Shining Light on the Shadow Economy:
Opportunities and Threats

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Executive summary

While the shadow economy is a long-standing problem, over the last decade many tax administrations have strengthened their efforts to identify and tackle its different aspects with some success. Many administrations have found the 2012 OECD Forum on Tax Administration (FTA) information note *Reducing opportunities for tax non-compliance in the underground economy* ("the 2012 Information Note"; OECD, 2012) helpful in this respect. The 2012 Information Note considered the issues in some depth, stressing the importance of tax administrations having multi-faceted strategies that covered the wide range of shadow economy activity.

However the shadow economy is constantly changing and adapting. In particular recent changes in ways of working and business models, the growth of the digital economy, wider social changes and globalisation are causing new shadow economy activities to emerge and some existing ones to expand in scale or scope. These can create new societal problems and potentially undermine tax compliance more widely. In particular many administrations are seeing a growth in labour market crime, increased cross-border frauds, increasingly sophisticated use of technology within the shadow economy and a potential threat to the tax base through opportunities offered by the rapid growth of the sharing and gig economies.

It was therefore agreed at the 10th OECD Forum on Tax Administration meeting held in Beijing in May 2016 that it would be timely for the FTA to undertake a project looking at these new developments and how tax administrations should respond, including the possibilities for collaboration between countries and with law enforcement and other agencies. In this respect, this report complements the recently published OECD *Technology Tools to Tackle Tax Evasion and Tax Fraud* report (OECD, 2017a) as well as the 2012 Information Note.

The intention of this report is not to conduct a comprehensive analysis of the shadow economy or a review of all the strategies being undertaken by FTA members. Its purpose is more practical, namely to provide an overview of recent developments and some examples of strategies deployed by some tax administrations with the intention of recommending areas of further targeted collective work. The aim is to help keep tax administrations "ahead of the game".

This work has been sponsored and led by the Norwegian Tax Administration. The work has benefitted from the input and examples provided by a wide range of FTA members and the FTA Secretariat as well as through discussions at an expert workshop with working group members.

The report is split into four chapters:

- Chapter 1 examines the drivers and behaviours observed in the shadow economy and attempts a new definition of shadow economy activity as part of promoting the use of multifaceted strategies, given the complex interlinking of such activities in the modern economy;

- Chapter 2 looks at the main new trends in shadow economy activity focusing on: changing patterns in the use of cash; the emergence of new business models and ways of working; areas where technology can be misused; cross-border shadow economy activity, particularly fraud; and the illegal exploitation of workers;

- Chapter 3 sets out the range of strategies that tax administrations use to tackle the shadow economy, grouping them under three "pillars":

    - taxpayer education and simplicity of compliance;
    - reducing the opportunities; and
    - reinforcing social norms;

- Chapter 4 sets out recommendations for possible further work. These are:

    - ***Recommendation 1: Sharing of intelligence:*** as has been evident in the preparation of this report, tax administrations have much to share on the developing risks in the shadow economy, including on cross-border aspects, as well as on effective counter-measures. Tax administrations may want to consider whether a Commissioner sponsored Community of Interest should be established which would bring together experts on the shadow economy periodically to complement existing groups for exchanging information.

    - ***Recommendation 2: Effective use of different data sources:*** it could be useful to look further at the available data sources, internally generated, domestic and international, including bulk data sources; at how exchange can best be facilitated; and how data sources might be used most effectively to minimise opportunities for carrying out shadow economy activity.

    - ***Recommendation 3: Collective action on the sharing and gig economy:*** while the sharing and gig economy can have positive benefits for the wider economy, they also risk expanding the shadow economy as existing and new activity may go unreported. Given that this development affects all tax administrations, it is worth considering the possible creation of a Task Force made up of interested tax administrations to examine the options, including in discussion with online intermediaries facilitating the sharing and gig economy, and to propose solutions.

- ***Recommendation 4: Effective identification and registration:*** given the extensive use of false IDs in the shadow economy and the importance of effective registration, tax administrations may wish to further explore best practices in identification and registration of taxpayers and in secure authentication, including the use of biometrics and blockchain.

- ***Recommendation 5: Reinforcing social norms:*** as part of multifaceted strategies, tax administrations may wish to explore further the most effective mechanisms to influence behaviour. This might include how third parties, for example customers and trade bodies, can help put downward pressure on the shadow economy by increasing transparency and reducing the acceptability of cash payments without electronically recorded receipts.

- ***Recommendation 6: Whole of government approaches:*** actors in the shadow economy will often be involved in social security fraud, failure to comply with regulations (including health and safety) and, in some cases, serious crime. Tax administrations are increasingly working with other parts of government on tackling these issues. Tax administrations may wish to consider further the core elements of successful whole of government approaches and how they could help improve overall effectiveness.

- ***Recommendation 7: Production of "how to" guides:*** A number of tax administrations have introduced successful approaches to tackling aspects of the shadow economy, from online tills to innovative uses of data sources and the use of blockchain technology. In order to help other administrations benefit from the lessons of such approaches, some individual tax administrations might wish to provide fuller explanations of how such approaches were planned and implemented.

- ***Recommendation 8: Measuring impacts:*** Measuring the shadow economy can be difficult although important for decisions on resources, investment and strategies. Tax administrations may wish to compare approaches to measurement including on how the impact of policies can be most reliably measured.

Chapter 1

The nature of the shadow economy

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Introduction

While the shadow economy is, by definition, difficult to measure, in general it is seen as a significant part of the tax gap in most countries. Estimates of its size vary from under 1% of Gross Domestic Product (GDP) in some countries to over 20% in others. In addition to less revenue being collected to fund public services, it has other wider effects which can magnify its economic and social impact:

- it undermines trust in the tax system and the social norms supporting voluntary compliance. This can have a significant impact on compliance attitudes, particularly in the many areas where tax administrations rely on taxpayers to self-declare or self-assess. Where carried out by organised crime, it can also have wider social impacts;
- it can increase other government and business costs, for example social security costs, loss of regulatory fees and compensation to customers who have suffered financial fraud;
- it distorts competition, decreasing the costs of non-compliant businesses compared to their competitors. As such it can lead to failures of honest businesses or a spread of shadow economy activity;
- it can put consumers and other businesses at risk, potentially leaving them exposed to credit risk, lack of insurance and health and safety failures;
- it can lead to the exploitation of workers, for example not paying a minimum wage or lack of contractual protections. Such exploitation can be more extreme the more vulnerable the workers, particularly where organised crime is involved;
- such activity can also support wider illegal activity for example the trafficking of people, money laundering and as a source of funding for serious crimes.

How to define the shadow economy?

Most people can agree on many of the features of what is known as the shadow economy. Agreeing a more precise definition is more difficult. A variety of different terms are used in addition to "shadow economy". These include "underground economy", "non-observed economy", "hidden economy", "cash economy", "informal economy" and so on. There is no universal agreement on what exactly is covered by those terms or how they differ.

Some definitions include activity which is done by individuals for their own benefit or on a reciprocal basis, most of which will not generally be taxable. Some definitions will also draw a distinction between legal and criminal activity. (This is on the basis that legal activity would be taxed if reported and allowed to continue; illegal activity on the other hand, for example sales of illegal drugs, would result in enforcement action to end it.)

The 2012 Information Note took a pragmatic approach to the question of definitions. It described the subject matter of that note as simply "unreported economic activities". It is worth looking at this again. While any definition will suffer from flaws, having a greater common understanding of the scope of the shadow economy can help in both constructing comprehensive "whole of government" strategies domestically and in aiding mutual understanding and learning between tax administrations. This is particularly the case given the different ways administrations organise themselves internally.

To capture a wider range of the different elements of the shadow economy, the 2012 pragmatic approach could perhaps be expanded as below:

> "Economic activities, whether legal or illegal, which are required by law to be fully reported to the tax administration but which are not reported and which therefore go untaxed unlike activities which are so reported."

This definition, although imperfect like any other, may have a number of advantages in thinking about strategic approaches to shrink the shadow economy:

- It makes clear that there is a limit on economic activities in this context to those which governments have made subject to reporting to the tax authority;
- It recognises that shadow economy activity can exist within a legal business if there is not full reporting. **A number of new strategies are currently being deployed to minimise under-reporting such as tamper-proof electronic tills and online tills.**
- It recognises that aspects of the activity may be recorded outside of the tax administration. For example, a business may have obtained a licence from other public authorities, purchased goods or services from other parties or used third parties to facilitate transactions between them and customers. **Capturing this data can be an important tax administration tool, for example data from financial intermediaries**;
- While the activity may not be reported to the tax administration, the activity itself (rather than the non-reporting) will be visible to customers, intermediaries or employees. **Strategies aimed at such groups may therefore help in increasing reporting. Examples are customer verification of purchases, whistle-blowing schemes and wider reinforcing of social norms**;

- It does not distinguish between legal and illegal activity. While not all tax administrations will have direct responsibility for tackling wider illegal activity, they may be involved in the sharing of information with those who do, including in **"whole of government" approaches increasingly being implemented**.

Examples of shadow economy activity

The table below sets out a number of examples of shadow economy activity. Many of these overlap and the table is meant to be illustrative of the range of activities and not comprehensive.

Table 1.1. Examples of shadow economy activity

Activity	Examples
Non-registered businesses	Businesses that do not register with the tax administration for either income tax or value added tax (VAT). They may still register with other agencies or service providers.
Under-reporting of business income	Ranges from businesses or sole traders which skim off some cash sales to those which engage in large scale fraud.
Unreported sources of income	Businesses or individuals receiving sources of income not known to the tax administration from investments, property etc.
Inflation of costs	Those who inflate tax deductible expenses, for example through the use of false receipts or invoices or collusion with others.
Identity fraud	Use of fake identities to avoid tax liabilities or to claim refunds due to others. Also commonly used to continue to claim benefits while working.
Phoenix companies	Companies that are created with the intention of becoming insolvent before paying tax and other bills (with the business being transferred but not the debts). Similarly companies may strip assets and disappear prior to paying tax due.
Moonlighters	People registered with the tax administration for some employment but not for all, for example someone with a part-time job paid by cash on top of regular employment.
Ghosts	Those unknown to the tax administration, never having registered for tax. Examples may be some informal market traders, day or seasonal labourers, those providing domestic services and those carrying out serious crimes.
Cross-border fraud	Those who carry out activities across border with the aim of exploiting gaps and being able to hide out of reach of another tax administration.
Employer fraud	Not registering workers with the tax administration or requiring such registration as a condition of employment; not complying with requirements to withhold tax or social security liabilities; employing illegal workers – for example those without a permit or underage; not carrying out identity checks; paying less than required minimum wages etc.
Money laundering	Bringing money from illegal activity into a legal business in order to make its origin appear legal.

Activity	Examples
VAT fraud	Claiming refunds or deductions for VAT that has not been paid by the supplier, including through organised cross-border fraud.
Distance selling	Evading the payment of VAT by selling into one country from another online without registration.
Illicit trafficking	Smuggling of goods on which duty has not be paid or which are fake for sale informally or through established businesses.

This table illustrates the broad scope of activities and range of behaviours within the shadow economy. This points to a need to develop a diverse range of responses rather than approaching the shadow economy as though the activities within it form a uniform whole.

Drivers of the shadow economy

The drivers of the shadow economy can be characterised in a number of ways. At a broad level they can be split between:

- **Otherwise legal economic activities.**

The main drivers here are:

- *opportunity and risk of detection*: is the option to carry out shadow economy activity available and with what degree of effort and risk?

- *benefits:* the benefits of not paying tax (or other regulatory and administrative costs) will increase with the level of those costs. Shadow economy activity will often be higher, other things being equal, in countries with higher levels of tax, whether general or for specific income.

- *deterrence:* the empirical evidence is not always clear, but the level of penalties will clearly have some impact. Deterrence can range from criminal sanctions to monetary penalties to reputational impacts. Their effectiveness will depend on the particular individual concerned and calculations as to risk and reward.

