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TAX TRIBUNE

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Dear Readers,

I am delighted to present the new edition of the IOTA magazine, Tax Tribune. In this magazine, we publish a wide selection of articles on the relevant issues tax administrations are facing today. This edition contains 17 articles written by speakers from the various workshops IOTA organised throughout 2016. In these events, we provide the opportunity for tax administration officials from our 45 member countries to share best practice on effective and efficient approaches in dealing with the current issues and challenges facing todays tax administrations. Our workshops gather a lot of useful information that is interesting for tax professionals in Europe and beyond. The main purpose of our magazine is to share with a wider community the information, experience and analysis that our workshop participants gained from each other. We believe that through an open and extended exchange of views participants gain inspiration and take back to their home administrations innovative and new ideas on how to improve tax compliance and revenue collection. Interesting examples in this respect may be found in this magazine and we hope it will provide you with a useful source to cherry pick from those innovations or ideas.

In this edition, there are articles on issues such as increasing tax compliance, the fight against VAT avoidance and VAT fraud, the approach to large taxpayers, tracking cash flow (E-commerce), the analysis and efficient use of big data, improving processes in tax administrations and perceptions of the tax system. I believe these topics address some of our major concerns and challenges. I would like to thank all the authors for devoting time to write these articles and share lessons learned and the results achieved. All of them provide value and output to our membership.

I trust you will find this magazine useful and I wish you an enjoyable reading.

Miguel Silva Pinto
Executive Secretary of IOTA

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THE SWEDISH APPROACH TO IDENTIFY NON-FILERS ON THE INTERNET

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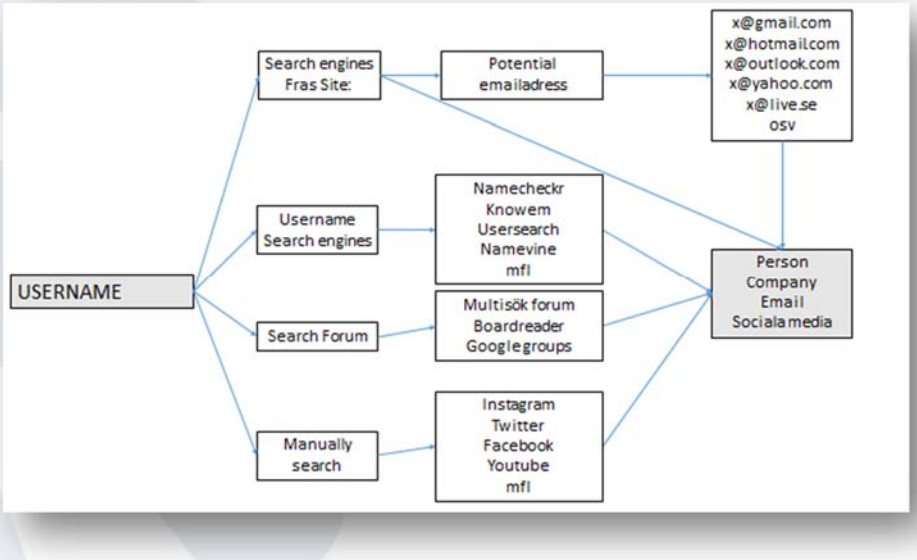
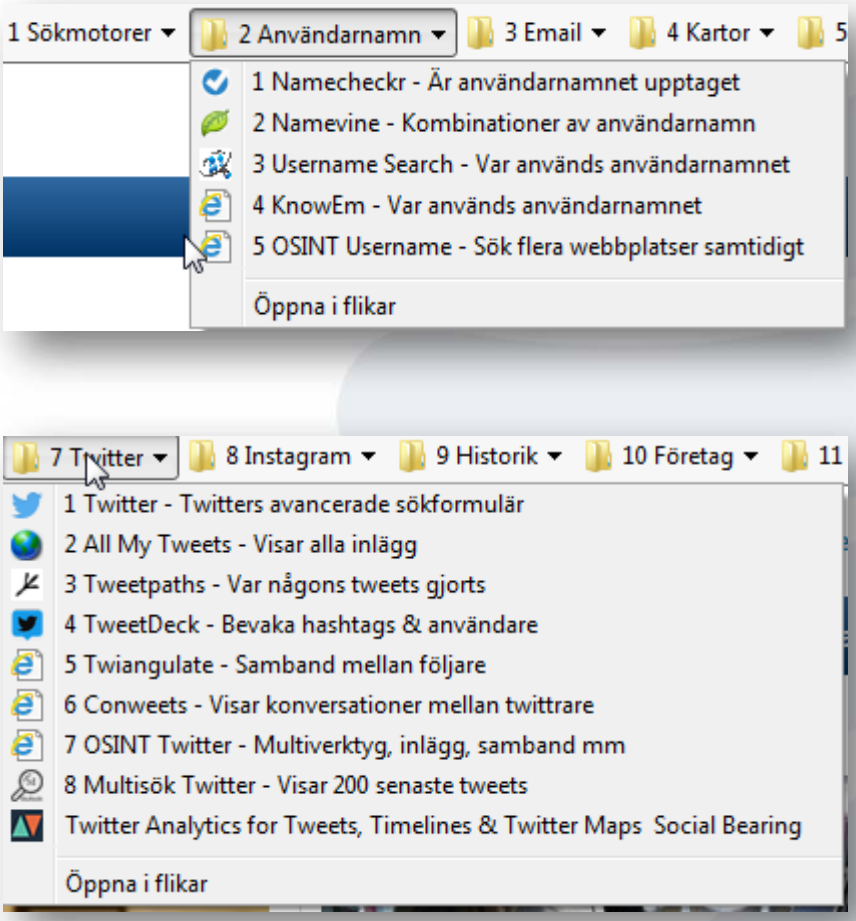
The Swedish Tax Agency (STA) has been investigating non-filers on the internet since the end of the twentieth century. Back then we used open source tools to search for information about domains, IP-addresses, who is-information, traceroutes etcetera.

Today we use these tools as well, although we are aware of all the opportunities for the non-filer to remain anonymous by using fake names and encrypting tools to hide their IP-address and email-information. There is a massive amount of information - and disinformation - on the internet. The use of different social medias has exploded. In order to identify non-filers we search with search engines, on social networks and online communities, we look for usernames, email-addresses, location and maps, photographs and videos. The work can be illustrated with the fo llowing picture.



Above is an example of a flowchart starting with a username and below examples of username web resources and Twitter web resources.



As a consequence of the increased focus on the open internet, the use of the Dark net and similar deep web resources has expanded, especially for non-filers who have no interest in being investigated by the STA or other authorities. We have started to monitor the most common market-places on the Dark net using their open source tools. We haven't had much luck yet identifying vendors on the Dark net but we are convinced that we need to observe this part of the web as well in case more vendors move their businesses in order to avoid detection. The best result we have had is that we found some connections between usernames on the Dark net as on the internet, where the possibility to identify the real person is much larger. The tricky part is to verify that it is the same person. We have also found a couple of message boards with lots of interesting threads by searching on different usernames.

When the search for information about non-filers on the internet gets more difficult due to increasing possibilities to be anonymous and to use encrypting services, we have realized that we need to focus on the one thing we and the vendors have in common, the payment.

In Sweden the STA can quite easily get information such as account statements, business deals etc. from banks and other third parties. This has of course led to the

use of more anonymous payment method such as foreign banks, internet wallets and crypto currencies.

The STA also have the possibility to perform test purchases on the internet in order to identify vendors.

In 2014 and 2015 we participated in an EU-project, Tafeic, and tried different tools like Xenon and other open source tools in order to find on-line sellers of drugs and medicines. We could easily find a lot of websites that sold these products. Most of them were totally anonymized. During this project we realized that the only way to identify the seller was by ordering the products and then get the payment information.

We continued this work in a new Swedish project that started in 2016 and we included searching on the Dark net/Deep web which is a totally new area for the STA. It is clear to us that our only way to succeed in identifying non-filers here is tracking payments. Even if the non-filers try different ways to make the payments anonymous, using bitcoins, prepaid cards and bank accounts registered on front men, in the end they want to change it into a regular currency or use it to buy traceable commodities like properties or cars etc.

Another conclusion is the need for the tax agency to work with other authorities outside and within the country. In 2013 we searched information on the internet and found out that many Swedish poker players did not declare their income and felt safe that the STA would not be able to identify them. Profits from on-line poker games arranged outside EES is taxable in Sweden.

We identified about 150 players only by searching on the internet .We sent questions to them and asked them to declare their income from poker. We also found another 150 players with the Swedish flag connected to their alias that we could not identify by searching on the internet.

We asked for, and got enforcement assistance from the Isle of Man, in order to be able to identify the other players by their alias. If we didn´t get a reliable answer from the players about their incomes and profits, we sent another request for enforcement

assistance to the Isle of Man and could then get the information from the poker organizer through Competent Authority.

Most of the players had not declared their income. Their total income tax was raised with more than SEK 58 million and the penalties was SEK 18 million Skr. Almost all of it has been paid.

Since the internet is a world wide web and not a domestic market, you really need the collaboration with other countries.

CONTROL OF E-COMMERCE IN BULGARIA COURIER COMPANIES – RELIABLE SOURCE OF INFORMATION ON CASH ON DELIVERY

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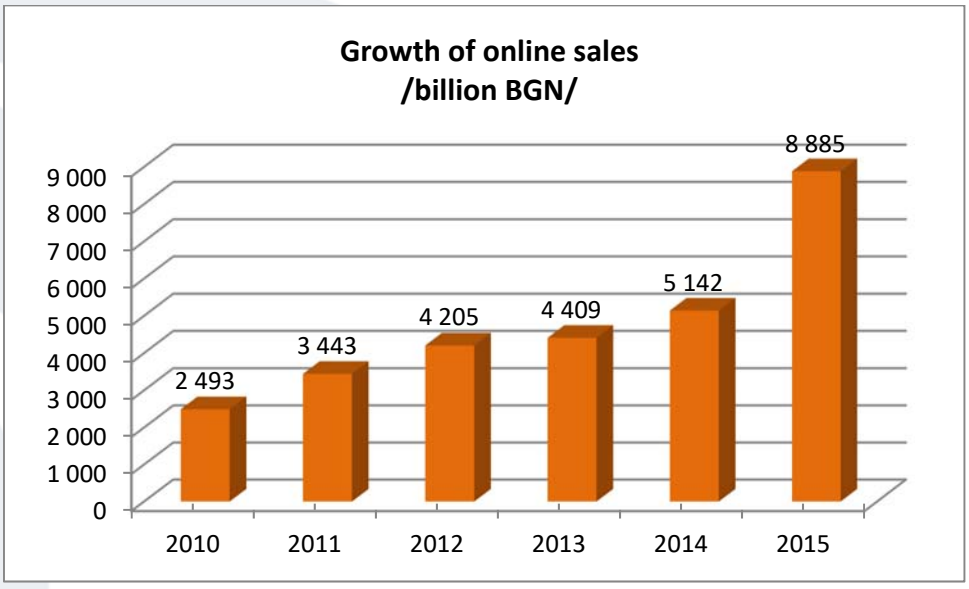
E-commerce is one of the fastest growing areas of business worldwide, in Bulgaria as well.

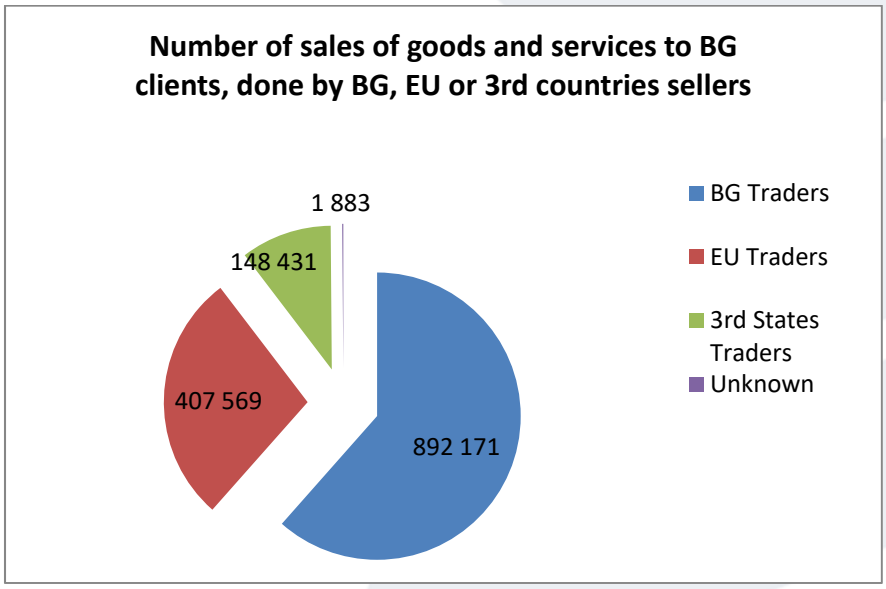
Let us look at some figures as a background: 93% of businesses in our country have internet access and half of them have their own websites; more than 60% of Bulgarian households have internet access.

The number of persons who have purchased goods or services for private use via the internet has rapidly increased and in 2015 reached over 1.1 million. Respectively the value of sales through online stores also has increased and exceeds 8.9 billion BGN (≈ 4,55 billion EUR) on an annual basis.

The growth of online sales in the last six years is shown on the graph below:



Domestic online traders are the majority among all e-traders from whom Bulgarians purchase goods. The next chart shows the proportion between BG traders, European Union traders and third countries traders in Bulgarian e-market.



Considering the growing volume of electronic sales, it becomes important to control effectively the correct declaration and payment of taxes due.

That is why in April 2016 a specialized unit has been established at the National Revenue Agency (NRA) – "E-Audit" Department within the Control Directorate at the Headquarters of NRA. The new department has a range of activities in three directions: e-audit, e-commerce, and in the future – IT Forensic.

In fact control of e-commerce started a few years earlier: at the beginning of 2012 when a team for control of e-commerce was established. The team consisted of three experts working part time on e-commerce issues.

The focus of their activities was to establish a good relationship with courier companies and to start obtaining relevant data from them. The reason was that in Bulgaria "cash on delivery" was and still is the most widespread method of payment in online purchases from domestic websites.

It should be emphasised that a legal base for obtaining bulk data from courier companies is an issue of big importance.

We had to overcome some provisions in two legal acts, which could be interpreted as contradictory to each other.

Art.12, para 1 Tax Insurance Procedure Code (TIPC) says "*The body of receivable at the observance of the provisions of this code:*

- *…11. shall require from every person state and municipal bodies data, information, documents, papers, materials, properties, statements of account, references and other information carryings necessary for the implementation of the controlling activity;"*

Art 37, para 5*: "All the persons, state or municipal bodies shall be obliged in 14 days term from the receiving of request by the body of receivables on the ground of Art. 12, para 1, it. 11 to present the data, the information, the documents, the papers, the information carryings and the other evidences regarding the indicated in the request facts and circumstances."*

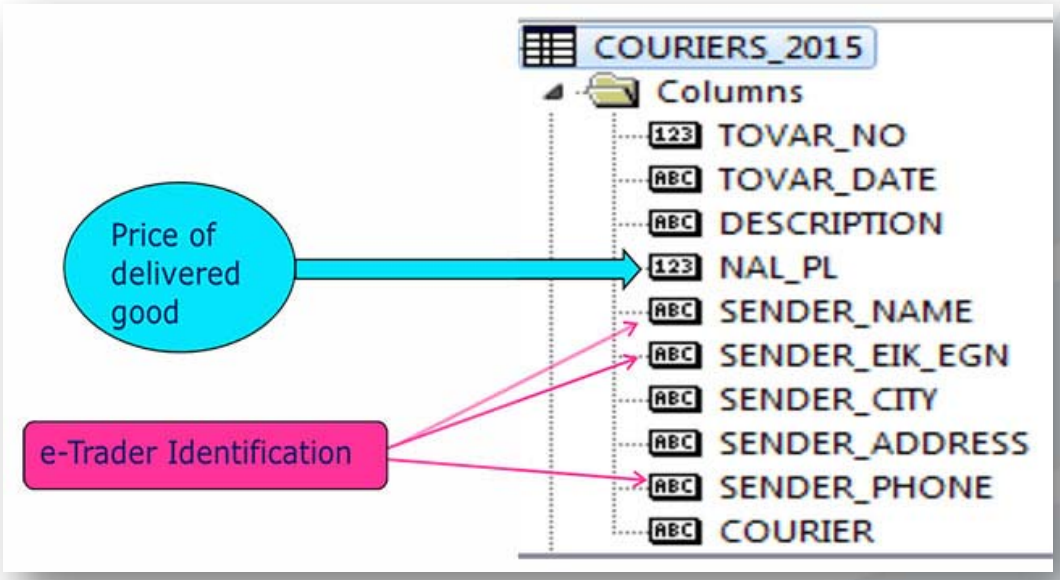
But, in the Postal Services Act (PSA) there is a kind of prohibition:

Art. 82. Para 1 says *"The post operators are not entitled:*

- *to provide information on items and the content thereof except to the sender and receiver or to persons authorized by them;*
- *6.to provide information to anybody about the post traffic between persons"*

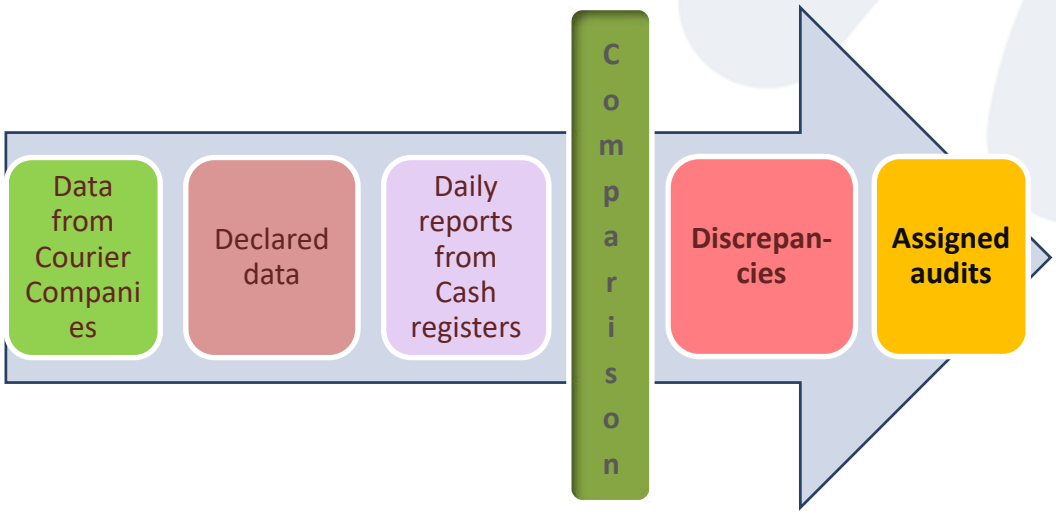
That is why our administration sent an official letter to the Communications Regulation Commission (CRC), which is the National Regulator for Telecommunications and Postal Services. At the beginning of 2013 we received the CRC positive legal standpoint regarding the possibility NRA to obtain bulk data from courier companies.

At that moment we had already visited the biggest courier companies and we had been aware of data available in their information systems. So, we officially requested from them to provide data in a pre-defined electronic format for the previous year. The data had to be on a transactional level and had to include information regarding the sender and the receiver of goods and the exact value of every delivery. The last pointed activity we repeat every year - since 2013 until now: we send official requests to courier companies for providing data about the deliveries for the previous year. After receiving the data we processed it using different tools. For example, in 2016 we uploaded the data, received from 14 courier companies to the Oracle database. The picture below shows the structure of the Oracle table consisting of more than 19 million records:



Using PL/SQL we grouped records by e-trader identification data and filtered those of them who had received the biggest amount of money, meaning those with the biggest turnover. At the second stage with the help of the IT department we compared that data with the NRA's databases, in particular: VAT registration, total VAT tax base declared, total amount of registered sales through fiscal devices, total income declared in annual tax returns. Thus we were able to find out the biggest discrepancies and to assign audits of about 140 e-traders.

