income of the self-employed (including their private taxable income), the taxable earnings of registered companies, the taxable income of principal shareholders, the taxable income of employees and spouses of the self-employed, and the taxable income of other partners.

In the *VAT* tables, error percentages relate only to the VAT adjustments made for those businesses which were checked both for VAT and tax on earnings, and the average adjustment amounts shown are thus for VAT alone.

With respect to level of compliance, however, the situation is rather different. As mentioned previously, it is not possible to separate out the levels of compliance according to tax on earnings and to VAT for those businesses which were checked with respect to both.

THE CALCULATION OF WEIGHTED AVERAGES

The sample was selected by a process of *stratified random sampling.* As mentioned previously, this involved selecting an equal number of businesses for checking from each of the six regions, thus ensuring that the level of accuracy was the same for all regions. The businesses in the sample were selected randomly from each region separately, not from the total national population of businesses.

However, when results are to be calculated for the country as a whole, it is not possible simply to sum or average the figures for each region, since these regions vary greatly in size. In order to obtain an accurate picture of the situation at national level, the results from each region have to be weighted. The weights used are the proportions of the national population of taxpayers made up by the taxpayers in each region.

All tables in this report and the comments upon them relate to the weighted numbers, averages or totals, unless explicitly stated otherwise. The actual numbers of checks on which the results are based are presented in Appendix Table 1, shown by region and by type of business ownership.

THE TAX GAP

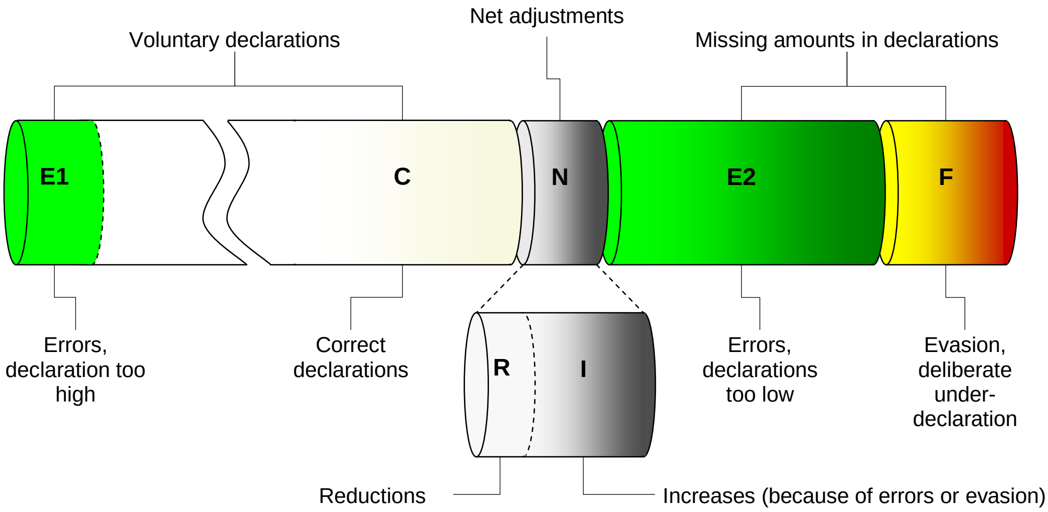
There are many individual taxpayers and businesses that follow the tax regulations in every respect, but there are also taxpayers who are not sufficiently familiar with the rules, and still others who are either unable or unwilling to follow those rules. As a result, there is a difference – or gap – between what people actually declare and pay tax on, and what they should have declared. This difference is often referred to as the tax gap; however, this is not particularly precise definition of it.

THE TOTAL TAX AND DUTIES GAP

The gap can be calculated in terms of the tax base or the tax revenue, i.e. equivalent to an accounting before or after tax. In the compliance report for the tax year 2006, the tax gap calculation was made in terms of the tax base, in line with previous standard practice in Danish research. In other words, it was a calculation made before tax. In this report, the focus is on the tax gap after tax, i.e. in terms of lost revenue. This is because this is the method preferred by the tax authorities in other countries, and because it is the measure in which politicians and the general public are typically most interested. The figures for lost revenue for 2006 are also reported here, for purposes of comparison with the new figures for the tax year 2008.

Tax declarations in Denmark consist of automated entries from third parties concerning the individual taxpayer’s income and deductions, plus the taxpayer’s own amendments and additions to these. Figure 3 provides an illustration of how taxable income is divided into voluntarily declared income, adjustments implemented as a result of checks by SKAT, and income which should have been declared but was not, and which was not discovered later through checks by SKAT.

Figure 3. Declarations of taxpayers' income and deductions

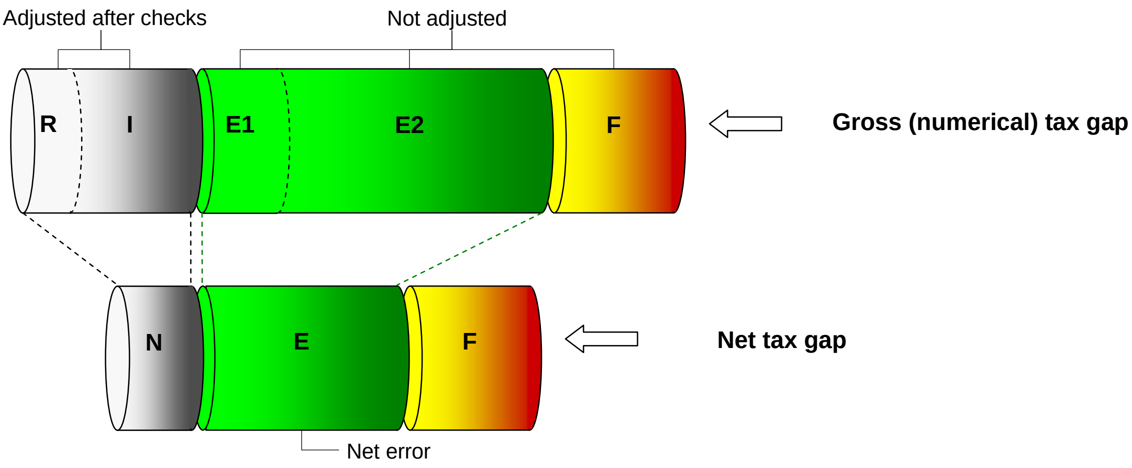


Voluntarily declared income makes up by far the largest part of the total amount, and consists almost entirely of a very large block of correctly declared income (**C**). In accordance with the scale of compliance, this section of the diagram is coloured white. Note the break in the block, which indicates that this part of the tax base is much larger than can be physically represented in the diagram here. The diagram is in any case not to scale. The voluntarily declared income also includes a number of entries which increase the size of the tax base beyond what it should be, either because income is incorrectly declared to be larger than it really is, or because certain legitimate deductions are not used (**E1**). These entries are regarded entirely as errors, since they can hardly be an indication of taxpayers deliberately "cheating" themselves.

A portion of the amount declared includes adjustments made on the initiative of SKAT. Increases (**I**) minus reductions (**R**) gives a net adjustment (**N**). A greyscale is used here, since adjustments can concern both non-compliers and compliers. Finally, we have the income which in contravention to the regulations is not declared, and which furthermore is not discovered by SKAT. These missing amounts are the result in part of errors (**E2**) and in part of actual evasion (**F**). Figure 4 shows the tax gap on the basis of the elements defined in Figure 3.

The tax gap is a theoretical sum of the adjustments actually made plus errors and evasion that are not discovered. The gap can be presented in either numerical or net terms. In the net calculation, the amount of over-declaration is deducted from the amount of under-declaration. The numerical tax gap focuses on the overall value of lack of conformity with the regulations, and consequently adds together the increases and reductions. Thus, instead of calculating DKK 1 billion of over-declaration and DKK 1 billion of under-declaration as a total of zero, the calculation of the numerical tax gap results in a total amount of error of DKK 2 billion.

Figure 4. The tax gap in numerical and net terms



It is difficult to calculate the size of the tax gap, and in practice it is impossible to measure it exactly. In the nature of things, the information which SKAT possesses is incomplete with respect to the amount of under-declaration, and it is not possible to check the declarations of all taxpayers in the county every year.

There are several different methods of calculating the tax gap, but common to them all is the fact that it is inevitably necessary to make compromises between what the measure should ideally encompass and what is possible in practice. Discussion of the tax gap therefore necessitates that the definition and delineation of the calculation be expressed very precisely. What types of taxpayer and of taxes are involved in the calculation of the gap, and which are not?

We define the *total tax and duties gap as follows*.

> The ***total tax and duties gap*** is the difference between the amount for a given tax year which is declared by all taxpayers and firms for the payment of tax, VAT, customs duties and excise duties and the amount which should have been declared if all taxpayers had provided precisely the information and amounts that they were obliged to in accordance with the rules, neither more nor less.

The calculation of the total tax and duties gap can be made either before or after tax, as discussed above. This delineation is the broadest conceivable, and the total tax and duties gap covers all types of taxpayer and all forms of taxes and duties. This is also the total amount that SKAT seeks to reduce through new initiatives. The total tax and duties gap can be calculated in net or numerical terms; unless stated otherwise, it is the net amount that is referred to in this paper.

Breakdown of the total tax and duties gap

Taxpayers can be divided into three broad categories:

1. Individual taxpayers, comprising waged employees and people receiving transfer incomes

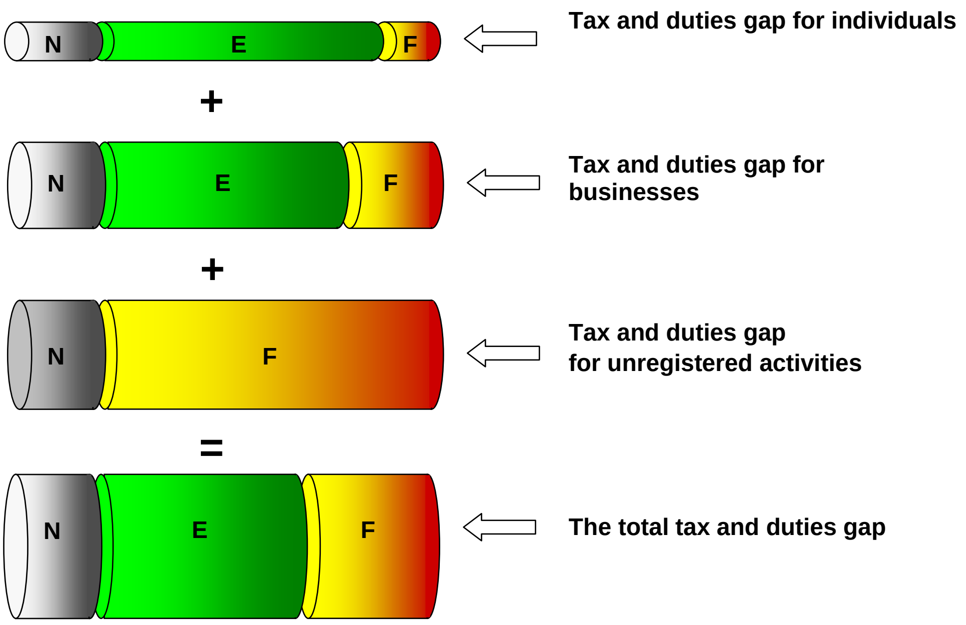
2. Businesses, including both companies and the self-employed
3. The unregistered, comprising people who live and work in Denmark without the knowledge of the authorities, and people who run what are in effect unregistered businesses by doing undeclared work.

We use the term *individual taxpayers* for the first group. The self-employed are of course also individual taxpayers, but for the purposes of this paper we do not include them in this category of taxpayer. Instead, the self-employed are included in group 2, which includes all types of *business*. This distinction between individual taxpayers and businesses is used throughout the remainder of this report.

The third taxable group consists of all those who are *unregistered*. A waged employee, or someone receiving a transfer income who also carries out undeclared work in his or her spare time, is by definition running an independent business, and as such is not regarded as an individual taxpayer even though he or she may have a wage or transfer income in addition to the income from undeclared work.

This means that the categories above cover all taxpayers, without any overlap between them. It is thus possible to divide up the tax gap in terms of the amount attributable to each of these categories, as shown in Figure 5. The total tax and duties gap is thus the sum of the tax and duties gaps related to individual taxpayers, businesses and the unregistered.

Figure 5. The composition of the total tax and duties gap in terms of different types of taxpayer.



As the figure indicates, the proportions of errors and evasion differ somewhat for the three groups. In particular, it is important to note that all the irregularities connected with unregistered work are naturally regarded as consciously fraudulent.

As mentioned in the definition of the total tax and duties gap, the gap is made up of income tax, VAT, and customs and excise duties. The gap can thus be broken down further, as is shown in Table 1.

Table 1. The components of the total tax and duties gap. Taxpayers and tax types.

	Individuals taxpayers		Businesses				Unregistered	
	Straightforward taxpayers	Complex taxpayers	Companies >250 employees	Companies, 0-250 employees	The self-employed	Other businesses	Unregistered businesses	Illegal residents
Income tax								
VAT								
Excise duties								
Customs								

Note: The term *companies* covers both publicly quoted companies and private limited companies (of various types). It also includes cooperatives. *Other businesses* in this context includes state-owned companies, etc.

The green colouring indicates the areas for which the compliance study provides information. There are thus no data shown relating to the tax gap for unregistered operations, but some of the most important aspects of the taxation of registered businesses are covered with respect to both taxable income and VAT for all self-employed persons and for companies employing up to 250 individuals.

Private individuals are fairly well covered, since tax evasion with respect to VAT, excise duties and customs duties is not very relevant for individual taxpayers – hence the shaded areas. In these fields, tax evasion by individuals is mainly related to the illegal import of goods for personal use. In cases where illegal importation is for the purposes of resale and thus capital gain which is not declared, this is automatically considered an unregistered business operation, and thus belongs to the unregistered operations section of the tax gap.

In this report we focus on the parts of the total tax and duties gap which concern the **tax on earnings** and the **VAT** payable by businesses. We refer to these two concepts respectively as *the tax gap for businesses* and *the VAT gap for businesses*. The first of these we define as follows.

> The ***tax gap for businesses*** is the difference between the amount of taxable earnings for a given tax year which is declared by all companies and self-employed persons with up to 250 employees and which are liable to Danish tax and the amount which should have been declared if all these businesses had provided precisely the information that they were obliged to in accordance with the rules, neither more nor less.

As mentioned previously, the tax gap for businesses is calculated in this report in terms of lost revenue.

The *tax gap for businesses* is thus a part of the *total tax and duties gap for businesses.* In Table 1 the *tax gap for businesses* comprises the two green areas at the top in the centre of the table, while the *tax and duties gap for businesses* includes the six areas below as well.

In the same way, we define the *VAT gap for businesses* as follows.

The ***VAT gap for businesses*** is the difference between the amount for a given tax year which is paid in VAT by all companies and self-employed persons with up to 250 employees and which are liable to pay Danish VAT and the amount which should have been paid if all these businesses had provided precisely the information that they were obliged to in accordance with the rules, neither more nor less.

The VAT gap is by definition a measure of lost revenue.

Calculation of the tax and VAT gaps for businesses on the basis of the compliance study

The section above defines what is included in the tax gap and the VAT gap for businesses. In the following, we consider the methods of measuring the size of these gaps. There are several approaches to calculating the tax gap. In general, tax administrations worldwide differentiate between *top-down* and *bottom-up* approaches.[7]

One form of *top-down* approach is based on macro-data, the figures for the economy as a whole. The total of personal incomes shown in the national accounts is compared with the corresponding figure registered by the tax authorities. Any discrepancy can be used as a measure of the tax gap – in this case, the tax gap for individuals.

The *bottom-up* approach calculates the gap from figures at a lower level, as its name suggests. Errors and evasion are calculated at the single unit level for a representative sample of businesses, and the results are then scaled up to calculate a figure for the entire population. It is this second approach to calculating the tax and VAT gaps for businesses that has been used in this report.