- *difficulty of complying:* where it is difficult to comply with tax law, for example difficulties in registering for tax or in understanding tax liability, this can influence taxpayer behaviour. (In some countries difficulty in registering can be a major driver of what is often known in that context as the informal economy.)

- *tax morale*: low tax morale can impact on propensity to comply in certain situations. It has a number of drivers and tax morale can decline if sanctions are seen as ineffective, if detection rates are low or if there is wider dissatisfaction with the fairness of the tax system.

- **Criminal activities**

  - for non-violent crimes (sometimes referred to as "white collar crimes") such as some financial crimes the main drivers will be as outlined above, although the perceived financial benefits might be dominant.

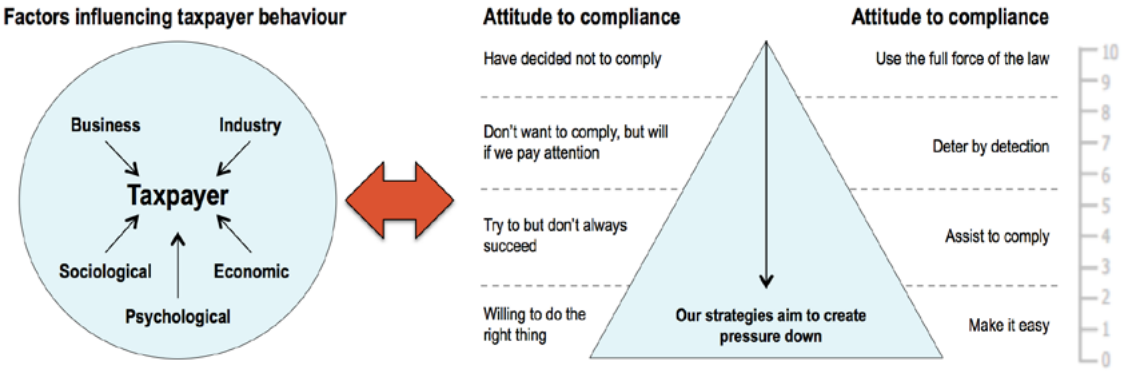
  - for violent crimes, such as trafficking of people or drugs, robberies and organised crime, the motivation will usually be the large potential financial benefits compared to other activities. The main strategies will therefore be centred on reducing the opportunities, increasing detection rates and severity of sanctions.

Taxpayer attitudes

In order to tackle shadow economy activity effectively, tax administrations have focussed on: the drivers (in so far as they are within their control or influence); on the underlying attitude or behaviour of taxpayers; and on particular sectors where shadow economy activity is more prevalent.

As regards behaviours, the 2012 Information Note set out the BISEP[1] model first published in the 2004 OECD guidance note *Compliance Risk Management: Managing and Improving Tax Compliance* (OECD, 2004). This model was developed in conjunction with the Australian Academic Dr Valerie Braithwaite. This model splits taxpayer attitudes into four categories, two broadly compliant and two broadly non-compliant.

Figure 1.1. The BISEP model and spectrum of taxpayer attitudes to compliance



Source: OECD (2004), "Compliance Risk Management: Managing and Improving Tax Compliance" (guidance note), www.oecd.org/tax/forum-on-tax-administration/publications-and-products/compliance/33818656.pdf.

1. Five factors influencing taxpayer behaviour: Business, Industry, Sociological, Psychological and Economic.

The 2004 guidance noted that these attitudes should not be seen as personality traits and that an individual taxpayer is capable of adopting any of the attitudes described at different times. While avoiding the temptation to categorise individuals, it remains useful to consider strategies against attitudinal categories since different strategies may be more effective in a particular context.

Box 1.1. Compliance strategy: Singapore

The Inland Revenue Authority of Singapore (IRAS) calibrates compliance strategies according to taxpayers' observable behaviours:

Voluntarily Compliant – Taxpayers who fully comply with their tax obligations without further intervention by IRAS.

Unaware – Taxpayers who are willing and want to comply with their tax obligations but are unable to do so due to a lack of knowledge and understanding of their tax obligations.

Negligent – Taxpayers who are willing to comply but who do not allocate sufficient attention and resources to their tax obligations.

Errant – Taxpayers who intentionally defraud tax schemes and evade taxes.

For those who are negligent, the primary objective is to change behaviour going forward. In order to identify non-compliance risks and detect such cases, IRAS uses a variety of tools, such as advanced analytics (e.g. predictive modelling and social network analysis), data-matching, internal and external referrals, scanning of trends, etc. Audit programmes (both desk-bound audits and field visits) allow the agency to gain a better understanding of taxpayers' circumstances and difficulties in complying with their tax obligations. The knowledge attained from these audits also enables refinement of compliance strategies, adapting to evolving trends and taxpayer behaviour. IRAS has also implemented a voluntary disclosure programme to encourage taxpayers to review their tax declarations. In order to benefit from more lenient treatment, these taxpayers are required to be tax-compliant in the future.

Where taxpayers undertake intentional fraud, severe sanctions are applied including prosecution leading to imprisonment and/or penalties up to four times the tax evaded. Such cases are shared in the media to increase public awareness and confidence in the fairness of the tax system.

Source: Singapore – Inland Revenue Authority of Singapore (2017)

In addition tax administrations are increasingly thinking in terms of "systems approaches" or "compliance by design". In such approaches self-declaration or self-assessment can become less of a feature and taxpayer attitudes in a particular situation may be less relevant. One example is the system of pay-as-you-earn withholding tax for salaried employees. This has been a long-standing feature of some tax systems. Since tax is withheld at source, the attitude of the individual employee towards compliance (at least as regards that income source) is generally less of a concern. Even determined non-compliance is difficult and generally could only result from criminal activity by the taxpayer (for example identity fraud) or fraud on the part of the employer or its agents.

Industry sectors or taxpayer groups of most concern

In addition to looking at drivers and behaviours, many tax administrations base their strategies on priority sectors. These will vary from country to country depending on national circumstances. The 2012 Information Note set out the industry sectors most commonly reported by tax administrations. This did not attempt to estimate the size of the shadow economy but the prevalence of observation by tax administrations (which will also be influenced by how easy it is to observe).

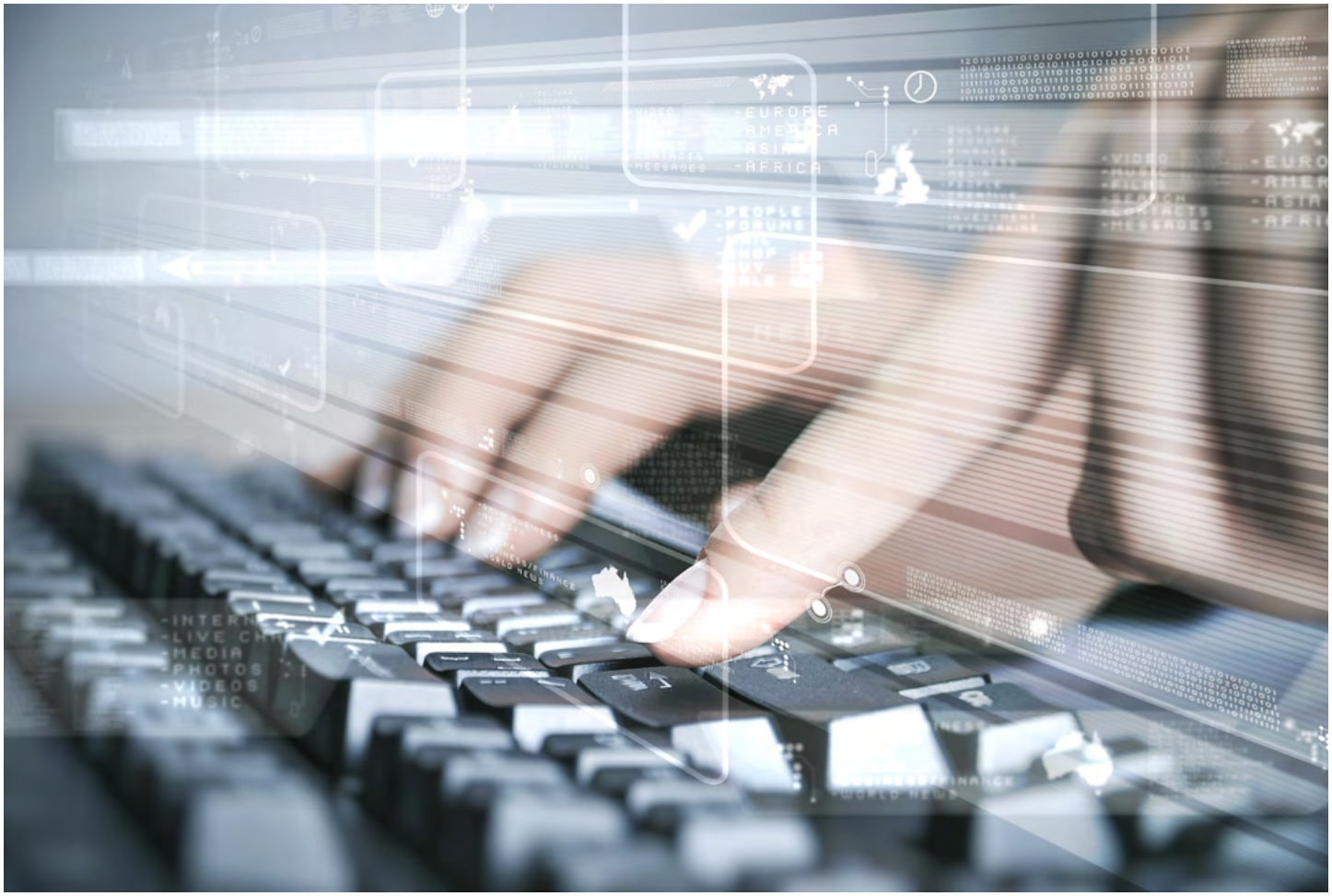
Table 1.2. Industry sectors commonly reported by revenue bodies

Industry sector	Bodies reporting (%)	Nature of activities included in this sector
Personal Services (B2C transactions)	22.1	House cleaning, hairdressing, beauty, dry cleaning, catering, pest control, computer maintenance, security, health, pet care, matchmaking, etc.
Hospitality	16.4	Restaurants, cafés, pubs, takeaways, hotels
Retail	15.6	Store based, flea/public markets, etc.
Construction	15.6	Building, home renovations, home repairs
Car sales & service	5.7	
Transport	3.3	
Taxi	3.3	
Agriculture, Fishing, Aquaculture	2.4	
Other	15.6	Tourism, real estate (incl. rental), recycling, internet based, freelancers, professionals, entertainers, etc.

Source: OECD (2012), "Reducing Opportunities for Tax Non-compliance in the Underground Economy" (information note), www.oecd.org/tax/forum-on-tax-administration/publications-and-products/sme/49427993.pdf.

Chapter 2

Recent developments in the shadow economy



Chapter 2

Recent developments in the shadow economy

Four main factors – globalisation, enhanced international co-operation, developments in technology and criminals increasingly entering the legal business market - are presenting opportunities and challenges to tax administrations as things move into and out of the shadows, changing the nature, scale and type of some shadow economy activities.

This chapter looks at some of the main changes that are occurring in shadow economy activity or in the wider environment which can enable such activity: changing patterns in the use of cash; the emergence of new business models and ways of working; areas where technology can be misused[1]; cross-border activity, particularly fraud; and the exploitation of workers.

Cash – still king?

The use of technology, in particular the rise of internet and telephone banking, contactless cards and mobile applications as well as the significant growth in online shopping, seems to be having a strong trend impact on the use of cash. This has led to a reduction in many countries in the use of cash for recorded transactions[2] (although the variations in the pace of change are large). In Sweden cash transactions made up barely 2% of the value of all payments in 2015. In the United Kingdom (UK) the number of recorded payments made in cash fell by 15% between 2015 and 2016 while in Germany and Austria the pace of change is much slower. The majority of large payments – but by no means all – are made electronically, including as a result of the physical difficulty of making large payments by cash and the vulnerability of holding large amounts. However, cash still plays a pivotal role in all economies with the bulk of transactions globally by volume made using cash.

