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ABOUT THE JOURNAL

The Journal of Tax Administration (JOTA) is a peer-reviewed, open access journal concerned with all aspects of tax administration. Initiated in 2014, it is a joint venture between the University of Exeter and the Chartered Institute of Taxation (CIOT).

JOTA provides an interdisciplinary forum for research on all aspects of tax administration. Research in this area is currently widely dispersed across a range of outlets, making it difficult to keep abreast of. Tax administration can also be approached from a variety of perspectives including, but not limited to, accounting, economics, psychology, sociology, and law. JOTA seeks to bring together these disparate perspectives within a single source to engender more nuanced debate about this significant aspect of socio-economic relations. Submissions are welcome from both researchers and practitioners on tax compliance, tax authority organisation and functioning, comparative tax administration and global developments.

The editorial team welcomes a wide variety of methodological approaches, including analytical modelling, archival, experimental, survey, qualitative, and descriptive approaches. Submitted papers are subjected to a rigorous blind peer review process.

SUBMISSION OF PAPERS

In preparing papers for submission to the journal, authors are requested to bear in mind the diverse readership, which includes academics from a wide range of disciplinary backgrounds, tax policymakers and administrators, and tax practitioners. Technical and methodological discussion should be tailored accordingly and lengthy mathematical derivations, if any, should be located in appendices.

MESSAGE FROM THE CHARTERED INSITUTE OF TAXATION

The Chartered Institute of Taxation is an education charity with a remit to advance public education in, and the promotion of, the study of the administration and practice of taxation. Although we are best known for the professional examinations for our members, we have also supported the academic study of taxation for many years and are pleased to widen that support with our involvement with this journal.

WEBSITE

The Journal of Tax Administration website can be found here: www.jota.website

SOCIAL MEDIA

We also have a Twitter account: https://twitter.com/jotajournal

EDITORIAL NOTE

We are pleased to publish this issue of the Journal, which contains another mix of papers, both in geographical and disciplinary terms.

The first paper is from experimentalists Jamison, Mazar, and Sen, and reports on a field experiment undertaken in collaboration with the State Revenue Service of Latvia. Behaviourally-informed messages were used to encourage non-compliant business taxpayers to file timely tax declarations. The best performing message was one that framed non-compliance as a deliberate choice.

In the second paper, lawyers Marcovici and Noked propose a compliance regime for individuals, which is modelled on the International Compliance Assurance Programme and entails the issue of a compliance passport. They argue that the regime will facilitate compliance with both tax and anti-money laundering laws in line with current trends towards beneficial ownership transparency, so as to reduce risks and costs for both taxpayers and tax authorities.

The third paper is from the U.S. In it, Boylan and Cline take a look at state property tax in the context of big-box retailers, drawing on dark store theory. Specifically, they examine a tax loophole and its effect on the property tax levy of local governments in Wisconsin.

The fourth paper is from Garcia and Sanches, who explore the Portuguese shadow economy using data from 1983 to 2015. They find negative relationships between social security expenditure and the shadow economy, and between real GDP growth rate and the shadow economy. They conclude that the shadow economy is a threat to the financial sustainability of the social security system and causes macroeconomic data distortions, which have implications for policy decisions.

Goslinga, de Jonge, Siglé, and van der Hel-Van Dijk, in the fifth paper, look at who participates in the Dutch co-operative compliance programme, drawing on data from a survey of large businesses conducted between 2014 and 2018. The authors conclude that large businesses benefit from increased certainty through participation in the programme, whereas the benefit for the tax authority is largely in the form of improved intelligence as a result of greater transparency.

The sixth paper is from Okanga, who explores legitimate expectation as a matter of policy in the Nigerian context. He shows that the exercise of discretion by tax authorities can support legitimate expectations thereby increasing levels of trust among taxpayers, which ultimately makes the job of administration easier.

In this issue of JOTA, we also present a literature review and a comment paper. The literature review, by Greil, takes us through recent developments in the arm's length principle, with particular reference to the digital economy. The comment paper is from Balakrishna, from the Indian Forest Service. Dr. Balakrishna describes the implementation of an e-government initiative in the Indian state of Andhra Pradesh.

We once again thank the contributors and the reviewers for helping us make this yet another diverse issue that makes an important contribution to our understanding of tax administration.

Lynne Oats & Nigar Hashimzade, Managing Editors

Personal Note From Lynne Oats

Having retired on 31 December 2020, this is the last issue for which I will act as Managing Editor. Having set the journal up initially, and having seen this and all prior issues bar one through to publication, it is with some sadness that I step down. But I am confident that the tax administration community will continue to support the journal; not only the editorial board but also contributors and readers. We are a relatively small community and should use the journal to share ideas, support new scholars, and spread the word more widely about the importance of tax administration.

APPLYING BEHAVIORAL INSIGHTS TO TAX COMPLIANCE: EXPERIMENTAL EVIDENCE FROM LATVIA[1]

Julian C. Jamison[2,3], Nina Mazar[4], Iman Sen[2]

Abstract

In recent years, tax authorities around the world have started to use behavioral insights to encourage taxpayers to fulfill their obligations. We review and discuss some of the recent empirical literature on tax compliance. In line with recent trends, we report on a field experiment in collaboration with the State Revenue Service of Latvia (SRS) to encourage previously non-compliant individuals, who also have their own business income, to submit their tax declarations on time in 2017. These individuals were pre-emptively sent emails with behaviorally informed messages in order to reach and influence an important target population at a salient moment. Our results indicate that all of the behaviorally-informed messages increased submissions by the submission deadline when compared to a control group. The best performer was a message that specifically framed non-compliant behavior as a deliberate choice and increased timely submissions by 9.4% (4.1 percentage points; $p=0.05$).

JEL Classification Codes: C93, H26
Keywords: Tax Compliance, Behavioral Economics, Randomized Field Experiments

1. INTRODUCTION

In recent years, behavioral economics, the practice of melding psychological and analogous insights within standard economic models, has been applied in a wide variety of policy arenas. An overlap in interest between governments, who are often attracted by the idea of relatively low-cost interventions, and researchers, who have been inspired by encouraging results from increasingly ambitious field experiments, has led to a growing body of empirical evidence, and to the establishment of national and sub-national “nudge” units. One context that has proven particularly fruitful from both perspectives is tax compliance which has, in turn, received substantial attention and resulted in a number of successes.

Recent studies have explored a wide variety of psychological tactics to increase tax compliance. These have either included deterrence messages aimed at addressing misperceptions of the various parameters of the classic incentive-based model of Allingham and Sandmo (1972), or have included notions of benefits from taxation, fairness and social norms, morality, and other topics, sometimes broadly classified as “tax morale” (Luttmer & Singhal, 2014), or addressed using the term “moral suasion” (Mascagni, 2018; Torgler, 2004b), and often described as targeting non-pecuniary and intrinsic motivations.

[1] The paper is a product of the Mind, Behavior, and Development (eMBeD) unit, Development Economics Department of the World Bank. Emails: jjamison@worldbank.org, nmazar@bu.edu, isen@worldbank.org. We thank the State Revenue Service of Latvia for their tremendous cooperation throughout this project, as well as Mihails Hazans, Ania Jaroszewicz, Emily Sinnott and Varun Gauri for their support. This paper solely represents the views of the authors and not (necessarily) the Government of Latvia or the World Bank Group.
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However, the results from these studies have been mixed, highlighting the centrality of the interaction between messages and specific environments, including the baseline characteristics and perceptions of taxpayers, and the type of tax (e.g., individual or business tax, income, or other). In this paper, we first present a short review of the increasing body of evidence from tax compliance experiments to take stock of the most recent literature and findings. We organize the literature first by the different types of messages used, which are broadly classified as deterrence and non-deterrence messages. We subsequently mention other types of behaviorally informed interventions, such as rewards and other incentives, varying communications channels, and more. We highlight sources of heterogeneity wherever relevant, including the type of tax in question, target groups, timing of interventions, communication channels, and outcomes. We find that, overall, deterrence messages that change the perceived probability of audit or make the penalties for non-compliance salient worked in a number of different field experiments, although there were some exceptions. When considering other types of messages, we find that messages highlighting the tax behavior of others (i.e., social norms) and omission/commission messages that increase the moral costs of non-compliance have worked towards increasing compliance for income taxes.

Next, we study tax compliance behavior in a country where tax revenue is substantially subverted by the presence of a large shadow economy, namely Latvia. The shadow economy in Latvia is estimated to be close to a quarter of the official gross domestic product (GDP) level, compared with an Organisation for Economic Co-operation and Development (OECD) average of only 14 percent. This includes both underreported wages from formal employment and underreported income from individuals who are self-employed.

We present results from an experiment in conjunction with the tax authority in Latvia, where behaviorally-informed messages were sent to self-employed individuals who had failed to submit their tax declaration or had submitted it late in any of the previous three years. We show that, in the Latvian context, an omission/commission message framing non-compliant behavior as a deliberate choice improved subsequent compliance by 9.4% (4.1 percentage points; $p=0.05$) more than a social norms message for tax declarations and showed a significant improvement when compared to the control group. With regards to late compliance, the social norms message had generated the most tax declaration submissions a month and a half after the deadline, 5.1% more (or 3.2 percentage points) than the control group. Both of these impacts become stronger when we introduced controls for other important drivers of compliance, such as demographics, and past income and tax payment behavior. We found that a third simple reminder message had no impact.

We expect the paper to be useful in several ways. First, it incorporates a brief and up-to-date summary of the large number of behaviorally-informed tax compliance interventions completed. Second, the paper presents the results of a pre-emptive intervention experiment targeted at a group of individuals central to the shadow economies of Eastern Europe: partially or fully self-employed individuals who have previously delayed in declaring or failed to declare tax obligations. As such, our paper also increases understanding about how to reduce shadow economies. Furthermore, to the best of our knowledge, no previous behavioral tax compliance interventions of any kind have been carried out in Latvia (or any highly similar country in the same geographical area and with a large shadow economy). Third, we add evidence in respect of several of the most consistently promising types of behavioral messages used in previous field experiments by directly comparing their relative efficacies.

The paper is organized as follows. Section 2 discusses the current literature on behavioral interventions related to tax compliance. Section 3 introduces the context of our experiment, including the collaboration with Latvian tax authorities, and the experiment's formal design and data. Section 4 presents the main results and Section 5 concludes.

2. A SHORT REVIEW OF THE BEHAVIORAL TAX LITERATURE

Recently, researchers have started working alongside tax authorities to test different insights drawn from behavioral science through randomized control trials and other quasi impact evaluation methods at scale (Pomeranz & Vila-Belda, 2018). While, traditionally, most of this work has been in higher income countries, new studies and evidence are emerging from middle and lower income countries. According to Hallsworth (2014), the number of field experiments in taxation doubled between 2012 and 2014.

Recent trials have both exhaustively tested the parameters and predictions of the traditional deterrence model and explored several different components that comprise "tax morale" in an attempt to explain the high levels of compliance observed in practice. Recent experiments have also become more ambitious in scale, trying to reach as many taxpayers as possible. The tax system in the country, the type of tax in question, the underlying characteristics and perceptions of taxpayers, social and cultural attitudes, and the baseline behaviors of taxpayers all appear to be relevant sources of heterogeneity. In particular, a lot of the literature finds that individuals with different levels and sources of income, and firms, act differently. While most experiments target delinquent taxpayers who have missed payment deadlines, some target those who have forgotten to declare their tax obligations in the first place. Outcomes therefore typically include reported income, payments made, and payment amounts within a certain time frame after the intervention. The experiments reported below were also cost-effective, primarily using letters but also using emails and text messages to communicate messages and administrative data to both target individuals and firms, and to measure outcomes.

At least three recent review papers (Hallsworth, 2014; Mascagni, 2018; Slemrod, 2017) are excellent sources that survey and interpret a lot of the recent experimental tax literature in depth[5]. These reviews are also wide in scope, discussing the broader tax literature and examining some of the experiments in great detail. Pomeranz and Vila-Belda (2018) also include an updated review of the tax literature in the context of recent collaborations between tax authorities and researchers. Hashimzade et al. (2013) is an excellent source for the theoretical background of the tax compliance literature. Arcos Holzinger and Biddle (2016) include an in-depth discussion of the theory, evidence, and related psychological insights. In this review, we attempt to arrange the evidence, focusing primarily on the psychological insights that were used to design the interventions, and cite an updated list of related field experiments. Using this method of categorization helps to put the focus squarely on the underlying beliefs, perceptions, and norms that, if changed, may subsequently result in a change in tax compliance behavior. We broadly divide the messages used in interventions into deterrence and non-deterrence categories, before discussing other kinds of behaviorally informed interventions. There are two important caveats: first, we do not claim that this review is comprehensive, and second, we do not comment on the size of the impacts. Therefore, this is a much shorter, more focused, and more abbreviated review of the important recent literature on behavioral insights towards improving tax compliance.

[5] Hallsworth (2014) also contains an excellent and easy to follow summary table of the major field experiments and results.

2.1 Deterrence Messages

2.1.A Perceptions of audit probability

Because individuals tend to overweight low probabilities, interventions that inform taxpayers about the true probability of an audit can be effective, even when this is quite low (Kahneman & Tversky, 1979). However, creating an ambiguous audit environment with unknown or irregular audit probabilities may also be effective at increasing compliance (Dai et al., 2015). Recent field experiments have extensively tested how changing these perceptions and making them more salient can affect tax compliance. In general, messages that increase the perception of audit probability appear to be effective. However, compliance does not typically increase with increasing probability, and there is a risk of heterogenous effects with poorer compliance for higher income individuals and firms in some cases.

For example, Slemrod et al. (2001) find that, in the U.S., increased perceptions of audit increased reported income for lower and middle income taxpayers who, in general, had greater opportunities to evade on self-reported income, rents, and royalties. Hasseldine et al. (2007) show that deterrence letters improved compliance for sole proprietors in the U.K. who had reported income below a certain threshold for two consecutive years and, in particular, for those submitting self-prepared returns. Kleven et al. (2011) show that, in Denmark, income tax compliance differed based on the individual's past audit experience and increased with increasing probability of audit. For example, the treatment group that was to be audited with certainty had significantly larger effects (almost double) than the treatment group with a 50% audit probability. They also show that options to evade matter, with compliance at almost 100% with the presence of third-party reporting but lower for those who self-reported income. In Finland, high and low probability audit letters sent to small, labor-intensive businesses increased VAT reporting for the high probability group (Harju et al., 2014). Similarly, other studies (including Dwenger et al., 2016, which examined a local church tax in Germany) find that making the probability of audit salient increases compliance, although compliance does not increase with increasing audit probability. In a large scale experiment in Uruguay, Bérgolo et al. (2017) found that providing firms with detailed information about past audit statistics, and average audit probability and penalties, together with a letter stating that evasion increases chances of audit, increased compliance, with the latter treatment performing marginally better. However, they not only found that higher audit probabilities (or penalties) do not lead to higher payments, but that firms' beliefs of audit probabilities drop after receiving the treatment letters. The authors hypothesize that even though firms respond to the threat of audit, it is not through the rational mechanisms laid out in Allingham and Sandmo (1972).

Along with the differential effects outlined above, the evidence also suggests that being able to implement the stated probabilities of audit (compared to nudged perceptions) may be important (Carrillo, Pomeranz, et al., 2017; Mascagni, 2018). Deterrence messages may also backfire in some cases, leading to a reduction in compliance levels. In some cases, compliance or reported income fell for high income individuals and firms (Ariel, 2012; Gangl et al., 2014; Slemrod et al., 2001). For example, in Gangl et al. (2014), the authors hypothesize that the reduction in compliance for firms in Austria is due to the crowding out of taxpayers' intrinsic motivation to comply.

2.1.B Perceptions of tax evasion costs

Research has shown that individuals may underestimate and/or be inattentive to financial penalties (Karlan et al., 2016; Stango & Zinman, 2011). Thus, vividly highlighting the financial, temporal, and effort costs of being caught seems to be an effective way of increasing tax compliance (see the lab experiments in Blackwell, 2007). Recent field experiments that have made penalties salient have also shown promising results in terms of increasing compliance.

For example, in a large scale field experiment in Argentina, a deterrence letter relating to property taxes that provided a simple example of the different costs that would arise from unpaid taxes after a year increased compliance (Castro and Scartascini, 2015). Perez-Truglia and Troiano (2018) made salient penalties to delinquent individuals in the U.S., resulting in an increase in payments.

2.1.C Other deterrence messages

A third parameter affecting compliance in Allingham and Sandmo (1972) is the tax rate. Harju et al. (2014) studied the impact of exogenously varying the VAT rate and found that a higher tax rate led to lower compliance rates for hairdressers in Finland.

Another way of reframing audit probabilities that has proven to be relatively successful is to make detection by authorities more salient. Oftentimes, this information is obtained from third-party reporting (see Pomeranz and Vila-Belda, 2018, for further details). For example, Fellner et al. (2013) carried out a field experiment in Austria with potential TV license fee evaders. They found that employing a letter treatment emphasizing that the risk of detection was high, and highlighting the associated financial and legal penalties involved had a strong effect on compliance. In an experiment conducted in Norway which aimed to increase reporting by individuals on foreign income, the addition of a sentence noting that the tax administration had detected assets abroad in previous years to communications led to more individuals reporting foreign income (Bott et al., 2017). Similarly, a letter sent to firms in Chile notifying them that they were being monitored and may be audited led to increased VAT payments (Pomeranz, 2015). In an experiment with delinquent firms in Costa Rica, Brockmeyer et al. (2016) found that a set of deterrence messages, including the threat of detection as a result of third-party information, had strong effects on compliance.