In this study, separate average adjustment amounts are calculated for companies and the self-employed in each region on the basis of the total of 2,992 checks carried out. These two averages for each region are then multiplied by the sizes of the respective populations of companies and the self-employed in the region. The amounts for companies and the self-employed can now be added together as a total amount for all the businesses in the region, and a Danish national total tax gap for businesses can be calculated simply by adding together the figures for the six regions. This method produces a reliable picture of the size of the tax gap for the whole country, because the results for each region can be relied on to be representative of its population, being based on a stratified random sample.

The VAT tax gap is calculated in exactly the same way.

The calculation presented here is based on a relatively large number of checks, which means that the level of accuracy is also relatively high. The bottom-up method enables breakdowns of the figures to be made in many different ways – for example, by regions, levels of turnover, age of businesses, business sectors, levels of compliance, etc. This is often not possible when a top-down approach is used. The final result of this process is a unique dataset in which the records of each type of error are linked to adjustments made to taxable amounts. This means that it is possible to subdivide the tax gap according to various types of error, which is very useful for the planning of future initiatives and the allocation of resources.

[7] In research, a differentiation is often made between direct and indirect methods. The national accounts method would be considered an indirect method, while checking a randomly selected sample of individuals is counted as a direct method.

LEVELS OF COMPLIANCE, ERROR PERCENTAGES AND ADJUSTMENT AMOUNTS

This section begins with a discussion of the most important differences found between the tax years 2006 and 2008. Changes in conformity with the regulations is examined with regard to error percentages, proportion of non-compliers, average levels of compliance and adjustment amounts. Figures for 2008 are then presented by region, size of turnover, business sector, form of ownership and age of business. The results are given first for tax on earnings and then for VAT.

DIFFERENCES BETWEEN 2006 AND 2008

As can be seen from Table 2, the error percentage for Denmark increased from 42% for 2006 to 52% for 2008. The table does not include the results of VAT checks.

The corresponding percentages of errors for companies were 35% in 2006 and 46% for 2008. For the self-employed, the error percentage rose from 45% to 54%. The table indicates that error percentages increased in all regions. The largest increases were in Copenhagen and Northern Zealand, followed by Central Jutland and Northern Jutland. The increases were slightly lower in Central and Southern Zealand and in Southern Denmark.

Table 2. Changes in error percentages and proportions of non-compliers between 2006 and 2008, exclusive of VAT

Region/form of ownership	Error percentage		Proportion of non-compliers	
	2006	2008	2006	2008
	– Per cent –			
Copenhagen	39	51	11	12
Central and Southern Zealand	43	47	7	9
Central Jutland	48	59	7	10
Northern Jutland	36	46	5	6
Northern Zealand	43	55	9	9
Southern Denmark	41	48	6	11
Total	**42**	**52**	**7**	**10**
Companies	35	46	6	9
Self-employed	45	54	8	10

The proportion of non-compliers for the whole country increased from 7% for 2006 to 10% for 2008. The greatest increase was in Southern Denmark, where the proportion of non-compliers almost doubled to 11% for 2008. For both 2006 and 2008, the proportion of non-compliers was lowest in Northern Jutland.

Table 3 shows the changes from 2006 to 2008 in error percentages and proportions of non-compliers for all businesses, broken down by business sectors. For both 2006 and 2008, the three sectors with the highest percentages of errors and non-compliers were Hotels and Restaurants, Transportation, and Construction. The error percentage in the Hotels and Restaurants sector was 71%, and at 23% the proportion of non-compliers was clearly the greatest for any business sector. The Transportation branch recorded the highest error percentage of any sector for 2008 – 73% – and the proportion of non-compliers was 16%. The Construction sector also recorded a high error percentage for 2008 at 64%, and the proportion of non-compliers there was 17%.

Error percentages and proportions of non-compliers were lowest in Agriculture, etc., in the Finance and Insurance sector, and in Real Estate. The error percentage for both Agriculture, etc. and Real Estate was 44%; the proportions of non-compliers were 8% and 6% respectively. The proportion of errors was 30% for Finance and Insurance, where the proportion of non-compliers was 4%.

Table 3. Error percentages and proportions of non-compliers for 2006 and 2008, broken down by business sectors, exclusive of VAT

Business sector	Error percentage		Proportion of non-compliers	
	2006	*2008*	*2006*	*2008*
Agriculture, Forestry and Fishing	37	44	3	8
Manufacturing	47	63	9	8
Energy Supply	41	23*	2	0*
Water Supply and Sewage	49	49*	7	0*
Construction	53	64	14	17
Wholesale and Retail Trade	49	58	11	14
Transportation	49	73	12	16
Hotels and Restaurants	57	71	20	23
Information and Communication	47	59	12	11
Finance and Insurance	28	30	4	4
Real Estate	38	44	5	6
Consultancy	48	58	8	12
Travel Agencies, Cleaning and Other Operational Services	47	60	12	16
Education	56	65	7	19
Health Care and Social Services	55	61	8	6
Arts and Entertainment	43	64	7	10
Other Services	42	51	7	9
Not Stated	33	44	4	6
Total	42	51	7	10

Note: An asterisk * indicates that there were fewer than 20 observations for the business sector, which means a greater level of uncertainty with regard to error percentage and proportion of non-compliers.

The greatest increases from 2006 to 2008 in terms of number of percentage points were within the Transportation and the Manufacturing sectors. In the Transportation sector, the error percentage increased by 24 percentage points to 73% in 2008, while in Manufacturing the increase was by 16 percentage points to 63%.

There were relatively high error percentages for both 2006 and 2008 for Education (56% for 2006 and 65% for 2008) and Health Care and Social Services (55% for 2006 and 61% for 2008). In the Education sector, there was a large increase in the proportion of non-compliers, from 7% to 19%. In the 2008 study, the Education sector was made up primarily of driving schools, which accounted for 30% of businesses in the sector, and "other education and training", representing nearly half of the sector and consisting of computer courses, folk high schools, personal coaching, etc.

The Health Care and Social Services sector in the compliance project primarily covers doctors and dentists in private practice, physiotherapists, occupational therapists, psychologists, masseurs, and other health-related service providers (pedicurists, chiropodists, zone therapists, acupuncture practitioners, etc.),[8] all of whom operate as private businesses; state health services are not covered by the compliance project.

THE TAX AND VAT GAPS, 2006 AND 2008

Figure 6 shows the tax gap calculated as lost revenue, estimated on the basis of all observations except for a very small number of "outliers". For 2006 there were three "outliers", whereas for 2008 there was only one. The identification of extreme outlying values among the adjustments was made on the basis of the method mentioned earlier, devised by Anders Milhøj of Copenhagen University.[9]

If we ignore the outlying observations, the tax gap is calculated to have increased from DKK 5.8 billion for 2006 to DKK 8.4 billion for 2008 (both figures expressed in current prices). This increase is statistically significant.

The increase in the tax gap calculated without the outliers is due in part to the fact that the error percentage rose, and in part, as we shall see later, to the fact that the size of adjustments increased. Finally, there was an increase in the number of businesses in Denmark, a factor which also contributed to the increased size of the tax gap.

When all adjustments are included in the calculation, the tax gap is reckoned as having fallen from DKK 9.4 billion for 2006 to DKK 7.9 billion for 2008. However, the calculation of the tax gap for 2006 is very sensitive to the inclusion of a few very large outlying values.

[8] "Other health-related services" make up the largest proportion of the Health and Social Services sector, followed by "General Practitioners". In the two studies, "Other health-related services" represented 24-28% of the sector, while "General Practitioners" accounted for 17-22% of it.

[9] Anders Milhøj's study paper, "Outlier tests", is available from the Ministry of Taxation on request (in Danish only). The use of Milhøj's method means that slightly fewer observations are defined as outliers than reported in the study entitled "Compliance with the tax rules by businesses in Denmark. Tax year 2006", which was launched at a press conference on 12 May 2009.

Figure 6. The tax gap in lost revenue for 2006 and 2008, DKK billions (current prices)

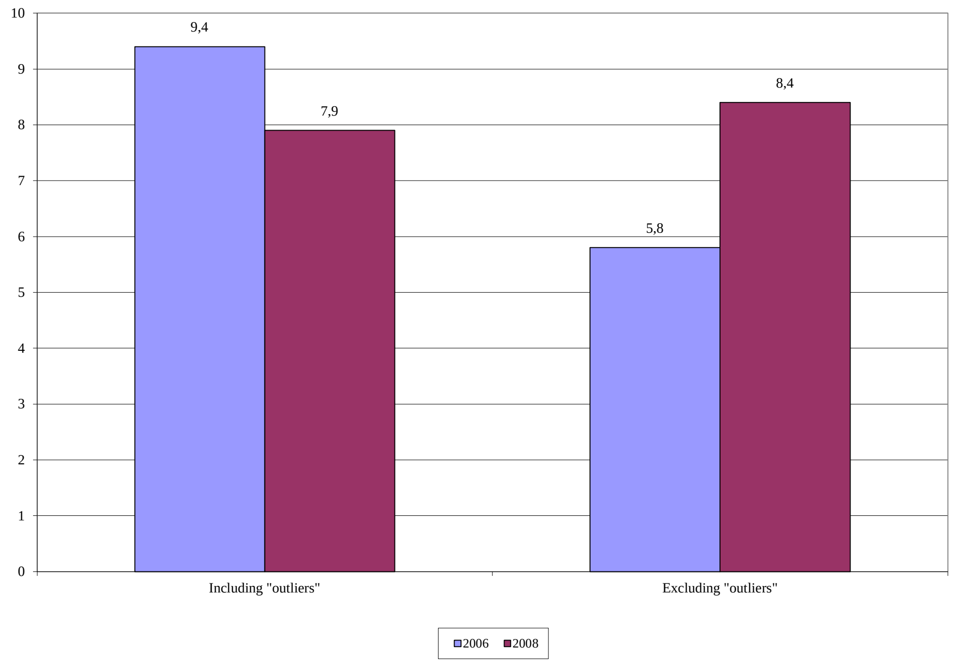
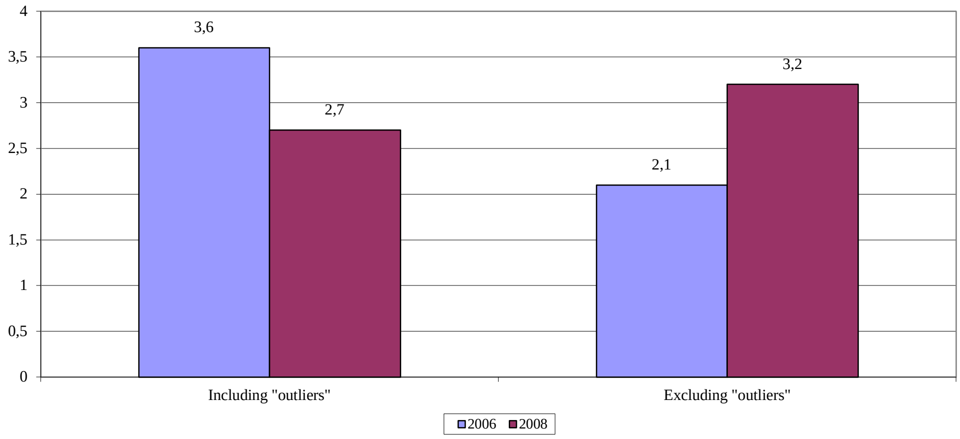


Figure 7 shows the changes in the VAT gap. As in the case of the tax gap, the VAT gap has been calculated both including and excluding a small number of large outlying adjustment amounts.

If the large outlying adjustments are ignored, the VAT gap is calculated to have increased from DKK 2.1 billion in 2006 to DKK 3.2 billion in 2008, in current prices. This increase is statistically significant.

If all observations are included in the calculation, then the VAT gap is found to have fallen by a non-significant amount from DKK 3.6 billion for 2006 to DKK 2.7 billion for 2008, measured in current prices.

Figure 7. The VAT gaps for 2006 and 2008, DKK billions (current prices)



CONFORMITY WITH THE REGULATIONS – TAX ON EARNINGS

Table 4 shows that the overall proportion of errors from all checks conducted on businesses was 52%. This figure is exclusive of VAT checks. At 54%, the error percentage was a little higher for the self-employed than for companies, where it was 46%.

There was a degree of spread in the percentages of errors among the various regions. The lowest proportion, 46%, was in Northern Jutland, while the highest was in Central Jutland, at 59%.

Table 4. Error percentages, adjustment amounts (numerical and net) and compliance ratings, broken down by regions and by forms of business ownership, exclusive of VAT

Region/form of ownership	Error percentage	Adjustment amounts, DKK '000s		Rating	Total
		Numerical (before tax)	Net (after tax)		
		Average			*Number*
Copenhagen	51	139.7	47.8	4.13	496
Central and Southern Zealand	47	93.3	28.9	4.34	500
Central Jutland	59	102.7	14.7	3.90	499
Northern Jutland	46	84.3	19.9	4.25	500
Northern Zealand	55	127.7	40.9	4.10	496
Southern Denmark	47	76.0	24.5	4.15	500
Total	52	103.3	28.0	4.13	2,991
Companies	46	197.2	41.5	4.29	836
Self-employed	54	65.6	22.6	4.05	2,155

Note: Excluding VAT checks. A single outlier has been excluded from the calculations.

The average numerical adjustment amounts and the net adjustment amounts after tax (i.e. increases minus reductions) are also shown in table 4. The average numerical adjustment amount for the whole of Denmark was DKK 103,000 for 2008.

This represents an increase on the average numerical adjustment amount for 2006, calculated excluding a few outliers, which was DKK 81,900.

For companies, the average numerical adjustment amount for 2008 was DKK 197,200, as opposed to DKK 65,600 for the self-employed. In the cases of both companies and the self-employed, the numerical adjustment amounts for 2008 were somewhat higher than the figures for 2006 (excluding outliers from the calculation).

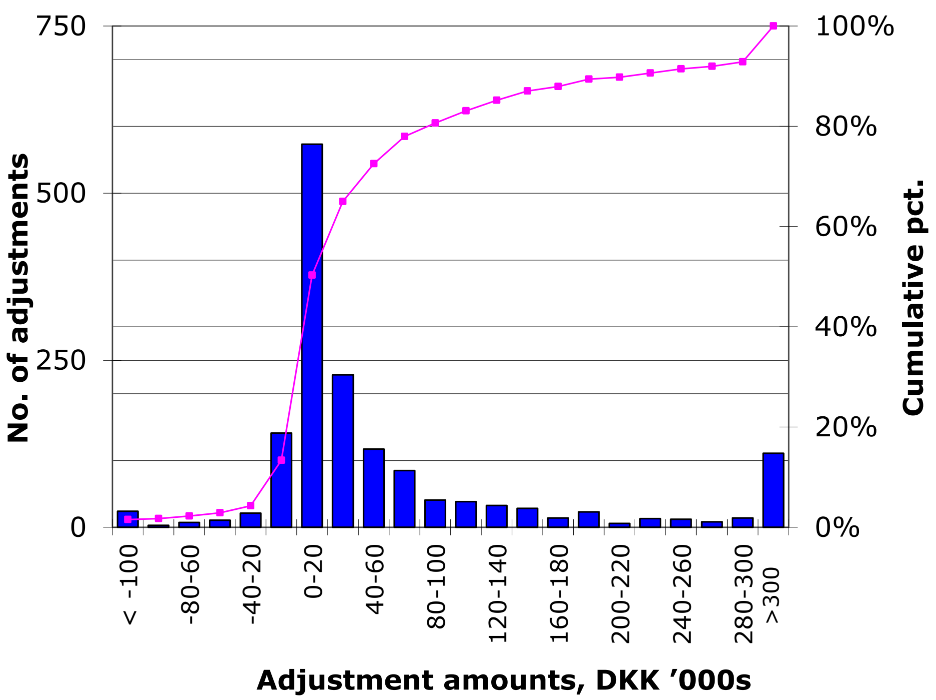
The net adjustment amount after tax – increases minus reductions – was DKK 28,000 on average for 2008. If further correction is made for the fact that errors were identified in 52% of cases, then the average adjustment after tax across all the cases checked, rather than only for those where corrections were made, was DKK 14,500.