However, contrary to predictions of the imminent demise of cash, the demand for cash in the form of bank notes has recently been growing in the vast majority of countries. It is estimated that there are over 500 billion banknotes in circulation globally, with increase in demand largely attributed to its function as a store of value although some may be due to shadow economy activity.

Consistent with the demand for cash as a store of value, in some countries there is increasing demand for high denomination notes. In its

1. More detailed information can be found in OECD, 2017a.
2. The amount of unrecorded transactions is obviously unknown and directly related to the size of the shadow economy.

2015 report entitled *Why is cash still king? A strategic report on the use of cash by criminal groups as a facilitator for money laundering* (Europol, 2015), the Europol Financial Intelligence Group found that in spite of growth in non-cash payment methods, the demand for high denomination notes, such as the EUR 500 note, has been sustained. Approximately EUR 1 trillion banknotes are in circulation as of end-2014. (The EUR 500 note alone accounts for over 30% of the value of all euro banknotes in circulation.)

Cash is by its nature generally untraceable to a particular person or transaction. Anti-money laundering rules require financial institutions to report suspicious transactions and transactions over a certain amount, but smaller transactions or those taking place outside of the banking system will often be entirely invisible. As such, cash continues to be used to facilitate shadow economy and illegal activity whether in paying traders, businesses, employees or in carrying out criminal activity. For transactions below a certain level, obtaining cash is now simpler than ever with the prevalence of Automated Teller Machines.

Even as recorded cash transactions decrease, the use of cryptocurrencies is starting to emerge. While overall usage of such cryptocurrencies is minimal at present, there is a risk that higher value transactions, where the use of cash appears to be decreasing over time, may in future increasingly be made via cryptocurrencies.

In the light of the continued widespread use of cash, strategies should have a strong and possibly increasing focus on the customer side, both through enhancement of social norms and through influencing customer behaviour in other ways.

New business models – the sharing and gig economy

The terms sharing and gig economy are often used interchangeably because while the first tends to be concerned more with physical assets and the second with labour, labour and assets are frequently used in combination. The core idea behind the sharing economy is that value can be extracted from "sharing" assets which may otherwise be unused - for example, a spare bedroom, a parking space or a car. Where this activity involves payment rather than altruism or cost contribution (for example contributing to petrol costs in a shared ride), then there can be taxable consequences. This activity has gone on in the past although usually on a very small scale. One reason for this is that in the past advertising such assets widely was difficult and there were issues of trust on the side of the provider – for example entrusting your house to a stranger – and also on the side of the customer – protection from fraud, insurance coverage and so on. The new online intermediaries have rapidly expanded the sharing market by providing mechanisms to assure trust (insurance, ratings, complaints procedures, funds held in escrow, etc.) and making the assets visible to large numbers of people combined with ease and security of use.

The core idea of the gig economy is the unbundling of specific tasks which can be performed at specific times allowing suppliers and purchasers of labour to transact in a cost-efficient way without a traditional intermediary employer. For example, whereas in the past taxi drivers were often employed or on contract to a particular employer, new technology allows the customer to connect directly via an online intermediary. Other examples are one-off deliveries, meal services, childcare services etc. Again the online intermediary is able to provide mechanisms to assure trust and advertise the services widely.

The emergence of the sharing and gig economies can have strong positive impacts on the economy, providing new markets for physical assets and labour, increasing market efficiency, lowering prices and providing more choice. However, the new business models do raise a number of public policy issues since some elements of price differential may be due to regulatory arbitrage and differential tax treatment, potentially reducing the tax base. For example there may be different requirements between those renting as a business and those doing so on a more casual basis as regards the need to comply with fire or other health and safety regulations. As for labour, there may be fewer protections or requirements such as pension provision, social security contributions, access to unemployment benefits etc. This can also lead to competitive distortions in forms of employment, with impacts on the tax base, including opening up access to deductions otherwise not available to someone in a traditional employee relationship.

While some countries are seeking to reduce obstacles to the emergence of the sharing and gig economies (including through tax thresholds), some are currently banning some activity until public policy issues are addressed. Although these new business models do not yet have a significant share of economic activity, they are already having wider influences on the provision of goods and services and many experts estimate that revenue will grow rapidly from the low tens of billions today to hundreds of billions over the next ten years.

A 2016 Time magazine poll on the sharing economy in the United States found that 44% of U.S. adults have participated in transactions where they played the role of lender, borrower, driver, rider, host or guest, in transactions through what is termed the sharing economy, gig economy or on-¬demand economy (Time Inc., 2016).

The tax issues are three-fold. First, there may be uncertainty among some providers of labour or assets as to what their tax liabilities are. This can be a difficult area, in particular the question of whether something is carried on as a business, the correct employment status and any relevant earnings limits. As a result some may not be aware that they may be liable for tax and therefore may not report this source of income. The second issue is that since there is usually no traditional employer, payments received will not generally be visible to the tax administrations in the way, for example, that they are for salaried employees in many countries. Third, as regards tax collection, the online intermediary itself may not be located in the same jurisdiction as the person who receives the end payment, and therefore it may be difficult to get information, in particular if sufficient details are not contained on the site itself. In addition some online intermediaries may structure themselves, or interact with clients in a way that such anonymity is seen as part of the "package" (some tax administrations report seeing some such cases).

On the positive side as regards tax, the emergence of these online intermediaries is bringing some existing activity out of the cash economy, with payments made and records kept electronically. It is possible that this model, combining trust assurance with ease of connections and payments, may expand more widely also covering increasing parts of the cash economy. In some countries this may lead over time to a shrinking of the informal economy provided that the data is supplied to the tax administration. While some may continue to seek to evade tax, if consumers prefer to use such models and costs are reduced as well as markets expanded, the number choosing to do so might reduce.

Misuse of technology

While the use of technology can enhance the visibility of the shadow economy, it can also be misused to create false data. Tax administrations providing input to this project noted that two of the most commonly observed facilitators of shadow economy activity were the use of fictitious invoices/receipts and identity fraud. In addition, even though more transactions are now being recorded electronically, such electronic records can themselves be vulnerable.

• Fictitious invoices and receipts

Fictitious invoices and receipts have long been used in the shadow economy and in fraud more generally which can have an impact on wider tax revenue where losses as a result of fraud are deducted from taxable income.

In the shadow economy, false invoices and receipts are used either:

- *to reduce taxable revenues*: for example a receipt can be issued for goods or services which under-records the actual amounts received. This can either be done unilaterally by generating two receipts (one for the customer and one for the supplier) or through collusion, with the benefits of the lost tax being shared by the buyer and seller.

- *to inflate deductible costs*: This can be done by recording an inflated cost of goods or services supplied to the company or an entirely fake purchase. As well as reducing costs this can also be utilised in fraudulent claims for refunds of VAT on goods or services, including those never purchased.

Fake invoices have always been relatively easy to produce. The difference now is that these can be indistinguishable from real invoices as a result of computers and online services. Even where tax administrations have mandated the use of certified printers, some have seen markets emerge in "cloned" invoices. In addition it is now easier, and less costly, to provide what can look like legitimate trails for false invoices through setting up shell companies (including offshore) and fake websites. High quality fake receipts can also be relatively simple to obtain. (Typing "buy fake receipts" into a web browser shows a large number of sites producing fake receipts for downloading or receiving by post.)

• Identity fraud

Identity (ID) fraud is becoming more common as vulnerabilities can be exploited more easily and at greater scale than before by obtaining personal data from the internet and through the ability to produce high-quality forgeries using new printers and scanners. ID fraud is still often carried out on the basis of personal information – bank statements, bills etc. – discarded in rubbish or by the interception of post. New vulnerabilities, though, are increasingly being exploited, for example phishing emails which trick people into revealing personal information themselves or through the installation of spyware programmes. Increasingly the accessing and mining of unprotected social media is being used by fraudsters. Hacking is a major concern, both on an individual and large scale basis and often aided by weak security and interconnected devices or data bases. In parts of the internet it is possible to purchase identity information, including scans of passports and other documents or the documents themselves.

ID fraud facilitates a wide variety of crimes including tax crimes (such as obtaining refunds due to the real taxpayer, either directly or by changing taxpayers' bank details). As regards the shadow economy, it can be used among other things to:

- set up fake companies, facilitating invoice frauds and false VAT refunds;
- create "phoenix businesses" which are closed prior to tax having been paid and where fake ownership makes it difficult to collect debts;
- obtain licenses from regulatory authorities while avoiding being visible to tax administrations;
- claim benefits or other government payments under one ID while working under another.

- **Sales suppression**

Sales suppression traditionally was in the form of some payments being "off books", usually carried out through receiving cash payments without recording the transaction and often without there being a legitimate receipt. Increased customer demand for receipts, and the protection that comes with them (for example in the ability to return goods), together with the increased use of electronic payments has led to some businesses providing receipts but seeking other means to take them "off books" through the use of specialised software or devices. Software to facilitate sales suppression is easy to find and sales suppression can even be done through the use of software located in servers in another jurisdiction. Jurisdictions are increasingly legislating to prohibit sales suppression software and devices although their use appears to remain widespread. Given the ease of downloading or using software from servers located in other countries, it may be worth considering the scope for co-ordinated international action.

The rise of the cross border shadow economy

Tax administrations report increasing difficulty in dealing with the range of issues that arise through personal and corporate taxpayers trading and earning income internationally. They note concerns about the adequacy of domestic laws and regulations to deal with the range of issues that have tax consequences inside their borders, but that are occurring where their laws and regulations are unenforceable. In addition increasingly the integration of processes and systems across borders can enable fraudulent activity to operate in time-scales far faster (including real time) than cross-border co-operation can currently operate.

Examples of cross border shadow economy activity increasingly seen by tax administrations are:

- **Non-reporting of offshore income and/or moving untaxed income offshore**

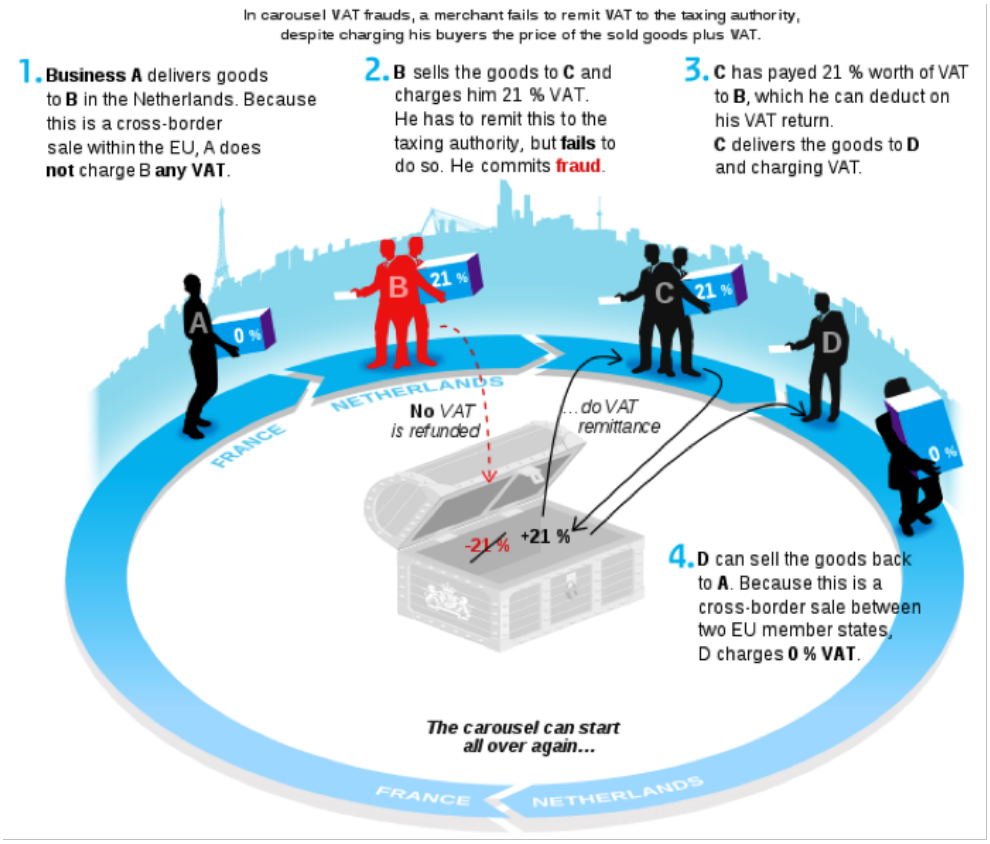
In the past most income placed in offshore financial accounts was largely invisible to the home tax administration. This allowed income to be earned without being taxed and provided opportunities to hide previously untaxed income which may have been visible in the home jurisdiction (either in accounts or assets). The introduction of the Common Reporting Standard (CRS) and the Foreign Account Tax Compliance Act (FATCA), under which information on offshore accounts will be exchanged between jurisdictions, will significantly reduce opportunities for using offshore accounts. However while over 100 countries have agreed to exchange such information, not all countries are covered and the CRS and FATCA do not require reporting of non-financial assets (such as real estate) which though less liquid may be attractive to those seeking to hide untaxed income.