2.2 Non-Deterrence Messages

2.2.A Perceptions of public benefits from compliance

Utilizing a set of messages that highlight the benefits of compliance (i.e., how taxes are used and how this benefits society) may increase tax compliance. The simple idea behind such fiscal exchange literature is that citizens can be motivated to pay revenue (taxes) for the services provided by government. This can happen through a variety of means: intrinsically motivating taxpayers to reciprocate because they appreciate the services provided; increasing the moral costs of non-compliance; invoking feelings of empowerment or agency when individuals can allocate expenditure; and improving transparency and trust in order to improve taxpayers' relationships with the state. Overall, utilizing these types of messages has produced mixed results.

For a successful example, see Bott et al. (2017), which details a field experiment in Norway where there was increased reporting of foreign income by individuals when the letter they received highlighted that taxes are used for publicly financed services. Similarly, Hallsworth (2014) found that messages with both positive and negative framing of gains and losses, respectively, from (not) funding public services in the U.K. increased compliance. An experiment in Argentina showed that the impact of the actual provision of a public good, a sidewalk by a municipality, had persistent effects on compliance for winners (randomly chosen from those who complied) along with spillover effects on neighbors (Carrillo, Castro et al., 2017). In the Rwandan context, Mascagni, Nell and Monkam (2017) found that a public service message (delivered via SMS, and emphasizing how taxes help to provide education, healthcare, and safety for citizens) was the most effective at improving compliance, even in a low income setting.

However, there are also several instances where such messages have been less effective. For example, Castro and Scartascini (2015) found no effect in the context of property taxes in Argentina when utilizing a letter that provided information on the use of revenues by the municipality. Blumenthal et al. (2001) studied the impact of letters to taxpayers that both highlighted how taxes in Minnesota (U.S.) are spent and encouraged support for these services, and found that they had no effect on compliance. Bérgolo et al. (2017) also found that a public goods message in a letter sent to firms in Uruguay had no effect on compliance. In addition, Torgler (2004b) found that letters sent in Switzerland that explained the role that taxes and compliance play in maintaining active citizen participation and democratic structures had no effect on compliance rates. Ariel (2012) found that when firms were given information about how public money is spent and the social implications of non-compliance, it actually reduced compliance rates.

Can enabling taxpayers to play a more active role in the process (for example, by allowing them to specify their spending priorities) increase compliance rates? In a hypothetical lab setting in the U.S, Lamberton et al. (2014) found that compliance increased when taxpayers were given increased agency and provided with a feedback channel. An earlier lab study in Costa Rica and Switzerland (Torgler, 2004a) produced similar findings, but no field experiment evidence currently exists.

2.2.B Perceptions of government

Perceptions of, or attitudes towards, the effectiveness of government itself can influence compliance. While most studies here are descriptive, we still think it is important to take this into consideration when thinking about compliance.

Frey and Torgler (2007) showed that perceptions of tax evasion, along with institutional measures (such as voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rules of law, and control of corruption) are correlated with tax morale. In a comparative study in Botswana and South Africa, Cummings et al. (2009) found that perceptions of the quality of governance, perceived through fairness of the tax administration, fiscal exchange, and overall attitudes may explain compliance. In an interesting modification, Kettle et al. (2016) found that invoking national pride increases compliance in Guatemala. Besley et al. (2015) showed how an unpopular and “unfair” tax in the U.K. had persistent effects on compliance long after its removal, making a key empirical contribution to the theoretical literature on fairness and compliance (see, for example, the discussion of distributive, procedural, and retributive justice in Kirchler, 2007).

2.2.C Social norms

Previous studies have shown that people are "conditional cooperators" in the lab, increasing their contributions in public goods games if others are also contributing, but withdrawing otherwise (Charness & Rabin, 2002; Fehr & Falk, 2002). Several studies have shown that these preferences also hold true in the domain of tax compliance, in that any individual taxpayer will be less inclined to pay her taxes if she believes that others are not cooperating—that is, if she believes that others are not paying their fair share of taxes (Bazart & Bonein, 2014; Frey & Torgler, 2007). Therefore, what others do (descriptive expectations) and believe (injunctive or normative expectations) affect an individual's behavior (Bicchieri et al., 2014; World Bank, 2015). Descriptive norms typically highlight how many other individuals or firms are complying, which is also indicative of normative support for the behavior. The decision to comply may also be influenced by moral costs of unfairness and inequity when others are complying, and the literature sometimes categorizes such interventions as fairness interventions. We find that, in general, social norms messages have been more successful in the context of income tax compliance than for other kinds of taxes. The success of social norms messages may depend on the beliefs that taxpayers already hold about compliance (Hallsworth, 2014).

In their seminal experimental study, Hallsworth et al. (2017) found that highlighting descriptive norms relating to tax payment may be one of the more effective ways of encouraging tax compliance in the U.K., and that it is more effective than highlighting injunctive norms. A follow-up experiment indicated that highlighting more specific norms—e.g., norms pertaining to an individual's geographic location or financial situation—may be even more successful. In a previous study in the U.S., Coleman (1996) also found descriptive norms messages to be effective. In a more recent experiment, Kettle et al. (2016) found a message highlighting descriptive norms to be one of the two most successful messages for increasing compliance in Guatemala. The experiment showed that highlighting descriptive norms that were not necessarily high (64.5%) still had a positive impact on compliance, for both individuals and firms. Similarly, Del Carpio (2014) found that informing individuals about descriptive norms for property tax payments increased compliance in Peru, after finding that these tax payments were underestimated at the baseline.

In some instances, social norms messages have not worked. Hernandez et al. (2017) even found that they had a negative effect in the context of personal income tax in Poland. In addition, Castro and Scartascini (2015) found that a message about descriptive social norms had no effect in the context of property taxes in Argentina. Similarly, Dwenger et al. (2016) found that social norms messages had no impact in the context of the church tax in Germany, Fellner et al. (2013) found generally weak evidence that they affected compliance rates in the context of TV license fees in Austria, and John and Blume (2018) found that they led to lower compliance rates in the context of council tax in London.

2.2.D Commission

Another "moral suasion" message that has been shown to improve compliance is appealing to an individual's personal sense of duty, or personal norms. For example, recent experiments have shown that letters that frame non-compliance as an intentional and deliberate choice typically do well in increasing compliance. This may be because the impending losses from acting can hurt more than gains from compliance (Kahneman & Tversky, 1979). Put another way, moral violations appear to be less serious when resulting from inaction (Descioliet al.,

2012; Kettle et al., 2016; Mazar & Hawkins, 2015). In general, individuals are often less comfortable with unethical behavior when it is described as being an intentional action rather than a failure to take action (Ritov & Baron, 1990). Accordingly, in large scale field experiments, commission messages in Poland and Guatemala led to larger increases in compliance than other messages (Hernandez et al., 2017; Kettle et al., 2016). These messages are often "harder toned" and may also fit within the deterrence category of messages, as they may work by changing perceptions of audit probabilities.

2.3 Social, Monetary, and Non-Monetary Rewards

Beyond deterrence and moral appeals, can taxpayers be directly incentivized to comply? Behaviorally-informed interventions may work, primarily through extrinsic rather than intrinsic motivation, and can include social as well as monetary rewards. In an early lab experiment, Alm et al. (1992) concluded that rewards that are more immediate and salient (such as a lottery or fixed reward) work better than audit reductions or public goods. In general, lotteries, including tax lotteries, may work well, as individuals overweight small probabilities. Subsequent evidence from field experiments has been largely positive.

For example, Dwenger et al. (2016) found interesting results in a field experiment examining a local church tax in Germany. They tested interventions that included a lottery, social recognition in a local newspaper, or both. The results were different for baseline compliers, who increased their contributions, particularly for interventions that included social recognition, and evaders who decreased their contributions. Similarly, Koessler et al. (2016) found non-monetary rewards (such as a weekend getaway) to be more effective than monetary rewards in Switzerland. Carrillo, Castro et al. (2017) found that being given the opportunity to win the municipality lottery in Argentina increased compliance but this was persistent only when a durable good (i.e., the sidewalk) was provided. However, Dunning et al. (2016) found that providing compliant taxpayers in Uruguay with a tax holiday led to a decrease in compliance after the tax holiday had taken place.

Tax authorities around the world also use social shaming as a tool to increase compliance. They usually do this by publishing lists of delinquent taxpayers online. Field experiments examining social shaming interventions have found that results here are often sensitive to baseline levels of compliance.

In a lower income context, in Bangladesh, Chetty et al. (2014) showed that sharing information about firms' compliance with peers increased VAT payments for firms in clusters where at least 15% of firms were complying at the baseline. The intervention meant that firms knew that their tax compliance information would be shared with other firms in the cluster. In a more directed shaming experiment in the U.S., Perez-Truglia and Troiano (2018) randomly informed neighbors about delinquent taxpayers via an online list and found that this had significant effects on the first quartile of delinquents and those who owed less money. Brockmeyer et al. (2016) showed that an SMS message threatening to publish delinquent firms' names online increased filings significantly.

In the context of the sales tax at the end of the VAT chain, an alternative is to incentivize consumers to improve compliance by firms. This provides useful third-party information when the audit trail breaks down in the final sale from retailer to consumer (Pomeranz, 2015). Naritomi (2016) found that rewarding consumers in Brazil with tax rebates and lottery tickets increased compliance by retail firms.

2.4 Simplification, Information, Timing, and Delivery Channels

As a first step, most field experiments include a simplification of the communication to taxpayers or the provision of basic information, as tax systems can be inherently complex and hard to navigate. Individuals in such tax systems may find it harder to predict their true levels of tax liability. In an early lab experiment, Alm et al. (2010) showed how providing taxpayers with information can increase both tax filings and income. The Cabinet Office Behavioural Insights Team (2012) highlight a few key lessons in designing such communications effectively, such as personalizing the language and highlighting the key actions to be taken. Hernandez et al. (2017) showed how simplified intervention letters improved compliance in Poland when compared to a conventionally worded letter sent to the control group. Similarly, Dwenger et al. (2016) found that using simplified mailings increased contributions significantly in the context of a local church tax in Germany. Robitaille et al. (2020) found that, in Ontario, Canada, planning prompt interventions increased the chances that organizations would file their overdue taxes. In addition, while Robitaille et al.'s (2020) intervention did not appear to have effects that persisted across tax years, organizations did not habituate to the manipulation and its effects were consistent across repeated exposures. Bhargava and Manoli (2015) found that U.S. taxpayers who were eligible for the earned income tax credit (EITC) were most likely to respond to various simplifications in mailings to increase filings. John and Blume (2018) found that simplification improves compliance in respect of council tax payments in London.

In the Rwandan context, Mascagni et al. (2017) successfully used images along with messages about deterrence and fiscal exchange to provide better information. In the U.S., Guyton et al. (2017) found that sending postcards and brochures to individuals who had not filed their returns in recent years, and who were potentially eligible for the EITC, was effective. Discussing benefits and where to get further information helped individuals in the treatment groups to file more returns, both in order to claim withholdings and to make voluntary payments, although these effects did not persist over time

Researchers conducting field experiments have varied the timings of communications with taxpayers based on their policy objectives. For example, if the objective is to increase the tax base in the context of high evasion and/or low tax to GDP ratios, letters are typically sent right before or during the reporting period to increase salience (Mascagni et al., 2017). However, if individuals often forget to, or do not, pay their tax liabilities after reporting has been completed, letters are sent soon after the payment deadline has passed (as in Hallsworth et al., 2017)

Finally, the communication delivery channel can be important. For example, Ortega and Scartascini (2015) used a variety of channels when communicating with delinquent individuals in Columbia, sending letters, emails, and conducting in-person visits. They found that in-person visits had the greatest impact. Similarly, Dorrenberg and Schmitz (2017) found that delivering messages in person achieved better results than delivering them by letter for small firms in Slovenia. Mascagni et al. (2017) found that, overall, the SMS channel was more effective than letter or email in Kenya. However, Hernandez et al. (2017) did not find a difference in impact when delivering letters by regular and registered mail in Poland.

2.5. Summary

Although it is clear that the overall literature on behavioral approaches to tax compliance is expansive, it is also the case that much remains unknown. As with most behavioral science interventions, the precise combination of tax type, target population (e.g., income level or firm versus individual), social and cultural norms, timing, framing of the message, and delivery channel etc. can greatly influence the magnitude or even the sign of the impact. Although the results of previous studies yield strong hints about what might work where, they are hardly dispositive, especially given the large number of possible permutations of inputs. However, in spite of the mixed results, we do see a few patterns starting to emerge. Deterrence messages have increased compliance in a number of different field experiments, but it is important to note the different sources of heterogeneity in these results. For other types of messages, we find that messages highlighting the tax behavior of others (i.e., social norms) and harder toned omission/commission messages seem to show promise in terms of improving income tax compliance. In the future, more quantitative meta-analysis could be conducted in order to better identify patterns, and assess the likelihood of different types of messages working in different contexts and across types of taxes.

3. AN APPLICATION TO LATVIA: CONTEXT, DATA, AND DESIGN

The informal shadow economy in Latvia is estimated to be approximately one quarter of the size of the country's GDP, compared to an average of 14.4% across the OECD countries (Hazans, 2011; World Bank, 2017). Unsurprisingly, it has one of the lowest ratios of tax revenue to GDP of developed countries: at 29%, this is five percentage points below the OECD average and a full ten percentage points below the European Union average (World Bank, 2017). Being able to increase tax revenues by even a small fraction of GDP would make a tremendous difference to the government's ability to function well and provide services to its citizens.

Spurred on by these facts, Latvia's Ministry of Finance collaborated with the World Bank on a holistic review of the country's tax system, with the intention of using this to help with the design of a new and improved tax strategy. As a complement to the comprehensive review, and inspired by the literature described above, the SRS (the Latvian tax authority) worked with the Mind, Behavior, and Development (eMBeD) unit at the World Bank on a pilot field experiment to use preemptive, behaviorally-informed messages to increase tax compliance.

All eligible residents of Latvia are required to submit an Annual Income Declaration (AID) between March 1st and June 1st. The SRS determined that the most relevant target group for the field experiment to increase compliance would be those individuals who did not primarily receive regular salaried income and who had been delinquent previously. To that end, they identified all self-employed individuals who had either submitted their AID late or failed to submit it in one or more of the tax years 2013-2015.

Tables 1 and 2 below provide more information about the study sample identified by the Latvian tax authority. Table 1 shows its demographic characteristics, as well as the revenue reported by the sample in the 2015 tax year and the proportion of income reported from business activity. The table shows that 58% of the group had delayed submitting their return the previous year (while the remaining members had delayed submitting in prior years) and, on average, their share of business income was nearly half of their total income, at 49%.

While these individuals are part of the tax system, they differ from the average individual taxpayer in at least two ways. First, these individuals had not submitted their returns by the deadline in at least one of the three previous years, and second, the delay in their submission was substantial, as shown in Table 2. For example, in a sub-sample analysis of 1166 individuals who had delayed submission in the past three years, the mean delay during that period was 144 days, with 20% failing to submit returns in the 2013 tax year and 15% in the 2014 tax year.

Table A1 (in the Appendix) shows the 25 strata of interest to the Latvian authorities. These strata may, primarily, have been of interest because the behaviors may have been different across these groups, although the study was not powered to detect differences across these groups. The main stratification variables of interest included age, revenue in the 2015 tax year, and dependence on business activity income.

Table 1: Basic characteristics (entire sample)

	Mean	SD	Min	Max	N
Female	0.56	0.50	0.00	1.00	4,324
Age (years)	47.02	14.49	19.00	98.00	4,324
Ever Married	0.74	0.44	0.00	1.00	4,324
Income in 2015 (Euro)	13,327.33	25,855.67	5.35	978,902.76	4,324
Delay in submitting return last year (versus in previous years)	0.58	0.49	0.00	1.00	4324
Share of business income	0.49	0.38	0.00	1.00	4324

Table 2: Delay in submission of AID among the "high-risk" target sample (subsample)

	Mean	SD	Min	Max	N
taxationyear2013 (days)	201.45	247.56	3.00	942.00	1166
taxationyear2014 (days)	148.63	152.96	3.00	578.00	1166
taxationyear2015 (days)	81.83	59.40	3.00	213.00	1166
Delay days (over 3 years)	143.97	128.96	4.00	577.33	1166

In total, 4,324 individuals pre-emptively (i.e., before any delinquency in 2017) and randomly received one of three treatment emails or were assigned to a control group that received no

message, resulting in 1,081 individuals per arm[6]. To the best of our knowledge, these emails were sent out right before the reporting period started on March 1st.

We provide further motivation for the selected treatment messages below. Table A5 (in the Appendix) shows the full text of the email messages sent. The first message (T1)—a simple reminder—was selected because the targeted individuals had shown habitual signs of delaying return submissions over the past few years. The message for T2 Omission/Commission was selected because similar messages had been the most effective in increasing compliance in a recent study in Guatemala (Kettle et al., 2016) and had also been effective in Poland (Hernandez et al., 2017). It also had a "harder" tone, than the messages in our other two interventions. Finally, the T3 Social Norm message was included because this message has been effective in a number of recent field experiments (although it had negative effect in Poland; see Hernandez et al., 2017), as discussed in Section 2.

T1 Simple Reminder: Tax letters, or any other form of communication from the government, typically contain multiple pieces of key information that are often hidden within legal jargon. The first step when revising any communication is to simplify it, by personalizing the message, and using clear, directed language. Consequently, this email reminded individuals of the tax timeline and included a link to the online system as well as contact information in case of questions. It was signed off with the name of the Chief Tax Inspector to make it more personal, as the names of the recipients could not be included for technical reasons. In summary, it contained three short, easy-to-read sentences, without extraneous information.