The average net adjustment amount after tax was highest in Copenhagen at DKK 47,800 and lowest in Central Jutland at under DKK 15,000. The fact that the numerical adjustment amount was relatively high in Central Jutland, while the net adjustment after tax was relatively low, was due to some large negative adjustments in that region, where businesses had "cheated themselves".

The overall average *level of compliance* for companies and the self-employed taken together was 4.13, which is equivalent to a rating close to pale green. Taking businesses overall, the most generally evident type of behaviour was that of "compliers". The level of compliance was significantly higher for companies than for the self-employed, the figures being 4.29 and 4.05 respectively.

Figure 8 shows the distribution of the adjustments made (before tax) according to the sizes of the amounts. The number of adjustments in each interval is indicated by columns (scale on the left), while the s-shaped curve is the cumulative frequency in percent (scale on the right).

Figure 8. Distribution of adjustment amounts before tax (histogram)



The distribution is concentrated on the interval DKK 0-20,000; 50.3% of all adjustments were in this range. A half of all adjustments made were under DKK 19,953 (the *median*), and the remainder were correspondingly above this amount. Amounts above DKK 67,435 accounted for exactly 25% of the total number of adjustments. The distribution is clearly *right-skewed*.

In those cases where an adjustment was made, the amount was reduced in 13% of cases – i.e., the businesses in question had paid too much tax (see Table 5). In the remaining cases, the amount was increased. The proportion of businesses that had paid too much tax was somewhat lower than the proportion of private individuals, of whom 34% of those whose tax was adjusted had paid too much (see the report *Compliance with the tax rules by private individuals in Denmark: Tax year 2008*).

Table 5. Adjustments upward or downward, and average numerical adjustment amounts, exclusive of VAT

	Adjustments	Numerical adjustment amounts, DKK '000s	Adjustments
	Percent	*Average*	*Number*
Zero	0.5	0	7
Down	13.3	103.7	200
Up	86.2	103.9	1,343
Total	100.0	130.3	1,550

Note: A single outlier has been excluded from the calculations.

Table 5 reveals that the average amounts of adjustments upward and downward are more or less equal in size, at just under DKK 104,000.

Table 6 shows the distribution of compliance with the regulations across the seven compliance levels, by region and by type of firm (company or self-employed).

For the country as a whole, nearly 10% of the businesses checked fell into one of the three "non-compliant" categories; the majority of these were at the "better" end of the opponent segment, i.e. pale yellow. This means that 90% of businesses should be regarded as compliers, i.e. they made a genuine effort to follow the rules.

Table 6. Percentage distribution across levels of compliance from 0 to 6, for companies and the self-employed, exclusive of VAT

Region/form of ownership	Rating (percentage share)							Av. rating
	0	1	2	3	4	5	6	
Copenhagen	0.0	0.9	10.8	35.9	12.6	6.7	33.1	4.13
Central and Southern Zealand	0.2	1.2	8.0	26.4	16.8	14.6	32.9	4.34
Central Jutland	0.4	2.1	7.2	42.7	13.2	13.7	20.7	3.90
Northern Jutland	0.0	0.6	5.6	38.9	11.3	10.0	33.6	4.25
Northern Zealand	0.0	2.8	6.6	36.6	13.6	12.1	28.2	4.10
Southern Denmark	0.0	2.3	9.1	32.8	12.2	14.7	29.0	4.15
Total	0.1	1.8	7.8	35.8	13.3	12.5	28.7	4.13
Companies	0.0	1.9	6.9	34.9	10.0	9.2	37.1	4.29
Self-employed	0.2	1.8	8.3	36.2	14.8	14.0	24.7	4.05

The proportions in categories 4 to 5 were of approximately the same size, with around 13% of businesses in each category.

The proportions of non-compliers were roughly the same to the East and to the West of the Great Belt. The proportion of businesses which deliberately under-declared their tax was nearly twice as great in Copenhagen as in Northern Jutland.

In comparison with 2006, there was an increase in the proportion of businesses rated in the dark green category. For 2006 the proportion in this category was 18.4%, whereas for 2008 the proportion almost doubled to 35.8%.[10]

In the light of this development, it is important to point out that although the dividing line between non-compliers and compliers appears very clear, the reality is unfortunately a little more complex. For example, many companies that have failed to declare turnover or have deducted what are clearly private expenses in the company accounts are rated as dark green (level 3).

There is thus a rather fluid boundary between non-compliers and compliers. It would perhaps be appropriate to introduce a new category of "borderline compliers" and define them as the businesses in the dark green category.

Using these terms, the changes from 2006 to 2008 could be described as follows. The proportion of non-compliers increased from 7% to 10%. The proportion of borderline compliers almost doubled, from 18.4% in 2006 to 35.8% in 2008. Conversely, the proportion of compliers fell from more than 74% for 2006 to 54.5% for 2008.

Table 7 shows the relationship between the size of turnover and observed conformity with the regulations. The percentage of errors clearly rises with increasing turnover. The same is true for the numerical adjustment amounts and the net adjustment amounts, if we ignore businesses declaring zero turnover. Both patterns are clearly statistically significant.

Table 7. Error percentages, numerical adjustment amounts and ratings, by size of turnover, exclusive of VAT

Turnover, DKK	Error percentage	Adjustment amounts, DKK '000s		Rating	No. of observations (unweighted)
		Numerical (before tax)	Net (after tax)		
		Average			*Number*
Unclassified	45	70.8	22.4	4.50	555
0[1)]	40	153.4	25.6	4.56	656
1-10.000	44	32.4	11.5	4.37	71
10,000-100,000	54	49.8	17.7	4.00	377
100,000-500,000	58	81.6	27.9	3.88	503
500,000-1 million	59	104.7	31.4	3.80	227
1 million-10 million	58	102.1	30.0	3.77	495
> 10 million	77	237.7	65.7	3.42	107
Total	**52**	**103.3**	**28.0**	**4.13**	**2,991**

Notes: A single outlier has been excluded from the calculations.
[1)] This entry includes three observations where turnover was negative. Since it is not statistically meaningful to calculate an average on the basis of so few observations, these are included in the group with zero turnover, where they have little effect on the average.

[10] The figures for 2006 can be found in Table 4 in the report *Compliance with the tax rules by businesses in Denmark. Tax year 2006*, published on 12 May 2009.

For both 2006 and 2008, the average numerical adjustment amount in the group of businesses without declared turnover was higher than for every other interval of turnover below DKK 10 million. It is also interesting to note that in both the 2006 and the 2008 studies, there were relatively high adjustments for businesses with turnovers in the very low turnover ranges. There is certainly an issue to pursue here, even if the level of compliance is in general fairly good.

The table also clearly shows that the level of compliance falls with increasing turnover, which is very much in line with the increasing error percentages and adjustment amounts.

The relationship between the size of businesses measured in terms of number of employees and compliance with the regulations is elucidated in Table 8.

Table 8 shows that both the error percentage and the average adjustment amount (measured both numerically and net) increase with the number of employees in the business. Conversely, the level of compliance rating falls with increasing number of employees.

It is perhaps hardly surprising that the error percentage increases with the size of the business, since larger businesses generally have to cope with an increasing number of sets of regulations, and regulations which are also of increasing complexity. What is surprising, however, is that the compliance rating falls as low as 2.66 for companies with more than fifty employees.

Table 8. Error percentages, adjustment amounts (numerical and net) and compliance ratings, broken down according to number of employees in the business, exclusive of VAT

Number of employees	Error percentage	Adjustment amounts, DKK ’000s		Rating	No. of observations (unweighted)
		Numerical (before tax)	Net (after tax)		
		Average			*Number*
0 employees	47	88.7	21.8	4.32	2,225
1-9 employees	64	116.3	36.5	3.65	540
10-19 employees	65	114.1	33.7	3.64	123
20-49 employees	67	192.2	59.0	3.53	72
50+ employees	89	255.9	68.8	2.88	31
Total	**52**	**103.3**	**28.0**	**4.13**	**2,991**

Note: A single outlier has been excluded from the calculations.

COMPLIANCE WITH THE REGULATIONS – VAT

Table 9 shows the error percentages with regard to VAT, the numerical VAT adjustment amounts (numerical and net), and the overall compliance ratings for those businesses where a VAT check was made.

Table 9. Error percentages, adjustment amounts (numerical and net) and compliance ratings, broken down by regions, VAT checks only

Region/form of ownership	Error percentage	Adjustment amounts, DKK '000s		Rating	Total
		Numerical	Net		
		Average			*Number*
Copenhagen	45	45.2	42.4	3.76	308
Central and Southern Zealand	32	25.0	20.6	4.16	342
Central Jutland	52	18.3	12.9	3.53	342
Northern Jutland	30	12.3	10.6	3.97	328
Northern Zealand	45	31.0	28.1	3.81	323
Southern Denmark	32	17.4	16.0	3.84	325
Total	40	24.3	20.9	3.82	1,968
Companies	40	45.6	37.3	3.70	473
Self-employed	40	16.0	14.4	3.87	1,495

Note: The results are given for adjustments related to VAT. The average numerical adjustment is calculated only for the cases where an adjustment was made. Net adjustments are equivalent to lost revenue.

The proportion of errors for the whole of Denmark was 40%. Once again there were variations between the regions. These variations were statistically significant. In comparison with 2006, the proportion of errors increased by 10 percentage points.

For both 2006 and 2008, the error percentage was clearly highest in Central Jutland (36% for 2006; 52% for 2008). In both studies, the lowest error percentages were found in Northern Jutland (24% for 2006, 30% for 2008).

The average numerical adjustment amount for the whole of Denmark for 2008 was DKK 24,300. This was less than for 2006, when the average numerical adjustment amount was DKK 32,000.

Thus, with regard to VAT, there was increase in the percentage of errors and a fall in the amount of adjustments, whereas for tax on earnings there were increases in both the error percentage and the average adjustment amount.

In assessing the ratings, no separation was made between VAT and tax on earnings. The ratings shown in Table 9 are thus overall ratings for businesses that were checked for both VAT and tax. As the table shows, the average rating for the whole of Denmark was 3.8, and there were no great variations between the regions. Only Central and Southern Zealand stands out with a rather better level of compliance than the rest of the country.

In comparison with 2006, there was a clear fall in the compliance ratings, from 4.2 to 3.8 for 2008.

Given that checks were made in these cases for both tax and VAT, it is not surprising that the average levels of compliance were lower than among businesses which were only audited with respect to tax. There were simply more opportunities for error. On the other hand, the error percentage relates exclusively to VAT. In comparison with an error percentage of 52% related to tax on earnings, there are fewer errors in relation to VAT. This was also the case for 2006.

Table 10 shows whether adjustments were upward or downward in the cases where errors were found. VAT payable was reduced in 11% of cases, meaning that in these cases the business had paid too much in VAT. In the remaining cases, the amount was increased. Thus, the proportion of businesses which had paid too much in VAT was on around the same level as the proportion which had paid too much in tax on earnings (see Table 5).

Table 10. Adjustments upward or downward, and average adjustment amounts, for VAT

	Adjustments	Numerical adjustment amounts, DKK ’000s	Adjustments
	Percent	*Average*	*Number*
Zero	1	0	4
Down	11	15.8	86
Up	88	25.5	690
Total	100	24.3	780

Note: A single outlier has been excluded from the calculations.

THE TAX AND VAT GAPS FOR BUSINESSES

Research has been carried out continuously in Denmark over many years into the extent of undeclared work. This research has been carried out by the Rockwool Foundation Research Unit. In contrast, studies of trends in the extent of errors and evasion in tax declarations have been less extensive. For both types of analysis the focus has been primarily on private individuals, and before the publication of the report on businesses for 2006, no research whatsoever had been carried out in Denmark with respect to errors and evasion by businesses related to tax on earnings and VAT. Now, with the present report, the Ministry of Taxation and SKAT have again systematically investigated the extent of errors and evasion by businesses in their declaration of taxes.

THE TAX GAP

In this report, the tax gap is calculated in terms of lost revenue. In *Compliance with the tax rules by businesses in Denmark. Tax year 2006*, the previous parallel report, the tax gap was calculated in terms of adjustment amounts before tax, while the tax gap in terms of lost revenue was presented in *Business sector analysis. Compliance with tax and VAT rules by businesses in Denmark. Tax year 2006.*

In order to calculate the tax gap in terms of lost revenue in each separate case where errors were found, a very detailed record of error types was made; see the section on error types on page 37. Every error was registered by type and amount. Each error type was linked to a specific tax rate.

On the basis of the tax rates relevant to the different types of error and with reference to the adjustments in tax that were made in each case, an estimate of the tax gap was calculated in terms of lost revenue.

Table 11 shows the tax gap for companies and the self-employed. Using the method developed by Anders Milhøj mentioned previously, one outlying observation was identified in the 2008 study.[11] However, this single extreme figure did not significantly affect the calculation of the tax gap. If all the adjustments are included, the tax gap is calculated as DKK 7.9 billion; without including the single large outlying adjustment in the calculation, the figure increases to DKK 8.4 billion (see the section *"Outliers"* on page 7 for a fuller discussion of the treatment of extreme observations).

[11] The observation in question was a negative adjustment of DKK 1.9 million.

Table 11. The tax gap for businesses in lost revenue, broken down by region, exclusive of VAT

Region	The tax gap	The tax gap calculated without outlying observations
	DKK billions	
Copenhagen	1.7	1.7
Central and Southern Zealand	1.1	1.1
Central Jutland	1.1	1.1
Northern Jutland	0.7	0.7
Northern Zealand	1.9	2.4
Southern Denmark	1.4	1.4
Total	7.9	8.4

It is clear from Figure 6 that the large adjustments were very important in the calculation of the size of the tax gap for 2006, but that this was not the case for 2008. Regardless of whether or not the single large outlier is included for 2008, the tax gap was largest in Northern Zealand at DKK 1.9-2.4 billion. For 2006, the tax gap was also largest in Northern Zealand, if the outliers are ignored. The next-largest tax gap for 2008 was in Copenhagen, at DKK 1.7 billion.

Using the information in Appendix Table 1, we can calculate that 46% of Denmark's businesses are based in the three eastern regions of the country. The table also shows that businesses based east of the Great Belt accounted for 62% of the total tax gap. The tax gap per business can thus be calculated to have been fully 90% higher in Zealand than in the rest of the country. It is certainly possible, however, that this could be explained by a different mix of businesses east of the Great Belt, for example in terms of the size of the companies, the form of ownership, or the business sectors covered.

The tax gap is largest for the self-employed at DKK 4.8 billion (see Table 12). This is the same picture as was found in the 2006 study, if the few extreme observations for 2006 are ignored.

Table 12. The tax gap in lost revenue, broken down between companies and the self-employed, exclusive of VAT

Form of ownership	The tax gap	The tax gap calculated without outlying observations
	DKK billions	
Companies	3.1	3.6
Self-employed	4.8	4.8
Total	7.9	8.4

It should also be noted that total financial activity, as measured, for example, by turnover, is significantly larger for companies than for the self-employed, even though a clear majority of businesses have the latter type of ownership structure. Companies are generally just much larger as businesses. This means that the tax gap for companies must be viewed as being relatively small in comparison with the tax gap for the self-employed in the light of the different sizes and levels of activity of the two types of enterprise.

Table 13 shows the tax gap broken down across the compliance rating scale. Regardless of whether or not the single outlying observation is taken into account, the tax gap calculated as lost revenue was largest in the dark green category at DKK 3.6-4.1 billion. The next-largest category is the pale yellow, where the tax gap is calculated to have been DKK 2.6 billion.