• VAT carousel fraud

VAT carousel fraud or missing trader fraud has many variants. It is a type of fraud carried out by multiple persons in different countries with the end result of a VAT refund being paid by the administration without receiving the VAT on the supply of the goods by the supplier (missing trader). In addition, under European Union (EU) rules tradable services are highly vulnerable to both (a) missing trader intracommunity (MTIC) fraud, and (b) missing trader extra-community (MTEC) fraud. MTIC fraud arises when a business makes an intra-Community purchase without paying VAT, collects VAT on an onward sale, and then "disappears" without remitting the tax. MTEC fraud arises when a business makes a purchase from outside of the EU without paying VAT, collects VAT on an onward sale of the service, and then "disappears" without remitting the tax.

These types of fraud can result in high returns over a very short period of time and given the complexity that can be involved in the chain of transactions involving cross-border sales (where different administrations have responsibility) it can be both difficult to detect the fraud early and to prove who was involved in the fraud. MTIC fraud is estimated to cost tax administrations in Europe around EUR 60 billion annually in tax losses (Europol, 2017).

Figure 2.1. Missing trader fraud



Source: the Netherlands – Netherlands Tax and Customs Agency.

• Cross-border traders

As barriers to cross-border transactions have generally reduced, they have offered new opportunities for shadow economy activity through distance selling and the trafficking of illicit goods. Distance selling is the use of internet based online intermediaries to sell cross-border. Some users of such online intermediaries will sell by way of business without VAT or appropriate customs duties being paid. An increasingly globalised world economy has also made illegal trafficking of counterfeit or pirated goods easier both due to the sheer volume of world trade and the rapid growth of e-commerce. These illegal products, often sold illegally and with no duty paid, cover a wide range of goods from finished luxury goods, to intermediate goods (for example industrial parts and chemicals) and mass consumer goods such as food, medicine and toys. The 2016 report *Trade in Counterfeit and Pirated Goods* (OECD/EUIPO, 2016) estimates that globally counterfeit or pirated goods account for around 2.5% of global imports worth nearly half a trillion dollars. In many cases such goods are trafficked by organised crime although postal parcels are a frequent method of shipping, accounting for 62% of seizures.

▶ Illegal work

Illegal employment and shadow economy are closely connected due to the fact that they both entail tax avoidance and non-respect for regulation. Jurisdictions have observed that people in vulnerable situations are more exposed to being used by unscrupulous employment agents, organised criminals or fraudsters, noting the connection between activities such as false corporate registrations, misuse of identities (e.g. false, stolen or sold IDs) and the illegal trade in work permits, as being closely linked to vulnerable segments of the population.

Amongst the most vulnerable groups, migrants are likely to be found at risk of labour market exploitation. However, it is important to distinguish illegal employment of migrant workers from informal employment as illegal employment of foreign workers may also be found in formal economy while informal employment may not necessarily involve migrant workers. Illegal employment of foreign workers, in breaching immigration or labour laws, needs to be addressed as a source of concerns for economic reasons (lost revenues for the State, social dumping, etc.), migration policy perspective (possibility of working illegally likely to be a key pull factor for irregular migration, stigma and backlash against migration in general) and more importantly for human, social and ethical arguments (migrants workers at risk of exploitation, with their fundamental rights violated).

An estimated 5 million people moving permanently to OECD countries in 2016

Recent years have seen increasing permanent migration flows between countries, with an estimated 5 million people moving permanently to OECD countries in 2016, well above the previous peak level observed in 2007 before the 2008 economic crisis. Humanitarian migration was the main driver behind this rise accounting for 1.5 million in 2015-16 (OECD, 2017b). Patterns on irregular migration are more complex to identify and vary across countries (for instance around 11 million unauthorised immigrants in the United States, largely unchanged since 2009). Most voluntary migrants are working-age adults, a characteristic that helps increase the size of the labour force in destination countries.

The impact on the shadow economy from an increase in voluntary migration can arise due to constraints in the capacity of the real economy to create new jobs at sufficient pace, language issues, regulatory requirements and other factors which can make it difficult for new migrants to find a job.

In most countries, the different aspects of the range of criminal activity involved in labour market crime and illegal working will be the responsibility of different parts of government. Few tax authorities, for example, have responsibility wider than the impacts on taxation. This is true of multifaceted crime in general and presents a new challenge given its scale, the cross-border nature and the use of new tools to hide identities and ownership.

Chapter 3

Tax administration strategies

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The 2012 Information Note recommended that tax administrations should have over-arching strategies for dealing with the shadow economy, recognising that the most effective strategies were likely to be multifaceted and systemic. This remains crucial. There is no single driver of the shadow economy and as the economy changes, so will the nature and interlinkages of shadow economy activities. While focusing on the different types of taxpayer behaviour can be useful in the deployment of particular activities by tax administrations, multifaceted strategies will also impact on the shadow economy as a whole, reinforcing other activities. This is also true of action taken by other actors in the system, such as other parts of government and the customers and competitors of those taking part in the shadow economy. Tax legislation also plays a critical role in reducing or eliminating opportunities for non-compliance and it is important that tax administrations and policy makers closely co-operate on effective design of the tax system.

Observing the range of strategies and activities undertaken by tax administration, there seem to be three main pillars:

- **Taxpayer education and simplicity of compliance**. There is good evidence that compliance can be enhanced where legal and administrative liabilities are relatively easy to comply with; and where there is advice and support available for small business.

- **Reducing the opportunities and increasing detection**. Shadow economy activities, by definition, cannot take place where fully visible to tax administrations. New tools are making it possible to enhance visibility by using a range of different sources and by combining information more readily, including automatically.

- **Reinforcing social norms**. Traditional enforcement activity can be effective in changing behaviours, sending strong messages out more widely about the risks of non-compliance. Most administrations also undertake activity to influence social norms at a high-level (including pointing out the risks); with some acting through intermediaries such as trade associations. By and large there has been less focus given to the demand side - consumers and employers who "turn a blind eye".

There is no magic bullet for the shadow economy and strategies carried out under these pillars will reinforce each other and ideally form a coherent and comprehensive strategy. Examples of what tax administrations are doing under each of these pillars are set out briefly on the next page.

Pillar 1: Taxpayer education and simplicity of compliance

The starting point is making ***registration and the payment of tax easier***. A number of countries have made registration more or less automatic, including from an early age, and combined it with registration for other government services. For example:

- In **Japan**, in order to improve the fairness of the social security and tax system and to make interacting with government easier, from October 2015 all individuals and corporations are issued with a unique identifier, known as "My Number". My Number, issued to individuals by municipal offices and to corporations by the National Tax Agency (NTA), is required on declaration forms and statutory statements. The NTA expects that aggregation and matching of declarations and statements will also improve the accuracy and efficiency of the social security and tax system.

- In **Mexico**, the Tax Administration Service (SAT) has strengthened registration processes for taxpayers added to the Federal Taxpayers Registry (RFC). Citizens can now enrol on-line using a unique national registration code that contains identification data certified by the National Population Registry. This number is also used to access other public services such as social security. After completing the on-line registration process, the taxpayer completes the process at a SAT office using identity documents and biometric information. Recent changes have allowed employers to ascertain whether new employees have been registered. Where the employee has not registered this can now be done for them by their employer (provided that the employer has registered) without the need to visit a SAT office.

- In **Denmark**, all businesses and individuals over fifteen years old receive digital post from all public authorities in one mailbox, provided by government on a secure public platform. All private information from tax to health data must be sent through this channel. Individuals and business are obliged to open their secure mailbox and are prompted to do so through e-mail and/or text messages notifying them of new mail.

- In **New Zealand**, Inland Revenue worked with the agency responsible for birth registrations to develop an improved service where parents can apply and receive a tax number for their new-born child in a single process while completing the registration of the birth. This initiative has seen an increase in parents applying for their child's tax number before their fifth birthday from approximately 50% in 2012, to 94% in 2016, improving the timeliness of receipt of family tax credits.

As part of making tax administration less burdensome, many tax authorities are also seeking to use the ***channels that are easiest for taxpayers***, for example switching from paper forms or letters to web or mobile applications and through greater use of telephone call centres and online chats. Examples include:

- In **Ireland**, for comparable periods in the first 6 months of 2016 and 2017, there has been a 50% increase in the number of online reviews for personal taxpayers. In 2016 the Irish Revenue telephone service had a 23% increase in performance over 2015, notwithstanding an 8% increase in the number of calls. Call waiting times have reduced from over 5 minutes in 2014, to less than a minute in 2016. As at June 2017, 14 of the 18 public offices operated by the Irish Revenue offered an appointment service and 91% of callers who sought an appointment were helped to do their business through another channel.

- In **Spain** it is now mandatory for all companies to deal with the tax administration through electronic channels. Following changes made with effect from October 2016, only natural persons can now deal with the agency in-person. By law all notifications by the tax administration itself must be by electronic means.

Tax administrations are also looking at how they can ***support small businesses in making tax a part of their natural environment***, reducing the burdens of administration and reducing the likelihood that tax gets crowded out by other factors, including cash flow. Examples include:

- In **Australia**, the Australian Tax Office (ATO) has continued to enhance the functionality of its mobile app, which it launched in July 2013 to support individuals, small business and self-managed superannuation fund clients. The app offers a variety of tools and features, including key dates, enabling clients to add reminders to their calendar, report concerns (including whistle-blowing) and to use a tax withholding calculator. Individuals and sole traders can use the same voiceprint they use to access phone based services to access secure ATO online services on their mobile device. In 2015, the myDeductions tool was added to the app, allowing

users to record tax deductions on the go. Using the camera on their device, people can capture receipts and use location services to record work-related car trips for vehicle deductions, eliminating the need for paper records. From July 2016, taxpayers will be able to upload these deductions to their tax return. Features and updates are built using iterative design and are delivered in smaller releases. Features are continually tested with users and feedback incorporated into each release.

- In **Chile**, there are more than 27 million mobile devices (58.5 for every 100 inhabitants) connected to the internet. The *Servicio de Impuestos Internos* (SII) launched its first App for smart mobile devices in 2016. This app allows verification of the Tax Identification Number of taxpayers and access to mobile web-services. In the first quarter of 2017 the SII launched a new app, enabling the filing of income tax returns. In 2016 the SII mobile web service received approximately 2.7 million visitors, which included requests and the issuance of electronic documents, filing of VAT and income tax returns.

- In **Peru**, the Peruvian Tax Administration (SUNAT) launched its first mobile app in February 2015. The device, available for both iOS and Android, provided 24/7 tablet and cell phone access to a range of services to facilitate tax compliance. These included those services mostly used by taxpayers: invoice issuing, database queries, access to a virtual tax guide, access to administrative information and the ability to report tax evaders. This mobile app supported the national framework of e-government as well as SUNAT´s own strategic objectives. More customer-orientated features were added during 2016 with new features to be incorporated in 2017 including registration for individuals supported by biometric identification.