The next picture presents a summary of our actions:



In the frame of audits the substantive actions implemented by the bodies of receivable *(tax inspectors)* are as follows:

- Direct access to e-shops software, including retrieving the e-site database;

- Requiring information from hosting companies;
- Obtaining detailed data from courier companies;
- Analysis of the available information and documents linked to sales - orders, shipments, payments, etc.;
- Additional analysis based on data available in NRA databases using ACL or Arbutus

Normally we meet problems in our work: besides the common ones that are inherent in e-commerce, like anonymity of Internet-sites or using frontmen /strawmen/, the other problematic areas are:

- Data quality: Not all courier companies require proper identification data from the senders of goods;
- Missing data: When senders of goods do not use mediators (couriers) and deliver goods to the clients themselves;
- Variety of software used by e-traders (e-shop S/W) and putting time and efforts to understand/puzzle out the structure of e-site database and the meaning of its particular elements;
- Manipulated or deleted data.

A lot of work has to be done:

- We would like to have good professional relationship with other interested national institutions and we have already started establishing contacts with some of them, as for example the Commission for Consumer Protection, State Agency for National Security, etc.
- We would like to cooperate with Bank cards operators – Visa, MasterCard, others and to receive relevant information from them;
- We would like to initiate several legislative changes, for example – for strong rules about the identification of the senders of goods, which should be applied by the courier companies.

We would like to work in support of the business and society at large. We have to admit that in this respect the exchange of knowledge and ideas with other European administrations, including all IOTA members, is extremely useful for us.

E-COMMERCE AND WEB SCRAPING

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Introduction

Though I have been working for the Belgium Federal Public Service of Finance for over 20 years now, IOTA particularly the meeting 'Tracking Cash Flow in Relation to E-commerce Activities' (14-16 September 2016 in Riga) was my first experience abroad in the exchange of information between European countries.

The workshops and presentations gave me a very good view on how other countries look and see things, how they are organized and what their operational working procedures and their tax legislations are. Some were surprising to me. For example, I didn't know that the same kind of information from the same bank can be obtained automatically in one European country while in the other you are not even allowed to ask for that information as a tax agent.

The presentation

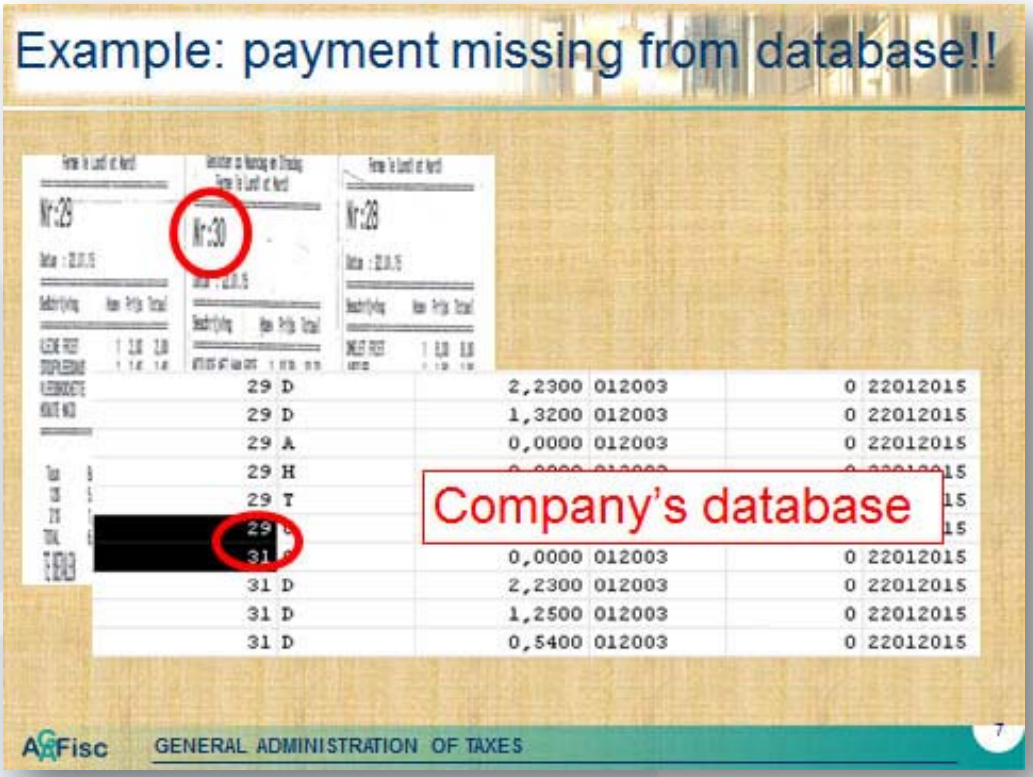
My presentation was about e-commerce and scraping the internet to have some preliminary information that can be checked with the company's database.

Companies store information about their business (whether e-commerce or other) in databases. So I tried to convince the audience of the importance of information in all kinds of databases (created by accounting software, cash register systems, spreadsheets, database management systems or real enterprise resource planning products) containing the details of financial transactions.

I also explained that, in my view, a tax auditor should gather some relevant information first, before demanding the electronic data from those databases.

This was illustrated by a traditional example:

1. collecting some tickets on paper
2. asking for the company's database
3. comparing both (ticket n° 30 is missing):



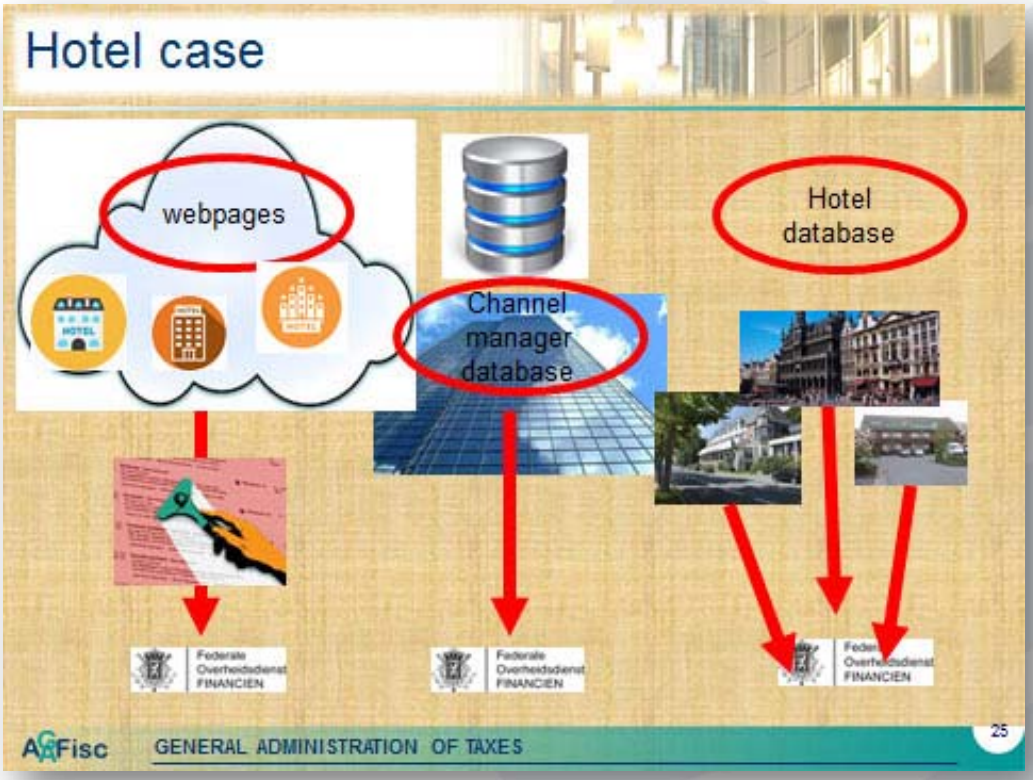
It turned out not to be the only missing transaction; the company admitted committing tax fraud on a larger scale. They deleted registrations of payments every day so that they could lower the financial result that goes to their bookkeeper and the tax declaration.

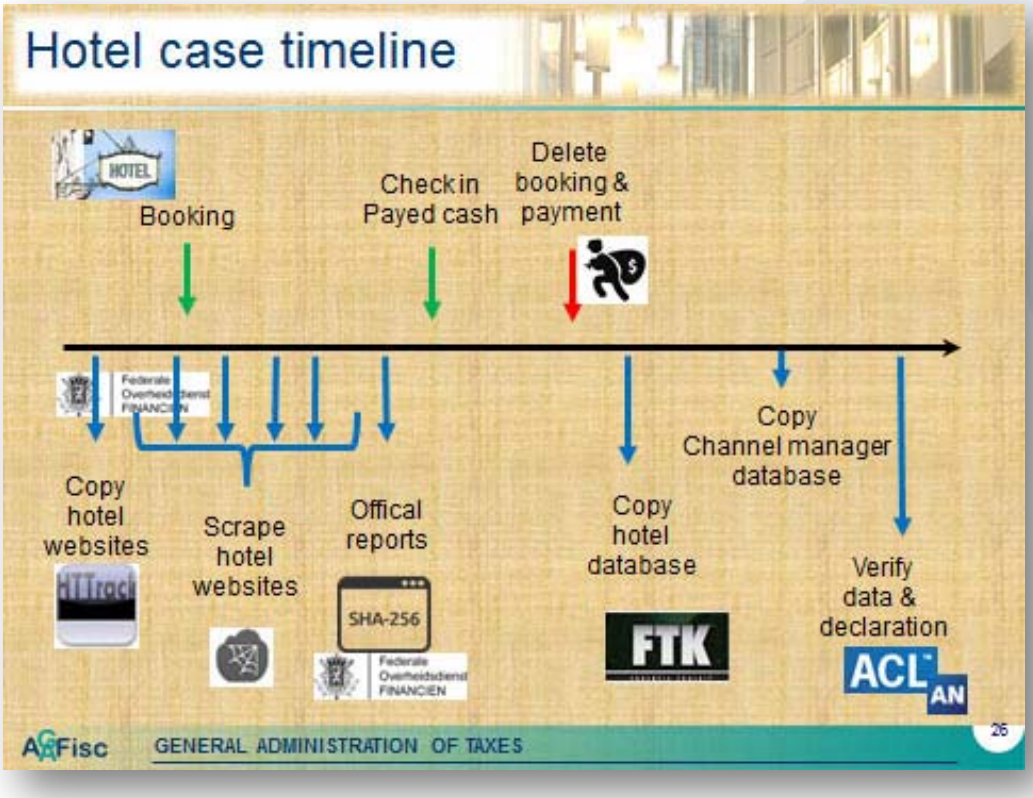
This short practical example was used to show that some preliminary gathered information before starting a tax audit or at the beginning of the investigation is very useful.

The preliminary information can be of any kind:

1. tickets
2. invoices
3. delivery notes,
4. a complaint you received,
5. …
6. but also it can be gathered by scraping the internet:

As an example, among other things, a hotel case was presented:





Conclusion

In Belgium tax auditors encounter few problems while gathering local companies' financial database information needed for tax investigation (except for those of financial institutions).

Gathering these databases from companies abroad (who have tax obligations in Belgium because they are selling there) is a lot more difficult, the procedures are long and hardly known.

Tracking cash and tracking sales would be a lot easier if the detailed digital tax information in those foreign companies' databases could easily be exchanged between countries. With the current possibilities of data on the web it might be very easy from the technical point of view to give official tax agents access for investigation purposes.

At the meeting in Riga I learned that changes in mindset, work procedures and legislation don't proceed with the same common speed and ease as the technological possibilities, but with initiatives from IOTA progress can be made.

FIGHT AGAINST VAT AVOIDANCE AND VAT FRAUD

VAT AVOIDANCE RELATED TO PHARMACEUTICAL PRODUCTS

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The purpose of this article is to highlight the importance of drafting legislation (in this concrete case, the VAT act) according to the objectives which are meant to be achieved and taking into account the applicable case law. In addition, it is necessary to say that Value Added Tax is established all around the Member States of the European Union by means of the transposition of the Council Directive 2006/112/EC (hereinafter, the VAT Directive) to their national legal system. Therefore, in this case it has to be taken into account that if a member state does not comply with the objectives set out in the VAT directive, this fact may lead to a conflict with the European Commission – the so-called 'Guardian of the Treaties' – which may be solved by the European Court of Justice.

These situations are of course undesired by both the member states and the European Union, because they entail a waste of resources and time which could be avoided at earlier stages. And another undesired outcome of these situations is VAT avoidance. In this case, the conflict between the Kingdom of Spain and the European Commission began in March 2010, when the latter formally informed the Spanish authorities that the application of the regime of reduced tax rates of VAT was deemed to be in breach of its obligations under the VAT directive and article 258 of the Treaty of Functioning of the European Union ('TFEU'). After receiving the answer of the Spanish authorities, the European Commission decided to present an action before the European Court of Justice in July 2011. The decision of the Court took place in January 2013 (Case C-360/11), that is, almost three years after the conflict began. And the corresponding amendment of the Spanish VAT Act entered into force in January 2015.

Now that the procedural facts have been briefly mentioned, it is time to see the main articles that can be applied to this case:

VAT Directive:

Article 98

1. Member states may apply either one or two reduced rates.

2. The reduced rates shall apply only to supplies of goods or services in the categories set out in Annex III.

This 'only' means that the application of reduced tax rates has to be interpreted in the most restrictive way. Hence if a product or service is not in Annex III of the VAT directive, no reduced VAT rate can be applied. Therefore, if we want to see which pharmaceutical products can benefit from a VAT reduced tax rate it is mandatory to see points three and four of the above mentioned annex, which state that the following products may benefit from a reduced VAT rate:

(3) pharmaceutical products of a kind normally used for health care, prevention of illnesses and as treatment for medical and veterinary purposes, including products used for contraception and sanitary protection;

(4) medical equipment, aids and other appliances normally intended to alleviate or treat disability, for the exclusive personal use of the disabled, including the repair of such goods, and supply of children's car seats;

Spanish VAT Act:

We have already seen what is allowed by the EU Law as regards reduced VAT rates. The transposition of the above mentioned articles of the VAT directive has been done by means of article 91 of the Spanish VAT Act. As it is a very long article, it has to be said that pharmaceutical products could be found in article 91(1)(6)(second paragraph), which stated the following before the decision of the European Court of Justice:

A reduced rate of 10% shall be applied to the following goods:

Sanitary products, material, equipment or instruments that, objectively considered, can only be used to prevent, diagnose, treat, alleviate or cure illnesses or diseases of humans or animals.

Cosmetics and personal care products are not included, excepting sanitary towels.

Background

The first aspect that brings attention when reading carefully the Spanish law is that it states the application of a reduced VAT rate to 'sanitary products' instead of 'pharmaceutical products' as stated in points 3 and 4 of VAT directive's annex III.

As it can be seen in points 58 to 68 of the court's decision, 'sanitary products' or 'medicinal products' cannot be considered the same as 'pharmaceutical products' as stated in point 3 of VAT directive's annex III. In fact, if these concepts had the same meaning, it would not make any sense to outline 'medical equipment, aids and other

appliances' in a different point (in this case, point 4) of the above mentioned annex. In fact, 'pharmaceutical products' have to be seen as a kind of 'medicinal product' (whose meaning is already explained in directive 2001/83), which makes sense with the restrictive interpretation of goods included in annex III as mentioned above. As a matter of fact, according to article 1(2) of the above mentioned directive 2001/83, a medicinal product is defined as follows:

Any substance or combination of substances presented for treating or preventing disease in human beings.

Any substance or combination of substances which may be administered to human beings with a view to making a medical diagnosis or to restoring, correcting or modifying physiological functions in human beings is likewise considered a medicinal product.

Decision of the European Court of Justice

The main arguments exposed by the ECJ where the following ones:

As mentioned before, there has to be a strict interpretation of the goods and services included in Annex III of the VAT directive, which are considered as exceptions.

Not all sanitary or medicinal products, material, equipment or instruments can be deemed to be pharmaceutical products. In fact, point four of the above mentioned annex III outlines a certain kind of sanitary equipment, which would not make any sense if 'sanitary/medicinal products' and 'pharmaceutical products' (outlined in point 3 of the same annex) were the same concept.

The purpose of the existence of reduced tax rates in VAT is to reduce cost for final consumers. Therefore, the vast majority of the imports may not have the right to get this reduced tax as they are not made directly by final consumers.

Article 168(4)(c) of TFEU states the purpose of the EU institutions to adopt measures in order to guarantee the security and quality of the medicinal and sanitary products. Thus, incompatibilities may be detected between this purpose and the one mentioned before (reduction of VAT rates in order to reduce cost for final consumers).

It has to be added that sanitary and medicinal products are mainly sold to hospitals and health institutions whose activities are VAT-exempted. This means that these entities cannot deduce VAT from their purchases. Therefore, all the above mentioned facts create a 'good atmosphere' for a VAT avoidance scheme.

How to detect and tackle those VAT avoidance schemes

In this case, databases are crucial tools for detecting these schemes. It is necessary to highlight the important information and look for inconsistencies in the taxpayer's activities (inter alia, purchases of medicinal products done by non-final consumers or firms importing goods not included in chapter 30 of the Tariff's Combined Nomenclature who declare them with a reduced VAT rate). Once the VAT avoidance

scheme is detected, its quantification is the next step in order to decide to open the appropriate case and, if necessary, to extend the investigations to other possible concerned taxpayers.

Consequences of the decision of the ECJ and way forward

Article 90(1)(6) of the Spanish VAT Act was modified as follows:

A reduced rate of 10% shall be applied to the following goods:

Pharmaceutical products included in Chapter 30 of the Combined Nomenclature liable to be used directly by the final consumer (...).

This modification took place by means of the Spanish Act 28/2014, which entered into force on 1st January 2015.

This situation would have been avoided with an appropriate transposition of the VAT directive. The outcome of the above mentioned transposition was a conflict between the Kingdom of Spain and the European Commission which could have been solved at earlier stages. This conflict entails a waste of resources and, what is worse, a VAT avoidance scheme (whose concerned taxpayers may switch to VAT fraud once they know the decision of the ECJ) and legal uncertainty due to the VAT Act amendment mentioned above.

Therefore, and to conclude this article, it is necessary to learn from the mistakes made in the past and to spread good practices in order to avoid that other tax administrations commit the same mistakes.

Useful links

EU VAT directive (consolidated version)

http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02006L0112-20160601&from=EN

Treaty of Functioning of the European Union (consolidated version)

http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:12012E/TXT&from=EN

Spanish VAT Act (in Spanish), versions before and after the amendment of article 91 (see amendment by clicking on the update of article 91 done by means of the Spanish Act 28/2014, which entered into force on 1st January 2015)

https://www.boe.es/buscar/act.php?id=BOE-A-1992-28740

Case Law ECJ – Case C-360/11

http://curia.europa.eu/juris/document/document.jsf;jsessionid=9ea7d2dc30d53c6b4aba8a0a4e4ba307afcf636b477d.e34KaxiLc3qMb40Rch0SaxyKb3v0?text=&docid=132525&pageIndex=0&doclang=en&mode=lst&dir=&occ=first&part=1&cid=454335

Directive 2001/83/EC

http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32001L0083&from=en

VAT ABUSE BY LOCAL AUTHORITIES IN BELGIUM

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VAT abuse by local authorities in Belgium

The Halifax judgement (C-255/02:2) dated on February 21st 2006 is well known to be the 'mother' of the application of VAT anti-abuse law. As of December 27th 2006 the anti-abuse law was introduced in the Belgian VAT code: "*For purposes of this Code, there shall be deemed to be abuse where the transaction carried out in a given case result in the accrual of tax advantage the grant of which is contrary to the purpose intended in this Code and the decrees enacted in implementation hereof and those transactions are essentially aimed to obtain that tax advantage'.* This is quite a sentence which, according to experience, is not so easy to apply in practice. Besides, we all know that the well-known consulting firms of this world like to test the boundaries of what is permissible.