T2 Omission / Commission: In addition to the text from T1, this email stated that previously missed deadlines had been considered to be unintentional and inadvertent (i.e., honest omissions). However, going forward, failures would be considered to be deliberate acts of non-compliance (i.e., commissions). Framing non-compliant behavior as a deliberate choice reduces ambiguity about inaction, increases moral obligations towards action, and likely increases perceived deterrence.

T3 Social Norms: Along with the text of T1, this email highlighted the descriptive social norm that an increasing number of taxpayers file their AID by the deadline each year. This draws on the insight that people tend to follow others, in part due to normative inferences about what others believe is the right thing to do. While social norms messaging typically includes a specific descriptive statistic relating to compliance, specific statistics were unavailable, so we included language about the real increasing trend instead.

4. RESULTS

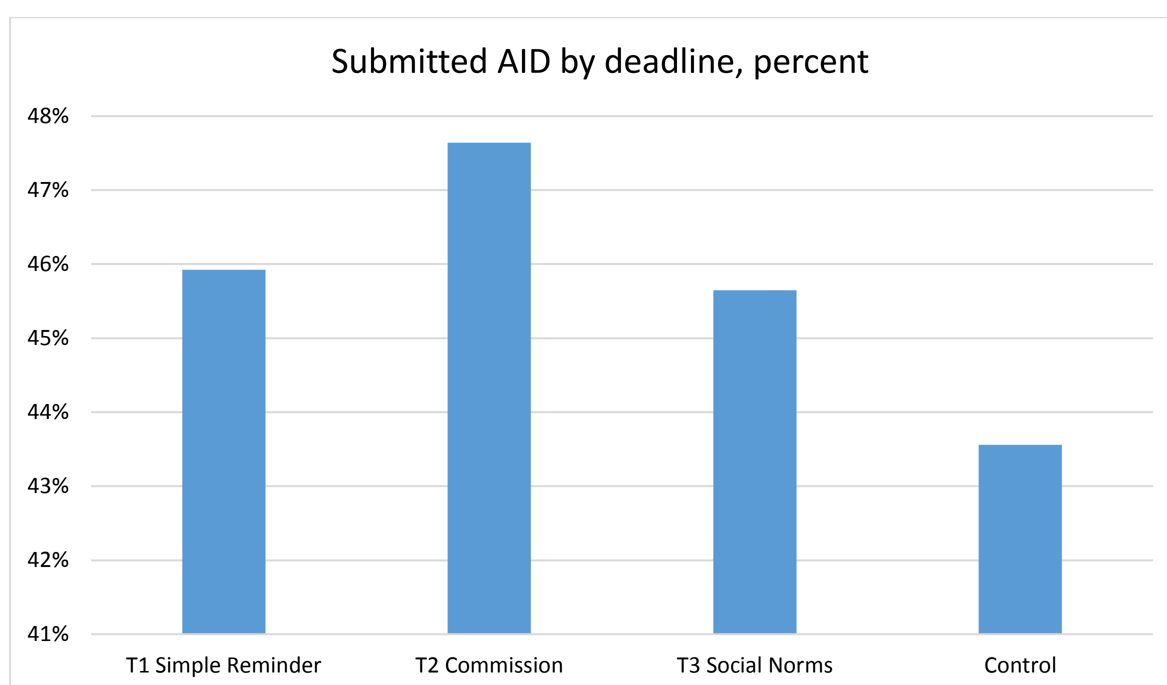
The primary outcome measure of the experiment was AID submission by the deadline (June 1st)[7]. Table A2 (in the Appendix) shows the balance tests. Age, past tax submission behavior, past revenue, and dependence on business activity were balanced by design. There is some imbalance with regard to gender and marital status, and we control for this in the regressions (Columns 2 and 4 in Table 3 below). To the best of our knowledge and understanding from conversations with SRS, all emails were sent out, and they received call backs from some

[6] Initial sample size calculations for detecting a 0.1 SD decrease in submission delay required about 1,550 individuals per treatment arm, so the study was underpowered.
[7] The final sample size is 4,320. We dropped four individuals who had paid before the start of the payment period (i.e., March 1st).

recipients on specific phone numbers listed in the emails. We were, however, unable to ascertain whether the recipients of the emails had opened and read them.

43.6% of the control target population had submitted their declarations by the deadline. AID submission in every treatment group was higher than in the control group (see Figure 1 below). Table 3 shows OLS results for simplicity of interpretation (see Table 3A in the Appendix for the logistic regression results). Submissions in the T1 (reminder) and T3 (social norms) groups were 5.5% (i.e., 2.4 percentage point) and 4.8% (2.1 percentage points higher respectively than the control group yet they were not statistically different from it. Submissions in T2 (commission) were 9.4% (4.1 percentage points) higher than the control group—a statistically significant difference (*p=0.05*). These results become stronger when controlling for basic demographic information, and past income and tax compliance behavior, and the treatment effect in T2 (commission) was 4.2 percentage points higher than the control group, as shown in Column 2 of Table 3.

Figure 1: Submission of AID by deadline across treatment groups



In addition, 63% of the control group had submitted declarations by July 17th (46 days or 1.5 months after the deadline), the last date for which we have data. Figure A1 shows the monthly submissions across the treatment arms for the entire period for which we have data. Submissions made by mid-July were highest in the social norms group, yet this was not statistically significant: 5% (3.2 percent points) higher than the control (also shown in Table 3, Column 3). However, when we controlled again for basic demographics, and past income and tax behavior, compliance in this treatment group was higher (3.6 percent points) and significant (*p=0.075*).

Table 3: Main OLS regression results

VARIABLES	(1) Submitted by deadline	(2) Submitted by deadline	(3) Submitted	(4) Submitted
T1: Simple Reminder	0.0238	0.0238	-0.00615	-0.00621
	[0.0210]	[0.0210]	[0.0203]	[0.0202]
T2: Commission	0.0408*	0.0421**	0.0247	0.0264
	[0.0210]	[0.0210]	[0.0203]	[0.0202]
T3: Social norms	0.0209	0.0237	0.0318	0.0360*
	[0.0210]	[0.0210]	[0.0203]	[0.0202]
Female		0.0319**		0.0529***
		[0.0153]		[0.0148]
Age		-0.00184		-0.00295***
		[0.00113]		[0.00108]
Ever Married		0.00265		0.00861
		[0.0200]		[0.0192]
Delay last year		0.264		0.187
		[0.176]		[0.169]
Ln(Total Revenue in 2015)		0.0217**		0.0478***
		[0.0101]		[0.00971]
Share of business income		-0.0246		0.0394
		[0.0301]		[0.0289]
Constant	0.436***	0.328***	0.630***	0.586***
	[0.0149]	[0.118]	[0.0143]	[0.113]
Fixed Effects	Yes	Yes	Yes	Yes
Observations	4,320	4,320	4,320	4,320

Standard errors in brackets
*** p<0.01, ** p<0.05, * p<0.1

Table 4 shows the number of days until submission and the correlation of various taxpayer characteristics with submissions of the AID. Those who had delayed submission in the previous year (2015) were more likely to submit their returns by the deadline than those who had delayed submitting their AIDs in prior years. This highlights the importance of, when feasible, communicating earlier with taxpayers prevent them from habitually delaying submissions. Individuals who were female and had higher revenues in the 2015 tax year were also more likely to submit their AIDs by the deadline.

We also investigated whether compliance by gender was differential across the treatment groups (shown in Table A4 in the Appendix), as women may have responded differently (Croson & Gneezy, 2009). While the study was not sufficiently powered to test for heterogeneity in treatment effects in subgroups, we still observed some interesting patterns. In particular, women were more likely to respond to the omission / commission and social norms messages (Columns 1 and 3), by 3.4 and 3.0 percentage points respectively when compared to the control group. Men were more likely to comply with the reminder message and omission / commission message (by 3.6 and 5 percentage points respectively; see Columns 2 and 4). This shows that the increased compliance in the omission / commission treatment arm was driven by both genders, but it also suggests that, in this setting, women were more likely to be persuaded by social norms messages.

Table 4: Other OLS regression results

	(5)	(6)	(7)
VARIABLES	Days to Submission	Submitted by deadline	Submitted
T1: Simple Reminder	-1.717		
	[2.007]		
T2: Commission	-1.089		
	[1.986]		
T3: Social norms	-2.816		
	[2.006]		
Female		0.0354**	0.0566***
		[0.0152]	[0.0146]
Age		0.000498	-0.000284
		[0.000588]	[0.000565]
Ever Married		-0.00471	0.0123
		[0.0193]	[0.0186]
Delay last year		0.184***	0.140***
		[0.0152]	[0.0146]
Ln(Total Revenue in 2015)		0.0170***	0.0490***
		[0.00598]	[0.00574]
Share of business income		-0.0245	0.0568***
		[0.0204]	[0.0196]
Fixed Effects	Yes	No	No
Observations	1,974	4,320	4,320

Standard errors in brackets
*** p<0.01, ** p<0.05, * p<0.1

5. CONCLUSION

In this paper, we applied two of the more successful behavioral interventions (commission and social norms messages) from previous tax experiments, along with a simple reminder message, in a pre-emptive intervention which was set up to reduce delinquency. We showed that behaviorally-informed tax communication can be effective in improving tax compliance, even when targeted towards individuals who are partially or fully self-employed, and who have been delaying in the submission of, or failing to submit, their returns in the past few years. The context is that of a newly independent country, Latvia, where the shadow economy has historically played a large role. The experiment shows that any portions of this shadow economy that are familiar to the tax authority can be targeted successfully with simple interventions. We found that, as in Guatemala (Kettle et al., 2016), the most successful message in Latvia was the harder toned message, which made salient the role of deliberate active choice in non-compliance. We found that simple reminder and social norms messages also increased timely submissions, but not significantly so. However, the study was underpowered to distinguish treatment heterogeneity, such as on those individuals who have a higher proportion of own income.

The results show promise for future research. First, we believe there is a high demand for policy-relevant experimentation in Latvia and similar countries, where tax authorities are actively looking for policy tools to help them to reduce the size of the shadow economy, and strongly encourage such collaborations. Finally, the differential impact of such interventions on the different groups that comprise the shadow economies could be better understood by investigating these questions with larger samples.

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APPENDIX

Table A1: Table shows the 25 strata used for the randomization.

Strata	Dependence on Revenue from Business Activity	Age Group	Revenue Group (based on taxation year 2015)	AID Submitting Discipline
1	High	Under 30 years	Under 10 000 EUR	AID submission delay for last taxation period
2	High	Under 30 years	Under 10 000 EUR	AID submission delay for last 2-3 years
3	High	Under 30 years	10 000 EUR - 100 000 EUR	AID submission delay for last taxation period
4	High	Under 30 years	10 000 EUR - 100 000 EUR	AID submission delay for last 2-3 years
5	High	31-50 years	Under 10 000 EUR	AID submission delay for last taxation period
6	High	31-50 years	Under 10 000 EUR	AID submission delay for last 2-3 years
7	High	31-50 years	10 000 EUR - 100 000 EUR	AID submission delay for last taxation period
8	High	31-50 years	10 000 EUR - 100 000 EUR	AID submission delay for last 2-3 years
9	High	Over 51 years	Under 10 000 EUR	AID submission delay for last taxation period
10	High	Over 51 years	Under 10 000 EUR	AID submission delay for last 2-3 years
11	High	Over 51 years	10 000 EUR - 100 000 EUR	AID submission delay for last taxation period
12	High	Over 51 years	10 000 EUR - 100 000 EUR	AID submission delay for last 2-3 years
13	Low	Under 30 years	Under 10 000 EUR	AID submission delay for last taxation period
14	Low	Under 30 years	Under 10 000 EUR	AID submission delay for last 2-3 years
15	Low	Under 30 years	10 000 EUR - 100 000 EUR	AID submission delay for last taxation period
16	Low	Under 30 years	10 000 EUR - 100 000 EUR	AID submission delay for last 2-3 years
17	Low	31-50 years	Under 10 000 EUR	AID submission delay for last taxation period
18	Low	31-50 years	Under 10 000 EUR	AID submission delay for last 2-3 years
19	Low	31-50 years	10 000 EUR - 100 000 EUR	AID submission delay for last taxation period
20	Low	31-50 years	10 000 EUR - 100 000 EUR	AID submission delay for last 2-3 years
21	Low	Over 51 years	Under 10 000 EUR	AID submission delay for last taxation period
22	Low	Over 51 years	Under 10 000 EUR	AID submission delay for last 2-3 years
23	Low	Over 51 years	10 000 EUR - 100 000 EUR	AID submission delay for last taxation period
24	Low	Over 51 years	10 000 EUR - 100 000 EUR	AID submission delay for last 2-3 years
25			Over 100 000 EUR	

Figure A1: Submission of AID by month

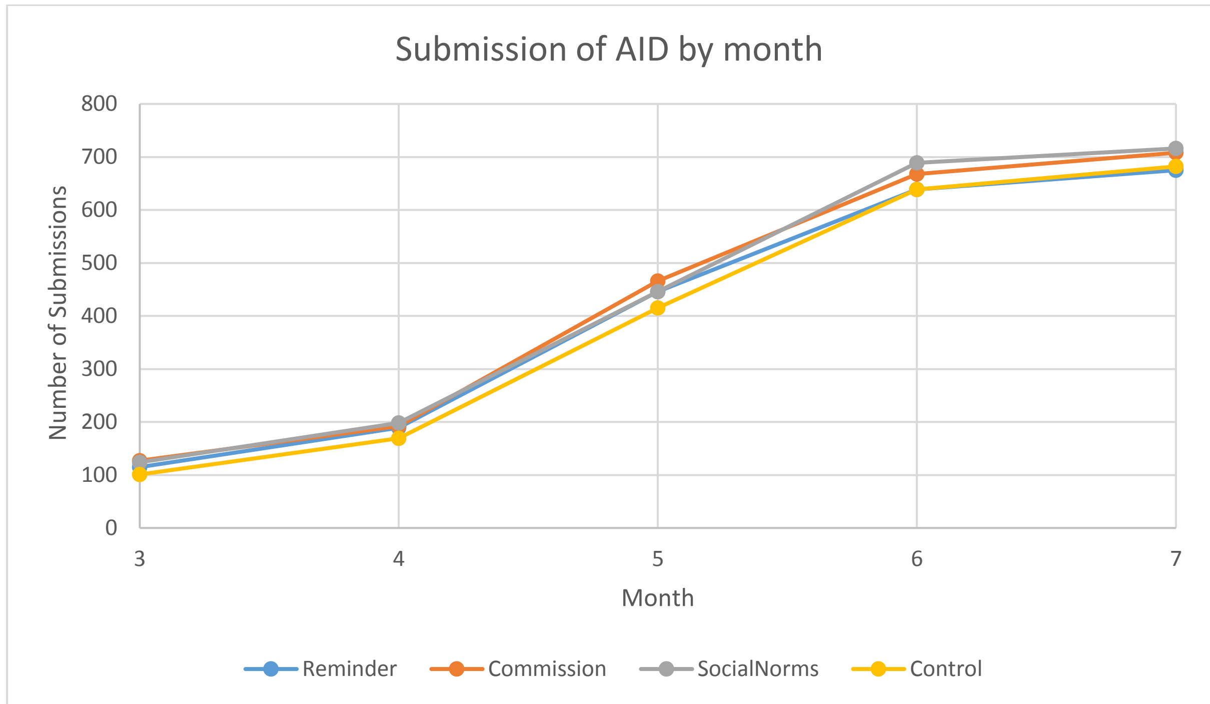

Table A2: Balance tests

	Simple Reminder	Commission	Social Norms	Control	(1) vs. (2), p-value	(1) vs. (3), p-value	(1) vs. (4), p-value	(2) vs. (3), p-value	(2) vs. (4), p-value	(3) vs. (4), p-value
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Female	0.592	0.555	0.550	0.553	0.082	0.051	0.068	0.829	0.931	0.897
	(0.015)	(0.015)	(0.015)	(0.015)						
ever_married	0.745	0.718	0.763	0.732	0.160	0.318	0.494	0.016	0.470	0.092
	(0.013)	(0.014)	(0.013)	(0.013)						
age_years	47.082	47.004	47.145	46.847	0.901	0.919	0.707	0.820	0.804	0.628
	(0.442)	(0.450)	(0.430)	(0.440)						
delay_last_yr	0.583	0.581	0.581	0.582	0.931	0.931	0.965	1.000	0.965	0.965
	(0.015)	(0.015)	(0.015)	(0.015)						
Total revenue in 2015	13646.759	12826.767	13241.847	13593.938	0.497	0.757	0.966	0.675	0.378	0.727
	(1047.177)	(599.683)	(788.127)	(630.610)						
dependence_high	0.236	0.234	0.236	0.237	0.919	1.000	0.960	0.919	0.879	0.960
	(0.013)	(0.013)	(0.013)	(0.013)						
N	1081	1081	1081	1081						

Table A3: Main results, logistic regression

VARIABLES	(1) Submitted by deadline	(2) Submitted by deadline	(3) Submitted	(4) Submitted
T1: Simple Reminder	1.106	1.106	0.973	0.973
	(0.0979)	(0.0982)	(0.0884)	(0.0889)
T2: Commission	1.188*	1.195**	1.119	1.127
	(0.105)	(0.106)	(0.102)	(0.104)
T3: Social norms	1.093	1.106	1.156	1.180*
	(0.0967)	(0.0983)	(0.106)	(0.109)
Female		1.145**		1.273***
		(0.0742)		(0.0856)
Age		0.992		0.987***
		(0.00472)		(0.00490)
Ever Married		1.011		1.039
		(0.0854)		(0.0905)
Ln(Total Revenue in 2015)		1.096**		1.235***
		(0.0469)		(0.0542)
Delay last year		2.953		2.516
		(2.200)		(2.029)
Share of business income		0.903		1.201
		(0.114)		(0.157)
Strata Dummies	Yes	Yes	Yes	Yes
Observations	4,320	4,320	4,320	4,320

Standard errors in brackets
*** p<0.01, ** p<0.05, * p<0.1

Table A4: Submission by deadline heterogeneity by gender

	(1)	(2)	(3)	(4)
	Submitted by deadline	Submitted by deadline	Submitted by deadline	Submitted by deadline
Group	Female	Male	Female	Male
T1: Simple Reminder	0.0118	0.0362	0.0123	0.0372
	[0.0281]	[0.0319]	[0.0281]	[0.0320]
T2: Commission	0.0335	0.0504	0.0343	0.0517*
	[0.0285]	[0.0312]	[0.0285]	[0.0312]
T3: Social norms	0.0301	0.0124	0.0304	0.0148
	[0.0286]	[0.0312]	[0.0286]	[0.0312]
Age			-0.00314**	-7.61e-05
			[0.00150]	[0.00173]
Ever Married			0.00233	-0.00495
			[0.0271]	[0.0303]
Delay last year			1.046**	0.114
			[0.450]	[0.190]
Ln(Total Revenue in 2015)			0.0188	0.0224
			[0.0135]	[0.0154]
Share of business income			-0.0352	-0.0140
			[0.0390]	[0.0479]
Constant	0.454***	0.412***	-0.165	0.161
Strata Fixed Effects	Yes	Yes	Yes	Yes
Observations	2,431	1,889	2,431	1,889

Standard errors in brackets
*** p<0.01, ** p<0.05, * p<0.1

Table A5: Text of email treatment messages

Treatment 1: Simple Reminder

Subject: Submit your Annual Income Declaration

Hello!