Table 13. The tax gap for businesses in lost revenue, broken down across the compliance scale, exclusive of VAT

The tax gap	Rating (contributions to the tax gap, DKK billions)							Total
	0	1	2	3	4	5	6	
Including extreme values	0.05	1.3	2.6	3.6	0.3	0.0	0.05	7.9
Excluding extreme values	0.05	1.3	2.6	4.1	0.3	0.0	0.05	8.4

If the extreme values are included, 50% of the gap was attributable to non-compliers; however, this figure falls to 47% if outlying values are excluded. The dark green category accounts for 45-48% of the gap, which is almost as great a proportion as the "non-compliers" categories. This reinforces the argument for introducing a third category of "borderline compliers" to supplement the "non-compliers" and compliers groups.

Table 14 shows the tax gap distributed across number of employees in a business. It is interesting to note that over half the tax gap is accounted for by very small businesses without any employees. Thus, even though the error percentage in this group is actually a little lower than the average for all businesses (47% as against 52%, see table 8), the group contributes the greater part of the tax gap.

Table 14. The tax gap for businesses as lost revenue, broken down by number of employees in a business, exclusive of VAT

Number of employees	Tax gap		No. of observations with errors (unweighted)
	All adjustments	Without outliers	
	DKK billions		*Number*
0 employees	4.3	4.3	1,052
1-9 employees	2.0	2.5	340
10-19 employees	0.6	0.6	79
20-49 employees	0.6	0.6	46
50+ employees	0.4	0.4	27
Total	**7.9**	**8.4**	**1,544**

At the other end of the scale, businesses with more than 20 employees accounted for around one eighth of the entire tax gap, even though they comprised only 3.5% of the total number of all businesses. It is quite probable that the size of the business is in itself part of the explanation for this, but it is not the whole story; Table 8 shows that the level of compliance for this group is lower than that for the other groups.

Table 15 and Table 16 show the tax gaps for companies and the self-employed respectively, broken down by business sectors. For companies, the Wholesale and Retail Trade sector had the largest tax gap for 2008 at almost DKK 770 million, equivalent to 22% of the total tax gap for companies. Next was Real Estate, with a tax gap of over DKK 600 million. The Manufacturing and Construction sectors shared third place, with tax gaps of around DKK 445 million each.

The pattern of the tax gap for businesses across business sectors is similar to that found for 2006. The "top ten" list of business sectors for 2008 included eight sectors that were in the top ten for 2006. These were (positions on the 2006 list in parentheses) Wholesale and Retail Trade (no. 1), Real Estate (no. 6), Manufacturing (no. 4), Construction (no. 3), Information and Communication (no. 7), Finance and Insurance (no. 10), Consultancy (no. 5) and Transportation (no. 8).

The tax gap for 2006 for Unclassified businesses was over DKK 360 million, and this "sector" came in second place with regard to the size of the tax gap. As Table 15 shows, the tax gap for Unclassified businesses for 2008 was DKK -268 million. However, this was due to one very large negative adjustment among these businesses. If that adjustment is ignored, the tax gap for Unclassified businesses would be over DKK 100 million for 2008, and this category would appear on the list in tenth place.

For the self-employed, Table 16 shows that the Unclassified group accounted for by far the largest tax gap, with just over DKK 1 billion – equivalent to almost 22% of the tax gap. Next came the Wholesale and Retail Trade and the Construction sectors with around DKK 500 million each, or approximately 10% of the tax gap. Like the companies, the self-employed exhibited a relatively high degree of stability in relation to the pattern for 2006. Of the sectors that were in the 2008 "top ten" list for size of contribution to the tax gap, nine were also on the list for 2006. These were (positions on the 2006 list in parentheses) Unclassified (no. 2), Wholesale and Retail Trade (no. 4), Construction (no. 3), Consultancy (no. 5), Agriculture, etc. (no 1), Travel Agents, Cleaning, etc. (no. 6), Hotels and Restaurants (no. 8), Health Care and Social Services (no. 10) and Manufacturing (no. 9).

Table 15. The tax gap for companies, broken down by business sectors, calculated in terms of lost revenue. Listed in descending order by size of contribution to the tax gap

Companies **Business sector**	Tax gap in lost revenue	Proportion of total tax gap	No. of errors (unweighted)	Proportion of the total no. of errors
	DKK millions	*Percent*	*Number*	*Percent*
Wholesale and Retail Trade	768	21.6	268	20.3
Real Estate	616	17.3	124	9.4
Manufacturing	446	12.6	94	7.1
Construction	446	12.6	163	12.4
Information and Communication	445	12.5	92	7.0
Finance and Insurance	381	10.7	189	14.3
Consultancy	201	5.7	134	10.2
Hotels and Restaurants	167	4.7	27	2.0
Transportation	141	4.0	58	4.4
Travel Agencies, Cleaning and Other Operational Services	79	2.2	62	4.7
Arts and Entertainment	52	1.5	27	2.0
Agriculture, Forestry, Fisheries and Commodities Production	31	0.9	26	2.0
Health Care and Social Services	24	0.7	21	1.6
Other (<15 errors per error type)	22	0.6	10	0.8
Unclassified Business	-269	-7.6	24	1.8
Total	3,550	100.0	1,319	100.0

Note: A single outlier has been excluded from the calculations.

Table 16. The tax gap for the self-employed, broken down by business sectors, calculated in terms of lost revenue. Listed in descending order by size of contribution to the tax gap

The self-employed **Business sector**	Tax gap in lost revenue	Proportion of total tax gap	No. of errors (unweighted)	Proportion of the total no. of errors
	DKK millions	*Percent*	*Number*	*Percent*
Unclassified Business	1,052	21.9	686	16.7
Wholesale and Retail Trade	502	10.4	512	12.4
Construction	492	10.2	350	8.5
Consultancy	447	9.3	474	11.5
Agriculture, Forestry, Fisheries and Commodities Production	438	9.1	443	10.8
Travel Agencies, Cleaning and Other Operational Services	377	7.8	222	5.4
Hotels and Restaurants	257	5.3	185	4.5
Information and Communication	244	5.1	173	4.2
Health Care and Social Services	211	4.4	371	9.0
Manufacturing	184	3.8	125	3.0
Arts and Entertainment	160	3.3	101	2.5
Transportation	144	3.0	144	3.5
Real Estate	129	2.7	140	3.4
Other Services	95	2.0	103	2.5
Education	61	1.3	71	1.7
Other (<15 errors per error type)	15	0.3	13	0.3
Total	4,810	100.0	4,113	100.0

Note: A single outlier has been excluded from the calculations.

THE VAT GAP

The calculations *with VAT check* concern VAT alone. In this case, the calculations indicate revenue. Table 17 shows that the VAT gap totalled DKK 2.7 billion in 2008, if all adjustments are included in the calculation.

Table 17. The VAT gap for businesses, broken down by region.

Region	The VAT gap	The VAT gap calculated excluding outlying observations
	DKK billions	
Copenhagen	0.8	0.8
Central and Southern Zealand	0.4	0.4
Central Jutland	0.1	0.6
Northern Jutland	0.1	0.1
Northern Zealand	0.9	0.9
Southern Denmark	0.4	0.4
Total	2.7	3.2

Note: The VAT gap is calculated as increases minus reductions. The results are for adjustments related to VAT.

If one very large (negative) outlying observation is ignored, the VAT gap is calculated to have been DKK 3.2 billion. As with the tax gap, this extremely large adjustment makes little difference to the identification of the regions where the VAT gap was largest. Regardless of whether or not the large outlying adjustment is included in the calculation, the VAT gap was largest in Northern Zealand.

If the VAT gap for the year 2008 is compared with the total VAT revenue of DKK 120.5 billion – excluding revenue from firms employing more than 250 people – then the relative VAT gap was 2.2%, or 2.7% if the figure excluding extreme values is used.

For comparison, the VAT gap for 2006 as a fraction of total VAT revenue represented 3.4% when all observations were used in the calculation, or 1.8% when the outlying observations were excluded.

Table 18 shows the VAT gap for businesses, broken down by business sector. The largest gap was for the Wholesale and Retail Trade sector at DKK 600 million, equivalent to almost 20% of the total VAT gap. Wholesale and Retail Trade also recorded the largest VAT gap for 2006, when it represented over 16% of the total. Next came the Information and Communication sector, with a VAT gap of DKK 415 million, around 13% of the total 2008 VAT gap.

Of the "top ten" sectors with the largest VAT gaps for 2008, eight also figured on the equivalent list for 2006. These were Wholesale and Retail Trade (as mentioned above, also no. 1 for 2006), Real Estate (no. 9 for 2006), Construction (no. 3 for 2006 as well), Consultancy (no. 2), Manufacturing (no. 7), Hotels and Restaurants (no. 5), Travel Agents, Cleaning and other Operational Services (no. 8) and Agriculture, etc. (no. 6 for 2006).

Table 18. The VAT gap for businesses, broken down by business sector.

Business sector	VAT gap in lost revenue	Proportion of total VAT gap	No. of errors (unweighted)	Proportion of the total no. of errors
	DKK millions	*Percent*	*Number*	*Percent*
Wholesale and Retail Trade	604	19.1	340	19.6
Information and Communication	415	13.1	120	6.9
Real Estate	308	9.8	72	4.1
Construction	270	8.5	204	11.7
Consultancy	242	7.7	234	13.5
Manufacturing	187	5.9	87	5.0
Hotels and Restaurants	175	5.5	111	6.4
Travel Agencies, Cleaning and Other Operational Services	154	4.9	134	7.7
Agriculture, Forestry, Fisheries and Commodities Production	148	4.7	163	9.4
Arts and Entertainment	144	4.5	45	2.6
Finance and Insurance	129	4.1	15	0.9
Education	100	3.2	44	2.5
Transportation	72	2.3	54	3.1
Health Care and Social Services	51	1.6	60	3.5
Other Services	51	1.6	42	2.4
Other (<15 errors per error type)	110	3.5	14	0.8
Total	3,159	100.0	1,739	100.0

Note: A single outlier has been excluded from the calculations.

TYPES OF ERROR

After the checks had been carried out, three working groups produced a more detailed error type analysis of declarations by companies and the self-employed.

The error analysis was based on a re-examination of all the cases where one or more errors had been found in relation to tax on earnings or VAT. The aim of this re-examination was to map both the frequency of the different types of error and what they meant in terms of lost revenue from tax and VAT.

In each case, all the errors were recorded in terms of error type and the amount of money involved. From this record, an overall calculation was made of how many times each error occurred, and how large an amount was involved.

On the basis of the tax rates relevant for the different types of error and with reference to the adjustments in tax that were made in each case, an estimate of the tax gap was calculated in terms of lost revenue, as described in the previous section. Using this method, it is also possible to subdivide the revenue gap by different types of error.

The error types used in this analysis and the tax rates for the calculation of the revenue loss are given in Appendix 2.

In the area of tax on earnings, the account of typical errors is based on an examination of the 1,544 cases that resulted in changes to taxable income, out of checks made in a total of 2,992 cases. As far as VAT is concerned, the error type analysis is based on a re-examination of 777 cases in which the VAT declared was incorrect, out of the total of 1,969 cases in which checks on VAT were made.

The following provides a categorisation of errors under main headings. As in the previous sections, the amounts presented here have all been scaled up to the macro level.

Table 19 shows where companies typically make errors. The table is sorted in descending order of amount of lost revenue. The largest amount lost through errors is under the heading "Additional dividend income to principal shareholder – taxation of principal shareholder", which accounted for DKK 680 million in lost revenue for 2008, or 19% of the total tax gap for companies. This error type covers all forms of disguised payments of dividends to the principal shareholder which are taxable as additional payments, and, in addition, redistribution of holdings in the company which result in an additional tax liability for the principal shareholder. See the description of error type no. 5 in Appendix 2.

The next-largest error type concerned use of company vehicles. This error accounted for DKK 270 million in lost revenue, or 7.6% of the total tax gap. The error type covers full or partial failure to pay tax on the value of the use of a company vehicle.

Next was the general area of "Fixed interest payments and rents to individuals", which covers the negotiation and setting of interest payments, rents, etc. that are not at normal market prices between the company and the principal shareholder. This error type accounted for just under DKK 250 million, equivalent to 7% of the total tax gap for companies.

If we compare a "top-ten" list of errors, defined in terms of the size of the tax gap accounted for by each error type, as in Table 19, with an equivalent list for 2006, we find that eight out of the ten error types for 2008 also occurred in the list of errors by companies for 2006. These are error type numbers 5, 19, 28, 27, 2, 11, 12 and 13. The rank order is not exactly the same, but nevertheless there appears to be a relatively stable pattern to the errors made by companies.

Table 19. The tax gap for companies, broken down by main error categories, calculated in terms of lost revenue. Listed in descending order by size of contribution to the tax gap

No.	*Companies* Error type	Tax gap in lost revenue	Proportion of total tax gap	No. of errors (unweighted)	Proportion of the total no. of errors
		DKK millions	*Percent*	*Number*	*Percent*
5	Additional dividend income to principal shareholder – taxation of principal shareholder	680	19.1	107	8.1
19	Company car	270	7.6	51	3.9
28	Rents and interest rates for individuals fixed at non-market prices	248	7.0	80	6.1
27	Company earnings not declared	161	4.5	20	1.5
2	Additional income to principal shareholder – private expenses	154	4.3	113	8.6
11	Additional dividend income to principal shareholder – taxation of principal shareholder	149	4.2	54	4.1
12	Various non-deductible expenses	143	4.0	83	6.3
38	Calculation and transfer errors	114	3.2	27	2.0
13	Reduction in the basis for depreciation and thus in the depreciation for the year	105	2.9	15	1.1
32	Undeclared personal income	93	2.6	28	2.1
53	Rents and interest rates for companies fixed at non-market prices	91	2.6	16	1.2
31	Costs of improvements incorrectly deducted as maintenance costs	86	2.4	16	1.2
34	Deductions and allowances for travel	82	2.3	21	1.6
58	Losses to be carried forward	55	1.6	26	2.0
20	Additional salary income – private expenses	52	1.5	65	4.9
35	Payments in kind to employees, etc.	48	1.4	54	4.1
22	Fitting-out costs – rented premises	27	0.8	15	1.1
17	Assets incorrectly written off with immediate effect	18	0.5	15	1.1
8	Entertainment expenses	17	0.5	35	2.7
41	Company telephone	15	0.4	43	3.3
64	Profit/loss – shares	10	0.3	15	1.1
14	Expenditures on fines	9	0.2	20	1.5
21	Incorrect depreciation of assets	-13	-0.4	25	1.9
18	Incorrect deductions for VAT and duties	-81	-2.3	91	6.9
47	Permissible deductions not declared	-109	-3.1	41	3.1
23	Bad debts, etc. – periodisation	-145	-4.1	33	2.5
	Other (<15 errors observed per error type)	1,274	35.9	210	15.9
	Total	3,550	100.0	1319	100.0

Note: Appendix 2 provides an overview of all the error types used in the analysis and the tax rates used in the calculation of lost revenue. A single outlier has been excluded from the calculations.

Thus, the error type "Additional payments – various private expenses" appeared in fifth place for 2008, but was in tenth position for 2006. This error type covers expenses which are incorrectly deducted in the company accounts as being business-related, but which fairly obviously are actually for items which should be regarded as private expenses. Examples from the 2006 study included "Wedding reception, wedding dress, expenses for auditors in connection with division of property, travel and accommodation in connection with baseball match in New York, air tickets, membership of golf club, private hunting expenses ...".

In the 2008 study, staff at SKAT came across the following types of "obviously private expenses": "Building materials delivered to the private address of the son and daughter of the principal shareholder, expenses for plants, burglar alarm and cleaning at the principal shareholder's private residence, principal shareholder's fitness centre expenses, purchase of four Italian chairs for the principal shareholder, principal shareholder's private travel to Malaga".

For 2008, this error type accounted for DKK 154 million, equivalent to 4.3% of the tax gap for companies. The corresponding figure for 2006 was DKK 121 million, which was 5.4% of the tax gap.