The present case study I will present to you will make this clear.

In June 2014 we (the Belgian anti-fraud unit) paid a retailer of furniture an unannounced visit. During this unannounced tax audit we encountered a lot of problems. We found two briefcases in the CEO's office. At the moment of the tax audit the CEO refused to open the briefcases, so we confiscated them and took them back to our office. Our client's lawyers did everything in their legal power to stall the investigation. Due to these tactics we were unable to open the briefcases in a legal manner.

To get out this dead-end street we announced a tax audit at the local football team sponsored by the retailer (out target-client). It was there that we stumbled upon an 'autonomous municipal corporation'. There we found an invoice concerning "Building Rights" (right Vicky). This bill/invoice was about one million euros. Back at the office I checked out the municipal corporation.

The two briefcases were finally opened and we found approximately 15 keys that gave access to 15 bank safes.

Local authorities and VAT:

In the European Council Directive of 2006 you will find in Article 9 the definition of 'a taxable person'. Article 9 stipulates that "a taxable person is any person who, independently, carries out in any place any economic activity, whatever the purpose or result of that activity".

A few articles further on in the directive you can find article 13 which tells us that states, regional and local government authorities shall not be regarded as taxable persons in respect of the activities or transactions in which they engage as public authorities However, they shall be regarded as taxable persons in respect of these activities or transactions where their treatment as non-taxable person would lead to significant distortions of competition. In any event, bodies governed by local law shall be regarded as taxable persons in respect of the activities listed in Annex I of the directive.

Autonomous municipal corporation (AMC):

An AMC is the legal term for a local governing body. They become self-governing entities under the laws of the state in which they are located. An AMC acts as a private company. In other words, one of their goals is to be profitable. In a Belgian municipal corporation the board of directors consists of the members of the municipal council. The sole shareholder is the City/Town. Belgium is divided in two parts, north and south. Or the Flemish speaking part and the French speaking part. Both parts have similar laws on AMC's.

Why should a city establish an AMC?

There are several reasons why a city can establish an AMC.

Using these self-governing entities a city can work in a more flexible way. Decisions can be made without the interference of the municipal council, which will stall any decision making.

The possibility of using external partners and experts in the administrative bodies.

A municipal council can't participate in other legal entities, while this is no problem for an AMC.

The most important reason is without a doubt the financial considerations. In certain cases AMC's can be considered as a taxable person. And what could be the 'financial consideration'? Exercising the right of deduction! Later on in the article it will be clear that that's the only reason why a city establishes an AMC.

There are several domains in which AMC's are active, such as the exploitation of libraries, sports facilities, cultural centers, etc.

Bottlenecks:

During the investigation of the different AMC's we stumbled upon some tax issues or bottlenecks. The most important issues appeared to be:

The discussion whether an AMC is a taxable person or whether they act like a public authority.

The discussion whether or not the activity falls within the exemptions.

The discussion whether or not the transactions of the AMC meets the conditions of article 2 (taxed transactions).

The discussion whether or not we can use the anti-abuse law.

The first 3 bottlenecks appeared to be difficult to invoke because of unfavorable judgments (Isle of Wight judgment, Salix judgement, etc.) and unfavorable answers to Parliamentary questions in the Belgian Parliament. More or less mandatory our focus was brought to the anti-abuse law.

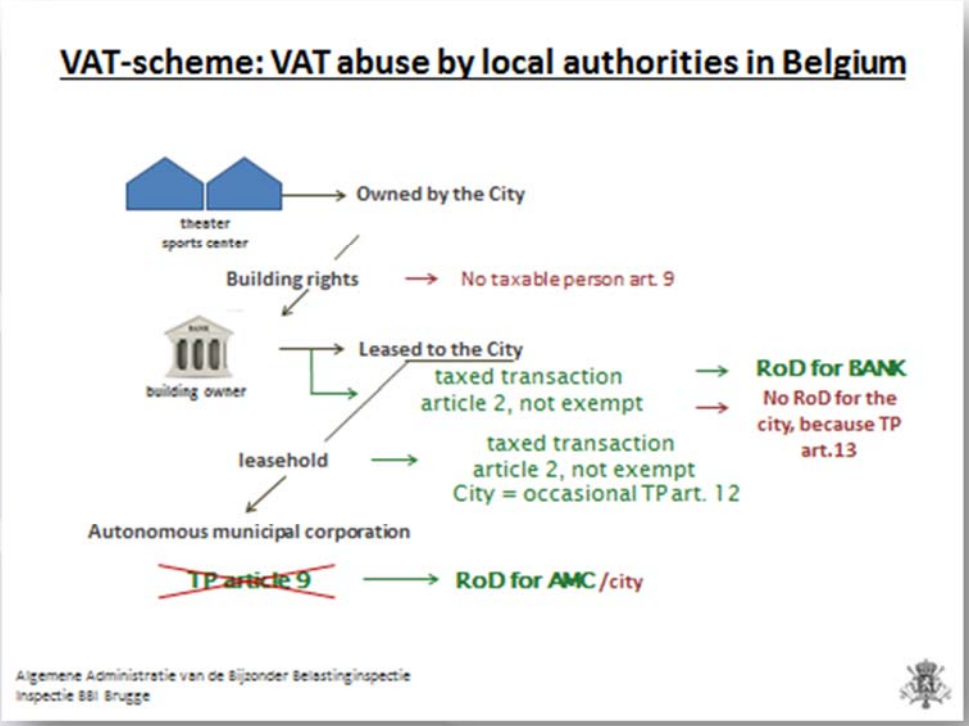
VAT-abuse:

The following scheme (cfr. enclosed scheme) appeared: a theater of sports center is owned by the city and due to various circumstances the city needs to rebuild, for example their public swimming pool. Because of the poor cash-flow situation of most of the cities they sell the 'Building rights' to a major bank. This selling transaction, of the building rights, is done as a non-taxable person (Article 9 of the Council Directive). Thereafter the bank will lease the building back to the city. This transaction is a taxed transaction of Article 2 of the Council Directive, which will not fall within the exemptions. The major bank, who acts as the building owner and a professional building constructor can exercise the right of deduction of the incoming VAT. The VAT charged by the bank is not deductible for the city on that moment. This is the moment where the city establishes an AMC (the city is of course the only shareholder and subsidizes het AMC to keep them solvent) with whom they close a leasehold. The subsidies paid by the city are not subject to VAT. The AMC is falsely presented, by the major consulting firms, as a taxable person with a full right of deduction of the VAT. All these steps have been well thought out to make a refund of the VAT possible, be it indirectly, for the city.

In several similar cases of AMC's we checked the terms of the Halifax judgement. First of all we needed to prove that there are transactions which, in spite of the formal application, result in a tax advantage. We are convinced that Article 9 of the Council Directive was wrongly used and that this resulted in a tax advantage, being the right of deduction of the VAT which is the logical consequence of the usage of Article 9. We consider the AMC to be a fictitious entity and it is in fact the city that benefits from the right of deduction of the VAT. Besides that we pinpointed several objective factors that demonstrate that the essential aim is to obtain this tax advantage. We detected that it is still the city that makes all the decisions, that bears all the financial

risks, etc. Moreover, we noted that it is still the mayor who signs of on all the outgoing payments while he is not part of the board of directors. In certain AMC's there appeared to be no registered staff, which makes no sense. How can you provide a service without personnel.

In Belgium we examined three AMC's as test cases. Two AMC's agreed on our point of view that there was VAT-abuse of Article 9 of the Council Directive and a settlement was made. Concerning the third AMC we currently await a judgement by a Belgian court of law (judgement foreseen in February of 2017). As a result of our audits we see in the VAT declarations that the AMC's get sensitized, which in fact was our main goal!



THE USE OF ELECTRONIC TRANSACTION REPORTING SYSTEMS TO PREVENT AND DETECT VAT FRAUD - EXPERIENCE IN SPAIN

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I. Introduction

The 'VAT gap', the difference between expected VAT revenue and VAT actually collected in member states, was worth almost €160 billion in 2014[1]. According to the European Commission, cross-border fraud is estimated to be responsible for a loss in VAT revenue of around €50 billion a year in the European Union[2].

Spain has legislation in force to improve and simplify tax collection and the audit of transactions. These are information statements, submitted electronically. On 2 December 2016, the Spanish Council of Ministers passed a royal decree that includes a series of measures to prevent and correct tax fraud, mainly in the area of VAT, through the implementation of the new Immediate information supply system (known by its Spanish initials, SII). This will enable the Spanish Tax Agency to obtain almost real-time information on transactions and therefore to improve tax control. The system belongs to the central VAT monitoring database model discussed in the Study on Methods for Improving and Simplifying the Collection of VAT, ordered by the European Commission in 2010[3].

[1] Study and Reports on the VAT Gap in the EU-28 Member States: 2016 Final Report. Warsaw, 23 August 2016

[2] European Commission Press release VAT Action Plan : Commission presents measures to modernise VAT in the EU. Brussels, 7 April 2016

[3] PriceWaterhouseCoopers, European Commission Study on the feasibility of alternative methods for improving and simplifying the collection of VAT through the means of modern technologies and/or financial intermediaries, 2010.

II. VAT Information statements in Spain and how are they used for tax authority control

In Spain, there are currently four information statements for VAT control:

1. Annual VAT statement – Form 390
2. Information statement of transactions with customers and suppliers – Form 347
3. Information statement of VAT records – Form 340 (VAT Directive articles 242 and 243)
4. Recapitulative statement of intra-community transactions – Form 349

These are described briefly below.

1) Annual VAT statement – Form 390

The taxpayer must submit information on statistical data (description of activities carried out) and the annual VAT due from domestic transactions, intra-community acquisitions and services and the application of the reverse charge mechanism. Information must also be given on the annual input VAT deductible from domestic transactions, intra-community acquisitions and imports. The statement contains the annual turnover. The statement must be submitted electronically in January for most taxpayers (taxable persons listed in the register of monthly returns which includes all exporters; large companies [more than €6 million annual turnover]; public limited companies; limited liability companies and public administrations).

2) Information statement of transactions with customers and suppliers – Form 347

This statement is compulsory for business activities (entrepreneurs and professionals; natural and legal persons) and public entities. All transactions with one person/entity exceeding €3,005 (VAT included) in a single year must be listed. Transactions must be split into quarters. Transactions with warehouses for products subject to VAT and excise duty must be indicated separately. The statement must be submitted electronically in February for most taxpayers (large companies [more than €6 million annual turnover]; public limited companies; limited liability companies and public administrations).

3) Information statement of VAT records – Form 340

This statement is provided for in articles 242 and 243 of the VAT directive. It is compulsory for taxable persons who are listed in the register of monthly returns, which includes all exporters. It must be submitted electronically each month and essentially contains information on invoices issued and received and other records.

4) Recapitulative statement of intra-community transactions - Form 349

This statement has information about intra-community supply of goods, intra-community supply of services, supplies by intermediaries in triangular transactions, intra-community acquisitions, intra-community acquisition of services and deliveries subsequent to VAT-exempt imports. It must be submitted electronically annual, quarterly or monthly depending on the volume of intra-community transactions.

The Spanish Tax Agency, *Agencia Tributaria,* carries out risk analyses and cross-checks using this information and other information contained in its data base. The information is analysed and filtered in order to make selections for desk enquiries and audits.

III. Immediate VAT information supply

The current VAT management system has been operating, with the necessary adaptations, for more than 30 years. However, the current state of technology now enables the implementation of a new Immediate VAT information supply system, thus improving tax control and assistance to the taxpayer in the fulfilment of their obligations. Information is immediately sent over the internet by one electronic device communicating with another using a web service.

The Immediate Information Supply system represents a substantial improvement in communication between the tax authority and the taxpayer, as it will allow a bidirectional, automated, instant relationship. In turn, it is configured as a new tool, both for assistance to the taxpayer, and for improvement and efficiency in tax control.

The Immediate Information Supply system essentially consists in the electronic delivery of specific fields of VAT invoicing records. The invoice's identifying data (number and series) will be an essential element for cross-checking transactions, without the invoice itself being sent. These specific fields of the VAT records should be sent electronically to the Spanish Tax Agency via web services based on the exchange of XML messages or, where appropriate, the use of an online form. Therefore, the taxable person's VAT record will be put together by the Spanish Tax Agency, practically in real time.

It is a system based on the central VAT monitoring database model,[4] with two important differences: there is no obligation to use e-invoicing, and taxable persons obliged to use the Immediate Information Supply system must notify about all transactions, not only B2B transactions.

[4] PriceWaterhouseCoopers, European Commission Study on the feasibility of alternative methods for improving and simplifying the collection of VAT through the means of modern technologies and/or financial intermediaries, 2010.

Deadlines for submitting invoicing records to the tax agency:

- Four business days from the issue of the invoice (issued invoices)
- Four business days from the accounting record of the invoice (received invoices)
- Four business days from the date of the SAD (imports)

The Immediate Information Supply system will be mandatory for a group of 63,000 taxpayers, which account for 80% of the total turnover of VAT taxable persons in Spain:

- Large enterprises (turnover exceeding €6 million)
- VAT group entities (persons closely bound to one another, VAT directive article 11)
- Taxable persons listed in the register of monthly returns, which includes all exporters.

This group of taxpayers have developed software systems and are able to adapt these to comply with the machine-to-machine communication. In addition, any other taxpayer wishing to voluntarily apply the Immediate VAT information supply may do so. This option shall mean that the taxpayers VAT return shall be submitted monthly and that they must stay in the system for at least one calendar year.

1. **Benefits for taxable persons:**

1.1) Reduction of formal obligations

The obligation to file the tax information statements on clients and suppliers (347), VAT records (340) and annual VAT statements (390) will be removed. Only self-assessment tax returns will be filed.

1.2) Voluntary compliance is easier

Taxable persons will have access to their tax data, because they have a “declared” VAT register and a "matched" one with information from third parties and/or from the Spanish Tax Agency database. This information may be consulted at any time on the tax agency website. It is a useful tool for completing tax returns, making the process simpler. It reduces mistakes and gives greater legal certainty. The information appears as cross-checked if both customer and supplier are covered by the system.

1.3) Quicker refunds

The time needed for carrying out refunds will be shortened, because the Spanish Tax Agency has the information in near real time and will have more information on transactions.

1.4) Reduction of information requests

As many of the requests currently made are to obtain invoices or data contained in invoices for the cross-checking of certain transactions, there will be no need for these.

1.5) Tax audits will be carried out faster and more effectively

Because the Spanish Tax Agency has the information in near real time and will have more information on transactions.

2. Benefits for the tax authority:

2.1) Improved tax control, moving towards a new tax control model
2.2) Good-quality information in a short timeframe
2.3) More information than at present
2.4) Quicker and more effective checking of tax returns

Since the tax administration gains access to information on purchase and sale transactions in real time, early control will be easier.

2.5) Faster refunds

Refunds will be extremely fast when both customer and supplier are covered by the system, because the information appears as cross-checked.

The royal decree was passed on 2 December 2016, with entry into force on 1 July 2017. During the second half of 2017, taxpayers will have an extra delivery time of eight business days. Given the technical infrastructure necessary to manage the volume of information that will go through the system, during the first half of 2017 a series of pilot trials have been scheduled, in which a sample of businesses will take part with the support of the main software companies operating in the country who provide back-up to the majority of the group of taxpayers included in the system.

CO-OPERATION BETWEEN TAX ADMINISTRATIONS – EXAMPLES OF COOPERATIVE WORK WITH OTHERS

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In the fight against organized fraud, it is nowadays completely impossible to exclusively face this threat on a national level. In such a particular case, a tax administration should be conscious about being confronted to a multinational business model composed of several hundred entities, having addresses spread all over the world. Each entity has a clearly defined role in the fraudulent organization and appears, acts and vanishes opportunely. It is obvious, that before hitting a specific market, fraudsters have strongly invested in legal and strategic advice. That's why involved entities often appear to be very well prepared to any kind of reaction on a national level.

Of course, in our era of economic globalization, other reasons may have even enhanced the complexity of fraud schemes in the past years.

In fact, the recent developments in the technological and logistic sector allow entities to send their goods around the world with a single mouse-click. E-commerce is expanding at an incredible speed and the life span of companies in general is limited.

Furthermore, the traditional financial flow is increasingly replaced by virtual currency schemes, anonymous blockchains or cloud banking, new tools which seriously compromise the identification of beneficiary owners.

Regarding transactions on intangible goods and services, it requires more and more technical expertise within tax administrations in order to remain able to detect fraudulent schemes.

Within EU member states, in order to meet the new challenges, several instruments on enhanced administrative cooperation have been implemented over the past years.

One of the tools having particularly proven its efficiency in case of intracommunity missing trader fraud is purely fiscal and named **multilateral control (MLC),** involving

two or more member states, according to **Council Regulation 904/2010** on administrative cooperation and combating fraud in the field of VAT.

Article 29 of the Regulation states in this context:

Member states may agree to conduct simultaneous controls whenever they consider such controls to be more effective than controls carried out by only one member state.

The useful aspects of an MLC are most of all the **cooperation** on an **international** level with **higher human and technical resources** at your disposal and **enhanced access to information** in a **specific fraud case**.

In order to be able to achieve a success in a multilateral control, one can identify four essential success criteria.

Planning meeting

The projected outcome of a planning meeting should be:

- The leading and coordinating member state is giving a **general overview** of the **specific fraud case** to (invited) participating member states;
- The participants agree on a **common goal**. The participants **identify** most important **actors and targets** to be monitored and audited;
- The designated MLC-coordinator
    a) clearly defines a **precise period of audit**
    b) sets up an **efficient action plan** within the upcoming MLC.

In general, **an action plan** should either **focus** on:

a) **current transactions** in order to disrupt an ongoing fraud;

   or

b) **past transactions** in order to collect enough proves for a later penal procedure after completion of the MLC.

Experienced fraud auditors

Indeed, it is of a key importance that each member state sends experienced fraud auditors to an MLC. **Profile of an MLC-auditor: open-minded, flexible and dedicated**. Last but not least, it is of great relevance that she/he is used to work in an international context, is fluent in the working language (English in most cases) and has already acquired a deep knowledge in fraud schemes. **Direct communication** at all times between involved auditors **is vital** for a later success.

Coordinated approach

It is up to the coordinator to **set the prioritized direction and** to **maintain it** throughout the whole audit. Therefore, the organization of at least one common work session among auditors is deemed necessary during a multilateral control. The

intermediate meeting is required as it facilitates the exchange of information between participants. Furthermore, it helps the coordinator to visualize the progress in general and to set up the next strategic steps. In order to be most efficient and to avoid at the most alerted entities during the audit phase, **particular actions** within a MLC should be conducted at all involved actors **at a precise date and time**.

Swift timing and schedule

A MLC should obviously be **limited in time**. All audits should start at a precise date and focus on the problems put forward at the planning meeting. Therefore, the most efficient MLC's should not have taken more than roughly one year. Besides the planning meeting, the coordinator should foresee **one or two work meetings** for the auditors as well as **one closing meeting** where all results and progress are to be presented and put into a final report which is made available to all participating member states and later to the European Commission in an anonymized form.