- In **Canada**, the Canada Revenue Agency (CRA) runs a focussed outbound calling campaign which includes use of its debt call centre and automated dialling. Its annual campaign is run in October each year, with bi-annual campaigns also run in May and November. The focus of these campaigns is those individuals on instalment payment programmes who were charged interest in the last year and have also missed an instalment payment in the current year. Over the last few years, results of these campaigns have shown that taxpayers contacted (otherwise expected to be non-compliant) made instalment payments for a value of CAD 80 - 112 million.

- The **United Kingdom** is taking steps towards implementing 'conditionality' in some parts of the tax system. By making access to licences or services for businesses conditional on tax registration. Following a public consultation, the UK government has signalled support for conditionality as a tool to reduce the size of the hidden economy and mitigate the negative impact it has on the majority of businesses who pay their fair share.

Pillar 2: Reducing opportunities/increasing detection

There are a number of developments which taken together can help to bring activity out of the shadows, decreasing current shadow economy activity. These can either move such activity into "compliance by design" type processes, for example through the pre-filling of tax returns, or where information is less complete or criminal activity is involved, provide sufficient information to allow investigations and enforcement action. These developments are:

- **The use of data:** The recording of data in digital form by businesses, suppliers, financial intermediaries and other third parties (including government) allows for greater visibility of a range of activities. By matching data through the transaction chain and with other information related to an individual or business the scope for shadow economy activity to remain undetected can be reduced.

- **Advanced analytic techniques:** Advanced analytics is the process of applying statistical and machine learning techniques to uncover insights from data. The aim is to better inform decisions about how to deploy resources and to help develop the most effective interventions and policies.

- **Technology to reduce ID fraud and fraudulent reporting:** As discussed in the previous chapter, ID fraud and fraudulent reporting have become more sophisticated and often simpler to effect. New technologies such as use of biometric data, digital signatures and secure transaction processes (such as blockchain) are increasingly being used to counter such frauds.

- **Whole of government approaches:** Such approaches, primarily designed to improve services to citizens and reduce burdens, also offer opportunities to collaborate, including on the sharing of data, to tackle non-compliant and criminal activity.

- **International co-operation:** The increase in shadow economy activity being carried out across borders exploits weaknesses in international co-operation. This can be mitigated by greater sharing of intelligence, as occurs through the Joint International Taskforce on Shared Intelligence and Collaboration (JITSIC), sharing of data (including more in real-time) and co-operation on investigations and enforcement.

• Use of data

Data can perhaps be categorised into four types as regards the shadow economy:

- *Behavioural data* – data generated from taxpayers' interaction with the tax agency. For example audit data, tax returns, (late) payments, etc.
- *Transaction data:* essentially data on sales and payments (and related information on the parties to the transaction);
- *Operational data:* data on ownership, identity, status, location, permissions, relationships etc. which are used in operational processes;
- *Open data:* this encompasses data which is open to public view for social or business purposes, such as social media or advertising.

Where such data is accessible to tax administrations, it can be used as an individual source or in combination to enable full or partial reporting of taxable income or to uncover under-reporting, fraud or unreported taxable activity. It can also be used to understand better taxpayer behaviour and to measure the impact of activities/interventions. Of course, there are limits to the ability of data alone to tackle the shadow economy given the prevalence of cash and misuse of technology, but combined with other strategies it can make significant inroads. The key is ensuring the quality, reliability and security of data. Examples of how tax administrations are using data are below:

- In **Russia,** the Federal Tax Service (FTS) has implemented a system that allows it to monitor VAT compliance on a nationwide basis, drastically reducing opportunities for fraud. The approach is based on automatic cross-matching of all VAT paid with all VAT claimed across all transacting parties. All incoming data is processed and analysed mostly in real-time, with only an eight hour delay across the country. The system allows the FTS to zoom-in on transactions or VAT taxpayers and automatically identify related tax risks. It can then initiate a VAT tax audit that is assigned to inspectors. The system also allows the FTS to monitor and measure performance of regional and local offices and of tax inspectors. Implementation of the system became viable following amendments to the tax code that introduced mandatory digital filing of all VAT tax returns, VAT invoices and digital grand ledgers, and the construction of new IT infrastructure concentrated around Data Processing Centres. FTS Data Processing Centres are capable of collecting, storing and analysing large amounts of data to provide a single platform for all tax administration business. 2016 results show an increase in VAT collection over 2015 of 8.5%, while in 2015 and 2014 the increase amounted to 12.2% and 16.8% respectively.

- In **Australia,** the ATO provides the opportunity for clients to choose to pre-fill information directly into individual income tax returns, including salary, interest and private health insurance data sourced directly from employers, banks and insurers. The information provided through this system helps the ATO improve services and makes it easier for those who want to comply to do so and harder for those that choose not to. In 2015-16, the ATO made close to 96 million transactions available for pre-filling, with taxpayers downloading more than 54 million of those transactions. It used over 636 million transactions reported by third parties to match individual income tax returns and other income statements. The ATO is using increasingly sophisticated data analytics and risk modelling to identify and review income tax returns that may omit information or contain incorrect statements. The ATO conducted around 450 000 reviews and audits resulting in revenue adjustments of over AUD 1.1 billion in income tax. Cases involved omitted income or over-claimed entitlements such as deductions or offsets, including those significantly different to claims made by taxpayers in similar circumstances.

- In **Singapore,** the Inland Revenue Agency uses vehicle records and employee Central Provident Fund contribution data to help determine whether a company has a business presence, thus indicating if it is active or dormant.

- In **New Zealand,** Inland Revenue has collected open sourced data on property and property related transactions from a number of central and local government agencies involved in property, and combined this with taxpayer specific data to create a data pool to be used to identify compliance risk areas across the property sector and to select candidates for targeted interventions.

- In the **United Kingdom,** Her Majesty's Revenue and Customs (HMRC) collects merchant acquirer data to identify non-compliance through the calculation of "dynamic benchmarks". These are used to compare the value of debit and credit card sales relative to declared turnover (under the VAT regime) for businesses of a similar size, from the same operating sector and geographical location. The benchmark tells HMRC what "average" business turnover might look like in specific sectors and places. As a result, potential non-compliance stands out for further investigation. Dynamic benchmarks enable HMRC to identify risks in both the hidden and formal economy (where tax evasion is a risk). Once a risk is identified, it is assessed to decide the appropriate level of intervention for each business according to HMRC's "Promote, Prevent & Respond" compliance strategy. To date, HMRC's use of merchant acquirer data in "compliance taskforces" (focused activity in a specific area or sector) has improved risk targeting (7% increase in hit-rate) and facilitated the collection of GBP 210 million in yield.

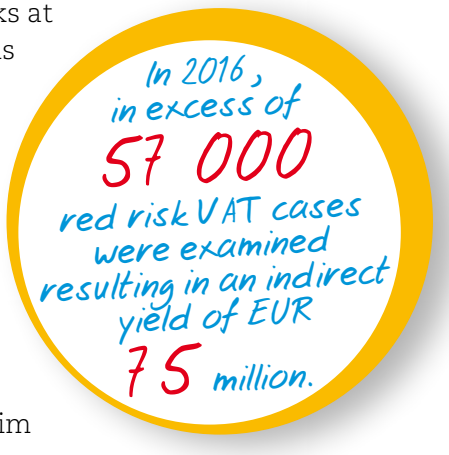
- In **Peru,** two important goals of SUNAT are to broaden the tax base and reduce tax evasion. In 2015 SUNAT research identified individuals who borrowed from the financial system and matched this data against taxpayers registered in the tax administration. Any individuals that had credit in the financial system and did not have a tax ID number, or no payments on their behalf could be identified, was flagged as a potential tax evader. This was on the basis that to access credit in the financial system individuals would need to have a relatively stable income stream in order to pay off their credit obligations. Based on 2014 information, this research identified 1.8 million "informal individuals", representing 19.2% of the total client base (31% of these were small and micro enterprises). Although it represented only 3.6% of the total amount of credit in the financial system, the potential tax evasion related to the entire informal group was estimated to be 0.7% of GDP.

- In the **United Kingdom,** from 2016 HMRC's data gathering powers were extended to online intermediaries (businesses that help to facilitate trade by e.g. introducing buyers to sellers, and facilitating orders or bookings on behalf of the seller; and electronic payment providers who operate digital wallets).

• Advanced analytics

Tax administrations have used advanced analytics to inform the management of overdue tax returns and collection of tax arrears for more than a decade. In recent years, coinciding with the significant increase in data, administrations have begun to use a range of techniques to identify proactive and responsive actions to assist taxpayers to meet their obligations, or to determine the best intervention to support compliance. Advanced analytics is increasingly being used as a tool to help tackle the shadow economy. For example:

- In **Ireland,** the Revenue Authority has expanded its risk management scope by incorporating real-time risk analysis in VAT compliance and collection programmes. The VAT Real-Time Risk approach is an example of a hybrid rules and predictive analytics-based compliance model which is improving prevention and detection of non-compliance in both payable and repayable VAT returns. The design process is informed by expert business users at all stages. The resulting compliance process automatically applies a number of checks at the time a VAT Return is filed, which include primary controls as well as taxpayer-specific data such as VAT return and payment history, company and Director status, composite scoring from other risk systems, and return and payment compliance for other taxes. Once the checks are completed, a risk score is assigned to each Return and is used to categorise Returns as either green (low risk) with any VAT repayment due being paid automatically; orange (medium risk); or red (high risk) which necessitates an intervention and full investigation by a staff member in order for a Return to be validated and for any repayment claim



to be released. The success of this risk-based approach highlights the importance of evidence-based data analysis and risk management. In 2016, in excess of 57,000 red risk VAT cases were examined resulting in an indirect yield of EUR 75 million.

- In **Canada,** the CRA has developed, and continues to refine several predictive models to assist in the delivery of its non-filer programmes. The models support improved workload selection and prioritisation for the programmes, and also supply estimates for taxpayers that have not filed returns. In its first year in production, one non-filer model resulted in a total of CAD 127.6 million in additional positive assessments. The CRA is now moving away from a pure predicted value to a relative ranking indicator, dynamically scoring accounts on an ongoing basis. The CRA has also developed several other models to improve programme effectiveness and enhance taxpayer services by predicting self-resolution and responsiveness to a specific compliance action.

- In the **United Kingdom,** HMRC is developing new proof of concept risk tools such as Virtual Street Sweep (VSS). VSS aims to pull together all the data HMRC holds about a specific address and use this as a means of identifying and then visualising compliance risks right down to property level – all without a HMRC officer having to leave the office. HMRC matches UK mapping data to what it knows about the trading activity of a business from its own data about various tax regimes. It then uses third party information that it also holds to identify anomalies and therefore potential tax risks. An early trial is focusing on a selection of UK streets where businesses or landlords have little or no HMRC "footprint" and may present a higher hidden economy risk.

- **Technology to reduce ID fraud and reporting fraud**

Supplying false information is at the heart of much shadow economy activity, whether to disguise identity or income. This is an area where tax administrations need to continuously monitor developments as new technologies and the growth in the illicit market supporting fraud are used to circumvent previous controls such as the earlier introduction of electronic tills. Many tax administrations are now exploring or introducing a new set of technologies (for more information see OECD, 2017a):

- To combat identity theft, many are now using enhanced authentication, including biometrics such as fingerprint, iris, face and voice recognition, including at a whole of government level.

- Many administrations are now requiring the use of electronic tills with secure data recording units installed or retro-fitted. Some are also requiring data to be transferred automatically to the tax administration, providing an additional layer of security to spot attempts at tampering by analysis of data or by reconciliation with data provided by customers through receipt verification.

- Electronic invoicing requirements are also becoming increasingly prevalent, including requirements to register such invoices centrally allowing the matching of data from the purchaser and the vendor.