Table 20 shows the errors that are most typically made by the self-employed. Like Table 19, the table is sorted in descending order of amount of lost revenue. "Estimations" makes up the most widespread error type. "Estimations" covers self-employed people who do not submit a declaration, for whom SKAT must estimate the taxable income of the business. This error type accounted for DKK 1.4 billion in lost revenue for 2008, equivalent to 24% of the tax gap for the self-employed.

The next-largest error type concerns "non-declaration of business income" and accounts for nearly DKK 500 million, or almost 10% of the tax gap. This category covers undeclared net turnover and public subsidies which should be included in net turnover.

The third-largest error type concerns "estimated assessments", and covers estimates of the taxable earnings of a business made as a result of failure to submit necessary attachments or as a result of the rejection of the business accounts in their totality. This error type accounted for over DKK 450 million for 2008, or around 9% of the tax gap.

As with companies, there were a number of returnees from 2006 in the "top ten" list of errors for the self-employed for 2008. If we compare a "top-ten" list of errors, defined in terms of the size of the tax gap accounted for by each error type, as in Table 20, with an equivalent list for 2006, we find that seven out of the top ten error types for 2008 also appeared on the list of most sizeable error types made by the self-employed for 2006. These are error type numbers 14, 6, 16, 1, 30, 25 and 27. Again, the rank order is not exactly the same, but nevertheless, as with the errors made by companies, there is a relatively stable pattern to the types of error made by the self-employed.

For example, the error type "Various private expenses" appeared in fourth place for 2008, but was in third position for 2006. This error type covers expenses which are incorrectly deducted in the accounts as being business-related, but which fairly obviously are actually for items which should be regarded as private expenses. As the following examples from the 2008 study show, the expenses claimed are often very reminiscent of those deducted by companies: "Private fitness centre subscription, roadside assistance service subscription for a private car, journey to Italy, maintenance costs for private residence, purchases of clothes and shoes for private use, property tax for residence, car tax for a private car, newspaper subscription, children's mobile phone bills, ..."

For 2008, the "various private expenses" error type accounted for nearly DKK 410 million in lost revenue, as against DKK 240 million for 2006.

Table 20. The tax gap for the self-employed, broken down by main error categories, calculated in terms of lost revenue. Listed in descending order by size of contribution to the tax gap

No.	The self-employed Error type	Tax gap expressed in lost revenue	Proportion of total tax gap	Number of errors (unweighted)	Proportion of the total no. of errors
		DKK millions	*Percent*	*Number*	*Percent*
14	Estimations	1,366	28.4	63	1.5
6	Undeclared business income	475	9.9	231	5.6
16	Assessment by estimation	454	9.4	59	1.4
1	Various private expenses	409	8.5	694	16.9
30	Various non-deductible expenses	224	4.7	375	9.1
25	Proportion of private use	204	4.2	383	9.3
41	Sleeping partner – joint leasing activity	178	3.7	20	0.5
27	Private sphere: data entry, etc. by third parties	147	3.1	323	7.9
31	Periodisation of income/profits	132	2.7	26	0.6
28	Calculation and transfer errors	118	2.5	88	2.1
26	Business-related travel	100	2.1	104	2.5
36	Errors in use of business taxation scheme	99	2.1	38	0.9
29	Undeclared personal income	92	1.9	18	0.4
33	Reduction of depreciation allowable	86	1.8	42	1.0
55	Periodisation of expenses and losses from bad debts	84	1.7	75	1.8
13	Company car	68	1.4	17	0.4
20	Improvements vs. maintenance – real estate	66	1.4	51	1.2
37	Rents fixed at non-market prices	53	1.1	35	0.9
59	Education and training expenses	50	1.0	29	0.7
57	Failures to make adjustments for employees, etc.	37	0.8	30	0.7
50	Deductions for work area and rent in own home	26	0.5	40	1.0
70	Establishment costs and capital levies	25	0.5	20	0.5
51	Classification errors	23	0.5	136	3.3
35	Assets incorrectly written off with immediate effect	23	0.5	28	0.7
17	Valuation of goods in stock	22	0.5	38	0.9
24	Errors in declaration of profits on property	21	0.4	18	0.4
46	Depreciation of installations	18	0.4	51	1.2
38	Mixed use of operating equipment	17	0.4	50	1.2
39	Errors in annual depreciation	15	0.3	36	0.9
23	Entertainment costs	14	0.3	93	2.3

44	Mixed use of real estate	13	0.3	23	0.6
72	Food and lodging	12	0.2	17	0.4
22	Expenditures on fines	9	0.2	60	1.5
45	Bookkeeping errors	8	0.2	110	2.7
48	Bank charges and loan costs	4	0.1	40	1.0
7	Interest – business	-3	-0.1	83	2.0
49	Adjustments to property value tax	-8	-0.2	32	0.8
9	Incorrect depreciation of assets	-9	-0.2	53	1.3
8	Missing deductions/earnings related to VAT and duty adjustments	-24	-0.5	162	3.9
47	Too much income included	-26	-0.5	38	0.9
42	Additional deductions – operating costs	-75	-1.6	151	3.7
	Other (<15 errors observed per error type)	261	5.4	133	3.2
	Total	4,810	100.0	4,113	100.0

Note: Appendix 2 provides an overview of all the error types used in the analysis and the tax rates used in the calculation of lost revenue.

The errors made by businesses with respect to VAT are shown in Table 21. The largest error type by far is "Undeclared VAT on sales", which accounts for DKK 1.4 billion, or almost 45% of the total VAT gap of DKK 3.2 billion. This error type covers non-declared VAT on sales, as evidenced by actual invoices. In addition, it covers sales activities which are subject to VAT, but on which no VAT has been invoiced or declared. The 2008 study reveals a relatively large increase in this category in relation to the figure for 2006, when the VAT gap for this error type amounted to around DKK 500 million, or 27.4% of the VAT gap.

Businesses also made many errors with respect to deductible purchases, and were thus "cheating themselves". The table shows that the amount in question was more than DKK 800 million, equivalent to -25% of the VAT gap. It should be noted, however, that there was one very large adjustment in this area. If that is ignored, the error type is calculated to have accounted for around DKK 400 million, or -12% of the VAT gap.

In part, this error type results from forgotten deductions; but it is also linked to a large extent to the fact that there was an increase in tax on earnings as a result of undeclared income (i.e. error type no. 6 for the self-employed and no. 27 for companies). When taxable income is increased as a result of undeclared income, a deduction is allowed in VAT, to the extent that this is relevant.

For 2006, VAT deductible on purchases amounted to -8.8% of the VAT gap. The increase to around -12% for 2008 was largely attributable to the fact that undeclared earnings also rose, in the case of both companies and the self-employed. For example, the revenue gap for error type no. 6 for the self-employed increased from 6% for 2006 to nearly 10% for 2008 (Table 20).

As with the tax on earnings for companies and the self-employed, there are many repeat appearances of error types in the "top ten" list of VAT errors. As in Table 21, the list is sorted in descending order of contributions to the VAT gap. Among the ten largest contributors to the VAT gap for 2006, six error types were also in the top ten list for 2006, namely error types 12, 540, 499, 526, 161 and 460.

Table 21. The VAT gap, broken down by main error categories, listed in descending order by size of contribution to the tax gap

No.	VAT Error type	VAT gap	Proportion of total VAT gap	Number of errors (unweighted)	Proportion of the total no. of errors
		DKK millions	*Percent*	*Number*	*Percent*
12	VAT on sales not declared	1,419	44.9	115	6.6
13	Estimated amount of VAT on sales	548	17.3	54	3.1
540	Missing documentation for VAT deducted on purchases	511	16.2	128	7.4
499	Declared VAT liability too low in relation to the accounts	378	12.0	100	5.8
95	VAT on business services purchased in the EU	260	8.2	35	2.0
526	The account for VAT on purchases should include only deductible amounts invoiced to the company	213	6.7	68	3.9
161	Various private expenses	150	4.8	276	15.9
460	Bookkeeping errors in calculation of liability for duty	112	3.6	97	5.6
164	Non-deductible purchases	97	3.1	65	3.7
308	Proportion for private use	71	2.2	193	11.1
386	Payment of employees in kind	42	1.3	31	1.8
389	Purchase and maintenance of cars	38	1.2	26	1.5
437	Incorrectly deducted purchase VAT: requirements for invoices	28	0.9	21	1.2
388	Restaurant expenses	16	0.5	36	2.1
702	Declared payroll tax liability not in accordance with accounts	14	0.5	20	1.2
59	Use of own products	12	0.4	23	1.3
387	Costs of gifts	7	0.2	19	1.1
701	Changes to the payroll tax base	-4	-0.1	19	1.1
500	Declared VAT liability too high in relation to the accounts	-75	-2.4	37	2.1
307	Partial entitlement to deduction	-212	-6.7	47	2.7
162	Deductible purchases	-804	-25.4	105	6.0
	Other (<15 errors observed per error type)	338	10.7	224	12.9
	Total	3,159	100.0	1,739	100.0

Note: A single outlier has been excluded from the calculations.

The financial crisis obviously had an influence on the trend in the tax gap from 2006 to 2008. However, it is not possible to determine how much of the increase in the tax gap was a result of the financial situation.

A specific example of the effects of the financial crisis is that in the 2006 study, one of the largest areas of error, both in terms of number of errors and lost revenue, was the tax-deductible depreciation of assets by companies. The same area was also prominent on the top ten list of error types for the self-employed.

In the 2008 study, however, the problem of errors related to depreciation of assets for tax purposes did not appear at all on the list of the top ten errors for the self-employed, whether measured by number of errors or lost revenue. As far as companies were concerned, the proportion of the gap accounted for by this error fell from 6.1% for 2006 to just under 3% for 2008.

This trend must clearly be seen as an outcome of the financial crisis, in that a fall in capital investments by businesses led to a reduction in the risk of errors in the area of depreciation.

It is also important to consider the background for the separate types of error in the area of depreciation. A very detailed examination of the various types of error made for the 2006 study revealed that the errors were very frequently connected with deduction of operating costs.

For many years, SKAT has interpreted the lack of conformity with the regulations by businesses as an expression of a lack of willingness to comply, a lack of ability to comply, or a lack of knowledge of the laws and regulations. However, from the autumn of 2010 onwards, SKAT's view of taxpayer behaviour has been amended to conform more closely with the OECD model, in which one of the parameters for lack of compliance with the regulations is the fact that tax is viewed by businesses as a cost.

Seen from that perspective, it must be very tempting for a business that is experiencing a decline in turnover as a result of the financial crisis to make active efforts to reduce costs, including taxes and duties. The following examples illustrate this.

- For the self-employed, errors in periodisation of income and profits moved up from 21st place in the 2006 study to 9th place in the 2008 study.

- In the 2008 study, one of the largest error types, measured both in terms of lost revenue and number of errors, was in the area of personnel. Errors in this field included failure to tax the value of the use of a company vehicle, the use of a company phone, etc. and the failure to tax payments in kind. This was a new area for 2008, and can be seen as an expression of private businesses having to some extent avoided accepting employees' demands for higher wages by giving them more "tax free" benefits, simultaneously both increasing the disposable income of the employees and reducing the costs to the firm.

- In the area of VAT, the 2008 study revealed a larger VAT gap in the area of too little VAT being declared in relation to the figures in the accounts. This error type involves the business recording the correct amount of VAT in the accounts, but declaring the VAT payable as a smaller amount. The increase in the occurrence of this type of error may well reflect falling earnings from the business and lower levels of liquidity as a result of the financial crisis.

APPENDIX 1. ERROR REGISTRATION FOR BUSINESSES

There were nine overall categories for recording errors made by businesses, as follows:

- *(1) Compliance – Business –Company*
- *(2) Compliance – Principal shareholders*
- *(3) Compliance – Employees and spouses*
- *(4) Compliance – Partners*
- *(5) Compliance – Private individuals – Self-employed owners of businesses*
- *(6) Compliance – Partial audit – VAT*
- *(7) Compliance – Spot check – VAT*
- *(8) Compliance – Audit – VAT*
- *(9) Compliance – Check – VAT*

The following explains each of these nine categories.

(1) ADJUSTMENT OF THE TAXABLE EARNINGS OF BUSINESSES

This category covers the total adjustments in the taxable earnings of a business. It is calculated as the difference between declared earnings and adjusted earnings.

Consider, for example, a business which has its taxable earnings raised by DKK 100,000. Subsequently, the firm asks to make deductions for depreciation and write-offs amounting to DKK 100,000. The change in the firm's taxable earnings is now DKK 0.

In the compliance rating, this income increase is counted towards the tax gap as contributing DKK 100,000, because there was a failure to comply with the regulations in the amount of DKK 100,000. The fact that the actual payment of the tax was postponed until a later tax year through the use of rules concerning depreciation and write-offs has no significance for the calculation of the tax gap.

The same reasoning would apply to increases that were offset by losses from previous years under §15 of the tax assessment law.

It is clear that there was an adjustment in the firm's taxable earnings in the example set out, and as such the change is included in the calculation of the tax gap. However, it is important to note that there are no immediate revenue consequences in such a case. The public purse gains no immediate benefit from the increase of DKK 100,000 in taxable earnings; this may, however, come later.

(2) ADJUSTMENTS IN THE TAXABLE INCOME OF THE PRINCIPAL SHAREHOLDER

The principal shareholder in the company was only covered by the audit to the extent that there were tax relationships between the company and the shareholder, for example in the form of free use of a company car, intercompany accounts, disguised dividend payments, etc.

The reason for inclusion of these factors in the businesses section of the compliance study is that errors of this type can only be discovered and meaningfully included in the calculations through examining tax declarations submitted by businesses.

All other factors in relation to the principal shareholder's tax declaration were dealt with through any check made of the shareholder as an individual taxpayer. In other words, people who were principal shareholders in companies could be checked in the section of the study connected with individual taxpayers, since a company and its principal shareholder were regarded as two independent taxpayers.

The category "Compliance – principal shareholders" covers the entire adjustment to a principal shareholder's taxable income that results from a compliance check on a company, irrespective of whether the principal shareholder's taxable income from the company is treated as additional salary or as a dividend. For example, consider a principal shareholder who has received a disguised payment from the company of DKK 100,000. This payment is treated by the company as additional salary.

The adjustment to the company's taxable income will be zero, since the tax adjustment falls on the principal shareholder alone in the form of an upward adjustment to taxable income of DKK 100,000.

(3) Adjustments to taxable income for employees and spouses

This category covers all adjustments to taxable income of employees, spouses of self-employed owners of businesses, and spouses of principal shareholders where the adjustment results from a compliance audit of a company or a business owned by a self-employed person.

(4) Adjustment of taxable income for partners

This category covers the total adjustments resulting from a compliance audit to the taxable income of partners in a business set up as a partnership (in Danish: *interessentskab*) or limited partnership (in Danish: *kommanditselskab*).

It should be noted that the only route to making a compliance audit of a partnership or limited partnership is through a tax assessment of one of the partners. Consequently, the result of a compliance audit of a partnership is recorded as an adjustment to the private taxable income for the individual concerned.

To illustrate this, consider a case where the compliance audit of a partnership results in an upward adjustment of the taxable earnings of the business by DKK 100,000. The partner owns a 10% share of the partnership. The change to the partner's income from the business is thus DKK 10,000.

(5) Section of the compliance study concerning private individuals: the self-employed, i.e. adjustments to private taxable income

The working group that prepared the audit plans for the compliance project considered it very important that in addition to businesses, the compliance audit should cover the private financial sphere with respect to the self-employed.

This category covers the total adjustments made to personal taxable income for self-employed owners of businesses. These could include adjustments to income from shares and to taxable value of property, for example – and it makes no difference that the tax rates on these two types of income are different. Adjustments related to the owner's business sphere would be included in the category "Adjustments to the taxable earnings of businesses" described above.

(6 and 7) Partial and spot check audits: VAT

These categories cover the adjustment to VAT payments resulting from a tax check on a business owned by a self-employed person.

The adjustments are entered under "Compliance – Partial audit – VAT" or "Compliance – Spot check – VAT", depending on the scope of the check.