Considering the current developments in fraud schemes, and referring to what was explained before, one should consider that multilateral controls should be in the future the standard in fighting organized fraud within the European Union and, why not, beyond.

IDENTIFYING EFFECTIVE SOLUTIONS TO INCREASE (VOLUNTARY) TAX COMPLIANCE

THE MAINTENANCE OF THE REGISTER OF TAX OBLIGATIONS IN SPAIN

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The Register in Spain will allow the proper management and control of the Spanish Tax System, with each tax administration being competent to manage its own Registers.

The Register of Tax Obligations, of state competence, is made up of all natural persons, legal persons and tax 'obligors' referred to in article 35.4 of Law 58/2003, of December 17, General Tax, who must have a tax identification number for their relationships of a tax nature or with tax implications.

The concept of tax obligor in the tax regulations is broader than that of "taxpayer". A taxpayer shall be understood as any natural person, legal person or entity that is required to comply with tax obligations, whether formal or material.

The Register will include all the tax obligors that must be identified before the Tax Administration. Within this Register of Tax obligors, a subset of obligors: The Register of entrepreneurs, professionals and retainers will be created. In order to allow a better control, this register is subdivided into different groups as shown below:

Register of Tax obligors. This register, includes:

- Register of entrepreneurs, professionals and those obliged to withhold
  - Register of intra-community operators
  - Register of monthly returns
  - Register of large companies
  - Territorial registration of Special Taxes of Manufacture
- Rest of tax obligors

The content of the Register of tax obligors includes the following information:

- Basic information:
  - Surname and name, or company name or company name and acronym
  - Tax identification number
  - Fiscal address in Spain or abroad
- Additional information:
  - Resident or non-resident status
  - Tax identification number issued by other countries
  - Natural persons: date and place of birth, sex
  - Legal persons: constitution in Spain or abroad and dates
  - Social capital
  - Full identification of legal representatives

This information can be supplemented with additional information such as the identification of the partners, (indicating whether or not they are included in special registers), classification of the activity carried out, etc...

The Register is configured as a fundamental element for the control through the data submitted by the tax obligors. Through the register, the obligations the tax obligors must comply with are known and the identification´ errors are corrected. It also allows us to know what declarations have been submitted and what payments have been made by each taxpayer. In addition to all this, the register allows us to check the information the Administration has on each taxpayer against the information on him provided by third parties to which they relate, so there is a control of the register and of the fulfilment of obligations at the same time.

The control of the entrepreneurs and professionals is carried out, within the scope of its competences, by both the management and the inspection or control areas. The management bodies deal with the following tasks:

- Register control: The objective is to determine who are the tax obligors, what declarations they have to submit and the regularity of the submission. It is also necessary to keep it up to date and to perform regular Register clearance tasks (verification of the consistency of the data provided by the taxpayer in declarations submitted and in the crossing with other sources and the subsequent request and processing of corresponding Register corrections).
- Control of compliance with periodic obligations: The objective is to verify if the obligors submit the declarations with the corresponding periodicity and to verify that the amounts reflected in the declarations do not differ significantly from the amounts estimated.

Given the importance of the tax Register in the control tasks, it is a priority objective that it is updated. To this end, it has been made possible for the citizens to access their Register data and to modify them if they are not correct.

For this reason, one of the measures of improvement in the Register management that has had a better reception, both by taxpayers and officials, is the option "My Register data", available on the internet and the corporate intranet.

This project was born to improve the quality of the Register and the ways of its maintenance through the following lines of action:

- Transparency: To facilitate the right of citizens to consult their Register data and to rectify them if they are not correct.
- Improving of internet use: boosting services on the internet.
- To promote self-verification and correct mistakes: to use all the occasions on which the taxpayer relates to the administration by means that require their identification to inform them of their Register data (identification data, domicile, tax situation or activities) and, if it is the case, of Register incidents and open options for the taxpayer themselves to rectify Register´ data when they are inaccurate or incorrect in an agile and simple way. That is to say, to promote the fulfilment of Register obligations and, therefore, the maintenance of the Register.

In "My Register data", taxpayers can consult their identification data and they are offered the following options for consultation and processing:

- Consultation of "identification data" and "addresses" (fiscal and notifications).
- "Other inquiries" for the Register of Employers, Professionals and Retainers included in the Tax Agency database:
    - My tax situation: data on VAT, Corporate Tax, Non Resident Tax or Income Tax
    - My obligations: active obligations and regularity
    - My activities: data on economic and local activities
- "Modifying data":
    - Modification of tax domicile data
    - Registration, modification or withdrawal of the address for notifications
    - Other options such as modification of data related to VAT, Corporate Tax, Non Resident Tax or Income Tax
- "My alerts" that shows and allows to practice the pending notifications and to see the Register incidents. This option is activated when the electronic appearance of the obligor is authenticated.
    - "My Register incidents": it is part of "My alerts" and it informs about certain Register omissions or incidents. It includes a brief description and an explanation on how to regularize its Register situation (for example, provisional withdrawal, no data on legal representation, etc...).

Currently, and in order to reduce the costs of compliance with Register declarations and to improve the detection and reaction to omissions and non-compliance, the following will continue to be promoted:

- New register consultation and processing services on the electronic site (by the taxpayers themselves) and on the intranet. (In this case, the idea is that Register management officials, who deal with taxpayers, have the necessary tools and authorizations to access to the applications of modification of Register data on the internet. We gradually proceeded to enable these options on the corporate intranet environment, so that the data of those taxpayers who come to our offices could be updated immediately).
- Enabling on the corporate intranet all the Register options and formalities currently available in the consolidated database BDC and electronic headquarters.
- Social collaboration and the exchange of information with institutions and registers for the maintenance of the Register (police, agents, banks, etc...).

A relevant project repeatedly demanded by the Register Area and that would substantially improve the effectiveness of Register management actions is to provide Register attention counters with devices that allow the digital capture of the obligor's handwritten signature appearing at the counter.

It would be a very significant improvement in the following aspects:

- It will save time for officials.
- It will mean less waiting time for taxpayers in the offices and less direct cost on the fulfilment of their obligations.
- It will mean an obvious decrease in the use of printers since a document is now printed for its signature by the taxpayer.
- Immediate incorporation of the documents to the electronic file, avoiding errors of recording and scanning.

These improvements must be multiplied by the high number of Register procedures carried out at national level by the Register areas.

Finally, it should be pointed out that the actions for the maintenance of Registers are aimed at allowing the modifications, variations, registrations and withdrawals to be made by taxpayers themselves or directly by the official at the same moment in which they are communicated, so that the Register is always as updated as possible with the priority objective of identifying taxpayers and facilitating control tasks.

CAN WE MAKE PEOPLE FILE THEIR TAX RETURN FORMS BY CALLING THEM? A RANDOMIZED CONTROLLED TRIAL

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Introduction

In 2015, Tax Norway ran a phone campaign targeting self-employed people who had not yet filed their tax return forms (Pladsen, Aas and Bendiksen, 2015). The main aim of the campaign was to see if a phone call – personal or automated – could influence people to file.

We repeated the phone campaign late August 2016. This time we improved the design and achieved better results. This article is about the 2016 phone campaign. The campaign was again organized as a randomized controlled trial, which means we can estimate the effectiveness of the campaign directly.

The main goal of the phone campaign was to test whether or not such a phone call would be an effective way to influence self-employed people to file. As the due date is May 31, the entities in this campaign are almost three months late. We have already sent them a reminder letter at the beginning of August. The letter was a notification that they would be assessed and given a penalty for late filing if they did not file.

From an efficiency perspective, automated phone calls (made by a robot) are a lot cheaper than phone calls made by a Tax Norway employee. An aim of the study was therefore to gauge if a cheaper, automated phone call would be as effective as a personal phone call from a Tax Norway employee. The automated phone call had a robotic voice reading a predefined script. At different points during the recorded message, the recipient had to respond by pushing buttons. The setup was semi-robotic in the sense that transfer to a Tax Norway employee was possible, if you stated that you needed help at a late stage in the automated phone call.

The population were self-employed people who had not filed by August 15. Within the population, we randomly assigned each member to one of two treatment groups or to a reference group. Each person belonged to only one group. We had two treatment groups; one group received a personal phone call and one group received an automated phone call.

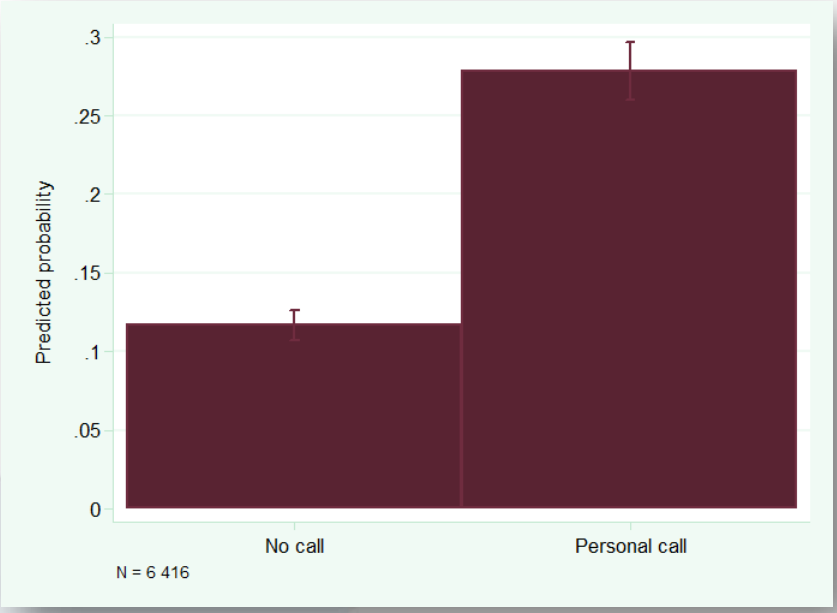
The reported effects are percentage point differences in filing between the treatment group (those we called) and the reference group (those we did not call). The proportion filed is measured at the date for the final tax settlement, September 23. All the calculated effects are point estimates with confidence intervals.

Effects of personal calls

From August 22 to September 2, we called self-employed people who had not yet filed. We attempted calling each self-employed person twice and reached almost half the people on our lists. In the graph below, we look at the difference in filing between the self-employed person we called and a reference group of self-employed people we did not call.

The figure shows that the campaign overall has quite decent results.

Figure 1: The effect of personal calls to self-employed people



The campaign increased filing by about 16 percentage points (from 12 percent to 28 percent). In other words, a personal phone call more than doubled filing among the self-employed people who were more than three months late.

The result is also a significant improvement over last year, when filing increased by about nine percent. Still, there is no such thing as magic – even if filing increases significantly, more than two out of three do not file, even after a personal phone call from Tax Norway. This group should be assessed and possibly targeted by other means.

This year, we updated the list of self-employed people to call twice during the campaign. As a result we avoided calling self-employed people who had already filed. Also, all the Tax Norway employees who made the calls had access to our systems and could verify if people who claimed they had filed actually had filed. This was an improvement compared to last year.

Effects of automated calls

We called self-employed people using an automated phone system from August 21 to September 6. We reached 42 percent of the people on our list. This is far better than last year. The main difference is that we changed the settings so the robot would wait longer for the recipients to pick up the phone. The robot tried calling each person on the list twice.

The automated phone calls increase filing by more than ten percentage points. This is up from six percentage points last year. As last year, automated phone calls are less effective than personal phone calls. However, automated phone calls cost less and might be a viable alternative to personal phone calls.

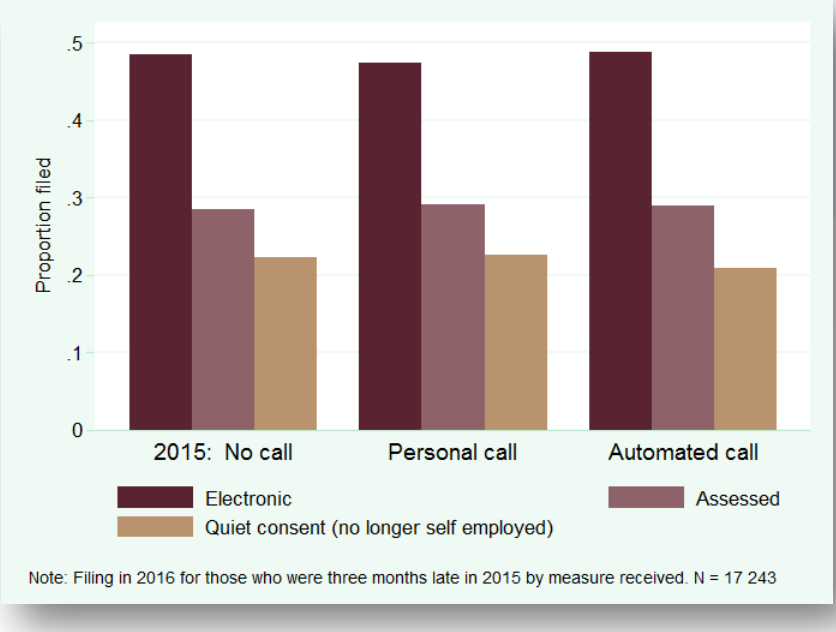
If the recipients want help from a real person, they have the option to be transferred to a Tax Norway employee at the end of the phone call.

The results are promising, so we would definitely recommend increased use of automated phone calls in the future.

Long term effects? What happened to the self-employed people we called last year?

A recurring question when presenting last year's campaign regarded long term effects. This year, we have answers. We start by looking at filing this year for self-employed people who were three months late last year and hence in the population for our 2015-campaign.

Figure 2: Filing in 2016 for those who were three months late in 2015.



If we start by looking at the overall heights of the graphs, we find little evidence of a systematic variation between self-employed people we called and those we did not call. In other words, there seems to be other drivers behind filing behavior than our phone call last year.

However, there is one striking finding in this graph. More than one in five self-employed people who filed late last year are no longer self-employed. This supports

the belief that late filing in many cases has to do with liquidation of a business and a transition into being a regular employee.

This finding should be taken into next year's campaign – self-employed people should be asked if they need help not only to file, but also to de-register their business.

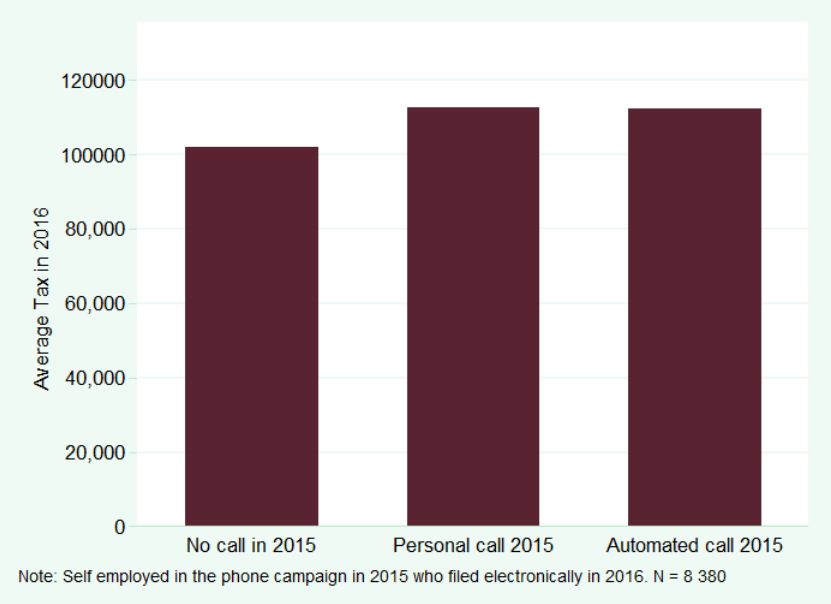
Also, we have been asked if phone calls last year influence filing this year. We find that there is a long term effect of calls on tax payers who are several months late several years in a row. Importantly, phone calls are more effective the second year than they are the first year. This means that as a measure, phone calls should be used routinely to nudge self-employed people to file.

Long term effects – phone calls last year increase taxes the year after

When talking to the staff doing this year's campaign, one of them said: "I bet the people we talk to pay more taxes. They believe they are targeted for audits!" As a result of this comment, we looked at taxes settled last year and found that indeed, self-employed people we called did on average have higher tax settlements than self-employed people we did not call. Self-employed people who received a personal call filed incomes and deductions so that on average, their tax settlements were 12,000 NOK higher than tax settlements in the reference group. Those who received an automated call had settlements that were almost 7,000 NOK higher on average than the reference group. This was not a part of last year's report as we started looking at it this fall.

Next, we will look at taxes settled this year for the people we called last year. As expected, there is no change for the people we assess both years, nor is there a change for self-employed people who are no longer self-employed. The graph below shows taxes settled this year for the people we called last year.

Figure 3: Average tax 2016 for population of 2015 phone campaign and filed electronically in 2016.



The picture is clear and surprising: the self-employed people we called in 2015 and who file electronically in 2016, settle on average 10 300 NOK more in taxes. Put differently, their tax settlements are about ten percent higher than the tax settlements for self-employed people we did not call last year. Interestingly, there is no difference between automated and personal calls - the differences between the two are barely noticeable.

By multiplying the number of people we called last year (and who filed electronically this year) by the average increase in tax settlements, we see that these self-employed people contributed more than 78 million NOK in increased taxes.

A note on the statistical significance is in place. If we include everyone, also self-employed people who settle low taxes, the findings are statistically significant, but not strongly so. However, if we just look at self-employed people who pay more than 150,000 in taxes, the results are highly statistical significant. In other words, phone campaigns increase taxes paid in particular for self-employed people who have a decent income, and hence, has a lot to lose if audited.

Conclusion

We see that personal phone calls can influence many more to file. The targets of this campaign are a difficult group to make file, as they are already several months late. With that in mind, the results are very positive and we recommend repeating a campaign every year.

As last year, our results indicate that personal phone calls are more effective than automated phone calls.

As more than one in five who filed late last year are no longer self-employed, they should be asked if they need help not only to file, but also to de-register their business.

Also, we have been asked if phone calls last year influence filing this year. We find that there is a long term effect of calls on tax payers who are several months late several years in a row. Importantly, phone calls are more effective the second year than they are the first year. This means that as a measure, phone calls should be used routinely to nudge self-employed people to file.

We also found the self-employed people we called did on average pay more taxes than the self employed people we did not call. This could be because the people we called might believe they are going to be audited.

Last, we would recommend planning a phone campaign carefully, as small details in the planning process might have a large impact on the end results.

Further information about the campaign is available upon request.

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THE DANISH APPROACH TO NON-FILERS AND STOP-FILERS/VAT

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The Danish Customs and Tax Administration has a constant focus on the behaviour of small entities submitting VAT- and tax returns.

The Administration has completed studies on the causes of non-compliant behavior, executed multiple projects towards non-compliant entities and taxpayers in order to affect their behavior and implemented preventive actions towards new started businesses.

In June 2012, the Danish Ministry of Treasury published a report on non-filers, late-filers and stop-filers. The purpose of the analysis was to find solutions to improve measures towards non-compliant entities and to establish a basis to decrease the number of non-, late- and stop-filers. The report's overall conclusion was that the Administration should focus its measures onto available characteristics of its entities and optimize the existing measures it applied.

The report was based upon data from records in our databases on the entire census and a questionnaire, sent out to randomly chosen entities among the non- and stop-filers. Close to 3.000 entities have participated in the inquiry and replied to the questionnaire.