- A number of administrations are exploring the use of blockchain technology to increase the security and reliability of records. Blockchain is, in essence, a distributed ledger that records when a transaction occurred, the details of that transaction, including transfers of assets and ownership, and provides assurance that the required business rules have been met without the need for third party verification. Each transaction is protected by a cryptographic key, which includes the key of the prior transaction, creating an immutable historic "chain" of transactions.

Examples of actions taken or being explored by tax administrations are:

- In **India,** the government has built a nationwide biometric database based on fingerprints and iris scans from more than a billion residents. Those residents are issued with a 12 digit identity number (an "Aadhaar number") which is used for security purposes in many government and private sector applications, from pensions to wages, telecoms and the distribution of benefits. The use of the number is now being mandated for income tax returns and other applications.

- In the **United States,** the Internal Revenue Service (IRS) continues to identify ways to improve and strengthen strategies to combat identity theft as mechanisms used by cybercriminals continue to evolve. Among the improved and expanded features are: new data elements transmitted by the tax industry with every tax return have been updated and expanded providing additional information to strengthen the authentication that a tax return is being filed by the real taxpayer; the tax industry

will share with the IRS and state tax agencies several data elements from business tax returns which extend more identity theft protections to business filers as well as individuals; the Verification Code initiative started by the IRS in 2016 for the Wage Tax Statement (using a 16-digit verification code) will expand to 50 million forms.

- **Brazil** is among a number of countries that have mandated e-invoicing: electronically sending, receiving and storing invoices between suppliers and buyers (either business to business or business to government). This has helped establish a national digital bookkeeping system, "SPED", which enables direct reporting of annual income taxes and other tax information. The Brazilian tax authority can now review, assess and act on some information almost instantly, including issuing penalties in near real-time. As a result, the number of audits, their assessed value and total tax collected has significantly increased.

- In **Russia,** the FTS in February 2017 started the transition to mandatory online cash registers. Such registers instantly upload sales data to the FTS data processing centres. As required by legislation, each receipt generated by online cash registers has a QR-code that enables customers to verify the transaction by comparing it to the information maintained by tax authorities. On July 1, 2017 the use of online cash registers became mandatory for all retailers except small and medium-sized enterprises (SMEs).

- In 2016, the **Czech Republic** introduced a requirement for an electronic record of sales. The first phase of electronic registration of sales was launched on 1 December 2016 and applied to food services and accommodation services. The second phase commenced on 1 March 2017, applicable to retail and wholesale. In March 2018, freelance occupations (doctors, lawyers, accountants) and persons conducting business in transport or agriculture will be obliged to record sales. The fourth phase will commence on 1 June 2018 and will apply to selected trades and other manufacturing activities.

- In **Italy,** as from 1 January 2017 VAT traders must transmit all input/output invoice data to the Revenue Agency. This data can also be acquired directly by the Revenue Agency where private parties use the "Exchange System" ("*Sistema di Interscambio/SdI*" in Italian) for exchanging invoices. (The Exchange System is a hub, managed by the Italian Revenue Agency, through which invoices issued to public administrations have been mandatorily exchanged since 2014.) Since 1 January 2017, the electronic storage and transmission of revenue data is mandatory for taxable persons supplying goods and services through vending machines. All transaction data is processed by the master system component of the vending machine with acquisition of the data and transmission to the tax administration server on a periodic basis (sometimes daily). As from 1 January 2017, VAT operators carrying out retail transactions and other similar activities may opt for the electronic storage and daily transmission of data to the Revenue Agency through telematic cash registers (TCR). Electronic storage and transmission must be made through media that guarantee the authenticity and durability of data, including that they are stored in permanent and unalterable memories.

- **Portugal** uses invoice software certification to mitigate sales suppression through the use of external programmes and also to ensure that if these kinds of features are used in software, the developer will be responsible.

- In **Estonia** since 2012 blockchain has been in operational use in Estonia's registries, such as national health, judicial records as well as legislative, security and commercial code systems, with plans to extend its use to other spheres such as personal medicine. Estonia has also introduced the Estonia ID card which is a cryptographically secure digital identity backed by blockchain technologies. This allows Estonians to access public services, financial services and medical services as well as to pay tax online, e-vote and validate digital signatures.

- In **Austria,** from the beginning of 2016 the issuing of receipts is compulsory. Businesses with turnover of more than EUR 15 000 have to have electronic cash registers or other electronic recording systems for digital recording of transactions. Each cash register must draw up a data collection log (DCL) to record and store each individual cash transaction. The data collection log has to be exportable without delay in case of a request from the tax authorities. From April 2017 a secure signature creation device has to be implemented in the cash register and all receipts have to be signed. The cash register has to have a cumulative memory, meaning that the transactions recorded in the cash register are added up continuously. The cumulative memory is part of the signature and constitutes another measure for the prevention of manipulation.

- **Hungary** introduced an online cash register (OCR) system 2014 to reduce underdeclaration of sales in business to consumer transactions. A subsidy programme was also established to foster the spread of point of sales terminals and to reduce the shadow economy through new electronic payment methods. A control mechanism has also been introduced for business to consumer transactions to tackle carousel frauds - the Electronic Road Trade Control System (EKAER). From July 2018 the online provision of invoicing data will be obligatory for taxpayers. This will provide the possibility for the tax administration to carry out real-time cross checks and enable the use of more effective risk management methods.

• Whole of government approaches

Whole of government approaches, also known as joined-up government, are intended to overcome boundary problems between different parts of government to allow citizens easier access to services, avoid duplication and increase efficiency. Examples are single points of access to services provided by different agencies, the sharing of information between agencies so that processes do not need to be repeated and better policy making. Whole of government approaches can also be effective in reducing fraud by allowing cross-checking of data held by different agencies. For example, cross-checking of registration for social security with registration for tax can help to pick up whether a person is both working and claiming benefit. Similarly checking of tax registration against regulatory licences (for example to open commercial premises), addresses registered for commercial purposes, registration of commercial vehicles and a wide range of other information held within government can help to pick up shadow economy activities. Information can

appear tangential, but can still be useful in uncovering such activity. For example, HMRC in the UK receives information on houses of multiple occupation which can be useful in risk assessing for labour market crime.

Tax administrations are increasingly working more closely with other parts of government, although such efforts can be hampered by incompatible IT systems, paper-based records, different cultural and management structures and legal barriers, including potentially around data privacy. Moving to whole of government approaches requires political commitment, clear objectives and strong governance processes. Examples of whole of government approaches in the area of the shadow economy are:

- In **Norway** following increasing pressure to address labour market crime, the Norwegian Government developed a strategy in 2015 based on a report on labour market crime delivered by public agencies involved in different labour market regulations and sanctions. The strategy involves a stronger and more holistic approach through broad collaboration between public agencies, employer associations and trade unions. This includes the Police, the Labour Inspection Authority, the Labour and Welfare Administration and the Tax Administration. Details on initiatives, organisation and responsibilities are defined in an action plan signed by directors of the involved agencies. The unified and joint direction of the agencies' efforts and priorities is a crucial element of the strategy. Strategic efforts enabling a holistic approach includes initiatives like establishing joint centres, establishing a national centre of intelligence and analysis, establishing a supervisor of confidentiality regulations between agencies, and identifying areas for regulatory development. An important effect of the strategy is that the agencies are more capable of choosing the most efficient and effective methods to combat the problem.

- In **Finland**, the tax administration has a Grey Economy Information Unit (GEIU) which operates under its own legislation. The GEIU has the right to get access to bulk information from other public agencies. It promotes the fight against shadow economy by producing, publishing and sharing information regarding the shadow economy and its control to wide target groups. Compliance reports on organisations and people connected to organisations are also shared with certain authorities mentioned in the legislation. Authorities who have the legal right to have access to data are the Tax Administration, Customs, The Finnish Centre For Pensions, The Unemployment Insurance Fund, Alcohol Sales and Service License Authorities, National Subsidies, EU-Funding, Enforcement, Bankruptcy Ombudsman, The Finnish Police, The Finnish Border Guard, Transport Licensing Authority, Finnish Patent and Registration Office and Occupational Health- and Safety Authority. The aim is to identify new phenomena, classify customers and customer groups, and obtain information. A Compliance Report Service includes information about an individual's or business' activities (registrations, scope of business, liabilities), compliance (tax liabilities, compulsory social security payments), connections (shareholders, board members) and financial status (enforcement register, financial statement, economic figures). The GEIU also maintains web pages for use of authorities.

- In **France**, the tax administration maintains close co-operative ties with all the anti-fraud agencies enhancing the collective ability to tackle tax fraud. These relations are formalised through memoranda of understanding (MOU). Such MOUs have been concluded with the Customs Agency and with TRACFIN - the French financial intelligence unit that reports suspicious transactions to judicial authorities. The results have been positive, leading to a significant amount of tax adjustments. The French tax administration also collaborates closely with the police. A special unit of police officers and tax inspectors with police powers was set up in November 2010. In 2014 a VAT Task force was also created in order to share information and co-ordinate efforts in the field.

- **International co-operation**

International co-operation is highly important to tackling cross-border shadow economy activity. This includes sharing of information, intelligence and co-operation on live cases.

Information sharing is made possible through bilateral treaties, tax information exchange agreements or the Multilateral Convention on Mutual Administrative Assistance in Tax Matters which now has over 110 participating jurisdictions. Exchange of information on request has been supported by the activities of the Global Forum on Transparency and Exchange of Information for Tax Purposes, including through peer reviews and technical support. While exchange of information on request remains vital, the agreements made by over 100 jurisdictions to automatically exchange information under FATCA and the CRS on offshore financial accounts of non-residents will provide tax administrations with a huge new source of information. Receiving tax administrations will be able to match the information received with that reported by the taxpayer, allowing them to open investigations or, where the information is sufficient, to use it in pre-filled tax returns or demands for payment.

The activities of the Joint International Taskforce on Shared Intelligence and Collaboration (JITSIC) brings together 37 tax administrations, sharing their experience, resources and expertise to tackle the issues they face in common. Among JITSIC's recent activities has been shared work on issues arising from the "Panama Papers" leak and the use of offshore vehicles to facilitate evasion. Its meeting in January 2017 saw the largest ever simultaneous exchange of information. Member countries pooled evidence from domestic efforts such as data analytics, voluntary disclosures, interviews with taxpayers, and document reviews on key intermediaries. Internationally over 1 700 taxpayer reviews and audits have been initiated and a target list of over 100 intermediaries has been identified.

Pillar 3: Reinforcing social norms

There are two aspects to strategies aimed at reinforcing social norms:

- first, influencing taxpayers to comply with tax obligations (or remain so inclined); and
- second working through customers and others to help reduce opportunities for non-compliant behaviour, in particular by not facilitating shadow economy behaviour.

• Education

The starting point for reinforcing social norms is educating taxpayers about the damage caused by shadow economy activity to the funding of public services and to society more widely. This is often not perceived since outside of serious criminal activity the individual amounts experienced by many taxpayers may often seem relatively small. What is often missing is an understanding of how much public revenue is lost from the shadow economy and how it depends on the individual actions of customers and employers who may be fully compliant in their own tax matters. Examples of educational campaigns are:

- In **Canada,** the CRA has been working with the Federal-Provincial-Territorial Underground Economy Working Group on a number of initiatives including the Trade School Initiative. This provided education on the requirements of the tax system and cautions against participating in the underground economy to students in the trades. The Responsible Citizenship Teaching Module taught young Canadians about the relationship between the self-assessment tax system and the quality of life in Canada.

- In the **United Kingdom,** HMRC has undertaken targeted "campaigns" approaches concentrating on particular sectors most at risk from shadow economy activity, working across professional and trade sectors. These campaigns bring together a basket of activities to encourage compliance in the target population and to influence customers who are entering the targeted area for the first time. An example campaign is that relating to "moonlighters" who earn a second income not declared for tax. HMRC worked with employers to increase tax awareness using staff newsletters and pay slip notices to remind employees of their tax obligations with a facility offered to disclose additional income. A second income campaign web page was set up, supplemented by an advice line. The campaign method ensured that more taxpayers voluntarily declared the additional income thereby ensuring that only the most complex evaders required costly one-to-one contact. Information learnt during campaigns informs future strategies. Successful campaigns include those on let property, plumbers, electrician, e-market places and offshore evasion. Together they have resulted in over GBP 1 billion in tax payments.