We remind you that the Annual Income Declaration (AID) can be submitted in the Electronic Declaration System (EDS) during the period: 1st of March 2017 – 1st of June 2017.

A brief guide on how to submit the AID in the EDS is available here (link provided).

In case of questions, please contact the Chief Tax Inspector Dace Liepiņa (phone number).

Thank you!

Treatment 2: Commission

Subject: Submit your Annual Income Declaration to avoid potential penalty

Hello!

We hereby inform you that any delay in the submission of the Annual Income Declaration (AID) this year will be considered an intentional and deliberate choice made by you, and a penalty as per the Administrative Violations code of Latvia may be applied.

We remind you that the Annual Income Declaration (AID) can be submitted in the Electronic Declaration System (EDS) during the period: 1st of March 2017 – 1st of June 2017.

A brief guide on how to submit the AID in the EDS is available here (link provided).

In case of questions, please contact the Chief Tax Inspector Gunta Kazāka (phone number)

Thank you !

Treatment 3: Social Norms

Subject: Submit your Annual Income Declaration, just like your peers!

Hello!

The number of taxpayers who submit the Annual Income Declaration (AID) on time is increasing more and more.

We remind you that the Annual Income Declaration (AID) can be submitted in the Electronic Declaration System (EDS) during the period: 1st of March 2017 – 1st of June 2017.

A brief guide on how to submit the AID in the EDS is available here (link provided).

In case of questions, please contact the Chief Tax Inspector Elizabete Strade (phone number)

Thank you!

COOPERATIVE COMPLIANCE PROGRAM FOR INDIVIDUALS AND TRUSTS: A PROPOSAL FOR A COMPLIANCE PASSPORT

Philip Marcovici[1], Noam Noked[2,3]

Abstract

Ensuring tax compliance among business and wealth owners is an important policy goal for many tax authorities. This article develops a proposal for a voluntary program for individuals, family trusts, and private investment vehicles, which draws upon existing cooperative compliance programs for large corporations, such as the Organisation for Economic Co-operation and Development (OECD)'s International Compliance Assurance Programme (ICAP). Under the proposed program, the authorities of the relevant jurisdictions would determine, on a joint basis, whether the participant is in full compliance with their tax obligations and whether there are any money laundering concerns. The implementation of this proposal could enhance a culture of cooperative compliance and free up enforcement resources. For participants, it could improve privacy, increase certainty, and reduce compliance costs and distortions. As this proposal has the potential to ensure compliance while reducing costs and risks for both tax authorities and taxpayers, it deserves serious consideration.

I. INTRODUCTION

Tax and beneficial ownership transparency regimes result in substantial direct and indirect compliance costs, legal uncertainties, and risks to privacy for many law-abiding individuals, family trusts, and private investment vehicles. In accordance with the current trend for tax and beneficial ownership transparency, governments are increasingly engaged in the collection and sharing of individuals' personal and financial information. Governments exchange the financial account information of foreign tax residents under the U.S. Foreign Account Tax Compliance Act (FATCA) and the international Common Reporting Standard (CRS).[4] This automatic exchange of information (AEOI) is described by the OECD as "the largest exchange of tax information in history" (OECD, 2019a). Under anti-money laundering (AML) laws,[5] countries maintain beneficial ownership registers, an increasing number of which are accessible by the public (Mor, 2019). This trend for transparency has accelerated rapidly in the past decade. It will likely continue as more jurisdictions find themselves under pressure to

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[3] The proposal in this article was developed with the valuable assistance of William Ahern, Simon Hodges, John Riches, and Bruce Zagaris. Simon Hodges is Director of Policy for the Society of Trust and Estate Practitioners (STEP), John Riches is the chair of the Public Policy Committee of STEP, and William Ahern and Bruce Zagaris, along with Philip Marcovici, are members of that committee. The work described in this article was fully supported by a grant from the Research Grants Council of the Hong Kong Special Administrative Region, China (Project No. CUHK 24611118). The authors are grateful to David Donald, Steven Gallagher, Leandra Lederman, Omri Marian, Michael Meissner, Ori Noked, Michael Olesnicky, and Viktoria Wöhrer for their helpful comments.

[4] For background information about FATCA and CRS, see Byrnes (2020) and Noked (2018a).

[5] All the references to AML in this article also refer to counter-financing of terrorism.

adopt public beneficial ownership registers,[6] and more transparency measures are promoted by the OECD,[7] analysts,[8] and non-profit organizations.[9]

This trend for transparency has an important policy goal: increasing governments' ability to deter and detect tax noncompliance and money laundering.[10] However, transparency has a high price tag. The high implementation and compliance costs of these tax reporting and AML regimes put their cost-effectiveness in question (Byrnes, 2020; Noked, 2018b). Another substantial non-monetary cost arises from compromising the privacy of law-abiding individuals (Hatfield, 2018a, 2018b). In addition, individuals and entities whose information is shared might face an increased risk of legal uncertainties where multiple jurisdictions examine their information and investigate them. Other costs are incurred when behaviors are distorted when parties try to avoid these costs and risks (Noked 2018a).

Transparency regimes may also have limited effectiveness. While they shine a spotlight on certain types of assets and behaviors (e.g., holding undeclared offshore financial assets in compliant financial institutions [FIs] in participating jurisdictions), bad actors might exploit loopholes to avoid detection (Noked, 2018b, 2019). This means that the current transparency regimes impose high costs on compliant parties while bad actors might be able to continue to engage in tax evasion and money laundering.[11] Although governments may try to close all loopholes and increase transparency until all bad behaviors have been detected, it is not clear whether the benefits of complete transparency will justify the costs (Noked, 2018b).[12]

This article develops a proposal that could ensure compliance while reducing enforcement costs for governments, and the costs and risks for participating individuals, family trusts, and private investment vehicles. The suggested approach draws upon cooperative compliance programs and on the International Compliance Assurance Programme (ICAP) in particular. Under the proposed program, the authorities of the relevant jurisdictions would determine whether the participant is in full compliance with their tax obligations and whether there are any money laundering concerns. A successful participant would be granted a Compliance Passport documenting the finding of compliance. A Compliance Passport holder would be able to present this document to FIs, authorities, and other parties to show that they are compliant in the jurisdictions that granted it.

The program's process could be structured similarly to ICAP and include the following stages: selection, compliance review, and the issuance of a Compliance Passport. Once a Compliance Passport has been issued, the participants' compliance status should be reviewed periodically. This program is feasible and could be implemented within the existing international legal framework. It could be offered as a pilot by several jurisdictions or even just one jurisdiction

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[6] For example, the Cayman Islands announced that it will set up a public beneficial ownership register for companies by 2023 (Cayman Finance, 2019).
[7] For example, see the OECD's (2018a) proposal for CRS mandatory disclosure rules.
[8] For example, see Zucman's (2013) proposal for a global financial register.
[9] For example, see the Tax Justice Network's work on tax transparency, including the Financial Secrecy Index (https://fsi.taxjustice.net/en/) and trust registration (Knobel, 2016); see also Transparency International's initiatives (Martini, 2019).
[10] For the link between tax evasion and money laundering, see Foo (2019) and Storm (2013).
[11] The transparency regime may increase the general level of compliance by incentivizing taxpayers to avoid making negligent mistakes and by increasing the awareness of the need for tax compliance.
[12] A comprehensive comparison of the benefits and costs of transparency is outside of the scope of this article. This article focuses on the impact of transparency regimes on *compliant* individual taxpayers, their closely related entities, and family trusts.

at first. These jurisdictions could include members of the OECD Forum on Tax Administration (FTA), as well as other jurisdictions and offshore financial centers.

Tax authorities and the authorities in charge of AML enforcement are expected to benefit from this program because it would ensure compliance among the participants through a cooperative process that could free up scarce enforcement resources.[13] If the cost to the authorities of administering this program were to exceed the amount of money saved, the net cost could be borne by the participants, in the same way that applicants for advance pricing agreements (APAs) are charged user fees.

To encourage participation, this program would have several advantages for its participants. A Compliance Passport holder should have greater legal certainty because the relevant authorities have already reviewed their tax compliance and money laundering risks. In addition, a Compliance Passport holder would be able to carry out activities such as opening bank accounts more easily because FIs and other parties would consider them as lower risk in respect of money laundering. Such FIs would incur lower compliance costs because they could apply simplified AML measures to low-risk Compliance Passport holders. This could reduce financial services costs.

Policymakers should consider amending the tax and beneficial ownership transparency regimes to provide Compliance Passport holders with more privacy protection. Where the relevant authorities have concluded that a Compliance Passport holder is in full compliance with their tax obligations and that no money laundering concerns have been identified, there is less need for information collection, sharing, and disclosure. In such situations, the interest of protecting legitimate privacy concerns should prevail. For example, a Compliance Passport holder's name and information could be kept on a private register, rather than on a public beneficial ownership register, to protect the beneficial owner's privacy while ensuring compliance and enabling the relevant authorities to access the information if needed. Providing more protection to the participants' privacy would increase the attractiveness of the program and encourage cooperative compliance.

By reducing these costs and the risks, this program has the potential to reduce the distortions caused by transparency regimes. Potential participants would take part in this program if the expected benefits outlined above exceeded the costs of doing so, including the fees charged by tax authorities, money spent on professional advisers, and the risk that being involved in the program could result in disputes or findings of noncompliance.

Addressing both tax and money laundering risks in a single program would be advantageous. The tax compliance and money laundering issues are closely related, and there would be potential synergy gains from addressing both risks in one program. A program that covers both tax and money laundering risks would be more valuable for participants because it would address more related problems. However, a combined tax-AML program could be harder to implement as it would require the participation of multiple authorities. If policymakers find that it is not feasible or desirable to have a program covering both tax and money laundering risks, they should consider launching a cooperative tax compliance program for individuals, family trusts, and private investment vehicles.

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[13] For a discussion on the benefits of cooperative compliance, see Szudoczky and Majdańska (2017), and Part III *infra*.

This article is organized as follows: Part II describes the costs and risks incurred by law-abiding individuals, family trusts, and private investment vehicles under the current tax reporting and AML regimes. Part III provides an overview of cooperative compliance programs. Part IV sets forth our proposal for a Compliance Passport Program. Part V offers a conclusion.

II. CURRENT CHALLENGES

Much of the recent research into wealthy taxpayers focuses on bad actors who engage in tax evasion and avoidance.[14] However, many wealthy taxpayers are compliant and many have a low risk appetite when it comes to engaging in illegal or aggressive tax behaviors or money laundering. A recent study found that most "wealthy individuals felt that the goal in arranging their tax affairs was to pay the legally-correct amount of tax" (IFF Research, 2019). Such compliant individuals face significant challenges under the current tax reporting and AML regimes.

A. Privacy

The tax reporting and beneficial ownership transparency regimes compromise privacy.[15] First, the information of beneficial owners of corporations and similar entities is publicly available in public beneficial ownership registers in an increasing number of jurisdictions. Following a G20 summit in November 2014 that called to increase the transparency of beneficial ownership (G20, 2014), many governments have set up, or are in the process of setting up, beneficial ownership registers. Some countries have government-run registers, while others require companies to maintain their own registers and share the information contained in them with governmental authorities upon request.[16] Some countries have established publicly-accessible registers, while others allow restricted access to their registers (Mor, 2019).

The international pressure to make the registers accessible by the public has been increasing. Since January 2020, under the Fifth AML Directive, all European Union (EU) member states are required to maintain public registers of the beneficial owners of companies.[17] Starting in March 2020, the EU member states are also required to maintain beneficial ownership registers for trusts and equivalent legal arrangements, although each member state can decide on the applicable level of transparency with respect to the register for trusts.[18] The British Overseas Territories and Crown Dependencies, including the British Virgin Islands and the Cayman Islands, are under pressure to maintain public registers for companies (Mor, 2019). The U.K. government aims to make public registers the global norm by 2023 (Mor, 2019). It is also planning to set up a beneficial ownership register for certain U.K. real estate owned by legal entities, including foreign companies (Mor, 2019).

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[14] For further discussion of this literature, see Gangl and Torgler (2020).

[15] This article focuses on individuals' privacy, which also extends to closely-held entities and family trusts. For an in-depth discussion on tax privacy, see Blank (2011). Different considerations may apply with respect to other corporations and entities. See, e.g., Avi-Yonah and Siman (2014); Blank (2014); Kornhauser (2005); Lenter et al. (2003); Pomp (1993); Thorndike (2002). The question of privacy of corporations and other entities that are not closely held is outside the scope of this article.

[16] For example, Hong Kong companies are required to maintain their beneficial ownership register and share the information with governmental authorities only upon request.

[17] The European Parliament and the Council of the European Union (2018, May 30) [hereinafter "Fifth AML Directive"].

[18] Under the Fifth AML Directive, member states can determine the level of transparency with respect to trusts and similar legal arrangements that are not comparable to corporate and other entities.

In addition, there are substantial privacy risks concerning information that is to be disclosed to tax authorities only. Tax authorities around the world are now collecting and sharing an unprecedented amount of information under FATCA, CRS, and non-public government-run registers. If the taxpayer data obtained through FATCA, CRS, and other initiatives that increase transparency towards tax authorities remains confidential, there should be no impact on taxpayer privacy. However, this information collection and sharing by tax authorities poses leak, hacking, and other privacy-related risks.[19] For example, the Bulgarian National Revenue Agency's information technology system was hacked in 2019 (OECD, 2019b). Hacked information, including information obtained through CRS information exchange, was leaked to the media.

Law-abiding individuals, who are not involved in tax noncompliance or any other illicit activities, could have legitimate interests in protecting their privacy (Blum, 2004; Cockfield, 2016; Hatfield, 2018b). People may want to keep their financial and beneficial ownership information private for a variety of personal and business reasons. Compromising privacy might result in serious personal safety risks for high-net-worth individuals (HNWIs) in certain jurisdictions. EU member states can provide exemptions from public beneficial ownership disclosure in exceptional situations where the disclosure "would expose the beneficial owner to a disproportionate risk of fraud, kidnapping, blackmail, extortion, harassment, violence or intimidation."[20] However, it is unclear how these exemptions will be granted in practice. Also, there is still a risk of information leakage from tax authorities (that collect and exchange the FATCA and CRS information) and government-run registers, even if the information is not accessible to the public. There are no other exceptions or exemptions to protect other privacy concerns.

Interestingly, while governments have been eroding privacy through these transparency regimes, many countries have been trying to protect privacy by regulating the use of personal data.[21] These trends appear to have contradictory motivations and goals, even if the relevant privacy protection regimes and transparency regimes are compatible from a technical legal perspective.[22]

B. Legal Uncertainty

HNWIs'[23] tax affairs have been subject to increasing interest from tax authorities, which leads to more tax uncertainties. Furthermore, the tax reporting and beneficial ownership regimes result in greater legal uncertainties for individuals and family trusts. The following example demonstrates the uncertainty created under CRS.

Example 1

Assume the following facts: a family trust was settled by a Hong Kong citizen and tax resident who has the power to revoke the trust. The settlor settled the trust as part of his succession

[19] For example, the U.S. IRS has been subject to massive data breaches. See Pagliery (2016). For discussions on transparency vs. privacy, see generally Hatfield (2018a, 2018b), Oei and Ring (2018); Noked (2018c).
[20] Fifth AML Directive § 36.
[21] See, e.g., General Data Protection Regulation (EU) 2016/679 (GDPR).
[22] The discussion on whether or not there is a conflict between these trends and legal frameworks is outside the scope of this article.
[23] The OECD's (2009) report on HNWIs "uses the term 'High Net Worth Individuals' to refer to individuals at the top of the wealth or income scale. The term is used broadly and thus includes both high wealth individuals and high income individuals" (p.5). This article adopts a similar definition.

planning. The applicable law is the law of the Cayman Islands. The trustee is an individual, a French tax resident, who has no beneficial interest in the trust. The trust has a protector, an Australian tax resident, who has no beneficial interest in the trust. The trust holds its assets through a company organized in the British Virgin Islands. The trust has discretionary beneficiaries in the United States and Canada. The trust's main asset, held through the company, is a bank account with a balance of 10 million U.S. dollars in Hong Kong. The trust has never made any distribution to the discretionary beneficiaries. The trust and the company are classified as passive non-financial entities (Passive NFE) under FATCA and CRS.[24] The trust is classified as a foreign grantor trust under U.S. tax law.[25]

Under FATCA and CRS, the Hong Kong bank can classify and report the beneficiaries as controlling persons even in years when they have not received any distribution from the trust.[26] The trustee and the protector will be classified as controlling persons even though they have no beneficial interest in the trust. Following their classification as controlling persons, the information of the trustee, the protector, and the beneficiaries will be reported to their tax residence jurisdictions. The reporting for each of them should include the full balance of the account (10 million U.S. dollars).