The analysis of the questionnaire shows, that the vast majority of the businesses feel, that the main reason for not submitting the VAT-return is sheer oversight. This 'oversight' can though be divided into two categories:

1. *Sincere* oversight
2. A more or less deliberate downgrading of the obligation to submit the VAT-return in favor of other "*more important*" tasks.

Furthermore, the analysis showed, that slightly less than 50% of the entities feel, that the tax administration could have done anything to make them submit the VAT-return in time.

According to the questionnaire the five major reasons for non- or late-filing are:

1. The entity did not know it had to keep a VAT-account.
2. The entity could not afford the VAT due.
3. Someone else was responsible for submitting the VAT-return.
4. The entity did not know it had to submit a VAT-return in case of no turnover.
5. The person responsible for submitting the VAT-return was ill or had private issues.

The five highest scoring improvement proposals by the non-or late-filers are:

1. Do not know.
2. A reminder before the submitting deadline.
3. Easier access to the online submitting system.
4. Easier access to get in touch with telephone support.
5. Simpler rules and legislation.

To the question, which type of contact the entities prefer the Tax Administration to use when reminding about submitting VAT in time, 85% of the entities answered "e-mail". Surprisingly only 8% prefer the use text messages. We therefore need to increase the use of reminders by e-mail approximately one week before deadline.

The Administration can optimize efforts considerably by initiation of a wider range of preventive activities and a firmer line towards non-compliant entities. The analysis has helped us to focus on efforts of trimming the census and the procedures for reminding entities to submit their VAT-returns in time.

A considerable number of entities are no longer active, but have forgotten to take care of deregistration and therefore they represent a significant part of the stop-filers. These subjects should be deregistered by the Administration in order to clean out the existing, inactive census.

We need to have more focus on both new registered and deregistered entities. New registered entities often have difficulties submitting their very first VAT-return. This requires better guidance. Deregistered entities often have difficulties submitting their very last VAT-return, most likely due to ignorance about submitting a final (zero) return. Furthermore, we need to bring about more awareness of the risks and consequences of non- and stop-filing.

I the period 1 July 2014 to 31 December 2015 the Danish Tax Administration successfully implemented a project aiming to help new registered companies submit their VAT-returns correctly and in time. As a result, the number of non-filers within the focus group has fallen drastically, by 89%.

With annually 40, 000 new registered companies in Denmark, it is impossible to reduce the Tax and Excise Gap by performing audits alone. Therefore the Administration has launched targeted information and audit initiatives and collected knowledge about behaviour and causes of mistakes in order to improve our initiatives towards new registered companies.

The Tax Administration has visited more than 500 new started companies during the project with positive and appreciative approach. The experience of the visits was that in most of the cases new started companies needed low-practical 'here-and-now'/'hands-on' help with for example submitting VAT-returns online. In other cases, we have performed real audits and checked the bookkeeping and invoices. One of the goals of the increased information and audit initiatives was to reduce the number of non-filers, which was succeeded as the number has fallen by 89%.

Main facts of the project:

- The project has run from July 2014 until December 2015.
- Denmark annually has about 40, 000 new registered companies.
- During the project, 12,000 companies have been contacted by either telephone, letter or e-mail, 500 have been visited.
- Errors made by taxpayers are mainly due to ignorance about rules, obligations and difficulties with our IT-solutions (submitting online).
- Within the focus group of non-filers, 89% of the companies have submitted their following VAT-returns in time.
- 3% - 5% of the new registered companies do not intend to comply and need other measures like for ex. deregistration by force.
- About 1, 000 companies have been deregistered by force after not having submitted VAT-returns for four consecutive periods (quarters).

ANALYSIS AND EFFICIENT USE OF BIG DATA

USE OF BIG DATA FOR A MASSIVE ANALYSIS OF RELATIONSHIPS

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1. INTRODUCTION

In recent years, the information managed by organizations is growing very fast. Some of the data represents connected elements that form social networks, which have become very important nowadays, not only for tax agencies but also for other businesses such as banks, logistics or media. They are helpful to analyse the behaviour of customers, companies, providers, etc. and their reciprocal influence.

In the tax agencies context, some useful relationships are employers-employees, shareholding of companies, ownership of real estate properties, business activity (invoices...) and many other combinations of the elements that we already have in the databases. A deep analysis of these networks with the current available technologies could help tax agencies move from simple data to useful knowledge, so fraud cases can be identified more easily.

2. TWO TYPES OF ANALYSIS

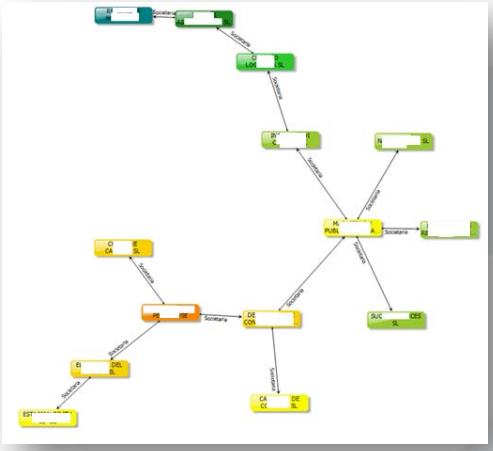
The analysis can be tackled in two ways: case-oriented or massive analysis. In the first case, the initially known information is a small limited group of elements (eg. 10 taxpayers), from which we can build a network and add new relationships at depth N from those elements. The results are dense networks with very detailed information, but only with hundreds of elements. This is useful for a particular investigation.

On the other hand, using massive analysis, we start with a huge group of initial elements (eg. millions of taxpayers). Then the information of each node can be shared in the network so that the connected elements can gather data from their connected neighbours. This method can identify "direct" relationships between taxpayers that were difficult to find beforehand because they were connected after N hops. For example, taxpayer A is connected to taxpayer B, B is connected to C, C is connected to D and D is connected to E; then, we can identify the relationship between A and E after 4 hops or iterations (4th level of depth). The analysis of those "direct"

relationships is very helpful for the selection of taxpayers according to certain risk parameters.

3. TECHNOLOGY

For case-oriented analysis, the data is stored in our own-developed data warehouse, called Zujar, in the National Tax Agency of Spain. It includes a dataset of relations between taxpayers. Along with it, we use another tool called TESEO that lets us draw the network (graph) starting from a limited group of elements (eg. 10 taxpayers) and some of their relationships. The tool offers some filters on the elements (nodes) and relationships (edges) so as to show just the information needed. It shows tags and colours according to business needs. In addition, it offers advanced functions such as path finding, dynamic filtering and node aggregation.



[photo_1: Graph in Teseo]

For massive analysis, there are two main issues: the storage of the network data (graphs) and the analytics of the data. Regarding the storage, there are many commercial graph-oriented databases (Neo4j, AllegroGraph...) that allow a user to search the information efficiently. However, our focus was not on the storage, but on massive analysis: the use of Big Data for the analysis of graphs.

Traditional systems have problems of scalability in computing resources when the size of data grows to Terabytes or even Petabytes. A proper solution to this fact can be the use of Big Data. Among the wide range of the new emerging software technologies and algorithms, we use Spark Graphx. It includes a Map-Reduce implementation of some graph algorithms such as PageRank, Connected Components and Triangle Counting, all based on the generic Pregel algorithm and running mainly in RAM memory, which is faster than other technologies. We use Impala database, which accepts SQL queries. Regarding the hardware, we use a dedicated cluster with high availability composed of 16 servers and around 50 TB of disk space to hold the distributed file system, Hadoop HDFS.

The development of these technologies requires knowledge of Java (or Scala) language programming, a suitable configuration of the cluster and optimization of the processes to reach a proper performance. It also requires technical analysis to integrate the existing tools with the new system.

4. EXAMPLE OF USE: MOVEMENT OF DATA INSIDE A NETWORK

We can create a big network (graph) using the data in our databases, using the libraries to load nodes (taxpayers, companies, etc.) and edges (relationships) from the existing databases. Then, you can call a specific graph algorithm in the libraries (Pregel, for example), so that the data in each node move to the other nodes at depth N in an iterative process. This process enriches the initial graph and lets the user search information in the graph more easily.

EXPLAINING RISK MODELS TO THE BUSINESS
Using an analogy as an intermediate step

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The need for explaining risk models

Risk models are becoming more popular in tax administrations for audit selection and other purposes. Although risk models have been applied in tax administrations for many decades, mostly these models have been applied in isolation. Recently, these models are becoming mainstream tools in taxpayer supervision and other areas and are embedded in the main business processes.

The fact that a computer algorithm is at the heart of a risk model makes it harder to explain such a model to auditors and management. However, a good explanation is an important part of getting these new, and often efficient, techniques accepted.

Risk models differ from risk rules that are used by most tax administrations. Risk rules are for example: "if this year's amount is more than 20% lower than previous year's amount, then select for audit". These rules are constructed by domain experts (mostly experienced auditors). In contrast, risk models are created by applying a computer algorithm to historic data. Hence the origin of the selection mechanism for risk models lies within a computer algorithm, while the selection mechanism for risk rules lies

within the head of experts. Note that in practice, often a combination of risk rules and a risk models is applied.

In this paper we present an approach that we have found to be helpful in explaining the concepts of a risk model to the business.

An analogy with a class of students to explain main concepts

To explain the concepts of a risk model to colleagues, we often use an analogy. Colleagues from the business are asked to imagine that they are a teacher in a class of students. As a teacher they are interested in knowing what students failed to complete their homework. Of course, they might check each and every student, but this will consume most of the lesson, which will leave no time to do teaching. So a balance needs to be found between time spent on checking students and the chance of detecting which students did not complete the homework. These contrasting interests are recognizable in an audit selection context within tax administrations.

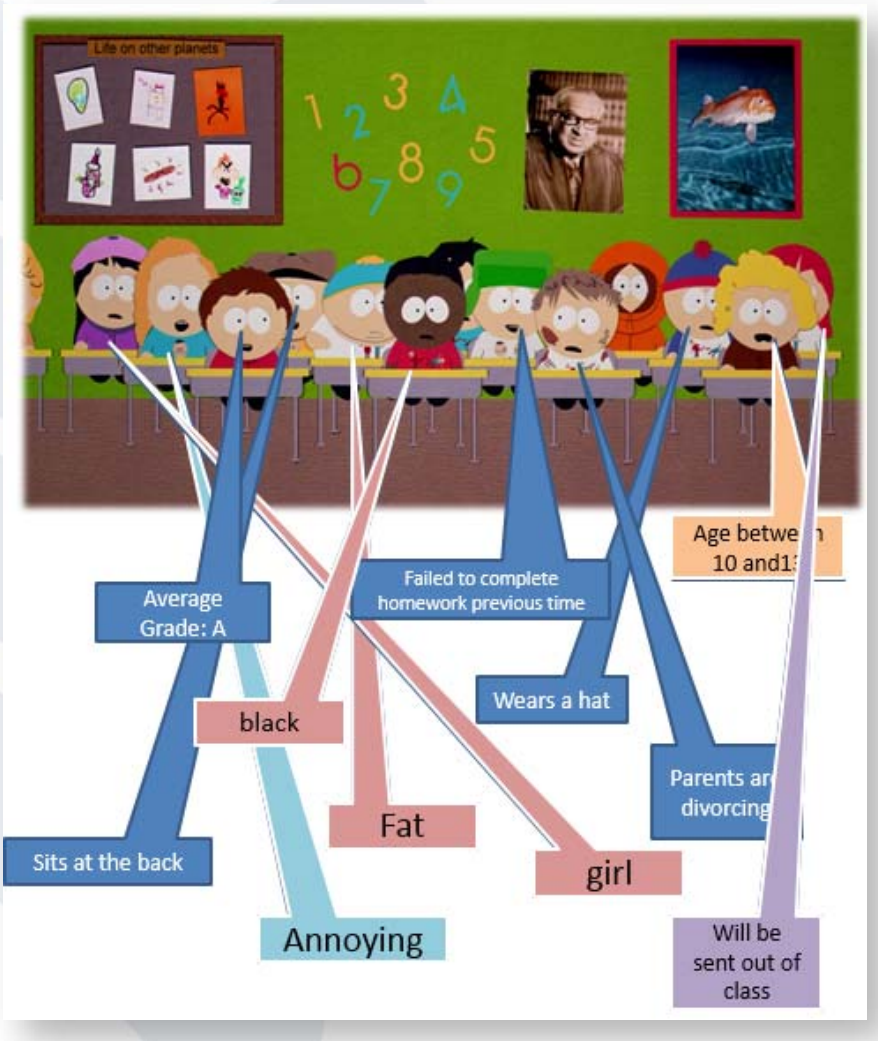
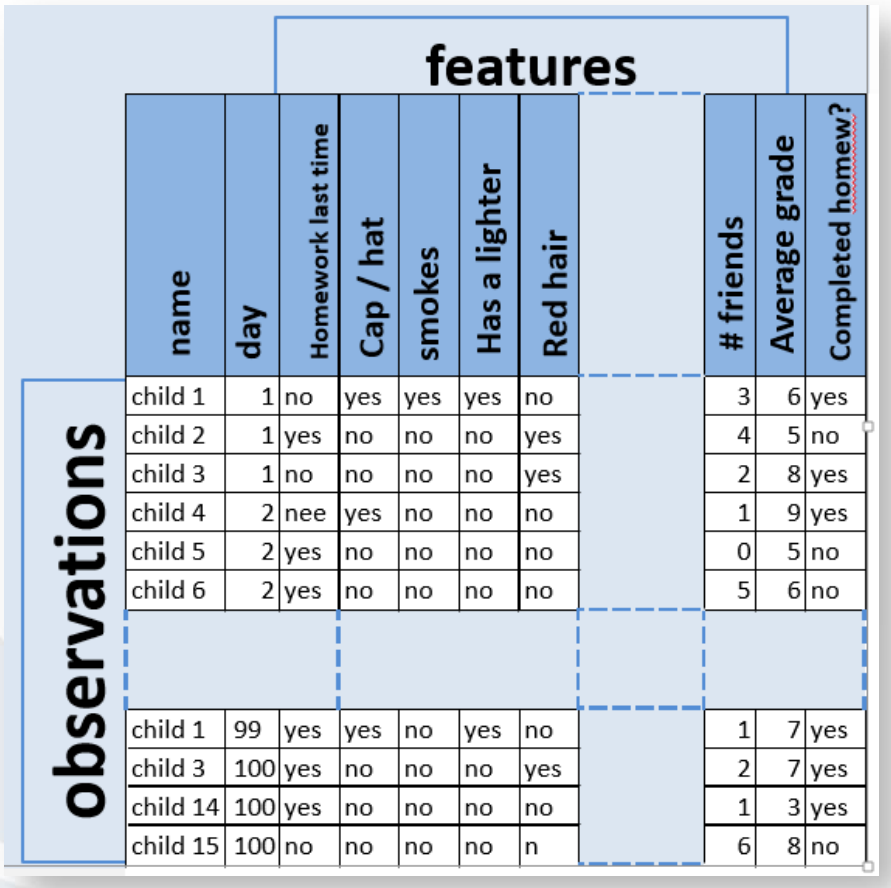


Figure 1 Class of students with some features

To find a balance between checking students and teaching, our teacher decides to pick three students each lesson that are checked on their homework. These three students should be the ones that have the highest chance of not having completed their homework. To select these students, the teacher uses several *features* of his students. These features might be any characteristic of a student. Some possible features are shown in Figure 1. In the Figure each student has exactly one feature, but in practice one student can have many features at the same time. In the tax administration context, features are characteristics of taxpayers or tax returns that are known to the tax administration.

The features as depicted in Figure 1 are helpful to show that not all features are equally suitable for the selection of students. Some features might be in conflict with the way we want to treat students; it is usually not desired to discriminate between students (or taxpayers) based on features like skin colour or gender. Moreover, some features are not practical since they cannot be determined objectively; a feature like 'annoying' in Figure 1 is such an example. This feature cannot be determined objectively since a student might be annoying for one teacher, but not for another. Such a feature is thus not suitable when building a risk model that can be used by various teachers. A third class of features that are not suitable for selection are features that are not known *at the moment of selection*. This may seem obvious, but usually one builds a risk model on historic data. Considered from the moment that the data was created, we find ourselves thus in the future. Hence we may have information that was not known at the moment that the data was created (e.g. the taxpayer has raised a dispute). One should avoid using these pieces of information, as they cannot be used at the time of selection new cases. In our example of Figure 1, the fact that a student will be sent out of class is an example of such a feature.

After selecting suitable features, the teacher can start building a data set, called 'Analytical Base Table' (ABT), see Figure 2. This means that the teacher records features of each student that was checked for a certain period. Each row in such an Analytical Base Table represents a student, and each column a particular feature. Note the last column that says whether the student did complete the homework or not. This column, often called 'the target', contains the piece of information that we want to learn to predict. The Analytical Base Table is the starting point for creating a risk model.



features

observations

name	day	Homework last time	Cap / hat	smokes	Has a lighter	Red hair	# friends	Average grade	Completed homew?
child 1	1	no	yes	yes	yes	no	3	6	yes
child 2	1	yes	no	no	no	yes	4	5	no
child 3	1	no	no	no	no	yes	2	8	yes
child 4	2	nee	yes	no	no	no	1	9	yes
child 5	2	yes	no	no	no	no	0	5	no
child 6	2	yes	no	no	no	no	5	6	no
child 1	99	yes	yes	no	yes	no	1	7	yes
child 3	100	yes	no	no	no	yes	2	7	yes
child 14	100	yes	no	no	no	no	1	3	yes
child 15	100	no	no	no	no	n	6	8	no

Figure 2 an example of an Analytical Base Table (ABT)

The basic idea of how the creation of a risk model is accomplished, is the subject of the next paragraph. Before explaining this basic idea, we first look at the final risk model. This is 'machine' that gets as an input the features of a new student and produces as output a risk score (i.e. a number that indicates the level of risk). Visually this is depicted in Figure 3: a new student is 'put through' the risk model and as a result the student receives a risk score. This enables to rank the students based on risk. The three students with the highest scores are eventually checked by the teacher.

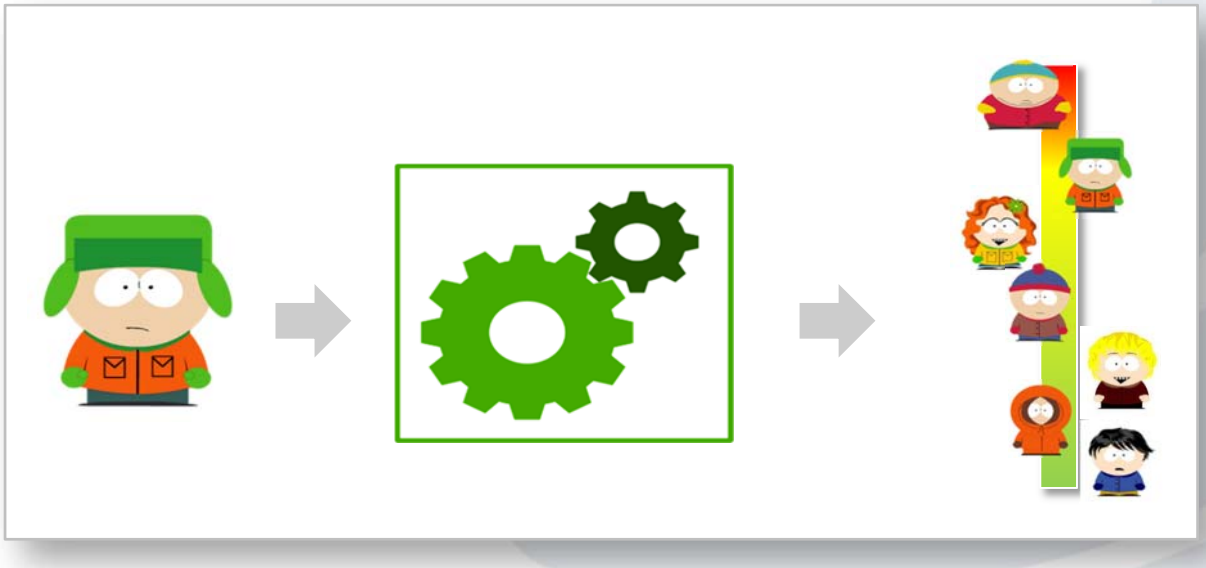


Figure 3 Scoring new students

Algorithms

Although many (complicated) algorithms exist for creating risk models, the basic idea is often simple and does not differ that much from what a human would do. This basic idea is first selecting the most promising features and then combining these features such that it gives a good result on the historic data of the Analytical Base Table.