- In **Hungary,** the National Tax and Customs Administration (NTCA) introduced a public taxpayer compliance classification system in 2016 in order to foster a partner relationship with compliant taxpayers and to force risky taxpayers to comply with regulations. The NTCA rates taxpayers in the business registry after each quarter (more than 550 thousand taxpayers), taking relevant data on the last day of the quarter and comparing it to conditions stipulated by the legal regulations. As a result of the rating, reliable taxpayers are entitled by law to benefits, which serves as recognition of their compliant behaviour. Risky taxpayers, however, face stricter regulations. Some business taxpayers who received reliable ratings have been using it as evidence of their social responsibility in public communications.

- **Behavioural insights**

Behavioural insights are drawn from empirically-tested interactions which try to achieve voluntary compliance and influence the motives and decision making of groups or individuals. It often involves the use of experiments and observations to identify patterns of behaviour, taking an inductive approach where experiments replace and challenge established assumptions. Tax administrations report considerable on-going research to better understand what motivates tax compliance. This is allowing them to design and implement better systems and to develop more effective compliance strategies. Examples include:

- In **New Zealand,** Inland Revenue's hidden economy work focuses on sectors where there are greater risks of people not reporting cash revenue and tax-evasion behaviours, such as construction, hospitality and those operating outside the tax system. Investigations into the hidden economy in 2015-16 found tax position differences of NZD 166 million. The tax administration ran a successful marketing campaign directed at tradespeople with the tagline "It's just the odd under-the-table job here and there." Since

2012, New Zealand has seen the proportion of construction industry workers who perform cash jobs fall from 29% to 19%.

- In **Australia,** the "Nearest Neighbour" model enables the ATO to compare a taxpayer's work-related deduction claims against those in similar jobs and earning similar amounts of income to determine how far they differ from the norm. A pilot programme was launched in 2014, issuing letters to 2000 taxpayers whose work-related expenses were higher than their peer group. The following year the ATO observed a significant reduction in claims from this group compared to their previous tax returns, especially for those where an amendment was made. Since the successful completion of the pilot project, the Nearest Neighbour model has been used extensively by the ATO to select higher-risk candidates for treatment. Currently, adjustment rates for those "potential risk" tax returns selected for audit using this methodology exceed 80%. In 2016, the ATO extended the use of Nearest Neighbour to operate in real-time. If work-related expense claims seem higher than expected, taxpayers are prompted to check their claims before submitting their returns. The ATO will introduce similar online analytics for tax agent clients prompting them if a client falls outside 'normal' claim parameters which may require their further attention. The ATO report that the Nearest Neighbour analysis is transforming the way they manage compliance, enabling a greater emphasis on prevention and self-correction to encourage willing taxpayer participation in the tax system.

Further examples of the application of behavioural insights in tax administration can be found in Chapter 12 of the OECD 2017 report on *Behavioural Insights and Public Policy* (OECD, 2017c).

• Support from customers and third parties

There remains a rich field to plough in trying to influence the demand side of the shadow economy. As said above, education is an important part of this. But this needs to be supported by other interventions aimed at influencing behaviour in particular contexts. Examples of this are the use of lotteries in a number of countries to encourage consumers to ask for receipts. In **Russia** each receipt generated by a cash register contains a QR code which the consumer can use to verify that the transaction has been properly recorded (with the information being passed to the tax authority). A significant proportion of consumers do so. Other types of legislative intervention could be around making certain benefits for consumers contingent on reporting to the tax authority, for example linking building permits or certificates of completion (often required for the sale of property) to registration of bills and payments with the tax administration; limits on cash payments over a certain amount (as is already the case in a number of countries); or requiring receipts or proof for purchase for insurance to be valid. Some tax administrations are working with trade associations on incorporating tax compliance into membership requirements. Such initiatives may be able to extend to online intermediaries providing introductions and ratings on tradespeople. Examples include:

- In **Sweden,** the Swedish Tax Agency, in co-operation with the Trade Organisation for Taxis in Sweden, introduced in May 2017 a mandatory transmission system for taximeters in the taxi industry. This includes the obligation for taxi businesses to transmit data (digitally and wirelessly) from their taximeters to a certified Accounting Centre for Taxi Businesses, supervised by the Swedish Transport Agency. The Swedish Tax Agency can then request standardised and digitalised information from the accounting centres. Sweden expects this transmission system to improve tax compliance and foster fair competition within the taxi business.

- In **Canada,** the CRA launched the "Get it in writing campaign", a joint initiative with the Canadian Home Builders' Association and the Canada Mortgage and Housing Corporation, to focus on the importance of, and protections related to, a written contract for home renovation work. This was part of a wider Industry Campaign Approach (ICA) whereby the CRA worked with industry associations in sectors to provide businesses with sector-specific information that help them comply with tax obligations. The ICA is intended to encourage businesses to self-correct and take steps to prevent common mistakes.

- In 2013 **Denmark** introduced a legal requirement that payments for services over DKK 10 000 should be made electronically. Where they are not, then individuals and businesses that are the beneficiary of services could be responsible themselves for any non-payment of taxes and VAT. In addition, if the purchase is by a company they cannot deduct cash payments over DKK 10 000. Under money laundering legislation there is also a requirement that companies must not receive or pay cash

over DKK 50 000. In **France** since September 2015 there has been a limit of EUR 1 000 for cash payments between businesses and individuals as well as business to business transactions. In **Austria,** cash payments for services in the construction sector (including labour) which exceed EUR 500 are no longer tax deductible. In addition wages in the construction sector must not be made in cash unless the employee has a legitimate reason for not having a bank account.

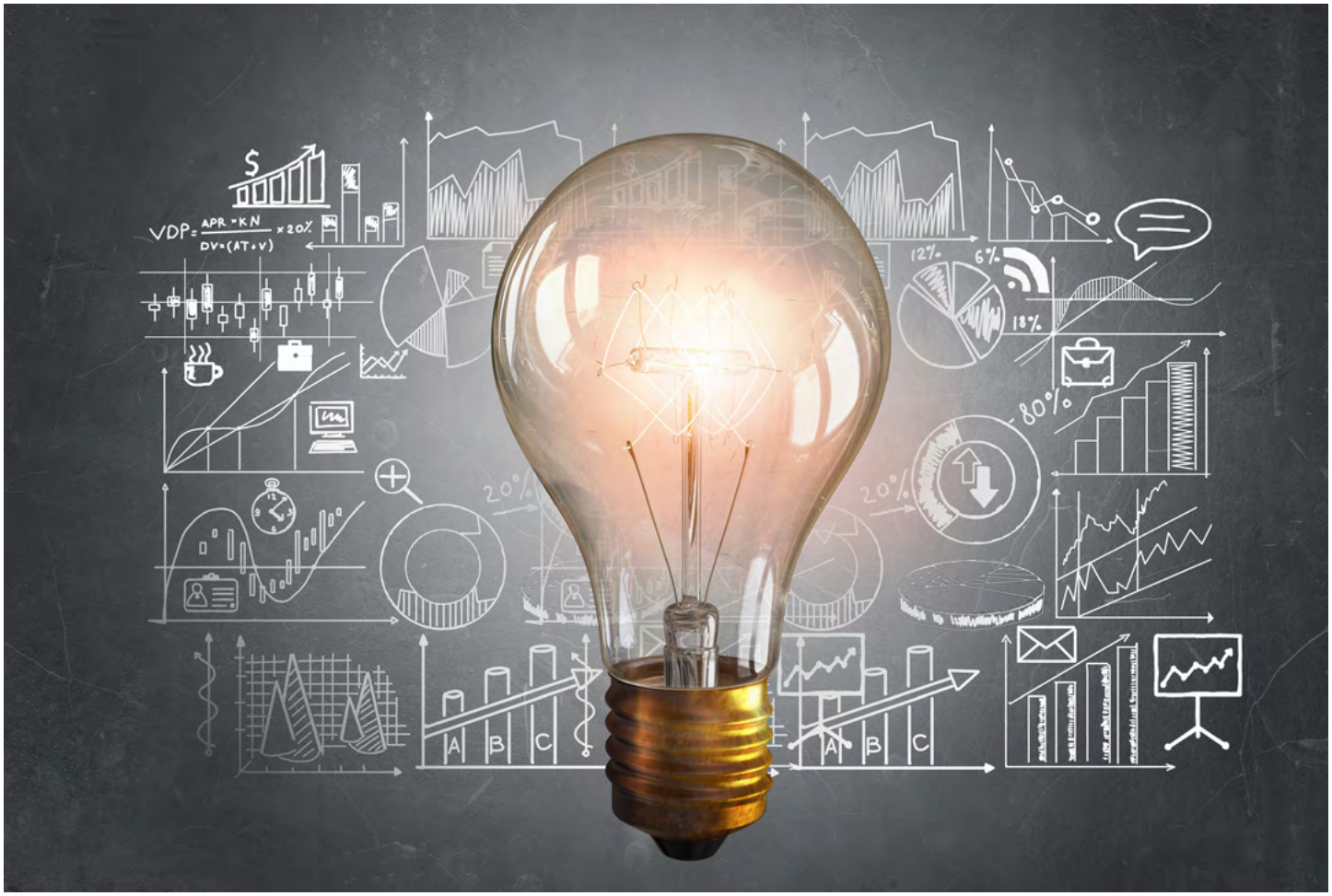
- **Voluntary disclosure initiatives**

Voluntary disclosure mechanisms can be an important part of compliance programmes when used as part of a broad approach to facilitating compliance outcomes. Such programmes offer non-compliant taxpayers the opportunity and incentive to proactively put their tax affairs in order. As well as being less resource-intensive than investigations, they can also potentially generate significant insights into the reasons for non-compliance (including accidental) and the structures used to facilitate deliberate evasion.

A number of administrations report on-going benefits from the operation of such programmes, as well as one-off arrangements related to automatic exchange of information. More information on the range of offshore voluntary disclosure initiatives can be found in the OECD Offshore Voluntary Disclosure Programmes report (OECD, 2015).

Chapter 4

Recommendations for further work



Chapter 4

Recommendations for further work

Introduction

The previous chapters set out some of the changes occurring in the shadow economy and in the ability of tax administrations to take effective action. It highlighted the importance of multifaceted and comprehensive strategies and the importance of international co-operation given the increasingly cross-border shadow economy risks. This chapter sets out some areas where FTA members may wish to consider further targeted work on knowledge sharing, collaboration and collective action. These are set out below and discussed in more detail in this chapter.

- **Recommendation 1: Sharing of intelligence**: as has been evident in the preparation of this report, tax administrations have much to share on the developing risks in the shadow economy, including on cross-border aspects, as well as on effective counter-measures. Tax administrations may want to consider whether a Commissioner sponsored Community of Interest should be established which would bring together experts on the shadow economy periodically to complement existing groups for exchanging information.

- **Recommendation 2: Effective use of different data sources:** it could be useful to look further at the available data sources, internally generated, domestic and international, including bulk data sources; at how exchange can best be facilitated; and how data sources might be used most effectively to minimise opportunities for carrying out shadow economy activity.

- **Recommendation 3: Collective action on the sharing and gig economy:** while the sharing and gig economy can have positive benefits for the wider economy, they also risk expanding the shadow economy as existing and new activity may go unreported. Given that this development affects all tax administrations, it is worth considering the possible creation of a Task Force made up of interested tax administrations to examine the options, including in discussion with online intermediaries facilitating the sharing and gig economy, and to propose solutions.

- **Recommendation 4: Effective identification and registration:** given the extensive use of false IDs in the shadow economy and the importance of effective registration, tax administrations may wish to further explore best practices in identification and registration of taxpayers and in secure authentication, including the use of biometrics and blockchain.