It should be noted that the VAT checks naturally involved only those businesses which were liable to VAT checks. In the error percentages without VAT checks, any adjustments in liability to VAT are ignored, regardless of whether such adjustments resulted from a partial audit or a spot check. For those businesses where a VAT check was made, both these categories are naturally included.

For a business selected for a compliance check of both tax and VAT, the results of the VAT check were recorded in the category "Compliance –Audit – VAT (see below).

(8 AND 9) DIRECT ADJUSTMENTS TO THE AMOUNT OF VAT A BUSINESS SHOULD PAY: "VAT AUDIT" AND "VAT CHECK".

These categories cover the total adjustments made to VAT liability as a result of a compliance audit of VAT in either a company or a business owned by a self-employed person.

A business where a VAT check was made in the compliance study had already been subjected to a full VAT audit for the tax year 2008, the results of this audit were included in the compliance project and replaced the projected compliance check.

Error types were also registered on the basis of the information from the full VAT audit.

If an audit that had already been carried out for the tax year 2008 had included only been a partial VAT audit, the results of the audit (i.e. the adjustment amount) were included in the compliance check, but only after further checks had been made so that the audit matched the requirements of the compliance check for breadth and depth.

APPENDIX 2. ERROR TYPES AND TAX RATES APPLIED FOR 2006 AND 2008 FOR COMPANIES, THE SELF-EMPLOYED AND VAT.

Error types and tax rates applied for **companies** for 2008

No.	Error type (Rubric and *description*)	Tax rate, percent 2008
01	**Additional dividend income to principal shareholder – life insurance** *Covers life insurance policies and joint life insurance policies which do not fulfil the requirements for being treated as joint life insurance policies, etc. with respect to tax, but must instead be regarded as additional dividend income to the principal shareholder.*	25
02	**Additional dividend income to principal shareholder – private expenses** *Covers expenses which are incorrectly deducted in the company accounts as being business-related, but which fairly obviously are actually for items which should be regarded as private expenses. (However, the error type does not include private assets which are incorrectly depreciated as business assets – cf. error type 13.)*	25
03	**Additional dividend income to principal shareholder – health costs** *Covers health-related expenses which do not fulfil the requirements for being treated as health expenses with respect to tax, but must instead be regarded as additional dividend income to the principal shareholder.*	25
04	**Profits – periodisation – contracts** *Covers errors regarding the treatment of income and deductions for expenses with respect to work in progress on behalf of third parties.*	25
05	**Additional dividend income to principal shareholder** *Covers all forms of masked dividend payments to the principal shareholder which should be taxed as dividends – in other words, tax not paid by the principal shareholder, cf. error types 1, 2, 3, 6, 10, 27, 28, 33, etc.* *Also covers errors related to the disposition of financial assets in the company which when corrected lead to the additional taxation of dividends for the principal shareholder.*	41
06	**Additional dividend income to the principal shareholder – pension contributions** *Covers pension contributions which do not fulfil the requirements for being treated as pension contributions with respect to tax, but must instead be regarded as additional dividend income to the principal shareholder.*	25
07	**Expenses in taxation cases** *Covers expenses in taxation cases where credit has already been given for the expenses, so that they should not be deductible in the company accounts.* **Effects of the 2010 tax reform:** The possibility of tax credit being given for these expenses was abolished with effect from 12 June 2009, which means that the problem was solved for 2010.	25
08	**Entertainment expenses** *Covers errors with respect to deductions of entertainment expenses in general.* **Effects of the 2010 tax reform:** Changes with respect to foreign business connections.	25

09	**Profits – shares – ownership for at least 3 years** *Covers profit and loss on the sale of shares not correctly declared because account has not been taken of the requirement that they should have been owned for three years.* **Effects of the 2010 tax reform:** Important changes with respect to shares.	25
10	**Estimations** *Covers estimations of a company's taxable earnings as a result of failure to submit a correct declaration; Tax Audit Act §5.*	25
11	**Additional salary income to principal shareholder** *Covers all forms of masked payments of dividends to the principal shareholder which are taxable as additional salary, though excluding error types 32 and 34 – in other words, tax not paid by the principle shareholder, cf. error type 20.*	50
12	**Various non-deductible expenses** *Covers various forms of expenses which cannot reasonably be considered deductible because they do not fulfil the requirements for documentation, because they are not expenses which should be borne by the company, or because the same expenses have been deducted more than once. Also errors in cases of expenses where the recipient of a benefit or gift is not taxed, in accordance with an agreement with SKAT that the expenses are not deducted as salary expenses.* **Effects of the 2010 tax reform:** Significant alterations with regard to group internal transfers which resolve some problems as to the correct bearer of expenses.	25
13	**Reduction in the basis for depreciation and thus in the depreciation for the year** *Covers disallowed deductions for depreciation and reductions in the basis for depreciation because all or some of the declared basis for depreciation cannot be accepted as qualifying for such a deduction. This error type also covers fittings in single and dual family houses which are not deductible from tax and thus cannot be deducted for depreciation.*	25
14	**Expenditures on fines** *Covers fines for infringements of the law, which are not tax deductible.*	25
15	**Incorrect salary payments** *Covers payments of salary which have not been registered, and from which tax at source has not been deducted in accordance with the Danish Withholding Tax Act.*	50
16	**Dividends – investment funds – capital income** *Covers dividend payments which have been incorrectly taxed on the basis of 66% of the payment, but which should have been taxed on 100% of the payment.* **Effects of the 2010 tax reform:** Changes with respect to dividends from companies which are not subsidiary companies. Yields from non-subsidiary companies are now always taxed on the basis of 100% of the yield, with the result that the problem was resolved from 2010 onward.	25
17	**Assets incorrectly written off with immediate effect** *Covers operating equipment which cannot – according to §6 of the Danish Depreciation Tax Act – be written off with immediate effect, since the value is above the limit for such writing off, including the joint value of assets which should be taken in combination.*	25
18	**Incorrect deductions for VAT and duties** *Covers additional deductions for operating costs as a result of changes in VAT and duties. Also covers additional taxable earnings resulting from adjustments to VAT and duties.*	25
19	**Company car** *Covers full or partial failure to pay tax on the value of the use of a company car.*	50

20	**Additional salary income for principal shareholder – private expenses** *Covers expenses which are incorrectly deducted in the company accounts as being business-related, but which fairly obviously are actually for items which should be regarded as private expenses. (However, the error type does not include private assets which are incorrectly depreciated as business assets – cf. error type 13.)*	25
21	**Incorrect depreciation of assets** *Covers omissions in the depreciation of operating equipment, buildings etc. as a result of disallowed writing off of assets with immediate effect – cf. error types 17, 24 and 31.*	25
22	**Fitting-out costs – rented premises** *Covers general errors in deductions for fitting-out costs of leased premises in accordance with §39 of the Danish Depreciation Tax Act.*	25
23	**Bad debts, etc. – periodisation** *Covers periodisation errors with respect to deductions for bad debts, and errors in the periodisation of operating costs and earnings in general.*	25
24	**Depreciation – rights** *Covers general errors related to the depreciation of the value of rights.*	25
25	**Unsuccessful expenditure of development costs** *Covers the incorrect deduction of expenses for accountants and lawyers in connection with the establishment or extension of a business which was not finally realised; §8J of the Danish Tax Assessment Act.* **Effects of the 2010 tax reform:** §8J of the Danish Tax Assessment Act has been tightened up – see also error type 70.	25
26	**Sponsorship expenditures – additional payments** *Covers additional payments which are incorrectly treated for tax purposes in the same way as the concurrent purchase of advertising. See the judgement in case no. SKM 2006.398 HR in the Danish High Court.*	25
27	**Company earnings not declared** *Covers lack of declaration of company earnings other than periodisation errors, and lack of declaration of state subsidies and of compensation payments, etc. from insurance companies.*	25
28	**Rents and interest rates for individuals fixed at non-market prices** *Covers the negotiation and setting of interest payments, rents, etc. that are not at normal market prices between the company and the principal shareholder.*	50
29	**Adjustments to joint taxation income** *Covers errors in the calculation of joint taxable income for companies which are taxed jointly.*	25
30	**Depreciation of value of goods in stock** *Covers incorrect depreciation of the value of goods in stock and general incorrect valuations of stock at the end of the accounting period.*	25
31	**Costs of improvements incorrectly deducted as maintenance costs** *Covers incorrect deduction as maintenance costs of costs of improvements to operating equipment and real estate.*	25
32	**Undeclared personal income** *Covers undeclared personal income of the principal shareholder, though excluding errors of types 37 and 45.*	50
33	**Assessment on the basis of an estimate – taxable earnings** *Covers calculation of the taxable earnings of the company through estimates as a result of non-submission of supplementary material.*	25

34	**Deductions and allowances for travel** *Covers incorrect payments of tax-free travel allowances and incorrect deduction of expenses for travel that are already covered because a company car has been made available.*	50
35	**Payments in kind to employees, etc.** *Covers various types of payment in kind to employees who have not been taxed correctly on the value of the goods. This error type does not include benefits in the form of a company car, company telephone, etc. – cf. error types 19, 40, 41, 42 and 72.*	50
36	**Losses on accounts receivable – group** *Concerns incorrect deductions for losses on accounts receivable between companies in the same group.*	50
37	**Private sphere – third party data entry and alterations to these** *Covers errors concerned with the principal shareholder's personal tax declaration, though excluding error types 32 and 45.*	25
38	**Calculation and transfer errors** *Covers errors in transfers of figures and conversion errors in connection with the statement of taxable earnings of the company which do not relate to any specific legislation.*	25
39	**Taxable subsidies and grants** *Covers various types of subsidy/grant which have been incorrectly handled with respect to tax.* **Effects of the 2010 tax reform:** Significant alterations with regard to group internal transfers which resolve some problems as to the correct bearer of expenses.	25
40	**Company living accommodation** *Covers errors regarding partial or complete failure to pay tax on the value of residential accommodation provided by the company and costs of electricity, water, heating, property tax and refuse collection paid by the company, Danish Tax Assessment Act, §16.*	50
41	**Company telephone** *Covers failure to pay tax on the value of a company telephone.*	50
42	**Company holiday home** *Covers complete or partial failure to pay tax on the value of use of company holiday homes.*	50
43	**Changes to taxation as a result of changes to calculations of tax for previous years** *Covers changes to taxable income as a result of changes to assessments for previous tax years.*	25
44	**Company motorcycle** *Covers complete or partial failure to pay tax on the value of a company motorcycle placed at the disposal of the principal shareholder.*	50
45	**Self-employment – principal shareholder** *Covers errors in taxable income from a separate independent business run by the principal shareholder*	25
46	**Additional dividend income – salary paid to the children of the principal shareholder** *Covers salary paid to the children of the principal shareholder which is disproportionate to the work they have done, so that the salary paid should be viewed as an additional dividend to the principal shareholder.*	25
47	**Permissible deductions not declared** *Covers various forms of permissible deductions from the earnings of the business which have incorrectly not been declared.*	25

48	**Addition – acquisition costs** *Covers expenses connected with the purchase of assets which have been incorrectly deducted as operating costs. These costs are a part of the cost of the assets which cannot properly be deducted until the time when the asset is sold.*	25
49	**Immediate write-off – buildings** *Covers incorrectly calculated immediate write-offs related to depreciable costs of buildings.*	25
50	**Non-deductible commitment commissions, etc.** *Covers commitment commissions, one-off payments, etc. in connection with the establishment of loans which have been incorrectly deducted at the time of the setting up of the loan.*	25
51	**Depreciation – leased assets** *Covers leased assets which are incorrectly written off in the year in which they are acquired.*	25
52	**Forward contracts – warehouse principle** *Covers incorrectly declared profits and losses on forward contracts declared.*	25
53	**Rents and interest rates for companies fixed at non-market prices** *Covers the setting of rents, interest rates, etc. negotiated between interested parties which are legal entities that are not at normal market prices.* **Effects of the 2010 tax reform:** Significant alterations with regard to group internal transfers which should have resolved a large part of the problem.	25
54	**Write-offs – development costs** *Covers incorrect treatment for tax purposes of development costs.*	25
55	**Dividends from subsidiary companies** *Covers incorrect treatment for tax purposes of dividends from subsidiary companies.* **Effects of the 2010 tax reform:** Significant simplification of regulations regarding dividends. Nevertheless, there is a risk that significant errors will arise during the transitional years.	25
56	**Territorial principle** *Covers incorrect declaration of earnings from operating bases overseas.*	25
57	**Dividends from companies which are not subsidiaries** *Covers incorrect declaration of dividends from companies which are not subsidiary companies.* **Effects of the 2010 tax reform:** Changes with respect to dividends from companies which are not subsidiary companies. Yields from non-subsidiary companies are now always taxed on the basis of 100% of the yield, with the result that the problem was resolved from 2010 onwards.	25
58	**Losses to be carried forward** *Covers incorrect calculations in general regarding losses which can be carried forward.*	25
59	**Profit/loss – operating equipment** *Covers incorrect calculation of profit/loss in connection with the sale of operating equipment.*	25
60	**Profit/loss – real estate** *Covers incorrect calculation of profit/loss in connection with the sale of real estate.*	25
61	**Profit/loss – investments** *Covers incorrect treatment for tax purposes of investment holdings.*	25

62	**Profit/loss – accounts receivable** *Covers incorrect treatment for tax purposes of profits and losses on accounts receivable.*	25
63	**Association activities** *Covers disallowed deductions of expenses for the non-commercial activities of an association.*	25
64	**Profit/loss – shares** *Covers the company's declaration of profits and losses on shares.* **Effects of the 2010 tax reform:** Significant changes concerning the treatment for taxation purposes of shares belonging to a company.	25
65	**Additional salary income – salary paid to the children of the principal shareholder** *Covers salary paid to the children of the principal shareholder which is disproportionate to the work they have done, so that the salary paid should be viewed as additional salary for the principal shareholder.*	25
66	**Company yacht** *Covers full or partial failure to pay tax on the value of use of a company yacht.*	50
67	**Additional salary income to principal shareholder – health costs** *Covers health-related expenses which do not fulfil the requirements for being treated as health expenses with respect to tax, but must instead be regarded as additional salary to the principal shareholder.*	25
68	**Partnership investment projects – basis of amortisation** *Covers disallowed deductions for amortisation and establishment of the basis for amortisation for multiple partnership investment projects, on the grounds that the basis of amortisation was calculated at too high an amount.*	25
69	**Company art** *Covers full or partial failure to pay tax on the value of use of company-owned art.*	50
70	**Establishment costs and capital levies** *Covers the incorrect deduction from the taxable earnings of the company of establishment costs and capital levies in general.* **Effects of the 2010 tax reform:** Significant tightening of the regulations on deduction of establishment and development costs under §8J of the Danish Tax Assessment Act.	25
71	**Thin capitalisation** *Covers the disallowed deduction of interest payments resulting from thin capitalisation.*	25
72	**Interest rate ceiling** *Covers disallowed deductions for interest payments conflicting with the rules concerning a ceiling on interest as laid down in the Corporation Tax Act §11B clause 8.*	50
73	**Company closure** *Covers errors in connection with the closure of the company.*	25
74	**Non-declared dividends from shares** *Covers declared dividends from shares in the principal shareholder's company where the company has not submitted information on the payment to the principal shareholder, and where the principal shareholder has not declared the dividends received as personal income.*	25
75	**Profit/loss on foreign exchange** *Covers undeclared losses and profits on accounts receivable and debts in foreign currencies resulting from changes in exchange rates.*	25

76	***Losses – theft*** *Covers disallowed deductions for losses from thefts.*	25
77	**Retaxation amount – permanent operating base** *Covers a missing or incorrectly calculated amount of retaxation in accordance with the Corporation Tax Act §31.*	25
78	**Connection charges** *Covers errors concerning incurred connection charges to public services in general under the Depreciation Tax Act §43.*	25
79	**Profit/loss – works of art** *Covers incorrect calculation of profit/loss in connection with the disposal of works of art.*	25
80	**Earnings prior to the foundation of the company** *Covers income dating from a period prior to the foundation of the company which has been incorrectly included in the company's taxable earnings.*	25
81	**Profit/loss – intellectual property rights** *Covers incorrect calculation of profit/loss in connection with the sale of intellectual property rights.*	25