In the class example, a teacher might first see what features have a clear relation with the fact that a student did not complete the homework. This can be done by looking at the Analytical Base Table and comparing the occurrence of a certain feature with the occurrence of not having completed the homework. For instance, the teacher may notice in the Analytical Base Table that the feature of having low average grades goes often along with the fact that the homework has not been completed. There might be no such relation between the target and a feature like 'wearing a hat'. This way, the teacher may come to a shortlist of features that are thought to be promising to select risky students. In risk modelling jargon this step is called 'feature selection'.

When having a list of promising features, it is time to combine these features to come to a final risk score for each student. Although several ways exist of doing this, we will focus on algorithms that do this by assigning individual risk points to features and then compute the final score by adding up these risk points. In our example, we may for instance assign two risk points to the student if the homework was not completed last time and one risk point when the average grade is low. The determination of the right risk points for each feature is an essential part of many algorithms.

A method for assigning risk points for features is to start with some random initial assignment of 'risk points' for each feature. Assuming these initial risk points, the risk score is subsequently computed for each student on the historic data in the Analytical Base Table. Students in the Analytical Base Table with high risk scores are selected and we record how many of them did indeed fail to complete their homework. Subsequently this procedure is repeated many times with different risk points for each

feature. The final risk points are those that are best able to select students from the Analytical Base Table that did not complete their homework.

Although most real algorithms have smarter ways than random of assigning risk points, the basic procedure of assigning risk points as described above, is mirrored by many algorithms. Starting from this point, any peculiarities of the specific algorithm used can be highlighted quite easily, is our experience.

LATVIAN EXPERIENCE IN TAX GAP ESTIMATION

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In 2014 the State Revenue Service of the Republic of Latvia started a project on the estimation of Tax GAPs. The main objectives of the Tax GAP estimation were the following:

- performance evaluation;
- providing information for risk management needs (for example, bringing to light industries with high compliance risks etc.)

At the moment the State Revenue Service has experience in estimation of Tax GAPs for the following taxes:

- value added tax (VAT);
- personal income tax (PIT);
- obligatory social contributions (OSC);
- excise duties on fuel, alcohol and tobacco products.

This article covers Tax GAP estimation and analysis aspects of PIT and OSC.

1. What do we understand by Tax GAP?

The definition and substance of the term "Tax GAP" provided by different organisations varies rather widely based on the objectives of Tax GAP estimation. The International Monetary Fund examines weaknesses in tax systems and tax administrations and recognises two types of Tax GAP – policy Tax GAP and compliance

Tax GAP. The policy Tax GAP reflects the tax sum lost due to the elements of the tax system (exemptions, inapplicable objects, tax reliefs, reduced tax rates, etc.), while the compliance Tax GAP arises due to deficient compliance with the current tax system (unregistered business, unreported tax, underreported tax, tax debt).

The institutions that are responsible for tax collection usually focuses just on the compliance aspect. The Centre for Social and Economic Research defines the VAT GAP as the difference between the amount of VAT actually collected and the VAT Total Tax Liability in absolute or percentage terms. The VAT Total Tax Liability is an estimated amount of VAT that is theoretically collectable based on the VAT legislation and ancillary regulations.

The State Revenue Service needs to estimate the compliance with the existing tax law, so the definition of the Tax GAP is concentrated on the compliance aspect. By Tax GAP the State Revenue Service understands the share of lost tax (containing a tax sum that wasn't declared and tax that was declared but not paid) in a potential tax sum that should be collected under conditions of full compliance.

2. The methods used for Tax GAP assessment

The State Revenue Service uses both top-down and bottom-up approaches to evaluate and to analyse Tax GAPs for PIT and OSC. The top-down approach ensures total Tax GAP estimation, while the segment-oriented bottom-up approach ensures the necessary data for Tax GAP structure analysis.

At the moment the Latvian tax authority applies bottom-up approaches for three compliance risks:

- general tax regime companies declaring only part of the employment income, so called "envelope wages";
- micro enterprise tax regime companies declaring only part of employment income;
- natural persons engaged in economic activity who are not fully declaring taxable income.

Each segment has its own methodology of estimation. All the bottom-up methodologies are based on an economically rational choices perspective.

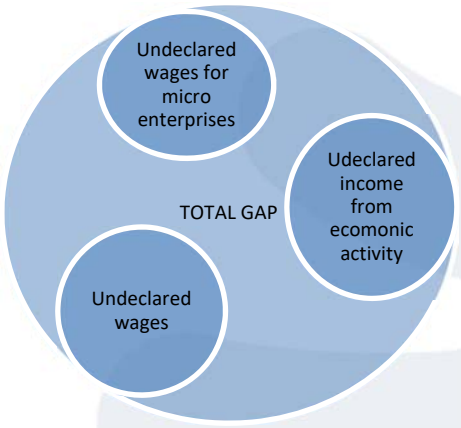


Figure 1. Relation of areas covered by top-down and bottom-up approaches

There is a difference between Tax GAP estimated by top-down approach and Tax GAPs estimated by bottom-up approaches, because some parts of the Tax GAP are still caused by unexamined tax avoidance schemes (Figure 1).

The fact is that in analysing Tax GAP, analysts never have all the information needed, so both approaches are based on several assumptions, therefore Tax GAP estimation can't fully substitute risk analysis tools used in selection of cases for tax controls.

3. The top-down approach

The top-down approach is based on identifying the undeclared income of natural persons. In order to assess taxpayers' undeclared income, money spent or invested by natural persons is compared with known sources of funds, thus assessing the costs that were covered by unknown sources (Figure 2).

When undeclared income is recognised, the Tax GAPs can be calculated by applying actual tax rates.

The main problems of applying this approach are the following:

- Lack of data - there is no reliable and comparable information for certain types of utilization of funds;
- Assumptions - you must make a number of presumptions in order to minimize the impact of laws and regulations on the statistics;
- Reviews of statistical data - statistics on household consumption are reviewed regularly;
- Tax return corrections - in Latvia taxpayers are allowed to make changes in their tax returns within 3 years from the end of taxation period.

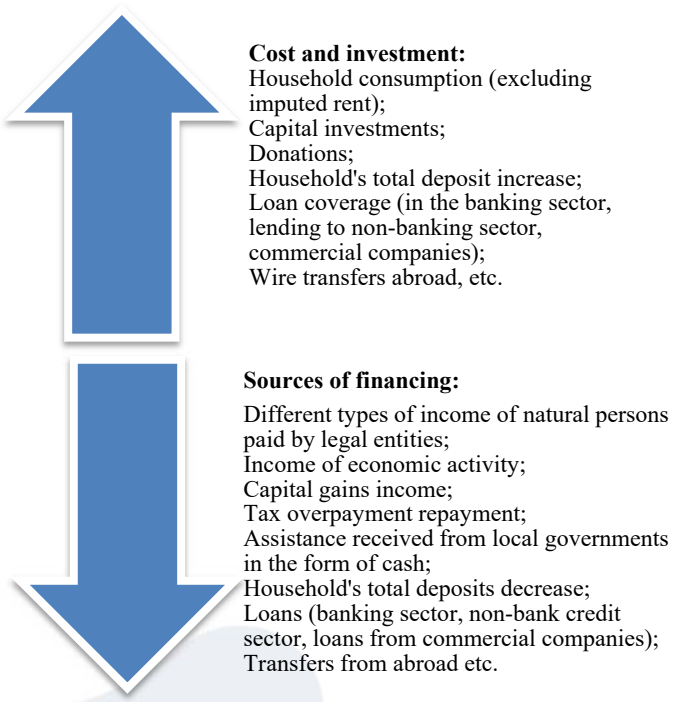


Figure 2. Revealing undeclared income within the top-down approach

As a result of applying the top-down method you get information on total Tax GAPs, but this doesn't provide any understanding on the sources of undeclared income. Thus, to ensure the analytics, the bottom-up approaches need to be applied.

4. The bottom-up approach for wage earners employed under the general tax regime

To analyse the Tax GAP you have to personalise it, identifying persons who have high risks of receiving non-declared income.

Given that the salary depends on the profession of the employee and the length of the working day, our approach estimates two components of under declared wages:

- under declared wages originating from inadequately low average hourly rate (Figure 3);
- under declared wages originating from under-declared working hours (Figure 4);

For the estimation of the Tax GAP the following information on working places is collected:

- Registration number of employer;
- Personal code of employee;
- Administrative territorial code of employer;
- NACE 2 code of employer;

- Number of working hours;
- Wage;
- Profession code.

The Tax GAPs that rise from inadequate low average hourly rate are identified in case the average hourly rate of the working place accounts for a significant discrepancy from profession's average in the region.

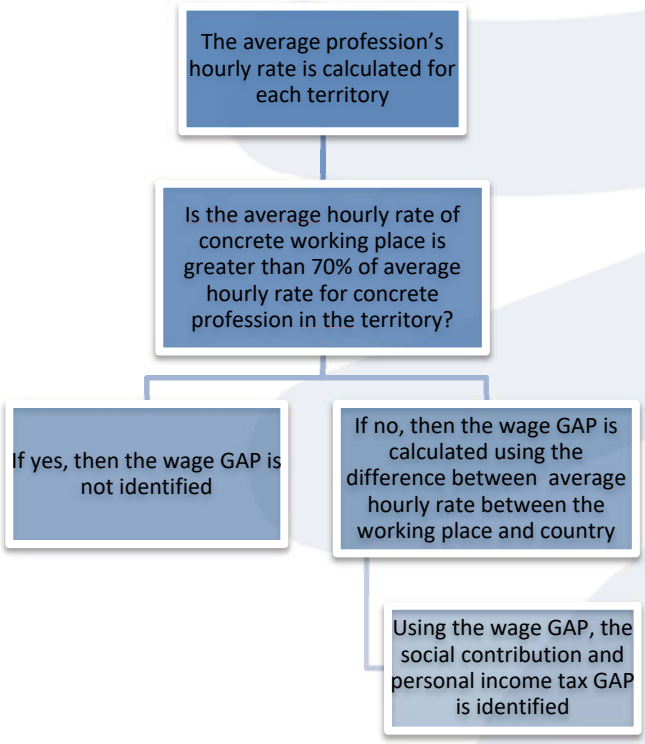


Figure 3 The algorithm to identify under-declared wages originating from inadequately low average hourly rate

The Tax GAP resulting from undeclared working hours is calculated for all jobs that meet all four of the following conditions:

- the workplace is a natural person's the only place of work;
- number of hours worked per month is less than 110 hours;
- hourly rate is not exceeding doubled average tariff hourly rate for a particular profession and country region;
- number of hours worked is lower than the national average number of working hours for the profession.

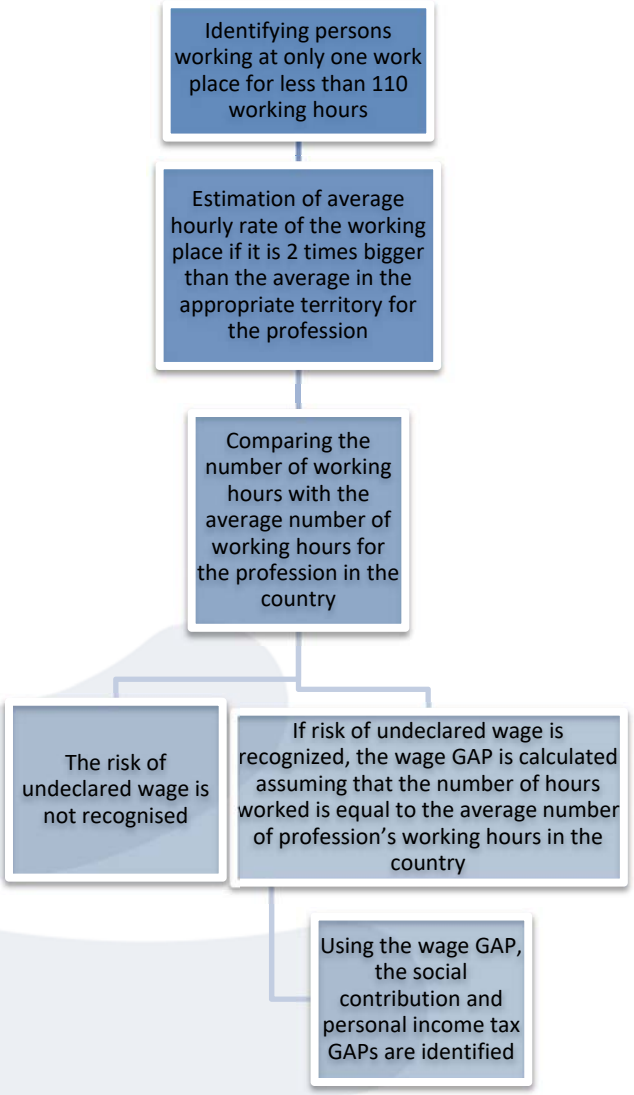


Figure 4. The algorithm to identify undeclared wages originating from nadequately low working hours

The main advantage of the method is that you actually personalise the Tax GAP, so it is possible to analyse the Tax GAP phenomenon from both employee and employer perspective, to identify risky industries and professions, to formulate the demographic profile of employees receiving undeclared salaries and economic profile of employers paying them. That provides better understanding on the compliance risk's nature. Another very important advantage of the method is the possibility to trace Tax GAP promptly. The common disadvantage is a narrow application of the method. By applying it you identify only the envelope wages and nothing more.

5. The bottom-up approach for wage earners employed under microenterprise tax regime

In the Republic of Latvia the special regime for tiny companies (called microenterprises) is adopted. According to regulations companies pay only a

microenterprise tax of 9% from the turnover, that includes shares of all common taxes - CIT, PIT, OSC. This regime is rather popular among small businesses providing labour intensive services, with dominant labour expenses. According to the latest studies, most companies entering the regime had labour costs of 70%-90% from turnover.

Microenterprise tax is a simplified tax regime with simplified tax returns, so no information on employees' profession and working hours is available.

The method of Tax GAP estimation is based on the principle of rational economic behaviour, assuming that the person chooses to work under a microenterprise regime (with less social security level) earning income which is not lower than the analogous employment income under the general tax regime. The Tax GAP is recognised with regard to persons employed under a microenterprise tax regime whose total income constitutes a significant discrepancy comparing to wages of persons working under a general regime in the same industry and region.

For the estimation of the Tax GAP the following information on working places is collected:

- Registration number of employer;
- Personal code of employee;
- Administrative territorial code of employer;
- NACE 2 code of employer;
- Wage.

The main problem of applying this bottom-up approach is setting the correct comparison base. As Latvia is a rather small country, in some cases there is a lack of identical business and regional scope of data on wages paid by employers working under a general tax regime. In such limited data conditions, the analyst is to follow the best available basis for comparison. Preference should be given to the comparison base that best describes the average salary of the business segment analyzed. The order of priority is as follows:

- Average wage for industry (explored to NACE 2 edition 4-digit code) within the region;
- Average wage for industry (explored to NACE 2 edition 4-digit code) – in case the industry is not presented in the region;
- Average wage for region – in case the industry analyzed is presented with just a few taxpayers, that is not sufficient to form a statistically significant comparison base;
- The national average wage – used as a benchmark for analysis of newly-founded tax payers with incomplete registration data.

Taking into consideration the fact that the phenomenon of non-declaring wage income is widespread also within employers working under a general taxation regime, the comparison base is to be increased by wage GAP identified for the industry under analysis.

6. The bottom-up approach for natural persons engaged in economic activity

The method is based on the principle of rational economic behaviour, assuming that the economic operator chooses to favour economic activity (with its inherent risks, administrative burdens, etc.) earning an income which is not lower than the analogous employment income.

The GAP is identified with regard to persons who over the past three years have been engaged in economic activity receiving income from economic activity and other sources of income that derive from the average wage income at the same region and the industry where economic operator acts.

The comparison base used for analysis of adequacy of economic activity income is the average wage paid by companies working under a general tax regime. The recognition of comparison base is analogous to the approach described in the section 5 of the article.

7. The main conclusions and findings of PIT and OSC GAP data analysis

- Although currently Latvia has estimated Tax GAPs only for a five year period (that is not enough to apply any econometric models to reveal factors impacting tax compliance), monitoring fluctuations of GAP and Gross Domestic Product (GDP), we can suppose that there is a negative correlation between the GDP growing pace and the Tax GAP rates;
- In Latvia the industries having the most undeclared wages are going along with trade and construction activities (Table 1), while undeclared income from economic activity is associated with agriculture and services consumed by households (table 2).

Table 1

TOP 10 industries with highest undeclared wages

NACE 2 code	NACE 2 name	Undeclared wages, mil. EUR
47	Retail trade, except of motor vehicles and motorcycles	149,95
46	Wholesale trade, except of motor vehicles and motorcycles	109,10
49	Land transport and transport via pipelines	75,43
43	Specialised construction activities	47,79
41	Construction of buildings	45,41
45	Wholesale and retail trade and repair of motor vehicles and motorcycles	43,32
16	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	41,40
68	Real estate activities	39,33
56	Food and beverage service activities	36,63
10	Manufacture of food products	34,70

Table 2

TOP 10 industries with highest undeclared economic activity income

NACE 2 code	NACE 2 name	Undeclared income, mil. EUR
01	Crop and animal production, hunting and related service activities	52,57
96	Other personal service activities	50,95
02	Forestry and logging	20,53
68	Real estate activities	19,30
47	Retail trade, except of motor vehicles and motorcycles	8,50
69	Legal and accounting activities	7,27
43	Specialised construction activities	5,50
41	Construction of buildings	5,37
86	Human health activities	3,97
49	Land transport and transport via pipelines	3,59

- Analyzing the Tax GAP broken down by professions revealed correlations between factors influencing the demand side of employment market and the level of the Tax GAP. The professions having a higher share of vacant working places had lower rates of tax GAP. The reduced rates of the Tax GAP were also recognized for the professions which require higher professional skills. So we can conclude, that at least in Latvia, the Tax GAP is mostly provoked by the decision made by the employer, not the employee.