This reporting might trigger audits and investigations against the controlling persons even though they have not failed to comply with any legal obligation. The French and Australian tax authorities might investigate whether the trustee and the protector have beneficial interests in the trust's assets and income which they failed to report. The U.S. and Canadian tax authorities might investigate whether the beneficiaries have failed to comply with any obligation that applies to the reporting of interests in, and distributions from, foreign trusts.

Even if these audits and investigations end without any finding of wrongdoing, these individuals might incur costs from being subject to such proceedings. Also, there may be cases in which individuals would prefer to settle investigations into them although they have not breached any rules. As demonstrated in this example, AEOI reporting could increase compliant taxpayers' exposure to legal uncertainty and associated risks.

C. Compliance Costs and Difficulties Doing Business

Business and wealth owners must navigate an increasingly complex web of reporting and related requirements associated with exchange of information rules, AML rules, public registers, and more. Many family trusts and private investment entities are classified as FIs under FATCA and CRS, and their owners incur compliance costs (Noked 2018a). These compliance costs may include the costs of professional assistance from tax and legal advisers, accountants, and other service providers. Owners of complex private and business assets may need professional assistance when they fill out forms and provide documents and information to banks and other FIs. Complexity of compliance is increased where the relevant beneficial owners, entities, and assets are spread across more than one jurisdiction, which is frequently the case given that it is common to invest cross-border, to use investment and business vehicles that may be located abroad, and to have family members living or working in multiple countries.

[24] For a discussion on when a trust should be classified as a Passive NFE, see Noked (2018a).

[25] For more background about the U.S. taxation of trusts, see Fox and DePasquale (2016).

[26] The Hong Kong bank may classify the discretionary beneficiaries as controlling persons only in years they receive distributions, but it is not under obligation to do so.

The tax reporting and AML regimes have resulted in more indirect costs and difficulties when doing business. As a result of the tax reporting and AML regimes, FIs (such as banks and funds) incur substantial compliance costs and risks with respect to clients who are HNWIs, family trusts, and private investment vehicles. FIs incur substantial compliance costs in the implementation of FATCA and CRS (Byrnes, 2020). FIs also face more challenges and higher costs when applying the AML rules to HNWIs and trusts. Regulators consider private banking (defined as the "provision of banking and investment services in a closely managed relationship to high net worth clients") to be "vulnerable to money laundering" because private banking services typically include "current account banking, high-value transactions, use of sophisticated products, non-standard investment solutions, business conducted across different jurisdictions and offshore and overseas companies, trusts or personal investment vehicles" (Financial Services Authority, 2007, pp. 3-4). The AML obligations are generally greater when the money laundering risk is higher, as FIs and other parties that are required to conduct AML customer due diligence (CDD) must take a risk-based approach (Financial Action Task Force [FATF], 2019). In the wealth management industry, FIs and other parties "must exercise a greater degree of diligence throughout the relationship", including at the onboarding stage[27] and on an ongoing basis.[28]

FIs might try to pass these costs onto their clients, which would result in increased financial services costs (Byrnes, 2020). In addition, it has become harder to open bank accounts or transfer funds across jurisdictions. This might be the result of higher compliance costs for FIs or the risks associated with servicing clients who might come under scrutiny. A recent report by the U.S. government found that U.S. persons living overseas have had reduced access to financial services as a result of the enactment of FATCA (U.S. Government Accountability Office, 2019). The unwillingness of many FIs to open and maintain accounts for foreign tax residents may have expanded following the implementation of CRS. For example, it has

[27] According to the Joint Money Laundering Steering Group (JMLSG) (2020, § 5.11), firms in the wealth management industry "must endeavour to understand the nature of the client's business and consider whether it is consistent and reasonable, including: the origins of the client's wealth; Where possible and appropriate, documentary evidence relating to the economic activity that gave rise to the wealth; the nature and type of transactions; the client's business and legitimate business structures; for corporate and trust structures - the chain of title, authority or control leading to the ultimate beneficial owner, settler and beneficiaries, if relevant and known; Where appropriate, the reasons a client is using complex structures; the use made by the client of products and services; the nature and level of business to be expected over the account. The firm must be satisfied that a client's use of complex business structures and/or the use of trust and private investment vehicles, has a genuine and legitimate purpose."

[28] JMLSG (2020) §§ 5.23-5.24 ("…In view of the risk associated with wealth management activities, it is appropriate that there should be a heightened ongoing review of account activity and the use made of the firm's other products… An illustrative (but not exhaustive) list of matters firms should carefully examine includes: substantial initial deposits proposed by prospects for business; transactional activity - frequent or substantial activity that is inconsistent with the normal levels associated with the product or purpose - unusual patterns of activity may be evidence of money laundering; wire transfers - frequent or substantial transfers not in keeping with either normal usage for the product or the verified expectations of the client's business requirement; cash or other transactions - which are not in line with either the normal usage for the product or the verified expectations of the client's business requirement; significant increase or change in activity – increased values, volumes or new products required, which do not align with the firm's profile of the client; accounts of financial institutions not subject to supervision in an assessed low risk jurisdiction; and any activity not commensurate with the nature of the business…").

become harder for individuals and entities from outside of Hong Kong to open bank accounts with FIs in the country.[29]

D. Distortions of Behaviors and Activities

Law-abiding people might change their succession planning, ownership structures, investments, and domiciles as a reaction to transparency regimes. Is it worth having a trusted family member as a protector of a family trust if there is information disclosure to the country of that family member that will trigger costly tax investigations, notwithstanding that the protector has no economic interest in the structure? Is it wise to invest in countries where such investments may attract public disclosures of beneficial ownership?

Here are a few examples of actions that compliant people might take to avoid the costs and the risks discussed above:

> a) Revoking or terminating a family trust: The settlor or the trustee (depending on who holds the relevant powers) can revoke or wind up the trust. A settlor that revoked his trust might adopt a different succession plan (e.g., bequeathing assets under a will or gifting the assets during the settlor's life).[30]
>
> b) Removing protectors and beneficiaries: The trustee can remove the protectors and beneficiaries from a trust so they will not be reported.
>
> c) Winding up companies: An owner of a foreign company can liquidate that company and hold the assets directly or through a domestic entity.
>
> d) Avoiding holding assets that are subject to transparency regimes: Instead of holding investments that are subject to disclosure under AEOI and public registers, investments can be made in jurisdictions and assets that are not subject to disclosure requirements.[31]
>
> e) Relocating and immigrating to other jurisdictions: In particular, wealthy families might move from countries where they face higher safety risks as a result of increased transparency to other jurisdictions.

These reactions may reflect distortions of people's preferences for succession planning, investments, holding structures, and location of assets. This means there is a greater deadweight

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[29] See, e.g., Winn (2015). The Hong Kong Monetary Authority noted in a circular that some banks "applied stringent CDD measures that are disproportionate to the likely risk level of the customers, resulting in many unsuccessful account opening applications and/or unpleasant customer experiences" (Hong Kong Monetary Authority, 2016).

[30] Many family trusts are settled for succession purposes. The decision to use a trust organized under the laws of another jurisdiction is frequently not tax-driven; popular trust jurisdictions typically have more developed and certain trust laws. For a discussion on the use of trusts in succession planning, see Marcovici (2016).

[31] For example, real estate in jurisdictions that do not have a public register for real estate, precious metals, collectibles, cryptocurrencies, etc. For further discussion and empirical evidence documenting these trends, see De Simone et al. (2020). Several studies (including Ahrens and Bothner, 2019; Casi et al., 2019; and O'Reilly et al., 2019) documented a decline in deposits in offshore financial centers which could be the result of FATCA and CRS. While this article focuses on the potential reactions of compliant taxpayers, these could also be the reactions of noncompliant taxpayers.

loss because of the distortion of the behaviors of law-abiding individuals who take steps to avoid the costs and risks discussed above.[32]

III. COOPERATIVE COMPLIANCE PROGRAMS

The proposal developed in this article draws on elements from existing and proposed cooperative compliance programs. This part provides a high-level overview of these programs.

A. Cooperative Compliance Programs

There is a growing number of countries that offer voluntary cooperative compliance programs to their *corporate* taxpayers (de Widt et al., 2019; Hein and Russo, 2020; OECD, 2013). These countries include Australia, Denmark, Ireland, the Netherlands, the United Kingdom, and the United States, among others. The OECD has been actively promoting the adoption and development of such programs (Huiskers-Stoop & Gribnau, 2019). In general, these programs aim to shift from the traditional compliance model to a more cooperative model (OECD, 2018a, p. 40; OECD 2017b, p. 21). The OECD notes that "[c]o-operative compliance approaches can best be characterised as 'Transparency in exchange for certainty'" (OECD, 2013).

For example, under the U.S. Compliance Assurance Process (CAP), the Internal Revenue Service (IRS) "and taxpayer work together to achieve tax compliance by resolving issues prior to the filing of the tax return" (IRS, 2020b). This program is available to U.S. publicly traded corporate taxpayers, with assets of 10 million U.S. dollars or more, that are not undergoing tax investigations or involved in tax disputes that could limit the IRS's access to the taxpayers' current corporate tax records (IRS, 2020a). Participants must sign a memorandum of understanding that details their obligations under the program (IRS, 2020a). As part of these requirements, participants must disclose material transactions and issues as well as certain items (such as the use of tax shelters) that are subject to review regardless of materiality thresholds (IRS, 2020a). If the IRS and the taxpayer disagree on the appropriate reporting position, they should attempt to resolve the disagreement before the tax return is filed.

From the taxpayers' perspective, one of CAP's main advantages is tax certainty.[33] By resolving all potential disagreements with the IRS prior to the filing of the tax returns, the taxpayers know the IRS will accept the returns. The real-time review and pre-filing resolution of issues could save time and resources for both the IRS and the participants.[34] Both the participants and the IRS appear to participate in the program because of self-interest: both sides can benefit from a timely dispute settlement, increased certainty, and greater administrative efficiencies (de Widt et al., 2019; OECD, 2013). The government audit and compliance costs are expected to be lower because participants are less likely to adopt weak tax positions and the tax authority is less likely to challenge participants' well-grounded tax positions (De Simone et al., 2013).

[32] It could be argued that some people's decisions regarding these matters have been distorted by the low tax rates and intransparency offered by some jurisdictions. While this may be the case for some people, these may not be the drivers for other people's choices. In addition, the tax and beneficial ownership transparency regimes create distortions because they increase transparency for certain types of assets and activities and not for others.

[33] For further discussion on the benefits of cooperative compliance programs for large businesses and tax administrations, see Björklund Larsen and Oats (2019).

[34] However, it is unclear whether the program actually results in lower compliance costs; Dolan and McCormally (2018).

Cooperative compliance programs are typically offered only to large businesses (OECD, 2013). However, countries may offer similar "trusted taxpayer" programs to smaller businesses. For example, in South Korea, small and medium-sized businesses can also be designated as "trusted taxpayers" (Suh et al., 2019). The designation of a business as a trusted taxpayer is made after a process that includes tax investigations and evaluations as well as a public hearing. Trusted taxpayers receive several benefits: (1) they should not be subject to tax investigations for three years; (2) they receive special treatment with respect to certain tax issues; and (3) they would typically be subject to lower penalties if they were to be involved in certain types of tax noncompliance. A recent study found that firms designated as trusted taxpayers by the Korean tax authority are less likely to engage in tax avoidance (Suh et al., 2019). There have been proposals for "trusted taxpayer" programs to incentivize compliance among small businesses in Australia and New Zealand.[35]

B. The OECD's Proposal to Engage with HNWIs on Tax Compliance

In 2009, the OECD published a report aiming to improve tax administrations' understanding of the HNWI taxpayer segment, including tax planning strategies used by HNWIs (OECD, 2009). The report also details detection and response strategies that tax administrations can adopt.

The report recommended that governments should consider applying the concept of cooperative compliance to HNWIs (OECD, 2009). Improving cooperative compliance among HNWIs should ensure their compliance while providing them with greater tax certainty and safeguarding confidential information, as has happened as a result of other cooperative compliance programs. The OECD envisages that, in most cases, the dialogue would be between the tax authority and the HNWIs' tax advisers (OECD, 2009).

The report considered offering a comprehensive program for HNWIs that would be similar to the U.S. CAP (i.e., a voluntary pre-filing program). However, the report concluded that it would be premature to recommend adopting such programs at that stage because it was unclear (based on the fact that CAP was relatively new when the report was published) whether doing so would be beneficial and attractive for tax authorities and HNWIs.[36]

The report recommended improving certain aspects of co-operative compliance. It recommended establishing dedicated HNWI units within the tax administrations that would become the designated contact points for HNWIs. It also mentioned the use of individual rulings to increase tax certainty, although it noted the low demand by HNWIs for individual rulings (OECD, 2009).

[35] The Australian Black Economy Taskforce (The Australian Government the Treasury, 2017) has recommended that Australia should adopt a "trusted taxpayer" program for businesses which operate cash-free in order to incentivize small businesses to adopt non-cash business models by offering several benefits, such as a lower installment rate and simplified reporting. Nigel Jemson (2019) presented a similar proposal for small businesses in New Zealand, under which participating small businesses that are mostly cash-free would give the tax authority real-time access to their financial information through approved accounting software in exchange for a lower tax rate.

[36] The report noted the following reasons: (a) similar programs for corporations are rather new, and therefore tax authorities may not know if the CAP model is generally successful; (b) this program might increase the tax administration resources; (c) it is uncertain how this program would be updated; and (d) there is a risk that such programs would create a public perception that HNWIs receive special treatment from the tax authorities (OECD, 2009).

Following the OECD (2009) report, International Monetary Fund (IMF) researchers also recommended taking a cooperative compliance approach with respect to HNWIs (Buchanan & McLaughlin, 2017). There have been other proposals to promote compliance among wealthy taxpayers by granting them reputational rewards (e.g., by labeling them as "honest taxpayers"; Gangl & Torgler, 2020, pp. 136-137).

The OECD (2017a) noted that one-third of the 55 jurisdictions surveyed reported having units or programs for HNWIs, most of which focus on audit. It stated that:

> [t]he establishment of dedicated HNWI units by tax administrations reflects the recognition that a small number of taxpayers are typically responsible for a disproportionate share of the wealth and assets held within the economy…. This concentration of wealth and income, with its significant tax implications, is likely to see more tax administrations establishing HNWI units and/or programmes in the coming years (OECD, 2017a, p. 58).

However, it appears that only a few countries have cooperative compliance programs for HNWIs.[37]

C. ICAP

ICAP could be described as a multi-jurisdictional cooperative compliance program which provides participating multinational enterprises (MNEs) with more tax certainty with respect to international tax matters. The OECD's project on base erosion and profit shifting (BEPS) has increased the tax uncertainty for MNEs.[38] As a result of country-by-country (CbC) reporting and other international tax developments, tax authorities have more information about MNEs' worldwide operations (OECD, 2015).[39] Tax authorities may use this information to claim more taxing rights to MNEs' income. As a result, there is a higher risk of disputes between tax authorities and MNEs, as well as disputes between tax authorities of different jurisdictions where different jurisdictions claim taxing rights to the same MNE income (Hanlon, 2018). In addition to risks related to CbC reporting and transfer pricing, MNEs have been facing other international tax risks concerning, for example, permanent establishments, hybrid mismatch arrangements, treaty benefits, and withholding taxes, etc. (OECD, 2021).

[37] These countries include the Netherlands (OECD, 2017a) and Romania (OECD, 2019c).
[38] OECD (2017b) lists several factors that contribute to tax uncertainty: the increased internationalized nature of business activities, the emergence and spread of new business models (such as the digital economy), unilateral and fragmented policy and court decisions, and the BEPS project transition.
[39] An MNE's CbC report shows the following information for each jurisdiction where the MNE conducts business: revenues divided into revenues from related and unrelated parties, profit (loss) before income tax, income tax paid (on cash basis), income tax accrued in the current year, stated capital, accumulated earnings, number of employees, and tangible assets other than cash and cash equivalents.

The OECD introduced ICAP with the aim of increasing multilateral cooperation between tax authorities and tax certainty for participating MNEs.[40] ICAP is described by the OECD as a "voluntary programme for a multilateral co-operative risk assessment and assurance process" (OECD, 2021, p. 6).[41] The first ICAP pilot was initiated in January 2018 with the participation of eight jurisdictions (OECD, 2018b).[42] The second ICAP pilot was launched in March 2019 with the participation of 17 jurisdictions (OECD, 2019d).[43] The FTA adopted ICAP as a permanent program in December 2020, and the most recent available guidance for participating tax administrations[44] and MNEs was published in February 2021 (OECD, 2021).

ICAP is designed to: facilitate a multilateral process that can increase tax certainty; reduce the risk of disputes or resolve them at an early stage; and reduce compliance and implementation costs by following clear procedures and templates, and resolving issues in a multilateral manner.[45] Tax administrations could spend less on enforcement efforts targeting ICAP participants and more on other taxpayers. Tax authorities may also benefit from MNE cooperation and the disclosure of information that goes beyond the statutory obligations (Russo & Martini, 2019).