Error types and tax rates applied for **the self-employed** for 2006 and 2008

No.	**Error type (Rubric and *description*)**	**Tax rate, percent, 2008**
01	**Various private expenses** *Covers expenses which are incorrectly deducted in the business accounts as being business-related, but which fairly obviously are actually for items which should be regarded as private expenses. (However, the error type does not include private assets which are incorrectly depreciated as business assets – cf. error type 33.)*	50
02	**Improvements vs. maintenance – operating costs** *Covers incorrect deduction as maintenance costs of costs of improvements to operating equipment.*	25
03	**Depreciation – time of starting to use operating equipment** *Covers disallowed depreciation of operating equipment and buildings for which deduction is refused purely because the equipment was not taken into commercial use during the tax year.*	25
04	**Non-declaration of profit/loss on real estate** *Covers non-declaration of profits or losses on the sale of real estate. (This error type does not include profits/losses which are declared but where the profits have been incorrectly calculated, cf. error type 24.)*	25
05	**Depreciation – year of sale** *Covers assets which are incorrectly depreciated in the tax year in which they were sold, including sales in connection with the closure of the business, cf. error type 19.*	25

06	**Undeclared business income** *Covers business income which is not declared, including income that is assessed on the basis of an estimate and state subsidies and grants that should be counted as business income. Also includes business operating income and insurance payments, including repaid insurance premiums resulting from the sale of operating equipment which have not been counted as income. (This error type does not include bookkeeping errors, cf. error type 45.)*	50
07	**Interest – business** *This error type only covers errors concerning business-related interest payments and earnings. (The error type does not include interest income and costs related to the private sphere, cf. error type 27.)*	25
08	**Missing deductions/earnings related to VAT and duty adjustments** *Covers additional deductions for operating costs as a result of changes in VAT and duties. Also covers additional taxable earnings resulting from adjustments to VAT and duties, for example in the case of earnings which are not liable to VAT, but where the earnings are mistakenly entered in the accounts as being subject to VAT.*	25
09	**Incorrect depreciation of assets** *Covers omissions in the depreciation of operating equipment, buildings etc. as a result of disallowed writing off of assets with immediate effect, etc., cf. error types 2, 20, 21 and 35.*	25
10	**Undeclared salary subsidies** *Covers salary subsidies from public funds which are not registered as earnings (or offset against the business salary costs).*	25
11	**Assessment by estimation – specific expense items** *Covers assessment by estimation of specific expenses, excluding travel expenses, cf. error type 26.*	25
12	**Undeclared profits on real estate – reinvestment** *Covers errors related to the reinvestment of profits from real estate in general.* **Effects of the recent tax reform:** The regulations concerning reinvestment have been tightened up.	25
13	**Company car** *Covers full or partial failure to pay tax on the value of the use of a company car.*	50
14	**Estimations** *Covers estimations of the taxable earnings of a business as a result of the failure to submit a correct declaration. (In addition to the estimation of the earnings of the business, this involves errors connected with accounts set up for business profits under the business taxation scheme, since the failure to submit a tax declaration can be interpreted as a decision not to opt for taxation under that scheme.) This error type does not include estimations of amounts required because of the failure to submit annexes to the declaration, cf. error type 16. Tax Control Act, §5.*	50
15	**Spouse – principal operator** *Covers errors in the declaration of income from the business in the name of a spouse who has not in reality been the person predominantly involved in running the business.*	25
16	**Assessment by estimation** *Covers the estimation of the taxable earnings of a company as a result of the failure to submit adequate annexes to the tax declaration, Tax Control Act §6, and the estimation of the earnings of the business as a result of the rejection of the entire accounts basis for the business.*	50
17	**Valuation of goods in stock** *Covers incorrect depreciation of the value of goods in stock and general incorrect valuations of stock at the end of the accounting period.*	25

18	**Assisting/salaried spouse** *Covers the incorrect treatment for tax purposes of payments to a spouse assisting in the business.*	50
19	**Closure of the business** *Covers undeclared profit or loss in connection with the closure of a company, including transfer of assets to private use.*	50
20	**Improvements vs. maintenance – real estate** *Covers incorrect deduction as maintenance costs of costs of improvements to real estate.*	25
21	**Fitting-out costs – rented premises** *Covers fitting-out costs for rented premises in general under §39 of the Danish Depreciation Tax Act.*	25
22	**Expenditures on fines** *Covers fines for infringements of the law, which are not tax deductible.*	25
23	**Entertainment costs** *Covers errors with respect to deductions for entertainment expenses in general.* **Effects of the recent tax reform:** Changes with respect to foreign business connections.	25
24	**Errors in declaration of profits on property** *Covers profits/losses which have been declared but which have been incorrectly calculated. (The error type does not include non-declaration of profits or losses on the sale of real estate, cf. error type 04.)*	25
25	**Proportion of private use** *Covers changes by estimation in the sharing of operating costs between private and business use. Contrast with error type 38, which covers a change by estimation in the sharing of acquisition costs of operational assets for mixed private and business use, and error type 44, which covers running costs, extension construction and other utilisation of real estate for mixed private and business use.* *In addition, the error type covers the value of private consumption of goods, etc. (calculated according to standard rates).*	34
26	**Business-related travel** *Covers the use of a company car under §9B of the Danish Tax Assessment Act, though cf. error type 25, which covers changes in the proportion allocated to private use and error type 30, which covers non-documented expenses for car use.*	50
27	**Private sphere: data entry, etc. by third parties** *Covers changes regarding the private sphere of the owner of the business, though not including personal income which has not been correctly declared by the owner of the business, and where it is not possible to make a comparison with data entries made by third parties, cf. error type 29.*	50
28	**Calculation and transfer errors** *Covers transfer errors and conversion errors that do not fall under any specific legal category.*	25
29	**Undeclared personal income** *Covers personal income other than salary which is incorrectly not declared, cf. error types 27 and 71.*	50

30	**Miscellaneous non-deductible expenses** *Covers expenses which do not meet the normal requirements for documentation or which otherwise are clearly not deductible because they are attributed to the wrong person or entity. Also covers errors concerning expenses in cases where an employee, etc. is by agreement between SKAT and the business not subject to tax, on condition that the business does not claim deduction for expenses (such as salary costs). Finally, this error type also covers errors resulting from double deductions in connection with the calculation of taxable earnings, but which are not attributable to pure accounting errors, cf. error type 45.*	25
31	**Periodisation of earnings/profits** *Covers periodisation errors with respect to net turnover, including work in progress on behalf of third parties.*	25
32	**Salary paid to children** *Covers salary paid to the children of the owner of the business which is disproportionate to the work they have done, so that owner is actually liable to tax on the salary paid.*	50
33	**Reduction in the basis for depreciation and thus in the depreciation for the year** *Covers over-estimates of the basis for depreciation in general, resulting in a reduction in the basis for depreciation and hence in the depreciation for the year.*	25
34	**Business not engaged in commercial activity** *Covers a refusal of the right to deduct losses on the grounds that the business cannot be viewed as being run as a commercial enterprise (a hobby enterprise).*	50
35	**Assets incorrectly written off with immediate effect** *Covers operating assets which, according to §6 of the Danish Depreciation Tax Act, cannot be written off with immediate effect, since their value is above the limit for such writing off, including values of assets which should be taken in combination. Danish Tax Assessment Guidance, Businesses, part C 2.4.6.2.*	25
36	**Errors in use of business taxation scheme** *Covers only errors directly related to the use of the business taxation scheme, and not adjustments concerned with the business taxation scheme deriving from other errors, such as a change in the amount saved up under the terms of the business taxation scheme as a result of other errors.*	25
37	**Rents fixed at non-market prices** *Covers the negotiation and setting of rents, etc. between interested parties that are not at normal market prices.*	50
38	**Mixed use of operating equipment** *Covers adjustments based on estimates of the sharing of the purchase sum – and hence depreciation for the year – between private and business use for newly acquired equipment with mixed use. Contrast with error type 25 (general operating expenses with mixed business and private use) and error type 44 (operating costs of and extensions to real property with mixed private and business use).*	50
39	**Errors in annual depreciation**	25
40	**Health expenses** *Covers expenses paid by an employer for medical treatment for employees in accordance with the provisions of §30 of the Danish Tax Assessment Act. The error type only covers expenses for employees; otherwise, it would be a matter of a private expense for the owner of the business, cf. error type 01.*	50
41	**Sleeping partner – joint leasing activity** *Covers errors related in general to investment partnership projects with not more than ten shareholders.*	25

42	**Additional deductions – operating costs** *Covers reductions in the taxable income of the owner of the business, other than reductions resulting from bookkeeping errors (error type 45), additional depreciation (error type 43) and the estimated amounts of specific expenses items (error type 11).*	25
43	**Additional depreciation** *Covers reduction in taxable earnings as a result of unclaimed deductions for depreciation, though not changes to annual depreciation because of incorrectly made deductions for immediate write-off (error type 9) and for small assets that have been incorrectly depreciated when they are approved for immediate write-off (error type 35).*	25
44	**Mixed use of real estate** *Covers adjustments based on estimates of the sharing of the maintenance costs, running costs and costs of extensions of property between private and business use for real property with mixed use. Contrast with error type 25 (general operating expenses with mixed business and private use) and error type 38 (newly acquired operating equipment with mixed private and business use).*	50
45	**Bookkeeping errors** *Covers actual bookkeeping errors. Does not cover calculation errors with respect to taxable earnings, cf. error type 28.*	25
46	**Depreciation of installations** *Covers installations which are incorrectly written off with immediate effect, but which should be capitalised and depreciated over time in accordance with the provisions of §17 of the Danish Depreciation Tax Act. Also covers installations in private houses which do not qualify to be either written off immediately or depreciated over time; Danish Depreciation Tax Act, §15.*	25
47	**Too much income included** *Covers general errors of declaration of too much income from the business. Does not cover declaration of too much salary income, income entered by third parties (error type 27) or bookkeeping errors (error type 45).*	25
48	**Bank charges and loan costs** *Covers commitment commissions, one-off payments, and other similar charges related to loans where the loan period is for more than two years and which are consequently not deductible; Danish Tax Assessment Act, §8, Section 3.*	25
49	**Adjustments to property value tax** *Covers adjustments to property value tax in relation to the proportion of business use of the real property. Does not cover adjustments to property value tax in the private sphere, cf. error type 27.*	100
50	**Deductions for work area and rent in own home** *Covers disallowed deductions for a work room in the home, on the grounds that the conditions for such deduction are not fulfilled.*	50
51	**Classification errors** *Covers earnings and expenses which are incorrectly classified, so that the error results in both an increase and a reduction in taxable earnings, though not including problems surrounding the issue of being a salaried employee vs. being self-employed, cf. error type 62.*	25
52	**Sponsorship expenses** *Covers deductions for sponsorship expenses disallowed on the grounds of the personal interest of the self-employed person.*	25
53	**Addition to the purchase price for real property** *Covers expenses which cannot be deducted as operating costs but which must instead be capitalised as part of the cost of acquiring real property.*	25
54	**Profits/losses on various items of operating equipment** *Covers declaration of profits/losses concerning various kinds of operating equipment in general.*	50

55	**Periodisation of expenses and losses from bad debts** *Covers expenses which are incorrectly deducted in the tax year before or after the tax year in which the expenses were incurred and were thus deductible. Also includes losses from bad debts that are deducted before the loss has been finally established.*	25
56	**Craftsman's salary – value of own skilled work** *Covers the taxable value of the taxpayer's own work in connection with construction of real property.*	50
57	**Failures to make adjustments for employees, etc.** *Covers the unpaid taxation on payments taken in kind by employees and the spouse of the self-employed person.*	50
58	1)	45
59	**Education and training expenses** *Covers disallowed deductions for education and training expenses as a result of the incorrect or lacking delimitation of expenses for supplementary education and training in relation to expenses for higher education.*	50
60	**Renting out of rooms** *Covers incorrect accounting of profit from renting out of rooms for habitation in accordance with §15P of the Danish Tax Assessment Act.*	50
61	**Business related profit/loss on exchange rates**	25
62	**Salary income/business income delimitation** *Covers errors in the tax declaration as a result of incorrect delineation between earnings from self-employment and salaried income.*	50
63	**Reclaimed depreciation – real property** *Covers calculation and declaration of reclaimed depreciation in general.* **Effects of the recent tax reform:** Full taxation of reclaimed depreciation on real property.	25
64	1)	25
65	1)	25
66	**Use of establishment account**[1)]	25
67	**Rights: profit/loss** *Covers errors in the declaration of profits/losses from the sale of rights in general.*	25
68	**Immediate write-off – buildings** *Covers the immediate write-off of the value of buildings in general.*	25
69	**Changes to taxation as a result of changes to calculations of tax for previous years** *Covers changes to taxable income as a result of changes to assessments for previous tax years.*	25
70	**Establishment costs and capital levies** *Covers the incorrect deduction from taxable income of establishment costs and capital levies in general.* **Effects of the recent tax reform:** Tightening of the rules for deductions under §8J of the Danish Tax Assessment Act.	25
71	**Incorrect salary payments** *Covers payments of salary which have not been registered, and from which tax at source has not been deducted in accordance with the Danish Withholding Tax Act.*	50

72	**Food and lodging** *Covers incorrect application of the rules concerning deductions for food and lodging as a self-employed business person in accordance with §9A, clause 8 of the Danish Tax Assessment Act.*	50

Note: [1)] This error type did not occur in the 2008 study.