Table 3

TOP 16 occupations with highest employee number receiving undeclared wages ("envelope wage")

OCCUPATION	Employees number
Managing Directors and Chief Executives	39603
Shop Sales Assistants	23141
Heavy Truck and Lorry Drivers	13905
Finance Managers	10652
Manufacturing Labourers Not Elsewhere Classified	6852
Cleaners and Helpers in Offices, Hotels and Other Establishments	6599
Cooks	4880
Policy Administration Professionals	4644
Car, Taxi and Van Drivers	4532
Accounting Associate Professionals	4217
Accountants	3448
Security Guards	3255
Motor Vehicle Mechanics and Repairers	3161
Building Construction Labourers	3073
Stock Clerks	2986
Office Supervisors	2701

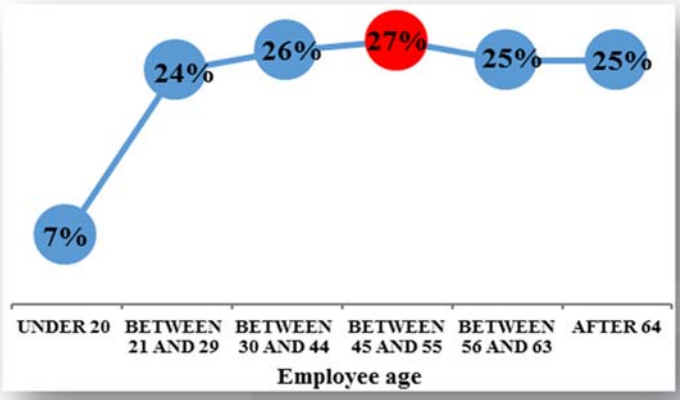


Figure 5 Employees', paid "envelope wage", share in the total number of workers in the country by age group

- In Latvia the most typical employees paid "envelope wage" are middle-aged divorced men (Figure 5, 6 and 7). This trend is quite different from tax evasion behavior studies made by other tax administrations that usually connect non-compliance behavior with relatively younger people. The rational behavior usually leads seniors to lower risk tolerance, likewise upcoming retirement promotes seniors' deeper involvement in the pension capital accumulation process. In the case of Latvia, a decrease of envelope wage is revealed just shortly before retirement age. At the moment tax experts associate seniors' involvement in envelope wages with strong competition and older male discrimination in the Latvian labor market that leads seniors to accept any working conditions provided by the employer. Thus this finding needs further studies.
- The economic factor impact on the envelope wage phenomenon is revealed analysing envelope wages spread in different marital status groups. The higher levels of non-compliance are detected in groups who potentially have dependents – married, divorced and widowed persons. The biggest level of non-compliance is recognised in divorced persons' groups, that could be connected with concealment of income to avoid paying alimonies

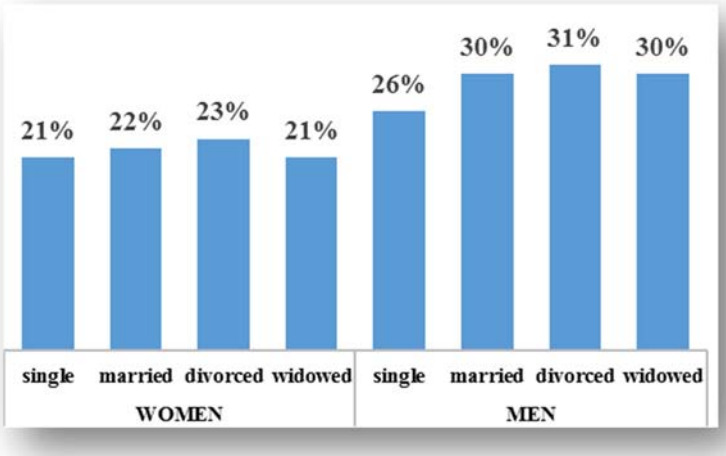
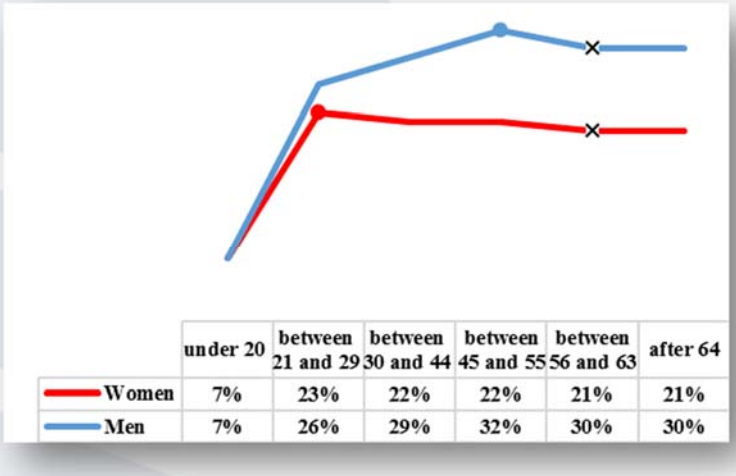


Figure 6 Employees, paid "envelope wage", share in the total number of workers in the country by gender and marital status



	under 20	between 21 and 29	between 30 and 44	between 45 and 55	between 56 and 63	after 64
Women	7%	23%	22%	22%	21%	21%
Men	7%	26%	29%	32%	30%	30%

Figure 7 Employees, paid "envelope wage", share in the total number of workers in the country by gender and age

- Analysing the Tax GAP trends from tax preventive and control activity perspective, we recognised that public statements of tax administration on industry oriented tax control programs do affect the Tax GAP of the industry itself and industries related to the common industry treated. At the same time, the positive effect of the program is not sustainable. Taxpayers also explore the risk tolerance levels of the tax administration, so the maximal effect of the industry approach usually is reached within two months after the program is announced, the positive effects start to expire in 3-4 months.

APPROACH TO LARGE TAXPAYERS

RISK ANALYSIS PROCESS: SPANISH APPROACH FOR LARGE TAXPAYERS[1]

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THE SPANISH LARGE BUSINESS STRATEGY

The Spanish Tax Administration, so called *"Agencia Tributaria"* has a specific tax office for very large taxpayers obtaining annual turnover of over 100 MM Euros. Those kind of taxpayers have very complex structures, a huge amount of operations, international activities and in many cases they run business in different industries among many jurisdictions.

Control of this group of taxpayers requires different strategies, measures and tools from those usually used to control medium or small taxpayers, so their peculiarities as large taxpayers have to be taken into account in the design of an efficient control strategy.

In order to foster that efficiency the Spanish Tax Administration has implemented the following principles, objectives and essentials in his large business strategy:

[1] Article written by Ms Maria Jesus Cardoso based on the joint presentation with Mr Eduardo Cordoba

- Principles:

  - Efficient allocation of resources: We focus our best resources to get the greatest degree of control over the largest and most complex taxpayers
  - Development of a risk-based approach: Our activity is determined according to a tax risk analysis system
  - Greater demand for transparency and good tax governance: Listed companies have specific obligations in this field
  - Co-operative compliance model when taxpayer is signatory of the Code of Good Tax Practices: As a first step to maintain a cooperative relationship to sign the Code is well appreciated

- The objectives we want to achieve with this strategy are:

  - Improve large business tax compliance: Providing assistance to resolve significant issues or by mean of traditional measures of control
  - Assess risk appetite and classify taxpayers: Existing internal tax control framework allows to assess risk and get to an efficient allocation of resources prioritising highest risks
  - Work in real-time: We seek to work issues in real-time because provide earlier certainty and allows to reduce lawsuits and conflicts

- Essentials

  - *Central Office for Large Taxpayers,* created in 2006 to control the compliance of the census of very large taxpayers.
  - *Large Businesses Forum (2009):* Discussion forum to foster a greater and wider cooperation between businesses and the Tax Administration.
  - *Code of Good Tax Practices (2010)*: Set of voluntary recommendations for the Tax Administration and for the taxpayers (not only large businesses)
  - *Tax Risk Analysis System (2014)*: Since 2014 we have implemented an structure inside the Central Office for Large Taxpayers to run risk analysis of large taxpayers properly
  - *Corporate Law obligations for listed companies (2015)*
  - *Tax Transparency Annual Report* (2016)

OUR RISK ANALYSIS PROCESS:

The analysis of the taxpayer is based on data management and the intensive use of IT Tools:

Sources of information:

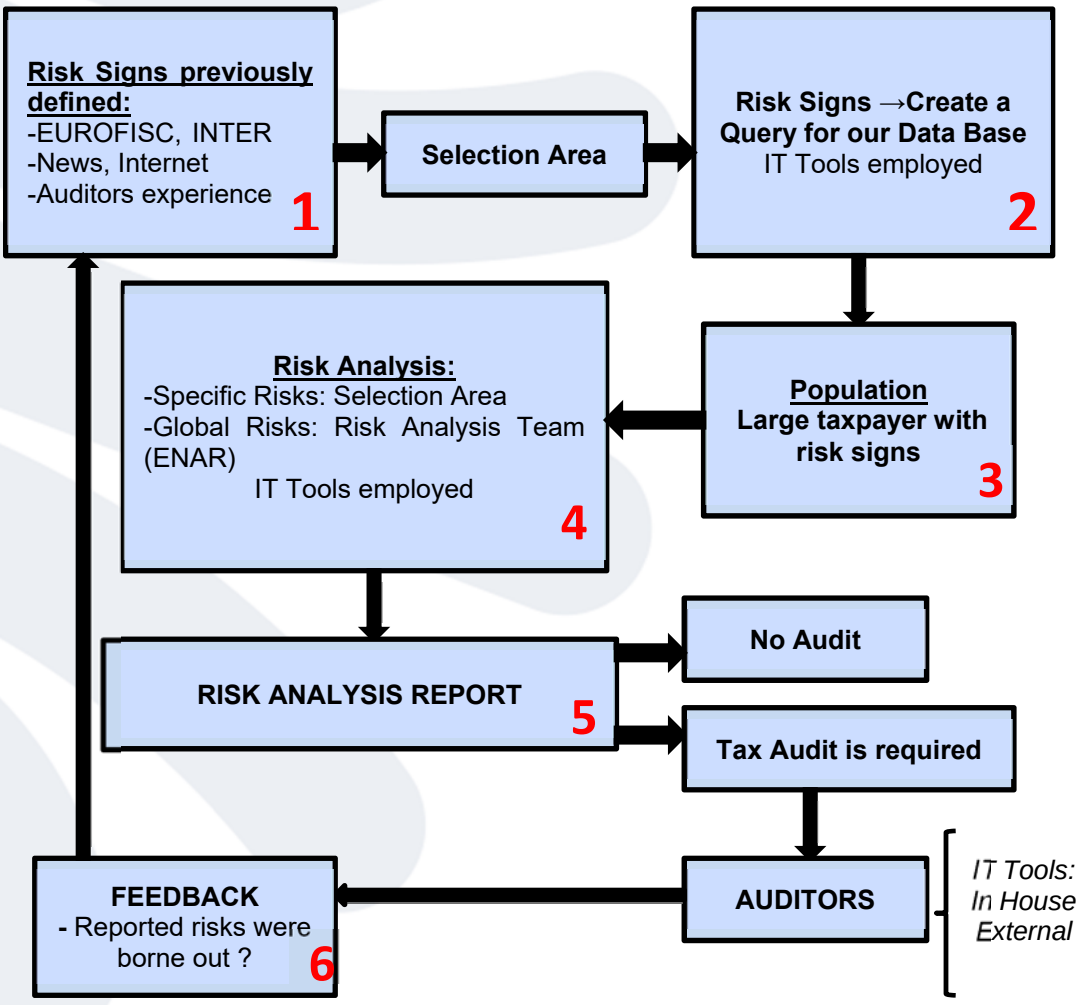
Sources of information may be classified in two groups:

- Internal: information obtained from tax returns submitted by taxpayers themselves (VAT, income taxes, withholding taxes, custom information...) or third parties (banks, employers, traffic, electricity consumption...). This information is submitted electronically, so all this data is automatically included in our data bases, thus allowing quick management of the data.

- External: information obtained from other sources such as public registers, public notaries... This information may be obtained directly, by accessing to other parties databases (ie. social security) or through specific information requests. We obtain also, valuable information from International Organizations: EUROFISC, INTER...

Steps for Risk Analysis Process:

We can observe the steps in this chart:



Risk Analysis process in detail:

The analysis is based mainly on the use of IT tools to manage the huge amount of data we have got in our data base in order to seek for risk signs. This method of analysis is completed with the analysis of external sources: news, the taxpayer background, structures and facts observed in other taxpayer audited. In addition, to identify specific risks, an industry approach is always present and considered during the process.

The analysis made using IT tools consists on the following process:

- Risk signs are translated in a query for our database, with filters and logical, numerical and arithmetical algorithms. Our IT tools make the query design and implementation easy, so not advanced IT knowledge are required for managing huge amount of data. After applying the query on database, we obtain a population with high probability of non-compliance behavior. This risk population will be the selected target.
- Depending on the type of target population we use a case based approach or an issue based approach.
- Manual analysis is carried out by our team of analysts composed by tax auditors with a huge experience in the tax audit field. Within this analysis, the teams examine all the available information on this taxpayer: information in our data base (returns), newspapers, internet, Public Registers, international requests, third parties requests (for example: banks, clients, suppliers…) This teams execute a kind of "pre-tax audit", with all the available information.
- The output of the analysis is a report, which includes: the observed risk (s), the level of risk, a recommendation to carry out a tax audit if necessary and other recommended actions.
- The report is submitted to tax audit teams, who will use the information included in the report, in case a tax audit is needed.
- Next the result of tax audit will be communicated to selection and analysis teams again. This feedback is very valuable for designing future selections and programming more accurate queries.

The Risk Analysis Report is very useful for many reasons:

- It supposes a way to control large taxpayers even in case no risk has been detected.
- If the analysts teams advised to carry out a tax audit, the report will contain a lot of valuable information compiled, processed and ready to be used in a tax audit, and this is a very important fact, because the term to carry out a tax audit in Spain, is limited by law and in case of large taxpayers, this term is seldom

enough, so is very helpful to have all this information include and analyzed in this report.

- The selection and the analysis of taxpayer help our organization to make a risk profile for different taxpayers and to score their risk level. Once defined their risk score, we can get an idea about which taxpayers should be controlled by the traditional method (tax audit) and which ones we can work with in a cooperative relationship context.

IT tools employed:

The received information is stored in the tax agency databases, and different tools are available to analyse that information.

ACL TM is the program which received the data and the main warehouse, but this software is too hard for being used by people without enough IT knowledge, so our IT team has designed different in house tools, with user-friendly interfaces, which makes tax experts able to manage the data even if they haven't got on advanced IT knowledge. These tools are called ZUJAR, PROMETEO, and TESEO.

ZUJAR: Is an analytic in house tool which allows the storage and the management of the huge volume of data we have. We have got different "Zujar" for different items e.g:

- Currency exchange traffic
- Taxpayer relationships
- Car, plane and boat registration
- Invoices submitted and received

PROMETEO: This tool allows us to stock the account and the invoices of companies. This program is compatible with SAP and other standard software, so the account can be imported to PROMETEO ready to be analyzed.

TESEO: This is an IT In-house tool which allows easily visualize the relationship of our taxpayer, with a draft. The relationships we can observe are:

- Owner relationships
- Family: we can see the participation of the relatives of and partner of the company, in other companies, to detect related party transactions
- Who is authorized in the bank accounts of the taxpayer we are studying
- Who are the managers, and which other companies are managing
- Commercial relationships, etc.

RISK ANALYSIS AND CO-OPERATIVE COMPLIANCE

When companies are willing to follow voluntary recommendations of the Code Of Good Tax Practices they can submit the Tax Transparency Annual Report covering nine different topics:

1. Explanations about presence in tax havens and low tax jurisdictions
2. Information of international taxation schemes and BEPS suitability of the company
3. Business restructuring, merges, acquisitions of the fiscal year
4. Relevant transactions on subsidiaries and permanent establishment
5. Tax strategy and tax governance of the company
6. Most important business decisions adopted by the Board during the fiscal year
7. Existence and description of Internal Control Framework and prevention of illegal activities
8. Law suits about taxes and position taken by the company
9. Tax transparency reporting of the business

The Tax transparency Annual Report is used for risk assessment purpose among three steps as follows:

- Submission of the report to the Central Office for Large Taxpayers, every year on July, as an annex of the Corporate Tax return of the previous fiscal year.
- Open dialogue and meeting with the business to better understand issues on the report and request of additional documentation during a period of three months
- Decision making: the outcome of the process should be the identification of the issues which are going to be included in next audit and what are not because they have been clearly explained and are aligned with tax administration criteria

SWEDEN´S APPROACH TO RISK ASSESSMENT

Regarding transfer pricing and profit allocation to permanent establishments

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Background

Transfer pricing is the setting of the price for goods and services sold between controlled or related legal entities within an enterprise. If a subsidiary company e.g. sells goods to a parent company, the cost of these goods paid by the parent to the subsidiary is the transfer price.
In principle, a transfer price should match either what the seller would charge an independent, arm's length customer, or what the buyer would pay an independent, arm's length supplier.
Profit allocation to permanent establishments is also based on transfer prices since there can be dealings within a single enterprise. The permanent establishment should make the profits it would have made, had it been a distinct and separate enterprise.
Because countries impose different corporate tax rates, a corporation that has a goal of minimizing the overall tax burden can set transfer prices that allocate more of the worldwide profit to lower tax countries. Transfer prices become a concern for government taxing authorities when transfer pricing is used in this way, i.e. to lower profits in a division of an enterprise located in a country that levies high income taxes and raise profits in a country that levies no or low income taxes.

Organisational and risk assessment development

Historically the Swedish approach to transfer pricing and profit allocation to permanent establishments consisted of low activity until 2008. In 2008 a national project on these issues – transfer pricing and profit allocation to permanent establishments – was started with the aim of developing the knowledge and methods on these issues and in 2011 transfer pricing issues became the sole responsibility of the Large Tax Payers Region within the Swedish Tax Agency. Issues regarding profit

allocations to permanent establishments were then handled by two offices, both being the competent authority for exchange of information.

Today the Swedish Tax Agency has a new organisation concerning these responsibilities. The new organisation includes a co-operation between the tax areas transfer pricing and profit allocation to permanent establishments and the Swedish Tax Agency thinks that this new organisation works well. This co-operation between transfer pricing and profit allocation to permanent establishments has been in place since 2015 and it includes both a joint risk assessment team as well as investigation teams.

The joint risk assessment team has been created in order to become more efficient and productive when it comes to risk assessment and case selection concerning these tax areas which are in many ways very closely related. Our risk assessment work is hence now centralised but the analysts working in the risk assessment function still also work as tax auditors. The reason for us to have this organisational structure is that we think it is very important to have and to maintain a good communication between the compliance enforcement personnel and the risk assessment function.

Figure 1: The life cycle of the Swedish risk assessment process.

The figure above shows the annual life cycle of the Swedish risk assessment work of today. In the beginning of each year an annual plan for the upcoming year is decided by the Swedish Tax Agency. This plan contains information on what kind of controls etc. that the Swedish Tax Agency has decided that the risk assessment team should

concentrate its efforts on for the next year. The risk assessment team then continuously performs all case selection and the compliance enforcement personnel perform the corresponding activities such as auditing, information, correction, legal support etc. on the, through the risk assessment process, chosen companies and permanent establishments. The risk assessment team has to deliver new cases three times per year.

We have also built parameters into our new risk assessment model in order to do follow-ups when our new model has been tried and tested during a couple of years. The purpose behind the coming follow-ups is to evaluate the outcome and to develop the model and hence to improve the risk assessment process.

What factors do we use to identify transfer pricing compliance risk?

In our risk assessment work we have tried to learn from our own previous experiences as well from the OECD handbook on risk assessment.

We use a risk assessment model that is based on the whole population of companies. This means that we search for all risks, regarding transfer pricing and profit allocation to permanent establishments, regardless of company size. We also utilize all accessible sources of information and combine automated searches with manual assessments done by experienced analysts. We then assess the risk for each individual company in a standardized manner and according to our own existing risk assessment model which is based on both the probability of risk and the consequence of risk.

Concerning the upcoming Country-by-Country (CbC) reported information there is ongoing legislative work to prepare for CbC, which the EU country Sweden most likely will subscribe to and have in place from the end of next year (2017). Therefore, our risk assessment work and case selection work both need to be developed further so that the CbC reported information becomes a good source of information. In this context, rulings will also be a good source of information.