Two recent case studies of MNEs that participated in the first ICAP pilot provide initial evidence that ICAP succeeds in achieving its goal of increasing tax certainty through a multilateral process (Stanley-Smith, 2019a, 2019d). Joe Stanley-Smith, the author of these case studies, noted that:

> [w]hat companies love about ICAP is that it gives them advance certainty in multiple countries in the often uncertain area of transfer pricing. It does this more quickly and comprehensively than other options like advance pricing agreements (APAs) and tax rulings (or 'comfort letters') (Stanley-Smith, 2019c).

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[40] The OECD lists six key drivers for the introduction of the ICAP risk assessment and assurance process. The first driver is to improve tax certainty for MNEs. This follows the G20's agenda to promote measures that increase tax certainty. The second driver is to improve dispute resolution by resolving potential disputes through the ICAP so fewer disputes will arise. This could reduce the need for agreement procedures (MAP) and other forms of dispute resolution. The third driver is to utilize well-established MNE compliance frameworks and best practices. The fourth driver is to advance international collaboration. The fifth driver is to improve and standardize the information for transfer pricing risk assessment. The sixth driver is to provide more assurance to tax administrations by capitalizing on greater opportunities for multilateral engagement (OECD, 2021). For an in-depth discussion of ICAP, see Hein and Russo (2020); Russo and Martini (2019).

[41] For further discussion on risk assessment in the context of cooperative compliance, see de Widt and Oats (2017).

[42] The jurisdictions are Australia, Canada, Italy, Japan, the Netherlands, Spain, the United Kingdom, and the United States. See https://www.oecd.org/tax/forum-on-tax-administration/international-compliance-assurance-programme.htm.

[43] The jurisdictions are Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Luxembourg, the Netherlands, Norway, Poland, Russia, Spain, United Kingdom, and the United States.

[44] The current list of tax administrations participating in ICAP includes Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Luxembourg, the Netherlands, Norway, Poland, Russia, Singapore, Spain, the United Kingdom, and the United States. See https://www.oecd.org/tax/forum-on-tax-administration/international-compliance-assurance-programme.htm. All FTA members are able to participate in the program.

[45] OECD (2021) lists the following as the anticipated benefits from ICAP: (a) "Fully informed and targeted use of CbC reports and other information held for risk assessment", (b) "An efficient use of resources", (c) "A faster, clearer route to multilateral tax certainty", (d) "Co-operative relationships between MNE groups and tax administrations", and (e) "Fewer disputes entering into MAP" (pp. 7-8).

As areas for improvement, some MNEs noted that the process in the first pilot took longer than expected and that certain tax administrations could have improved their internal communication (Stanley-Smith, 2019b).

The ICAP process includes three stages: selection, risk assessment and issue resolution, and outcomes (OECD, 2021). The selection stage starts when an MNE voluntarily submits its selection documentation package to its potential lead tax administration, which would typically be the jurisdiction of the MNE's ultimate parent entity (the "UPE tax administration"). The selection documentation package should include high level information using certain templates. The MNE can indicate a preference as to which tax administrations should be "covered tax administrations" in the ICAP risk assessment. The tax administration that agrees to assume the role of lead tax administration should then provide the selection documentation package to tax administrations in jurisdictions where the MNE has constituent entities and enquire whether they agree to act as covered tax administrations. At this stage, tax administrations should also make decisions about transactions that should be excluded from the risk assessment, any changes that should be made to the standard main documentation package, and the target timeline. The results of these discussions should be communicated to the MNE, which will then decide whether to proceed with the ICAP risk assessment (OECD, 2021).

The risk assessment and issue resolution stage is, according to the OECD (2021), "at the heart of ICAP, and involves a multilateral risk assessment and assurance of the covered risks by the lead tax administration and other covered tax administrations" (p. 12). This stage, which starts when the MNE submits the main documentation package, will include at least one multilateral meeting or call between the lead tax administration, the covered tax administrations, and the MNE. The lead tax administration and the covered tax administrations should communicate until each of them can conclude either that the covered risks are low or that it cannot reach such a finding. This stage should normally be concluded in fewer than 20 weeks. The ICAP process can be used to resolve disagreements between the MNE and the relevant tax administrations regarding the appropriate tax treatment of the covered transactions. This process enables potential disputes to be resolved as part of the ICAP process (OECD, 2021).

At the outcomes stage, the lead tax administration should issue a completion letter to the MNE, confirming the conclusion of the ICAP risk assessment process. Each of the covered tax administrations should provide the MNE with an outcome letter which should include the relevant tax administration's risk assessment and assurance concerning the covered risks in the covered periods. The outcome letter should reflect situations where a covered tax administration is unable to reach a conclusion with respect to a covered risk or cannot determine that the risk is low. This stage should normally be concluded in four to eight weeks (OECD, 2021).

IV. PROPOSAL FOR A COMPLIANCE PASSPORT PROGRAM

This article proposes a new cooperative compliance program for HNWIs, family trusts, and private investment vehicles. Under this program, the authorities of the relevant jurisdictions would determine whether the participant is in full compliance with their tax obligations and whether there are any money laundering concerns. Like ICAP, this program is intended to cover multiple jurisdictions in a multilateral manner, although it could also be offered by one jurisdiction. A successful participant would be granted a Compliance Passport documenting the finding of compliance. A Compliance Passport holder would be able to present this

document to FIs, authorities, and other parties in order to show its compliance in the jurisdictions that granted the Compliance Passport.

A. Process

The multilateral process under the proposed program could be structured similarly to ICAP, with stages including selection, compliance review, and issuance of a Compliance Passport. After the issuance of a Compliance Passport, the compliance status should be reviewed periodically. As with ICAP, there should be set time frames for each stage of the program.

Stage I: Selection

An individual taxpayer, a trustee (in respect of a trust), or a director (in respect of a company) could contact a tax authority that acts as a lead tax administration to initiate the process. A lead tax administration could be the tax authority of the tax jurisdiction of the individual (in the case of an individual participant) or the tax jurisdiction of the individual who is the primary beneficial owner (in the case of a company or a trust). Alternatively, the lead tax administration could be the tax authority of the jurisdiction where most of the underlying assets are located.

If the relevant tax authority agrees to act as the lead tax administration, the next step would be to identify the potential covered tax administrations. These would include the tax authorities of the following jurisdictions: the jurisdictions of tax residence of the beneficiaries; the jurisdictions where the assets are located; the jurisdictions where the relevant entities are organized; and the jurisdictions where the relevant entities are resident for tax purposes.

The program could also be applied by one tax authority of one jurisdiction only. A single-jurisdiction Compliance Passport could help individuals and private investment vehicles when they hold assets and carry out activities in other jurisdictions. These additional jurisdictions could be added to the Compliance Passport after their tax authorities have conducted the required review.

At this stage, the participant should provide basic information, such as a list of assets, details of beneficial owners, a description of the relevant structure, a trust deed for a trust, and articles of association for a company.

The standard scope should include tax compliance and money laundering risks for a specific number of years (e.g., three years). However, the relevant jurisdictions could change the scope if so agreed. The relevant tax issues in the scope would depend on the domestic tax laws of the relevant jurisdictions and the applicable tax treaties. For example, the tax issues in the scope could include: the tax status and residency of individuals, trusts, and entities; the application of controlled foreign corporation rules and other anti-deferral regimes; the tax obligations of beneficial owners and other parties; withholding obligations; and treaty benefits.

Stage II: Compliance review

As part of this stage, the participant should provide documents, certifications, and information that show they have been compliant with their tax obligations and that they have not been involved in money laundering. The participant could be required to provide the following information: financial accounts; a history of distributions, gifts, loans, asset transfers, and transactions; information regarding the source of funds, assets, businesses, and investments;

and tax returns filed in the relevant jurisdictions. The relevant jurisdictions could raise issues with, and ask questions of, the participant.

The compliance review could be carried out by the relevant authorities: the tax authorities in the relevant jurisdictions could review the tax compliance and the authorities in charge of AML enforcement could review the money laundering risks. Alternatively, the compliance review could be carried out by third parties appointed by the authorities. For example, accounting firms or other service providers could confirm compliance with the relevant legal obligations and assess the money laundering risks. The cost of such third parties could be borne by the participants.

The engagement of such third parties could be a practical solution where the relevant authorities do not have sufficient resources to administer the program. The use of third parties could also minimize privacy concerns as such parties may be able to safeguard the information obtained through this program better than the relevant governments. Subparts C and D below elaborate on the considerations of the compliance review.

Stage III: Issuance of a Compliance Passport

Once the compliance review has been successfully completed, the lead tax administration should issue a Compliance Passport to the participant. This document should detail the covered tax administrations that endorsed its issuance. The Compliance Passport would note that the participant is in full compliance with their tax obligations in the relevant jurisdictions and that no money laundering concerns have been identified.

Stage IV: Periodic review

There should be a periodic review of the compliance status after a specified period (e.g., three years). The periodic review would likely be less rigorous than the compliance review in stage II, but should identify any material changes to the tax compliance and money laundering risks. The Compliance Passport should be renewed upon successful completion of this review. [46]

B. Other Design Considerations

The eligibility criteria for the proposed program should be flexible. Individual taxpayers, family trusts, and private investment vehicles (including foundations, companies, partnerships, and other entities) should be able to participate in this program. Parties that are subject to international sanctions should not be eligible to participate in it. The lead tax administration should check, as part of Stage I, whether the primary beneficial owner and the relevant individuals and entities are subject to any international sanctions.

When an individual taxpayer participates in the program, there would be a need to review any entities in which they have a substantial beneficial interest. For example, assume that an individual owns a private investment vehicle through which various investments are held. To confirm that individual’s tax compliance and assess the money laundering risks, the private investment vehicle should be reviewed. Similarly, in order to confirm that a trust or another private investment vehicle is tax compliant and that there are no money laundering concerns,

[46] A participant could choose not to renew its Compliance Passport and, in that case, there would be no periodic review. However, dropping out of this program might trigger scrutiny as it might indicate that the participant’s past or future actions raise tax or money laundering concerns.

the review of other parties might be required. For example, as the settlor is typically the person who transfers assets into a family trust, information about the settlor and how they obtained the relevant assets will likely be required so as to review the trust's source of funds. Therefore, the review should be holistic and cover all relevant persons, entities, and assets that need to be reviewed in order to ensure the compliance of the participant in the program.

It is unclear whether the cost to the tax authorities of administering the program would be higher than the potential cost savings from the reduction in the number of audits and disputes required, increased compliance, and greater cooperation that adopting it could bring. If the cost of administering the program is higher than the cost savings, the net cost could be borne by the participants via the payment of fees. Each tax administration could determine its fees based on the estimated costs of the case, although it would be advantageous to standardize these. The fees should be communicated by the lead tax administration to the prospective participants as part of Stage I (above). As the program would be voluntary, potential participants would only choose to participate if their expected benefits from doing so exceeded their costs. One possible model for this would be the IRS's user fees for applicants for APAs.[47]

Like ICAP, this program could be initially offered as a pilot by one or more jurisdictions. These could include members of the Forum on Tax Administration, offshore financial centers, and other jurisdictions.

C. Review of Tax Compliance

Under this proposal, the tax authorities of the relevant jurisdictions would determine whether the participant had been in full compliance with their tax obligations based on the information that they have. This determination should be based on a review of the fulfillment of the tax obligations in a specified past period (e.g., the past 5 years), rather than on a pre-filing review.[48] In addition, the tax authorities should reach a finding of compliance where there have been no tax obligations, including reporting obligations.

For example, consider the facts of Example 1 above: a family trust was settled by a Hong Kong citizen and tax resident who has the power to revoke the trust. The applicable law is the law of the Cayman Islands. The trustee is an individual, a French tax resident, who has no beneficial interest in the trust. The trust has a protector, an Australian tax resident, who has no beneficial interest in the trust. The trust holds its assets through a company organized in the British Virgin Islands. The trust has discretionary beneficiaries in the United States and Canada. The trust's main asset, held through the company, is a bank account with a balance of 10 million U.S. dollars in Hong Kong. The trust has never made any distribution to the discretionary beneficiaries. The trust and the company are classified as passive non-financial entities (Passive NFE) under FATCA and CRS. The trust is classified as a foreign grantor trust under U.S. tax law.

Once they have been presented with these facts and supporting documents, the tax authorities in all relevant jurisdictions (Hong Kong, the Cayman Islands, the British Virgin Islands, France, Australia, the United States, and Canada) should be able to confirm whether the

[47] See IRS, Rev. Proc. 2015-41 (Procedures for Advance Pricing Agreements), retrieved from https://www.irs.gov/pub/irs-drop/rp-15-41.pdf. The current user fee for an initial original APA is $113,500 (Wrappe & Kramer, 2020). The applicable fees of the proposed program should be determined based on the expected costs for the relevant tax administrations.

[48] This review of compliance in a specified past period is different from a ruling on a prospective transaction.

relevant parties (the settlor, trust, trustee, company, protector, and beneficiaries) have been fully compliant with their tax obligations.

As part of the compliance review, the tax authorities could choose whether to carry out a full audit or to rely on the representations, responses, and evidence provided by the participants. If a tax authority later finds that the information it relied upon during the compliance review is incorrect, it should be able to revoke the Compliance Passport, notify the other relevant jurisdictions, and assess taxes and penalties, including potential penalties for providing incorrect information to the tax authority.

D. Review of Money Laundering Risks

In general, there are four core elements in AML CDD: "(1) Customer identification and verification, (2) beneficial ownership identification and verification, (3) understanding the nature and purpose of customer relationships to develop a customer risk profile, and (4) ongoing monitoring for reporting suspicious transactions and, on a risk-basis, maintaining and updating customer information (Department of the Treasury, Financial Crimes Enforcement Network, 2016).

Following the FATF recommendations' risk-based approach, the CDD obligations are greater when the risk is higher and vice versa (FATF, 2019). Under this proposal, the relevant governmental authorities (directly or through third parties engaged by them) would conduct a review that encompasses three out of the four core elements of CDD: the identification and verification of the beneficial owners and relevant parties/entities, as well as an analysis of the participant's money laundering risks based on an in-depth review of the source of their funds, their business and its structure, and other relevant factors. As the relevant authorities would not monitor transactions on an ongoing basis, their review of the money laundering risks would not encompass the fourth core element of "ongoing monitoring for reporting suspicious transactions." [49]

How should FIs apply the AML requirements to Compliance Passport holders? It is suggested that FIs[50] would continue to satisfy the four core elements of CDD with respect to Compliance Passport holders. However, in accordance with the risk-based approach recommended by the FATF (2019), Compliance Passport holders should generally be considered as posing lower money laundering risks than similar parties who have not been subject to such a review.

Practically, there should be no change in the first two core elements of identification and verification of the customers and beneficial owners.[51] As part of the third core element, at the onboarding stage, a Compliance Passport holder should generally be considered as posing a low risk by FIs, especially if these FIs are in the jurisdictions that granted the Compliance Passport. Such FIs would still require information about the participant's source of funds, the structure of their business, their business operations and activities, and other relevant factors in order to effectively monitor transactions. However, the onboarding process should generally

[49] The relevant authorities could review the transactions as part of the periodic review, but this would not be a real-time review similar to the monitoring conducted by FIs.
[50] In addition to FIs, there are certain designated non-financial businesses and professions that are required to carry out CDD. The references to FIs in this discussion also refer to these parties.
[51] FIs would need to identify the customers and beneficial owners before considering the effect of these parties having Compliance Passports.

be simpler and quicker where the FIs can consider the Compliance Passport holder as posing a lower risk from a money laundering perspective.

FIs should carry out the fourth core element of ongoing monitoring for reporting suspicious transactions, and maintaining and updating customer information, on a risk-basis (which should be considered as lower risk). FIs could consider the low-risk assessment of a Compliance Passport holder when determining whether a transaction is suspicious. For example, assume that an offshore company held under a family trust transfers a substantial amount of cash between accounts in different jurisdictions, and this cash is from the trust fund that has been reviewed by the relevant authorities as part of the compliance review. An FI reviewing this transaction might identify it as suspicious because it involves an offshore entity and transfers of an unusual amount of cash across jurisdictions. However, the FI could also consider the fact that this trust (including the offshore company and the trust fund) has been reviewed by the relevant authorities. This could be considered as an inconclusive factor supporting the finding that this transaction is not suspicious. Of course, it is still possible that parties with Compliance Passports could be engaged in money laundering, so there should be effective monitoring and reporting of suspicious transactions.

To conclude, this proposed program should achieve the goals of the AML regime following the FATF recommendations. Under the current AML rules, FIs carry out CDD to identify money laundering risks and report suspicious transactions to the authorities who then investigate them. Under the proposed program, the relevant authorities (or third parties appointed by them) would assess the money laundering risks and, if they found that there were no money laundering concerns, they would issue a Compliance Passport. In accordance with the risk-based approach recommended by the FATF (2019), FIs should be able to rely on this low-risk assessment, which could simplify the AML compliance. However, they would still be required to monitor and report suspicious transactions. This proposal is consistent with the AML framework as implemented by countries following the FATF (2019) recommendations.

E. Why Covering Both Tax and Money Laundering Risks?

It would be possible to set up a cooperative tax compliance program for HNWIs, family trusts, and private investment companies without including reviews of money laundering risks in the program. Similarly, it would be possible to offer a cooperative compliance program that only covered money laundering risks. So, why would it be advantageous for the proposed program to cover both tax and money laundering risks?

The answer is twofold. First, the tax compliance and money laundering issues are closely related, and there would be potential synergy gains from addressing both sets of risks in one program. Both the tax reporting regimes and the AML regime impose obligations on FIs to satisfy certain due diligence requirements and to report information about account holders to government authorities. Under both regimes, governmental authorities use the information received to identify tax noncompliance or other financial crimes. In many jurisdictions, tax evasion is a predicate offense for money laundering, which means that dealing with the proceeds of tax evasion could constitute money laundering (Foo, 2019; Storm, 2013). Therefore, it could be more efficient and effective to implement a cooperative compliance program covering both tax and money laundering risks than to implement separate programs.