ERROR TYPES RELATING TO VAT

No.	§	Error type (Rubric and *description*)
10	3	**Hobby business** *Covers disallowed deduction of VAT, on the grounds that the business is not involved in commercial activity.*
12	4	**VAT on sales not declared** *This error type covers non-declared VAT on sales, as evidenced by actual invoices. In addition, covers sales activities which are subject to VAT on which no VAT has been invoiced or declared.*
13		**Estimated amount of VAT on sales** *Covers sales subject to VAT where an estimate of the value has been made on the basis of use of raw materials, gross mark-up, negative private use, etc.*
58	5	**Transfer to private use** *Covers VAT not declared in connection with the transfer of assets from business to private use.*
59		**Use of own products** *Covers VAT not declared in connection with private use of products from the business.*
75	6	**Construction with a view to sale** *Covers building with sale in mind.*
77	7	**Building at own expense for business use** *Covers errors concerning construction of buildings at own expense for the use of the business.*
81	8	**Sale of assets** *Covers VAT payable on the sale of assets which is – incorrectly – not charged.*
95	11	**VAT on purchased made from within the EU** *Covers VAT on purchases from other EU countries on which VAT has – incorrectly – not been calculated.*
108	12	**VAT on goods imported from outside the EU** *Covers import VAT on purchases made from countries outside the EU where the VAT – incorrectly – has not been calculated.*
110	13	**Sales of VAT-exempt goods** *Covers sale of various VAT-exempt goods and services on which VAT has been incorrectly charged.*
126	14	**Place of delivery of goods** *Covers incorrect treatment with respect to VAT of international sales and purchases where account has not been correctly taken of the place of delivery of the goods.*
127	15	**Place of delivery for services** *Covers incorrect treatment with respect to VAT of international sales and purchases where account has not been correctly taken of the place of delivery of the services.*
136	23	**Commencement of obligation to charge VAT** *Covers periodisation errors with respect to VAT on sales.*

142	27	**Losses on bad debts** *Covers deduction of VAT with respect to bad debts before the loss has been finally established.*
143		**Basis for VAT calculation** *Covers errors concerning the supply of goods and services on which VAT has not been calculated on the full cost basis.*
153	30	**Sale of cars that have been leased or used as driving school cars** *Covers errors in the calculation of VAT on the sale of cars that have been used as driving school cars, etc.*
155	33	**VAT rate** *Covers incorrect rate of VAT as a consequence of errors in setting up the bookkeeping system.*
161	37	**Various private expenses** *Covers the incorrect deduction of VAT on purchases of goods and services which were clearly purchased exclusively for private use by the owner of the business.*
162		**Deductible purchases** *Covers failure of the business to make permissible deductions of VAT paid.*
163		**Rent** *Covers deduction of VAT on rent for buildings which has been incorrectly omitted because no voluntary registration has been made. Also covers deduction of VAT on rent for buildings which has incorrectly been omitted despite voluntary registration having been made.*
164		**Non-deductible purchases** *Covers the incorrect deduction of VAT on costs to which VAT was not applied, or where the expenditures are not related to the activities of the business that fall within the VAT regime.*
307	38	**Partial entitlement to deduction** *Covers the incorrect delineation of VAT-applicable and non-VAT-applicable activities, with consequential incorrect deduction of VAT on purchases.*
308		**Proportion for private use** *Covers an adjustment based on an estimate of the sharing of operating costs between private and business use whereby some deduction of VAT on purchases is disallowed.*
309		**Partial deduction: too little deducted** *Covers an adjustment based on an estimate of the sharing of operating costs between VAT-applicable and non-VAT-applicable activities whereby further deduction of VAT on purchases is approved.*
365	39	**Partial deduction: buildings** *Covers an adjustment based on an estimate of the sharing of costs of buildings used for mixed purposes.*
367	40	**Company telephone for employees** *Covers VAT on costs for the purchase and operation of telephones for employees in general.*
375	41	**Leasing of goods vehicles** *Covers an adjustment based on an estimate of the sharing of costs of leasing of goods vehicles used for mixed purposes.*
376		**Purchase of goods vehicles for mixed private and business use** *Covers an adjustment based on an estimate of the sharing of costs of purchasing goods vehicles used for mixed purposes.*
377		**Operating costs of goods vehicles used for mixed private and business use** *Covers an adjustment based on an estimate of the sharing of operating costs of goods vehicles used for mixed purposes.*

386	42	**Payment of employees in kind** *Covers incorrect deduction of VAT on purchases of goods for payment in kind of employees.*
387		**Costs of gifts** *Covers incorrect deduction of VAT on purchases of gifts.*
388		**Restaurant expenses** *Covers incorrect deduction of VAT on restaurant expenses in general.*
389		**Purchase and maintenance of cars** *Covers incorrect deduction of VAT on purchase and operating costs of cars registered as non-commercial vehicles.*
390		**Costs of courses** *Covers incorrect deduction of VAT on costs of courses in general.*
391		**Leasing of cars** *Covers incorrect deduction of VAT on costs of leasing cars in general.*
392		**Purchase and operating costs of housing for business owner and staff** *Covers incorrect deduction of VAT on the purchase and running costs of housing for the business owner and staff in general.*
393	43	**Adjustment obligation – capital goods** *Covers errors related to adjustments with respect to capital goods; Value Added Tax Act, §43 clause 1.*
436	51	**Voluntary registration in connection with renting out property** *Covers errors concerned with voluntary registration for VAT in connection with the renting out of real property; Value Added Tax Act, §51.*
437	52	**Incorrectly deducted purchase VAT: requirements for invoices** *Covers disallowed deduction of VAT on purchases where the normal requirements for invoices are not met.*
460	56	**Bookkeeping errors in calculation of liability for duty** *Covers incorrect calculation of liability for duty as a result of errors in bookkeeping.*
499	57	**Declared VAT liability too low in relation to the accounts** *Covers failure to declare VAT due despite it being correctly recorded in the accounts, because of errors in the calculation and balancing of the VAT due.*
500		**Declared VAT liability too high in relation to the accounts** *Covers declared VAT due being too high in relation to the amounts shown in the accounts.*
522	69	**VAT on used goods** *Covers errors in the treatment of VAT on used goods that are covered by the used goods VAT regulations.*
EXECUTIVE ORDER, VAT		
526	56	**The account for VAT on purchases should include only deductible amounts invoiced to the company** *Covers VAT incorrectly charged on purchases that have correctly not been invoiced with VAT. Also covers incorrect deductions of VAT on items which should not be charged to the business.*
540	58	**Missing documentation for VAT deducted on purchases** *Covers disallowed deduction of VAT on purchases because of lack of documentation for the expenditure.*
Electricity duty		
600		**Electricity duty: space heating** *Covers the incorrect deduction in general of electricity duty with regard to space heating.*

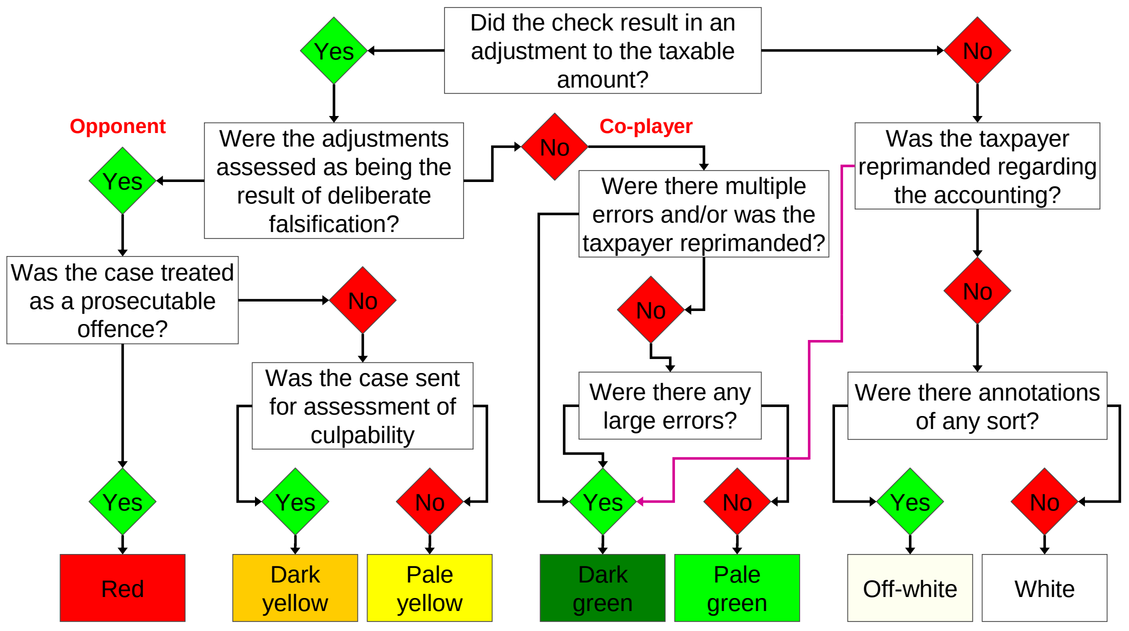
602		**Electricity duty: not deducted** *Covers additional deductions allowable for electricity duty which were incorrectly not deducted by the business.*
603		**Electricity duty: private use** *Covers the proportion of the electricity duty which should have been calculated for private use, but which was not.*
604		**Electricity duty: missing documentation** *Covers disallowed deduction of electricity duty because of lack of documentation for the expenditure.*
605		**Electricity distribution charge** *Covers the incorrect deduction in general of the electricity distribution charge.*
606		**Declared electricity duty too great in relation to the accounts** *Covers declared VAT due being too high in relation to the amounts shown in the accounts.*
607		**Electricity duty: not deductible** *Covers disallowed deductions of electricity duty on the grounds that the electricity was not used by the business or that the activities of the business do not give entitlement to the deduction of the electricity duty.*
608		**Electricity duty: partially deductible** *Covers the partial deduction of the electricity duty because the activities of the business are partially in areas that fall within the VAT regime and partly in areas that fall outside it.*
609		**Electricity duty: bookkeeping errors** *Covers accounting errors related to electricity duty.*
610		**Declared electricity duty too little in relation to the accounts** *Covers declared electricity duty being too low in relation to the amounts shown in the accounts.*
Fuel duty		
611		**Dyed diesel oil** *Covers disallowed deductions of expenses related to dyed diesel oil because the fuel was not used for purposes for which deduction is allowable.*
612		
613		**Fuel duty: heating** *Covers the incorrect crediting of fuel duty because the fuel was used for heating (purpose not approved for credit).*
615		**Fuel duty: no entitlement to credit** *Covers the incorrect crediting of fuel duty because the fuel was used for other purposes not approved for credit.*
616		**Fuel duty: entitlement to credit** *Covers additional deductions for fuel duty.*
Water duty		
621		**Water duty: not deductible** *Covers disallowed deduction of water duty because the water was not used in the business.*
622		**Water duty: deductible** *Covers failure of the business to make permissible deduction of water duty.*

CO_2 duty		
637		**Gas duty: space heating** *Covers the incorrect deduction in general of gas duty.*
638		**Duties on raw materials** *Covers the incorrect deduction in general of raw materials duties.*
Payroll tax		
700		**Payroll tax** *Covers VAT-exempt turnover which the business has incorrectly failed to record as subject to payroll tax.*
701		**Changes to the payroll tax base** *Covers repayment of payroll tax as a result of an alteration in the base for calculating the tax.*
702		**Declared payroll tax liability not in accordance with accounts** *Covers declared payroll tax not in accordance with the accounts.*
705		**Duty for private use of company vehicle** *Covers errors related to duty payable for private use of a company vehicle.*

Note: [1)] This error type did not occur in the 2008 study.

Appendix figures

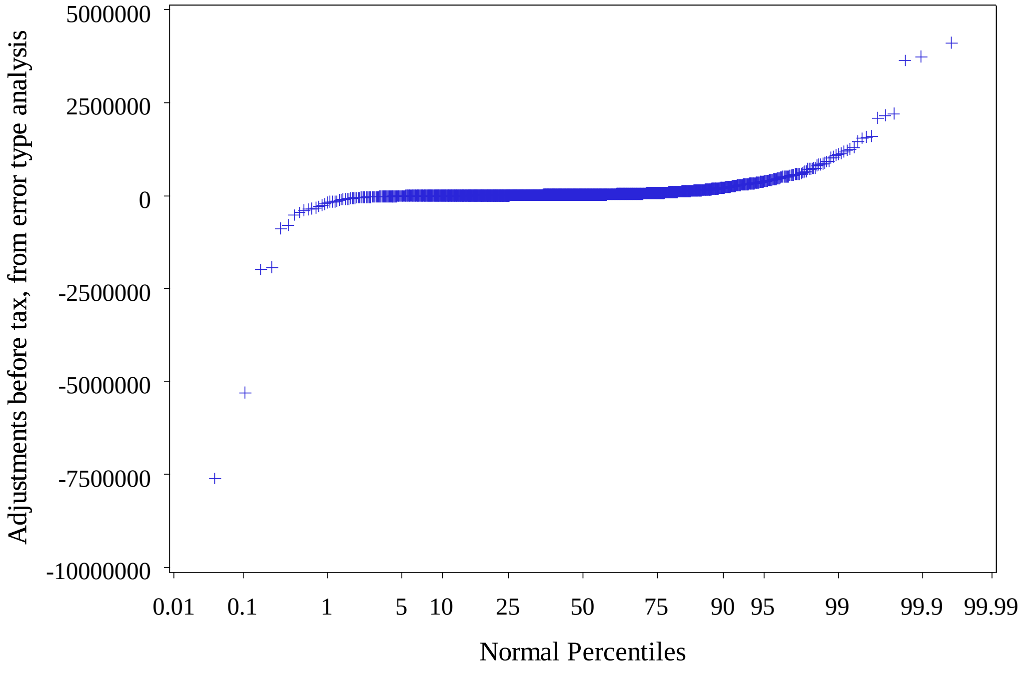
Appendix figure 1. Flow chart for establishing ratings



Appendix figure 2. Explanatory comments on compliance scale for businesses

Level 6 **Snow white**	The compliance audit has **not** given rise to adjustments of any kind. There were **no** reservations giving rise to annotations. *(The case is shelved after a simple audit or after a reassessment that does not result in any adjustment.)*
Level 5 **Off-white**	The compliance audit has **not** given rise to an adjustment to taxable income or to the amount of VAT the business should pay. Some guidance has been given though, for example in the form of a recommendation for changes in the future. The compliance audit has **not** led to a reprimand of the taxpayer with respect to the accounting. *(Reassessment does not lead to any change in the taxable amount.)*
Level 4 **Pale green**	The compliance audit has given rise to an adjustment to taxable income or to the amount of VAT the business should pay. There is only a single error, and this error is evaluated as having been unintentional, purely a mistake. Some guidance may have been given but the taxpayer has **not** been reprimanded – specifically the compliance audit has **not** led to a reprimand of the taxpayer with respect to the accounting.
Level 3 **Dark green**	The compliance audit has given rise to an adjustment to taxable income or to the amount of VAT the business should pay. There may be several errors, but they are not evaluated as being deliberate. Some guidance may have been given and the taxpayer may have been reprimanded. If the taxpayer has been reprimanded regarding the accounting specifically, this alone will be sufficient to trigger the evaluation *dark green* regardless of whether or not the compliance audit has uncovered any errors.
Level 2 **Pale yellow**	The compliance audit has given rise to an adjustment to taxable income or to the amount of VAT the business should pay. The error is evaluated as being deliberate or based on an improbable interpretation of the law and regulations. The case is **not** sent for assessment of culpability. *(Tax avoidance)*
Level 1 **Dark yellow**	The compliance audit has given rise to an adjustment to taxable income or to the amount of VAT the business should pay. The error is evaluated as being deliberate or based on an extremely dubious interpretation of the law and regulations – a serious error. The case is sent for assessment of culpability. *(Tax evasion.)*
Level 0 **Red**	The compliance audit has given rise to an adjustment to taxable income or to the amount of VAT the business should pay. The error is evaluated as having been a deliberate breach of the law – a serious error. The case is treated as a prosecutable offence.

Appendix figure 3. Distribution of adjustment amounts for companies and for businesses run by self-employed people, excluding VAT adjustments



APPENDIX TABLES

Appendix table 1. Number of businesses run by self-employed people and companies in the sample and in the whole of Denmark, by region

Form of ownership	Region	Number in sample		Number in the whole of Denmark	Proportion of businesses in total
		Unweighted	Weighted		
Companies	Copenhagen	169	144	28,267	41 %
	Central and Southern Zealand	115	117	22,409	26 %
	Central Jutland	142	207	40,088	33%
	Northern Jutland	118	104	19,911	27 %
	Northern Zealand	162	200	39,232	37 %
	Southern Denmark	131	188	36,049	30 %
	Total	837	960	185,956	32 %
Self-employed	Copenhagen	327	207	39,855	59 %
	Central and Southern Zealand	385	325	62,413	74 %
	Central Jutland	357	433	83,144	67 %
	Northern Jutland	382	274	52,710	73 %
	Northern Zealand	335	352	67,564	63 %
	Southern Denmark	369	441	84,791	70 %
	Total	2,155	2,032	390,477	68 %
Businesses in total	Copenhagen	496	351	68,121	100 %
	Central and Southern Zealand	500	442	84,822	100 %
	Central Jutland	499	640	123,232	100 %
	Northern Jutland	500	378	72,621	100 %
	Northern Zealand	497	552	106,796	100 %
	Southern Denmark	500	629	120,840	100 %
	Total	2,992	2,992	576,433	100 %

Note: The numbers of companies and self-employed persons for the whole of Denmark were calculated after correction for non-existent businesses in the original sample, since the final population is not known with absolute certainty. For example, a person may still be listed in SKAT's system as self-employed, even though the business has in fact ceased to operate. When this is discovered, the business is removed from the sample.

In cases where a selected business was found not to exist, a new business was taken from a similarly randomly selected reserve list in order to ensure that the number of checks made in each region remained equal. This ensured both that the error percentage calculations were made on the basis of extant businesses, and that the level of uncertainty in the calculations of error percentages was the same for each region. Of the originally selected companies in the sample, 4.5% had to be replaced with companies from the reserve list. For the self-employed, 9.4% of the businesses in the original sample were replaced from the reserve list.