However, we can already today see that CbC fits into our Swedish model. In order for Sweden to fully get all the benefits from the new information we need to develop our skills so that we can analyse and draw correct conclusions from it. Hence, the CbC reported information needs to be available for risk assessment purposes.

Overall risk assessment

What approach does Sweden have to overall risk assessment? The proper answer to this question is that we try to focus on these questions:

- What are the risks for mispricing?
- What are the most significant risks?

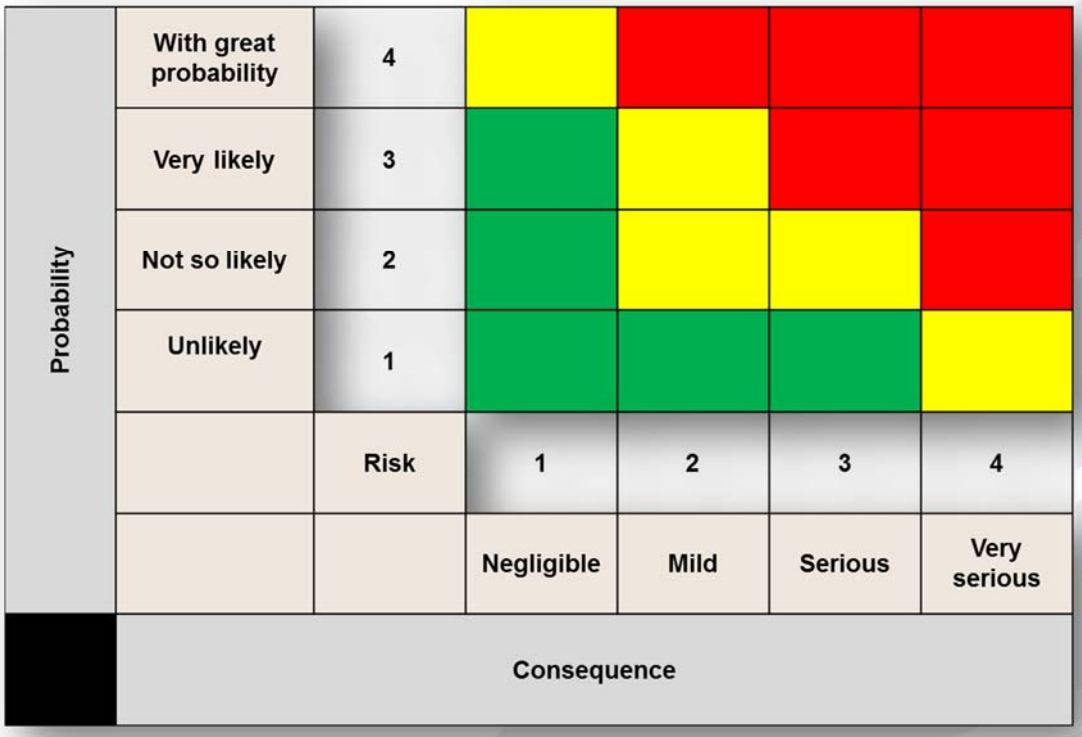

Figure 2: The probability of risk and the consequence of risk.

The Swedish Tax Agency looks at and evaluates the probability of risk to occur and the consequence of risk if risk does in fact occur according to the model above (see figure 2). The higher up in the right hand corner of the model that the probability of a risk and the consequence of a risk, if a risk occurs, is placed the more serious the occurrence is. E.g. a probability rating of "With great probability" and a consequence rating of "Very serious" is the most serious alternative of them all. Companies that are placed here will probably get audited whereas companies placed in the other corner of the model (to the bottom left) will probably not get audited.

This simple but effective way of thinking about risk shows how the Swedish Tax Agency looks at and handles risk management. This thinking is actually not only relevant to transfer pricing and profit allocation to permanent establishments, but it is also relevant to most risk management within the Swedish Tax Agency.

Conclusion

You can actually summarise this paper in only one sentence. Risk assessment is important! And since the Swedish view is that transfer pricing and profit allocation to permanent establishments in many ways are closely related to each other we have created a joint risk assessment team regarding these tax areas. This cooperation has already proven to be useful and it will hopefully also help us in our future risk assessment work.

Our automated searches also try to cover all risks. However, it is very important to continuously work on the indicators of the search model. The transfer pricing world keeps changing all the time and hence our automated searches are constantly being reviewed. It is a necessity to review the model on a continuous basis. If not, you will miss out on some risks and then the model will lose importance. When we do our risk assessment work we try to emphasize on what the risks for mispricing are and what the most significant risks are. The Swedish approach is to look at and evaluate the probability of risk to occur and the consequence of the risk if it actually occurs.

What about the future then? The next big thing on the agenda will probably be the CbC. Here the Swedish Tax Agency needs to focus on competence development and training as the key to success regarding the use of the new information.

IMPROVING PROCESSES IN TAX ADMINISTRATIONS, IMPROVING PERCEPTIONS OF TAX SYSTEM

APPLYING CONTINUOUS IMPROVEMENT METHODS IN STATE TAX INSPECTORATE UNDER THE MINISTRY OF FINANCE OF THE REPUBLIC OF LITHUANIA

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Introduction

Continuous improvement – easy and optimal way to improve tax administrations processes and procedures.

Financial crises, change management issues, re-organizations, staff deductions, etc. These factors are occurring occasionally during the years in work environment. There are numerous Continuous Improvement techniques those can help to build a functioning Risk and Quality management system in order to handle various crises. Even though it takes time to build such system in order to function right.

1. Risk Management system

Tax Inspectorate under the Ministry of Finance of the Republic of Lithuania (Tax Inspectorate) top management has made a decision to implement a Risk Management system **(RMS)** based on COSO Enterprise Risk Management model (COSO ERM) in 2007.

Figure 1.1. COSO ERM

In order to implement the model successfully and to execute project management stages efficiently the selection appropriate project framework is vital. Tax Inspectorate top management has made a decision to choose one of closely exclusive improvement cycle of Six Sigma projects – **Define Measure Analyze Improve Control improvement cycle (DMAIC)** (Figure 1.2.).

Figure 1.2. DMAIC improvement cycle

DMAIC framework complexity depends upon size of planned improvement project scope. Tax Inspectorate has accomplished the following steps implementing DMAIC:

Define. This part of the framework is the most important to determine the goal and scope of the planned improvement project. The Enterprise Risk Management system was identified as the aim for the change. The following main problems were defined: procedures were not linked to processes, there were no clearly defined responsibilities

for staff, Tax Inspectorate employees' had a little understanding about process based thinking.

However, besides core problems there were a sequence of other necessary actions to be taken during this step:

- Identification of the potential resources – Tax Inspectorate employees.
- Choice of Supplier Input Process Output Customer (SIPOC) method for analysis of procedures within processes. Finally, this tool has been used to form processes in Improve step.

Measure. Objectively establishing the milestones, benchmarks and basics for the improvement project. Data collection and analysis process reflects whether the significant improvement has been made at the end of the project. Concerning this project the following tools were the most important:

- Establishing process performance matrix has been the main data collection tool.
- Benchmark analysis of current state and COSO ERM approach at Tax Inspectorate environment.

Analyze. In order to apply COSO ERM model the RMS coordination, administration, management teams have been established. Risk Manager responsible for coordination and organization of the work of management teams has been appointed. Due to risk identification within processes PEST (Political Economic Socio-cultural Technological) analysis methodology has been applied. In order to evaluate and classify risks COSO ERM Risk Assessment matrix (Figure 1.3.) has been used.

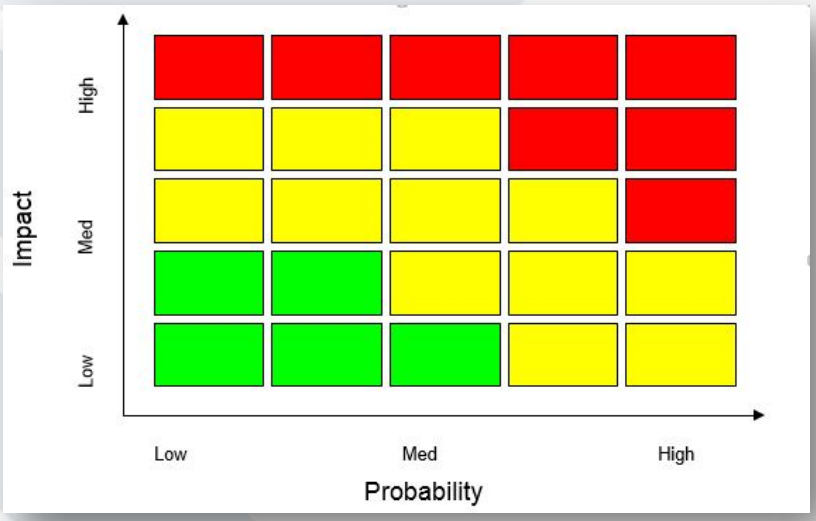

Figure 1.3. Risk matrix

Improve. The purpose of this step is to identify, test, and implement the solutions to occurring obstacles during the project.

Applied **SIPOC** and **process performance metrics** techniques helped to gain holistic approach of process and to collect data necessary to form 6 main processes and 8 subsidiary processes. A process owner and administrator were appointed to every process. Their responsibility is to contribute to RMS in close collaboration with Risk Manager.

Control. The RMS annual cycle has been structured according to Plan Do Check Act (PDCA) method. During the **planning** phase all the required data are gathered from the responsible teams. The potential risks and are discussed during the workshops organized by the Risk Manager. After all the data is collected and approved in workshops "**Do**" phase starts where all RMS documents are confirmed by the order of the Head of Tax Inspectorate. **Check** actions are taken during the annual cycle of RMS by demand after risks occurs. The final step of PDCA cycle is the **control** of risks, staff change of the responsible teams, RMS improvement possibilities are discussed during the workshops and meetings.

Risks

Two main risk groups were identified in Tax Inspectorate - **long-term risks** and **short term risks.** Both of them have different procedures created in order to eliminate occurring risks.

Long term risks (Figure 1.4.) are identified through the annual cycle during RMS team meetings, workshops, individual employees' observations. After the identification, risks are registered to the **long-term risk register** by the risk administrator. The long term risks are being analyzed and the tools for risk elimination and responsible staff are identified during the workshops. A new annual cycle is being started by checking the past year long-term risk register.

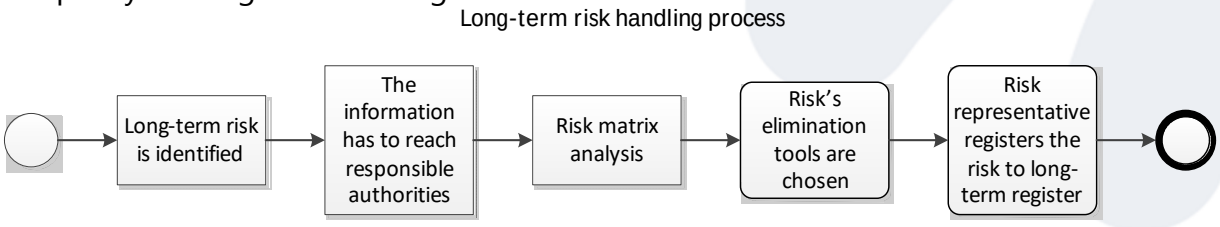

Figure 1.4. Long-term risk handling process

Short-term risks (Figure 1.5.) can be identified by any employee in Tax Inspectorate. Since the risk is identified it is sent to risk manager that registers the risk to the **short-term risk register**. The Risk Manager contacts stakeholders who have to take decision if the risk is viable. If so, responsible staff and tools, deadlines are established for risk elimination. In that case if the risk requires more time it might be identified as long-term risk.

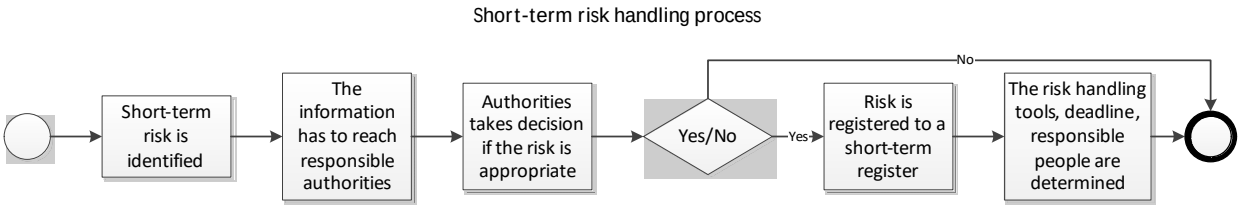

Figure 1.5. Short-term risk handling process

These procedures have been used to establish an effective RMS.

2. Quality Management system

Relying on gained experience about process based thinking while developing and implementing RMS Tax Inspectorate top management has made a decision to establish a Quality Management system **(QMS)** that would be addressed towards tax administration and tax payer. The goal for the QMS were to comply with international quality standard (ISO 9001:2008) requirements. DMAIC and SIPOC analyzed data were used for the development of QMS.

QMS is based on the documents: **Quality Management system policy, Main Tax Inspectorate goals and their evaluation criteria, Tax Inspectorate process efficiency evaluation criteria** that have been maintained during the years and improved continuously. (Figure 2.)

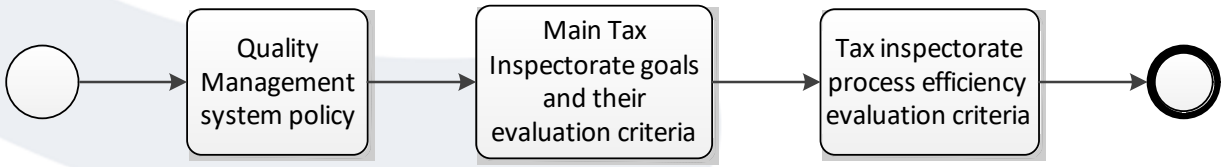

Figure 2. Quality Management cycle

Quality Management system policy. The main policy where Tax Inspectorate top management states about main goals and values of QMS. Purpose of this policy is to emphasize QMS importance and to promote Tax Inspectorates values, management responsibilities using and improving QMS. The quality policy is maintained during the annual cycle by the authorities.

Main Tax Inspectorate goals and their evaluation criteria. In this document the main quality goals, their criteria and target values are defined. These evaluation criteria are renewed during the annual cycle according to planned process improvement. This document is closely linked to QMS risk policy.

Tax Inspectorate process efficiency evaluation criteria. In this document all processes have been divided into procedure groups. Every procedure has a criteria and a target value. Target values are set during the annual cycle.

These three main documents are the core of QMS. Along with QMS other improvements were implemented such as Quality box, Lean workshops etc. In 2012 Tax Inspectorate has been certified by ISO 9001:2008.

3. Integrated Risk and Quality Management system

In year 2013 Tax Inspectorate has started RMS and QMS integration project. RMS and QMS were build using similar data and frameworks but they were still separated and not linked together.

The integration process covered three main steps:

- Create annual IRQMS planning cycle.
- Combine necessary documentation.
- Establish responsibilities for RMS and QMS team's employees.

Integration of RMS and QMS to The Integrated Risk and Quality Management (**IRQMS**) enabled to avoid double work, reduced the amount of documentation, improved communication within the system, QMS and RMS functions were interlinked for better efficiency. Every single document (Figure 3.) during the annual cycle is confirmed by internal order of Tax Inspectorate.

Figure 3. Integrated Risk and Quality Management system annual cycle documentation

IRQMS is functioning smoothly during annual cycle since 2013. It is the main Tax Inspectorate system to eliminate occurring risks by optimal means and to optimize inner processes procedures to improve tax administration. Integrated system is continuously improved over the years by internal resources and it is continuously re-certified by international quality standard. The last planned verification of the system was to gain ISO 9001:2015 ISO standard certificate.

4. Summary

The Tax Inspectorate improvement project that started in 2007 has led to a Risk management system that helped to eliminate occurring risks by optimal means. Implemented Quality management system has been certified by ISO 9001:2008 in 2012. In the following year 2013 the systems has been merged together to an Integrated Risk and Quality Management system. In September 2016 Tax inspectorate IRQMS has been certified by ISO 9001:2015. IRQMS is the core of continuous improvement that is applied in Tax Inspectorate.

BULGARIA'S FISCAL EDUCATIONAL PROGRAM WITH ITS OWN ONLINE TUTORIALS NOW

More than 55,000 school-goers trained by tax educators. Another 55,000 take online tests.

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In 2016, the Bulgarian National Revenue Agency launched the third part of its "Keep up with Tax" educational program, targeted at secondary-school students aged 14 – 18 years across the country.

Learning through play

The main focus of the project is on learning through play. Some years ago, when we launched the educational program, we conducted a creativity contest on tax-related subjects – students had to write essays on tax-related subjects or make videos or photos. Within the next campaign, we encouraged students to collect cash receipts and, again, playing for prizes, learn why reporting turnover is important, what the tax system is about and what rights receipts give us.

Celebrities – teen idols

Another strategic idea we employ in the implementation of the project is involving celebrities, teen idols, talking from first-person perspective about taxes and their social function and significance for the country. Our experience shows that the celebrities looked up to by school-goers have much more credibility than institutions and each message idols send is viewed much more positively. Project's ambassadors include dozens of singers, athletes, super models, TV presenters, actors and other public figures who communicate their personal prestige and fascination to the educational program. This has proven to be a successful marketing move and most celebrities are happy to take part in the program free of charge because their participation in a socially responsible cause such as this boosts their personal popularity.

Online platform with video tutorials and tests on taxes and social security contributions

In 2016, online tax courses constitute a brand new component of the "Keep up with Tax" Project. It is by far less expensive and more efficient to have the entire educational content available online and it is crucial that it be attractively presented and comprehensible. The online portal enables us to expand significantly the range of school-goers that we are able to reach because with about 100 educators we can conduct classes with no more than 20,000 students per year.

The website www.vlezvchas.bg provides free, one-click-away access to tax tutorials. Each video tutorial ends with a questionnaire covering the material featured in the brief video presentation. The video tutorials are shot with the participation of teen idols – they not only take part in them, they also teach. Of course, we also use Facebook. The nearly 18,000 likes of the educational program's website in a country populated with seven million people is an unquestionable sign of success.

Prizes for the ones who excel

The students who excel accumulate score and have a real chance to win attractive prizes – drones, e-book readers, portable speakers and extreme sports cameras. Including the possibility of winning a prize is an additional incentive that has also proved to be effective over the years. Since the selection of prizes appealing to the target group is central, the decision on what prizes to offer was made within small focus groups involving teenagers. There are quite a few students who, apart from showing interest in tax-related subjects, are attracted to the chance of winning a pretty object.

From small to large scale: a tax class in every school

The key risks facing most fiscal educational projects are related to the fact that they fail to provide the necessary information to all students simultaneously. In Bulgaria, the fiscal educational program has reported a big success, with nearly 90% of participating students finding it helpful and considerably more interesting than the other subjects taught in school. However, when we assess the level of financial knowledge among those whom the project has been unable to reach, the situation seems alarming.

Therefore, after years of negotiations and the brand new School Education Act that came into force in 2016, in October of this year, the Bulgarian tax administration and the Ministry of Education signed a formal agreement for cooperation and enhancing fiscal literacy in schools.

Bulgaria has already adopted the technology and entrepreneurship school subject and institutions have come to share the willingness to incorporate in it topics related to taxes and social security contributions, thus teaching not only knowledge but also basic tax skills needed by every taxpayer-to-be. We believe that in the near future, the curriculum in Bulgaria will include this fundamental knowledge and skills that have been unavailable so far. Because financially literate people are far more successful. We do believe that.

Intra-European Organisation
of Tax Administrations