Second, from the participants' perspective, a program that covers both tax and money laundering risks would be more valuable because it would address more related problems. The

costs and risks discussed in Part II arise from the tax reporting and AML regimes. Therefore, a program that covered both tax and money laundering risks would reduce these costs and risks more effectively. This would create a stronger incentive for potential participants to take part in the program.

However, administering a combined tax-AML program could bring some challenges. A program covering both tax and money laundering risks would require tax authorities and the authorities that enforce AML laws (typically law enforcement units) to take a coordinated approach. A program that involves two governmental authorities in each country would likely be costlier and harder to implement than a program that only involves one authority in each jurisdiction. Also, the authorities that enforce AML laws typically investigate suspected crimes; they do not conduct a CDD-like review (as suggested in this article) because this review is typically carried out by FIs and other parties that alert the relevant authorities only where a suspected transaction has been identified.

Although we believe it would be beneficial to offer a program addressing both tax and money laundering risks, policymakers could consider implementing a program with a narrower scope. If policymakers find that it is not feasible or desirable to have a program covering both tax and money laundering risks, a cooperative tax compliance program for HNWIs, family trusts, and private investment vehicles should be considered.

F. Potential Advantages for Participants

1) Privacy

Policymakers should consider amending the transparency regimes to provide Compliance Passport holders with greater privacy protection. Where the relevant authorities have concluded that a Compliance Passport holder is in full compliance with their tax obligations and that no money laundering concerns have been identified, there is less need for information to be collected, shared, and disclosed. In such situations, the interest of protecting legitimate privacy concerns should be stronger than the public interest in transparency. Therefore, there should be a different balance between privacy and transparency with respect to Compliance Passport holders.

For example, beneficial owners who are Compliance Passport holders could be exempted from disclosure in public beneficial ownership registers. Their identities could be kept in a private register which would be accessible by governmental authorities upon request. As a result, the Compliance Passport holder's privacy would be protected while tax and money laundering risks were still addressed.

The idea that not all beneficial ownership information should be publicly accessible has been suggested by the United Kingdom with respect to trusts (HM Revenue and Customs [HMRC] & HM Treasury, 2020). In a consultation in early 2020, HMRC proposed that obliged entities[52] should not have direct access to the governmental trust register. Instead, when obliged parties enter into a new business relationship with a trust, the trustee should provide these parties with the required registration information. HMRC noted that "[t]his means that the trustee has control over who sees the information" (HMRC & HM Treasury, 2020, § 4.29). It would be

[52] These entities (which include financial institutions and other parties that need to conduct AML customer due diligence) are required to obtain proof of registration from the trust or an excerpt of the register.

possible to limit public access to the Compliance Passport holders' information in the same way.

Another example concerns the AEOI reporting of trust protectors, which is generally required even where the protector does not have any beneficial interest in the trust. Where a trust holds a Compliance Passport, it would be possible to consider exempting the reporting of protectors.[53] This would also provide better protection to legitimate privacy interests where there is little public benefit from information collection and exchange.[54]

Notably, participants in the program might be required to provide the relevant tax authorities with more information than they already obtain. The disclosed information should be kept confidential but, as noted above, there is a risk that leaks, hacking, and other privacy-related issues will occur. If the information disclosed as part of this program is not protected properly, participation in the program could result in greater risks to privacy. Therefore, governments that cannot be trusted to keep the information confidential should not be allowed to participate. As noted above, using third parties (such as accounting firms) to carry out the compliance review could minimize privacy concerns where such parties can safeguard the information obtained through this program better than the relevant governments.

2) Legal uncertainty

Like ICAP, the Compliance Passport Program is expected to provide greater legal certainty for Compliance Passport holders. The risk of investigations and disputes occurring should be lower where the relevant authorities have already reviewed the participant and found them to be fully compliant.

3) Compliance costs and difficulties doing business

The Compliance Passport Program has the potential to reduce compliance costs and difficulties doing business. Under AML laws which follow the FATF recommendations, FIs and other parties that conduct customer due diligence must implement a risk-based approach (FATF, 2019). Where the money laundering risk is low, simplified due diligence procedures may be permitted. A Compliance Passport holder should probably be classified as posing a low money laundering risk. This could reduce compliance costs for FIs and other parties. To the extent that the current compliance costs are shifted onto the account holders, this could reduce the cost of the relevant financial services. In addition, Compliance Passport holders may be able to open financial accounts and transfer funds across jurisdictions more easily. However, participating in this program would entail costs, as noted in paragraph 5 below.

4) Distortions of behaviors and activities

As the Compliance Passport Program could reduce the costs and the risks discussed above, it has the potential to reduce the distortions caused by transparency regimes. This means that participants' decisions regarding their succession planning, investments, holding structures, asset types, and asset locations are less likely to be distorted by transparency regimes.

[53] A similar exemption could also apply to trustees of trusts holding Compliance Passports.

[54] However, if this information is disclosed to the tax authorities as part of the review under this program, the value of excluding the protectors from the AEOI reporting might be limited. This said, avoiding undue investigations would be of considerable value.

5) Comparing costs and benefits

Participation in the program would entail several costs and risks. The participant would need to invest time in it and would incur costs as a result of using the services of professional advisers. There is also a risk that participating in the program would result in a finding of noncompliance or the identification of other risks that the participant was not aware of. It is suggested that the participants would bear the net cost of the program if the cost of administering the program were to exceed the tax authorities' cost savings. Potential participants would join this program if the expected benefits outlined above exceeded the costs involved in taking part in it.

G. Potential Advantages for Governmental Authorities

This proposal follows the OECD's (2009) recommendation to enhance cooperative compliance with HNWIs while providing them with greater tax certainty and safeguarding confidential information.

The benefits for authorities from this proposal are similar to those of ICAP. This proposal would ensure compliance among the participants through a cooperative process in which the participants provide the requested information voluntarily. Ensuring compliance through audits and investigations might involve higher enforcement costs. Conducting the compliance review in multiple jurisdictions in a multilateral manner can resolve issues more efficiently. This program could free up enforcement resources that could be used to investigate other individuals and entities that do not participate in the program. If the net cost of this program were to be covered by fees charged to the participants, the relevant governments would not be expected to incur any additional costs from operating it.

V. CONCLUDING REMARKS

Ensuring compliance among HNWIs is an important policy goal for many tax authorities. The OECD (2009) noted that HNWIs "pose significant challenges to tax administrations because of the complexity of their affairs, their revenue contribution, the opportunity for aggressive tax planning… and the impact of their compliance behaviour on the integrity of the tax system" (p. 5). At the same time, many governments have been implementing cooperative compliance programs, typically for large corporations.

The proposal outlined in this article applies the cooperative compliance approach to HNWIs and their family trusts and private investment vehicles. As these parties typically face challenges in multiple jurisdictions, the proposal here is to adopt a multilateral program, similar to ICAP. In addition, as these parties face challenges created by AML laws, this program would address money laundering risks as well as tax risks. The implementation of this proposal could enhance a culture of cooperative compliance and free up enforcement resources. For participants, it could improve privacy, increase certainty, and reduce compliance costs and distortions.

This proposal is feasible and could be implemented within the existing international framework. Policymakers could experiment with it by running a pilot program similar to the ICAP pilots. As this proposal has the potential to ensure compliance while reducing costs and risks for both tax authorities and taxpayers, it deserves serious consideration.

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DARK STORE THEORY: EXAMINING THE TAX LOOPHOLE'S RELEVANCE IN WISCONSIN FROM MULTIPLE PERSPECTIVES

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Abstract

Originally encouraged through legislative reformation during the 1950s, big-box retailers play a major role in the United States' economy. Built to thrive in the suburbs, they were welcomed by municipalities and property owners who believed that the increased sales taxes that the stores would generate would, in turn, lead to increased tax revenues and lower property taxes. Municipalities and residential property owners are now pushing for legislative action to close a tax loophole that was ostensibly allowed through recent tax reform. However, there is a substantial amount of confusion over the legitimacy of the loophole, as analysts have opposing viewpoints. This research examines the relationship between the presence of big-box retailers and the property tax levies of local municipalities in Wisconsin. It then investigates the phenomenon known as the dark store loophole and analyzes the opposing perspectives held by specialists within the industry. It also considers the overall impact of the loophole on residential property owners. This research finds that imposing legislation to close the dark store loophole would enable local governments to lower residential property taxes.

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1. INTRODUCTION

Big-box retailers such as Walmart, Target, and Ikea have effectively transformed the way that Americans shop for everything from everyday items to decade-lasting furniture and appliances. These stores make products accessible to broad new markets. Consumers have benefited from the affordable products sold by big-box retailers (Sciara et al., 2018). On the downside, however, many believe that big-box stores have a negative impact on local small businesses.

In the decades following World War II, the American legislature's attitude toward business changed. Notably, suppliers could no longer set "manufacturer's suggested retail prices" (MSRPs). For the first time, retailers were permitted to buy large quantities of goods at volume discounts. These changes resulted in the development of a new working model that defined the business plans of big-box retailers (NPR Staff, 2012). Stores such as the ones listed previously began to expand rapidly, building in multiple locations throughout the United States. As this expansion occurred, local governments experiencing slow tax revenue growth found that big-box retailers could provide them with much-needed funds. By allowing a few stores like this to open in their areas, local governments could increase both sales taxes and property taxes. This growth could, in turn, allow cities to lower residential property taxes (McGarry, 2005; Vandegrift & Loyer, 2014).

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At first, big-box retailers promised many benefits to communities that welcomed them. These benefits included lower property taxes, lower sales taxes, products and services at lower prices, community engagement, additional property development, and newly created jobs (Mast, 2020). Big-box retailers have often claimed that the real estate taxes they pay to communities reduce existing property taxpayers' burdens. This benefit is significant considering the fact that local property tax is the largest single funding source for communities (Sellers & Konikoff, 2019). These taxes help to pay for public schools, streets and roads, and public safety services. Public safety services include the police, fire departments, and many health programs (Texas Comptroller of Public Accounts, 2019). More recently, the tax benefits that local governments receive from big-box stores have changed, as these stores have begun to challenge their property tax assessments (Sellers & Konikoff, 2019).

Most states require localities to assess real property at a percentage of market value (Schieck, 2017). Market value presumes a transfer of ownership (Fanning et al., 2018). As many homeowners would know, value is relatively easy to assess when a property has been sold via an "arm's length" transaction. In contrast, it can be harder to assess the value of newly built stores that have never been sold, stores that have been owned for several years, and stores that have gone through several changes in ownership (Lennhoff & Parli, 2019).

When there is controversy about an assessment, it often begins with a debate about what "fair market value" means. There are many opinions about this. Many entities may weigh in on the issue, including assessors, local elected officials, the community, and the property owner (Mast, 2020). Each entity will have its own concerns about the relationship of property rights to market value (Lennhoff & Parli, 2019) and to the community's best interest (Harrison & Seim, 2019). Arguments sometimes arise about whether a property is unique or standard, and whether special conditions relate to it (Lennhoff & Parli, 2019). Some of these special conditions include economic development, community needs, and architecture (Heiland II, 2019). An additional consideration is that often, in commercial real estate, the tenant does not vacate the property. This is the case in "sale-leaseback at market rate" transactions. Here, there is no "second generation" user to create a strong argument for an "arm's length" transaction where a price is easily determined because of the original owner leasing the property back from the new owner (The Appraisal Foundation, 2012).

Historically, operating stores attract higher assessments than similar stores that are closed ("dark stores"). This is due to an understanding that profit-generating stores have higher fair market values than closed or vacant properties. The argument presented by big-box retailers, however, suggests this assessment to be inaccurate, as these properties have historically sold at similar prices to dark stores (Fanning et al., 2018). Many retail stores claim that they have been unfairly over-assessed, and thereby over-taxed, by taxing jurisdictions (International Association of Assessing Officers Special Committee on Big-Box Valuation, 2018).

This study intends to decipher whether the past property tax promises are still relevant today, using the U.S. state of Wisconsin as an example. As such, the focus behind this study includes the research question:

> *"Does the dark store theory have an adverse effect on the revenues of municipalities? In other words, do Wisconsin municipalities have a lawful basis to oppose recent rulings lowering the property tax assessments of big-box retailers?"*

To answer this question, data investigations are conducted into the real impact of big-box stores on local property taxes, based on records obtained from several Wisconsin municipalities. In addition, the study details the idea behind the dark store theory and evaluates the sources of its support from both theoretical and legislative standpoints. This study considers the possible ramifications of big-box property tax reform on residential property tax rates in Wisconsin municipalities. It also examines the plausible motivations behind the dark store theory of tax assessments.

The rest of this paper has five sections. It starts with a brief overview of dark store theory. The second section summarizes the literature related to this research. The third section explains the methodology used, including the research structure, categories of data collection, and hypothesized findings employed. The fourth section details the results. The final section describes the conclusions of the research, specifies any limitations associated with this study, and offers recommendations for future studies.

2. THEORY

During the decline of the automotive industry in Detroit, automakers wanted their tax burdens in respect of vacant factories to be reduced. Lawyers for the industry argued that these factories should not be valued as if they were in use but as if they were vacant or "dark". The City of Detroit was financially strapped and unable to fight these companies in court. It was also concerned that if it did fight them, there could be a risk to the remaining auto jobs in Detroit (Pettypiece, 2016). As a result of the automakers' success, other industries soon followed suit and a movement began (Baudot et al., 2019).

Dark store theory is the premise that big-box stores should be assessed as if they were "vacant and available for secondary use" (Fanning et al., 2018, p.172). In other words, the "dark store" name is derived from the proposition that a fully functioning, vibrant store should be valued as if it were "dark" or vacant. Big-box retailers advocate for the use of dark store theory based on an interpretation of the fair market value assessment of the store.

From an assessment perspective, dark store theory rivals the approach taken by the property assessors, who have been calculating higher assessments for years (Farmer, 2016). These higher assessments take profitability, building design, and capital outlays benefiting the current property owner into account (International Association of Assessing Officers Special Committee on Big-Box Valuation, 2018). These costs can often have a negative effect on a property's resale value (Heiland II, 2019). For example, Best Buy spends a great deal of money integrating its logo into its buildings. Other retailers see no value in doing this. From the perspective of retailers, the assessed value should not include these items. Instead, the argument is that it should only take the recent sales value of other comparable properties that are empty into account; a value that has plummeted in recent years because of the 2007-2011 economic recession (Jauer et al., 2017).

From a legislative perspective, court rulings have changed local tax laws, and in many states, these changes have favored big-box retailers by reducing property assessments (Grant, 2019). Some cuts exceed 50 percent (Baudot et al., 2019). Occasionally, big-box retailers have claimed that their properties hold fair market values that are far lower than the initial costs they incurred when buying land and building their stores (International Association of Assessing Officers Special Committee on Big-Box Valuation, 2018; Romell, 2017). This has led to strong opposition from local governments, which argue that the rulings have created a dark store

loophole that allows for the inaccurate assessment of big-box properties in operation. This loophole is the basis for dark store theory and is the cause of municipalities' desires to change property tax legislation back to its previous state (Farmer, 2016).

A common argument in taxation is the notion of fairness and equity. The "ability to pay principle" is an economic principle that results in two notions of fairness and equity—vertical and horizontal equity (Cornia & Slade, 2005). Vertical equity is a method of taxation where those with higher incomes should pay more than those with lower incomes. This concept relates directly to real estate taxation (Finoccchiaro Castro & Rizzo, 2014). For example, under this valuation method, the amount of tax charged in respect of a building measuring 100,000 square feet should essentially be twice the amount charged in respect of a building measuring 50,000 square feet. This directly relates to fair market value, as that same 100,000 square feet building will cost at least twice as much as the 50,000 square feet building. Cities will often argue that more tax should be charged in respect of the bigger building because it costs the local government more to service. For example, the existence of a small structure may not require the local fire department to make changes, while the addition of a new big-box store could mean that larger and more expensive fire trucks are needed. Additionally, it is likely that law enforcement authorities will need to make additional service calls to larger stores on a regular basis to deal with incidents of shoplifting (Wolfe & Pyrooz, 2014). Horizontal equity, on the other hand, is a method of taxation where entities of similar sizes or with similar income levels pay similar taxes (Finoccchiaro Castro & Rizzo, 2014). It has been argued that two nearly identical facilities may pay significantly different taxes due to differences in ownership (Cornia & Slade, 2005). In this scenario, imagine that two competing pharmacies, each occupying 15,000 square feet, are located directly across the street from each other. One of those pharmacies is locally owned while the other is part of a major national chain. While the locally owned pharmacy may lack the funds and expertise to challenge its tax bill, it is likely that the major national chain will possess these. This puts the locally owned entity at a competitive disadvantage to the national chain (Baudot et al., 2019).

It is worth noting that the dark store theory revaluation is unique to commercial enterprises. Homeowners are not permitted the same reduction. In fact, a homeowner with a second or a vacation home cannot claim that home to be "dark" in an attempt to reduce their taxes. In fact, homes that are rented out are often taxed at the higher "commercial" property level (Ito et al., 2015). It is important to understand dark store assessments, as any reduction to the amount of taxes received from commercial property in a municipality shifts the tax burden to residential property owners (Kim & Warner, 2018).

3. LITERATURE REVIEW

The title "big-box retailer" is used to describe large retailers that own many store locations throughout the United States. Each of these stores is large when compared to the stores of other retailers and is usually a rectangular or box-shaped building, measuring 50,000 square feet or larger, that sits on an expansive parking lot. These retailers stock a wide variety of products and often implement a high sales volume, low-profit-margin business plan that allows them to outcompete smaller retailers (Hayes, 2019).