- **Recommendation 5: Reinforcing social norms:** as part of multi-faceted strategies, tax administrations may wish to explore further the most effective mechanisms to influence behaviour. This might include how third parties, for example customers and trade bodies, can help put downward pressure on the shadow economy by increasing transparency and reducing the acceptability of cash payments without electronically recorded receipts.

- **Recommendation 6: Whole of government approaches:** actors in the shadow economy will often be involved in social security fraud, failure to comply with regulations (including health and safety) and, in some cases, serious crime. Tax administrations are increasingly working with other parts of government on tackling these issues. Tax administrations may wish to consider further the core elements of successful whole of government approaches and how they could help improve overall effectiveness.

- **Recommendation 7: Production of "how to" guides:** A number of tax administrations have introduced successful approaches to tackling aspects of the shadow economy, from online tills to innovative uses of data sources and the use of blockchain technology. In order to help other administrations benefit from the lessons of such approaches, some individual tax administrations might wish to provide fuller explanations of how such approaches were planned and implemented.

- **Recommendation 8: Measuring impacts:** Measuring the shadow economy can be difficult although important for decisions on resources, investment and strategies. Tax administrations may wish to compare approaches to measurement including on how the impact of policies can be most reliably measured.

Recommendation 1: Sharing of intelligence

While powerful new tools are becoming available to tackle the shadow economy, it is certain that shadow economy activity will continue to evolve as new business models are developed and new ways of misusing technology are found. This is particularly the case at the criminal end where significant resources can readily be invested in fraudulent activities and where significant tax losses can occur over short periods.

Recent examples are the large scale VAT carousel frauds observed in some countries which can start up very quickly and involve rapid large scale loss of revenue through fraudulent refund claims. The widespread introduction of electronic tills across countries also led to rapid and widespread use of sales suppression technology, estimated to have reduced reported turnover by significant amounts across whole sectors. As for new business models, the sharing and gig economies have developed extremely quickly expanding economic activity without payment flows always being reported or readily available to tax administrations due to their nature and location. As e-commerce expands, new concerns will arise as to the protection of the tax base where there is limited visibility of transactions.

The rapid take up of new shadow economy activity is facilitated by the internet, both in terms of dissemination of knowledge as to how to undertake such activity and in the ease of securing the means to do so. Emerging technologies such as blockchain and cryptocurrencies may also present risks where used in a way that leaves no easy trail for tax administrations to follow. The speed and scale of change also means that when new activity is seen in one country or industry sector, it can rapidly spread to other countries and sectors.

Two existing bodies – the Joint International Task Force on Shared Intelligence and Collaboration (JITSIC) and the Task Force on Tax Crimes and Other Crimes (TFTC) - provide opportunities for tax administrations to exchange information on developments related to aspects of the shadow economy where it involves cross-border evasion or criminal activity. This does not, though, cover the full range of shadow economy activity. Tax administrations may wish to consider, therefore, whether it would be helpful for interested tax administrations to establish a new Community of Interest group to undertake periodic horizon scanning and exchange of knowledge on new developments and effective counter-measures as well as identifying further opportunities for exchange of bulk data. (Communities of Interest are tax administration led groups, sponsored by a Commissioner or Commissioners, bringing together interested tax administration officials at the appropriate level to work together collaboratively on a particular topic.).

Recommendation 2: Effective use of different data sources

The most powerful tool for shining a light on the shadow economy comes from the ability to find evidence of such activities in data that can be processed automatically. While cash is still often used in the shadow economy, electronic payments are becoming more common are the only realistic methods of payment where large numbers of transactions are carried out remotely, including across borders. Other forms of evidence of shadow economy activity are also present in digital form and in potentially accessible databases or through internet mining techniques. Such data might provide direct knowledge, for example where someone has applied for a licence to operate a shop, has purchased a commercial vehicle or advertised services online. Using analytics on large data sets can also uncover issues which might warrant further investigation, for example well above average use of electricity or water, the number of trips across borders, low recorded wages or turnover given the type of firm or a higher than expected number of credit card transactions versus cash transactions (indicating possible skimming).

Tax administrations may therefore wish to look further at:

- the range of data sources that countries are using in seeking to uncover shadow economy activity;
- examples of legislative requirements to obtain access to data, including bulk data, and powers to specify the details of such transfer, including format. This would allow the drawing up of a set of considerations which countries might wish to take into account when looking at expanding data sources;
- the range of models and methods that countries are using, or currently embarking on to uncover shadow economy stratas (predictive modelling; data mining);
- examples of how different data sets can be used together to enhance risk assessment as well as examples of the impact of the use of combined data;
- areas where further international exchange of particular data sets would be useful and proportionate.

Recommendation 3: Collective action on the sharing and gig economy

While the sharing and gig economy can have positive benefits for the wider economy, they also risk expanding the shadow economy. At present knowledge of income received from such activities usually depends on self-reporting by the taxpayer. Self-reporting is most complete, though, when an individual knows that the tax administration can obtain the data themselves or, more powerfully, if it is reported direct to the tax administration. In the case of much of the sharing and gig economy, the tax administration may be unaware either who the seller is or the amount of payments received and may not easily be able to obtain the information. In particular, there may be little available publicly on the online intermediaries' platforms that is capable of proving identity without resource intensive investigations (for example a tax auditor becoming party to a transaction) and payment data may be difficult to obtain from the online intermediaries, particularly on a bulk basis.

Given that this development affects all tax administrations, tax administrations may wish to consider the creation of a Task Force made up of a number of tax administrations to examine the options, including in discussion with online intermediaries facilitating the sharing and gig economy, and to propose common solutions which address the tax concerns without creating unnecessary burdens. For example such a Task Force may wish to consider the information sets required to be able to match activity to individual taxpayers, what onboarding procedures would assist in the collection of information and what can be done with and without legislation.

Recommendation 4: Effective identification and registration

Registration of taxpayers is of paramount importance in tackling the shadow economy. Once someone is registered for tax, it is easier to create a picture of what taxable activities they are undertaking from self-reported sources, from income reported by employers and from matching of the taxpayer to third party data. Difficulty of registration is a significant issue in some countries, particularly but not only in developing countries, and can lead to people remaining part of the informal economy even where they are prepared to pay their taxes.

The issue of identification, including in authentication processes, is also a significant issue for the shadow economy. As set out in the report, the use of false IDs can facilitate a range of frauds and make detection extremely difficult, including in cases where a false ID has been used to register with the tax administration.

Tax administrations may therefore wish to look further at:

- examples of effective registration procedures (in terms of both simplicity and robustness);
- examples of how to combat false IDs/identity theft, including through the use of biometrics and blockchain;
- and based on this, to produce a guide on key issues which tax administration may wish to consider as regards enhancements to registration and identification processes.

Recommendation 5: Reinforcing social norms

Most tax administrations undertake activity aimed at reinforcing social norms as regards payment of tax. Many of these are focused on the non-compliant or at-risk taxpayer as part of multi-faceted strategies, and will often include sector specific strategies. The effectiveness of such strategies on influencing wider taxpayer behaviour, in particular as regards avoiding making cash-in-hand payments, is not always clear. It would be helpful to look further at the effectiveness of general versus specific campaigns.

It would also be useful to look further at what can be done through influencing customers and other third parties to put downward pressure on the shadow economy. Some countries have used incentives such as lotteries to persuade customers to ask for receipts and others provide positive incentives for whistle-blowing. There may be other innovative approaches that could be taken, including linking tax legislation or the possession of an electronic receipt with certain regulatory requirements, particularly for more expensive goods and services such as building works, or placing a degree of liability on the end customer where payments are made in cash. Trade associations and the emerging internet matching services also offer potential opportunities to influence behaviour on the side of the provider of goods and services and customers. (For example where a trade association provides some element of insurance, that might be made contingent on registration for tax and proof that tax was paid. In order to support compliant business, some online intermediaries may wish to incorporate the provision of electronic receipts into customer ratings or make it a requirement of using the service.)

Tax administrations may therefore wish to look further at:

- examples of effective campaigns and other mitigation efforts focussed on the non-compliant and at risk taxpayers, drawing lessons on some of the key determinants of success;
- existing examples of strategies focused on customers and other third parties and produce a guide to the different kinds of strategies, including new approaches, that tax administrations might wish to consider.

Recommendation 6: Informing whole of government approaches

Actors in the shadow economy will often be involved in social security fraud, failure to comply with regulations (including health and safety) and serious crime, including labour market crime. Given this, a stronger and more holistic approach, through a broad collaboration between public agencies and with other relevant bodies such as employers' associations, trade unions and trade associations, is important to combat the shadow economy.

This is not just about sharing of data but include how all parts of government, and all those affected by aspects of the shadow economy, can most effectively work together and pool efforts. This is particularly important where serious crime is involved, such as labour market crime, which can threaten society and social systems more generally, including the effective functioning of the welfare state.

Not all tax administrations have direct responsibility for tackling illegal activity, however they will increasingly be involved in the sharing of information with those public agencies that do have such responsibility. The fact that shadow economy activity does not distinguish between legal and illegal activity – on the contrary illegal activity is increasingly integrated into legal activity – reinforces the importance of taking a whole of government approach.

There are a number of examples where national whole of government strategies are proving effective. Tax administrations may therefore wish to:

- look in more depth at the examples of such strategies, including which government agencies are involved, the governance structure, data exchange issues, use of powers, legal framework etc.;

- based on this to consider setting out the main elements to be considered in designing and successfully operating a whole of government approach.

Recommendation 7: Production of "how to" guides

As illustrated in this report, a number of tax administrations have introduced highly successful approaches to tackling aspects of the shadow economy – for example in the use of online tills, real-time VAT reporting, e-invoices, use of blockchain etc. Not all such examples will necessarily be readily transferable between countries for legislative, cost or structural reasons. However, similar outcomes may nevertheless be achievable with some changes of approach or through the partial adoption of other's approaches. In order for the practical and legal issues to be considered fully, and to benefit from the lessons of others, it is important to understand in some depth how these approaches were designed and implemented. With tax administrations now looking at how to use the same emerging set of technologies and sources of data, there is a real risk that without such sharing of knowledge in depth, there will be areas of wasted effort or national debates will not be fully informed by an understanding of international developments.

Some individual tax administrations might, therefore, be approached to see if they are willing to provide fuller explanations of how successful approaches were planned and implemented. While such explanations do not need to follow a set template given that they will be very different, ideally they should cover, *inter alia,* the aims of the proposals and a description of how they work, the process of design, consultation, legislation, implementation, costs and benefits, refinements and lessons learnt.

Recommendation 8: Measuring impacts

The shadow economy is a multifaceted problem whose impacts are not limited to tax alone. Researchers have attempted to estimate the magnitude and extent of the shadow economy, mainly by using macroeconomic approaches. However, few estimates manage to isolate intentional (from unintentional) tax evasion and VAT fraud in different parts of the shadow economy. The reason for this is linked to both methodological issues and a lack of data.

Although research has provided an important contribution to our understanding of the shadow economy, it does not necessary fulfil the needs of the tax administrations. In particular, for practical purposes tax administrations need to be able to:

- understand the developments of the different segments of the shadow economy. In order to allocate resources to the area with highest risk, tax administrations need to know which part of it requires most attention.
- identify how effective the tax administrations' interventions are. What activities undertaken by the tax administrations actually have an impact on the development or size of the shadow economy?

The gold standard of measuring the impact of activities/ interventions is to use randomised control trials, i.e. isolate a group that is exposed to an activity (treatment) and compare the impact to/with a similar (control) group that are not exposed to the activity. For obvious reasons it is challenging to do this in the shadow economy. Since the uncertainty is large, tax administrations may want to combine several types of analyses and methods for a more precise view on the development of the shadow economy.

Tax administrations may therefore wish to look further at:

- an overview of how tax administrations measure the size and development of the various segments of the shadow economy and the impact of their activities and interventions;
- using this information and other research, develop some guidance on issues involved in effective measurement of the development of the shadow economy and evaluation of particular activities and interventions.

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