Before the Second World War, laws precluded retailers from obtaining large amounts of merchandise from suppliers at volume discounts. This prevented the development of the large sales volume, low-profit-margin business plans that discount big-box retailers use today. There were also laws that gave manufacturers the right to define the selling prices of goods, regardless

of the retailer supplied. In an environment that favored manufacturing, retailers had difficulty setting the terms of sale. This meant that they did not have the product volumes or the ability to discount prices required to earn a competitive advantage. In the 1950s, the American legislature slowly modified laws to allow mass selling. By the 1960s, retail giants such as Walmart and Target had emerged (NPR Staff, 2012).

Figure 1. Retail pricing before 1950s legislative reform.

It is important to understand how municipalities calculate property tax levies. When a municipality's revenues are increased by sales taxes and new property taxes, there may be capacity to lower the taxes paid by existing property taxpayers (Schieck, 2017). To understand why reducing a tax levy is important, one must understand how taxes in the United States are calculated. There are several steps involved when determining tax rates (State of Wisconsin Department of Revenue, 2020):

1. A taxing jurisdiction, such as a school or city, develops and adopts a legal budget.
2. The taxing jurisdiction calculates revenues from sources other than the property tax.
3. Those revenues are subtracted from the adopted budget to determine a shortfall. This shortfall becomes the tax levy or the amount of money needed to be raised through property taxes.
4. Next, a tax rate needs to be determined. The taxing jurisdiction divides the tax levy by the total taxable assessed value of all property in the jurisdiction.
5. As tax rates are generally expressed as "per $1,000 of taxable assessed value", this ratio is multiplied by 1,000.

For example:

- Town A's tax levy = $10,000,000.
- Town A's total taxable assessed value = $200,000,000.
- Tax rate = $50 per $1,000 of taxable assessed value.
- Tax bill for property in Town A with a taxable assessment of $1,500,000 = $75,000.

Figure 2. A high-level representation for calculating municipal property tax rates.

The taxing process described above explains how big-box retailers can work to inadvertently lower property taxes for themselves. Specifically, because zoning requirements must be consistent, communities find that they are invaded by many similar stores. For example, once a McDonald's has been zoned, a Chick-fil-A, a Wendy's and a Chipotle may arrive, creating a strip of restaurants. Branches of Walgreens and CVS pharmacies are typically located near each other. As a result, a city could find that several retailers fight their assessments. This idea is known and accepted, and is partly responsible for big-box retailers' success in terms of increasing the number of stores that they have (Vandegrift et al., 2011).

This behavior magnifies the effect of dark store theory. It increases the complexity and reduces the transparency of assessment which, in turn, weakens the integrity of the taxing process (Mangioni, 2011). This is because it creates a situation where municipalities and residential property owners have grown to rely on the taxes generated while some retailers are strategizing in order to reduce their tax bills. Given both the need for revenues and the zoning requirements, it can be rather difficult to limit big-box retailers. Lydia Wheeler, quoted in McGarry (2005), effectively summarized this lack of control when stating that "towns limiting big business are dying because their property taxes are skyrocketing". Many towns have grown to depend on sales tax revenue. As such, municipalities can have trouble containing the growth of big-boxes once those retailers have established a presence in their jurisdictions.

To understand the motivation behind the big-box retailers' property tax challenges, it is useful to view the politics of taxation from a broader perspective. Big-box retailers have an incentive to reduce their tax burdens to the level that would result in the largest reductions. Therefore, as taxes have declined at the national level, many big-boxes have devoted resources to challenging taxes at the local level (Rubin, 2020). This strategy started in the 1960s in California. Initially, the challenges were a response to large tax increases. As corporations had success in court and saw their tax bills decreasing, the push morphed into an "expense reduction" philosophy rather than an "overtaxing" revolt (Martin, 2008). Another issue that became important was the American ideal of the pursuit of prosperity. This fueled a consumer attitude that favored low prices and mass consumption, transforming American life (Cohen, 2004). As big-box retailers grew, they realized that they had the resources and expertise to challenge taxing institutions. This change happened when tax assessments became more market-oriented and centralized (Martin, 2008).

The circumstances at the time created an ideal situation for taxpayers to rebel. Now the problem wasn't that taxes were too high, but that reforms happened too late. Those accustomed to the old system were entrenched in their privileges while those that did not benefit from the system felt that it was unfair. As a result, these organizations placed blame on politicians. The politicians worked towards blame avoidance and were willing to provide unwarranted benefits in order to protect their careers. This cycle accelerated, as these "unwarranted benefits" became public knowledge and "every organization" demanded similar treatment (Martin, 2008).

At present, although municipalities benefit from the sales tax revenue collected from larger retailers, local governments have become reliant on the associated property taxes. However, several changes in legislation have resulted in changes related to property appraisal. As a result, many local governments stand to lose up to half of the revenue of property taxes generated from big-box retailers. This will cause significant changes to their budgets. For example, municipal officials in Bexar County, Texas, predict that changes in property appraisal legislation could lead to an $850 million decline in budgeted funds for county schools. Although the loss of property taxes can be difficult to accommodate, a city can incur a multitude of legal fees while fighting tax protests by large retailers (Chatham, 2020). These fees can often reach $300,000 per case (Jauer et al., 2017). Therefore, cities need to find ways to deal with such losses. The two main strategies used are to reduce public services or to raise the property tax levy. Municipal officials in Wisconsin predicted that there would be an increase of 7-8% to the property tax levy over the years following changes to tax legislation (Romell, 2017). The reason for the increase is that local budgets are not very flexible with regard to downward trends in revenue. Local community expenses tend to be fixed in nature and cannot easily be discontinued. They include the costs involved in the provision of streets, street lights, fire departments, parks, and labor. Due to court rulings, a city cannot just turn off its street lights. Typically, in periods of revenue decline, local communities rely on their cash balances in order to make ends meet (Meklin et al., 2000). In the event that tax revenues need to be repaid, the local community is hit twice—first, by the lost tax revenues, and second, by the lost cash balance.

This research examines the effects of dark store theory. Previous researchers have decided that big-box retailers are valuable both to municipalities and their residential property owners. A benefit is derived from the increased sales taxes and property taxes that they pay. This allows taxing authorities to lower property taxes for the remaining taxpayers (Vandegrift et al., 2011). Currently, however, cities are challenging recent court rulings, claiming that a property tax loophole exists that allows big-box stores to operate legally without living up to the promises they have made to local governments (Farmer, 2016). An alternative perspective suggests the loophole to be nothing more than a faulty perception held by municipal officials who would like to increase property tax collections (Engel & Linne, 2017).

4. METHODOLOGY

This research examines the tax loophole created by dark store theory and its effect on the property tax levies of local governments in Wisconsin. It seeks to understand the relationship between municipal sales and property taxes. This study analyzes the opposing viewpoints of local governments and property tax specialists, and evaluates the arguments of each. This defines the relevance of the dark store theory to residential property owners.

This research employs both quantitative and qualitative approaches. Preexisting data is used to analyze the impact of changing assessments. The League of Wisconsin Municipalities and local Wisconsin assessors provided all of the data used in this research. Data for this analysis was retrieved from scholarly studies associated with the *Journal of Regional Science* and the *Munich Personal RePEc Archive*. Descriptions of the calculation of property tax levies with respect to local budgets are represented by information provided by the State of Wisconsin Department of Revenue. Opposing viewpoints of dark store theory concepts and an analysis of the loophole's legitimacy are drawn from *Governing.com* and Bloomberg Industry Group. Other qualitative sources utilized in this study include *NPR.org*, *Comptroller.Texas.Gov*, the *Milwaukee Journal Sentinel*, and *The Post Star* (previously known as *Knight Ridder Tribune*

Business News). The research hypothesis is: The dark store theory is likely to have multiple effects on the different property tax stakeholders and their interests.

Separate and independent sources of data are utilized in this research, as preexisting studies are used to form the basis of the research setting's statistical and qualitative data. Information is drawn from various resources in order to describe and evaluate the process of calculating property tax levies, and to explain the relationship between sales taxes and property taxes. Preexisting qualitative studies are examined in order to represent the opposing opinions of analysts within the field of municipal tax. When collated, the data from these studies is predicted to support the author's hypothesis.

5. FINDINGS

This section describes the results from this study, which were obtained by analyzing statistical research and qualitative data collected from pre-existing studies. The data was examined in order to understand the existing relationship between the sales tax generated from big-box retailers and the value of local property tax levies. The historical benefits for residential property owners in big-box retailers' areas of operation are evaluated. The premise behind the dark store theory and how the associated loophole may impact residential property owners is then examined. An analysis of the loophole's impact based on opposing arguments from multiple property tax specialists follows. Finally, we look into the current tax legislation and how it relates to the legality of the dark store theory.

The first result involves the existing relationship between the sales tax generated from big-box retailers and the value of local property tax levies. Vandergrift et al. (2011) conducted a study in which they found a positive relationship between the presence of a new Walmart and the local government sales tax bases. The existence of an increased municipal tax base suggests that there has been an increase in the area's overall economic growth that has allowed the municipality to either increase its budgeted spending or maintain its previous budget and lower its property tax levy. While increases to budgeted spending could result in improvements to roadways, education, and many other facets of local public services, reducing the local property tax levy could be a viable option for municipalities looking to maintain their current economies rather than to seek economic expansion. Similarly, Vandergrift and Loyer (2014) found a relative reduction in a community's finances due to Walmart's arrival. While sales tax (which often only benefits the state) increased, the benefits to the local community were negligible. Additionally, this study also found that once one retailer had challenged its assessment, other big-box stores followed suit.

When determining the dark store loophole's impact, two opposing arguments made by specialists within the field of property tax were evaluated. Engel and Linne (2017) presented one such viewpoint in support of the recent court rulings in states such as Michigan, Wisconsin, and Indiana. From their perspective, an accurate assessment of big-box properties would be comparable to the selling price of "dark store" properties—the same conclusion reached by tax courts in multiple states. These analysts emphasize the importance of fair market value when assessing property value for taxation purposes.

Fair market value is determined by evaluating local markets and considering the historical selling prices of comparable local properties. These tactics compare two or more "comparable properties" to make a determination. IRS state assessors can use any one of three different methods to decide on a value. First, the assessor can use a comparable sales approach. This

method allows the assessor to consider sales from similar stores in order to make a valuation. Second, the assessor can use a capitalized income approach. This method values property by taking the net operating income of rent collected and dividing it by a capitalization rate. Third, the assessor can use the Replacement Cost New method. This allows an assessor to take any property and price it at the cost of rebuilding it as new (Williamson, 2017).

Many big-box retailers appeal tax assessments because, if they are successful, the tax reductions they receive can be substantial. For example, Walmart is an organization that can save millions of dollars a year by appealing its assessments. Walmart is in the process of appealing all of its statewide assessments in Wisconsin with a current rate of more than $40 per square foot. At present, most Walmart stores are assessed in the $55-$65 per square foot range. This represents a goal to lower tax assessments by at least 25%.

The opposing viewpoint is presented by Farmer (2016), who calculates property appraisals based on operating value; a metric that includes the property owner's costs when acquiring the land and building on it, capital expenditures (such as the cost of equipment), and any other costs relating to the retailer's operations (including rentals of the property). Including these costs inflates the appraised value of the property, occasionally doubling the big-box retailer's property taxes. From this viewpoint, the recent court rulings in favor of fair market value considerably reduce local governments' property tax revenues in what can be called a tax loophole (Farmer, 2016).

Farmer's (2016) study revealed that the current tax legislation applicable to the dark store theory was introduced in Michigan shortly after the economic recession of 2007-2011. Large retailers began to file lawsuits protesting their property tax assessments, claiming that the fair market value approach prescribed by law was not being practiced. This practice has since started spreading to Wisconsin and other states (Horner et al., 2016). In the view of big-box retailers, local cities were overcharging them by assessing their properties at well above the fair market value. Organizations challenging their assessments cited comparable sites with little relevance to their own situation. For example, when Menards built a store in Village of Howard, WI, in 2012, the costs included roughly $5 million for land and $5.6 million for the building. Menards challenged their $12.5 million assessment, citing comparable stores as justification. Three of these comparable stores were a former Cub Foods in Green Bay, WI (nearly 2.4 miles away), a former Sears store in Sheboygan, WI, that was in an enclosed mall (roughly 70 miles away), and a former Home Depot in Beaver Dam, WI (around 95 miles away). Ironically, the organization was satisfied with these cost assessments when depreciating the value of the land to decrease its federal corporate tax burden.

The following table shows assessed values vs. sales prices for several Walgreens stores in municipalities throughout Wisconsin in order to highlight the effect of dark store theory across the state.

Table 1. Wisconsin Walgreens and CVS assessed value vs. sales price

Data in Millions	Assessed Value	Sales Price	Undervalue	Lost Assessment %
Cudahy	2.4	4.9	2.5	51.0
Milwaukee	2.4	4.2	1.8	42.9
Wauwatosa	3.4	8.7	5.3	60.9
Mount Pleasant 1	2.6	6.3	3.7	58.7
Mount Pleasant 2	2.8	5.8	3.0	51.7
Franklin	2.1	5.6	3.5	62.5
Appleton	1.9	4.5	2.6	57.3
Kenosha	2.5	5.5	3.0	54.5
Waukesha	2.4	6.4	4.0	62.5

The first two columns of Table 1 show the assessed values against the sales prices for various Walgreens and CVS stores in Wisconsin. The third column of the table shows that all seven properties sold were undervalued. As a result, there were lost assessments ranging from 42.9% to 62.5%, as shown in the final column. This means that the local communities lost tax revenues of this same percentage from the properties. Table 1 shows that the property in Wauwatosa, WI, had the largest "undervaluation", at $5.3 million, while the property in Milwaukee, WI, had the lowest "undervaluation", at $1.8 million (League of Wisconsin Municipalities, 2018).

Table 2 shows the potential tax shift to residential property owners (based on a legal decision with Walgreens), should Walgreens and CVS capitalize on this "undervaluation".

Table 2. Wisconsin Walgreens and CVS lost tax revenues and city budget comparison

City Budget in Millions Lost Tax Revenues are Actual	Undervalue	2018 City Budget	Lost Tax Revenues ($)	Lost Tax Revenues (%)
Cudahy	2.5	13.3	66,560	0.5
Milwaukee	1.8	1,200.0	43,520	0.0
Wauwatosa	5.3	60.0	135,700	0.2
Mount Pleasant 1	3.7	19.0	94,720	0.5
Mount Pleasant 2	3.0	19.0	76,800	0.4
Franklin	3.5	25.0	89,600	0.4
Appleton	2.6	93.0	66,560	0.1
Kenosha	3.0	80.5	76,800	0.1
Waukesha	4.0	65.0	102,400	0.2

Table 2 shows the lost tax revenues by city if the Walgreens legal decision were to be fully implemented. This includes tax losses in both dollar amounts and percentages. Researchers used the tax calculator from Smartasset.com to estimate lost revenues. Two properties in Mount Pleasant were impacted. These two properties account for $171,520 ($94,720 and $76,800 respectively) lost dollars and almost 1% of all of the communities' tax revenues. The next most impacted communities were Cudahy and Franklin, with revenue losses of 0.5% and 0.4%

respectively. Milwaukee was the least impacted in both dollar and percentage terms. This does not mean that Milwaukee, a large city, will not have been impacted by other big-boxes. The total loss from all properties in the table was $752,660.

Table 3. Potential tax shift to residential property owners if Walgreens' legal decision is fully implemented

Data in Millions	Assessed Value	Value "At Risk"	50%	Value Loss %	Tax Rate Increase %	Per Home
Pleasant Prairie	2,667.5	777.9	389.0	14.6	17.1	892.50
Hudson	1,532.7	261.3	130.6	8.5	9.3	374.58
La Crosse	3,078.6	409.1	204.5	6.6	7.1	197.12
Onalaska	1,653.2	240.3	120.1	7.3	7.8	
Fitchburg	2,592.8	302.3	151.2	5.8	6.2	
Town Brookfield	973.5	126.4	126.4	6.5	6.9	
Oconomowoc	1,893.5	273.8	136.9	7.2	7.8	360.96
Appleton	4,891.8	410.1	205.0	4.2	4.4	
Wauwatosa	5,268.4	716.9	358.4	6.8	7.3	383.12
West Bend	2,402.8	391.0	195.5	8.1	8.9	253.89
Brookfield-City	6,619.5	668.7	334.3	5.1	5.3	233.80

Table 3 illustrates the potential tax shift to residential property owners if Walgreens' legal decision were to be fully implemented. It shows the assessed value for the town and the value "at risk" due to the Walgreens ruling, as well as the percentage of the assessed value that would be lost assuming that the legal decision was applied to 50% of the "at risk" properties. The tax rate increases are calculated based on percentages and the impacting increase in taxes per home. The per home increases assume that the local government cannot reduce its expenses and its budget. Some communities did not calculate the per home increase. Of those that did, Pleasant Prairie calculated the highest, at almost $900 more per home and La Crosse calculated the lowest (League of Wisconsin Municipalities, 2017).

Typically, the organizations that appeal for tax relief using dark store theory are large big-box retailers. These entities include Walmart, Meijer, Target, Lowe's, Menards, Walgreens, CVS, and Home Depot. These are not the only retailers competing for consumers' patronage. Small family-owned companies often lack the legal knowledge and the financial wherewithal needed to be able to challenge property tax assessments. This puts them at a competitive disadvantage (Vachon, 2016).

Big-boxes not only provide revenue for communities but also cause them to incur expenses. They often arrive with promises of jobs and sales tax revenue increases but rarely mention the jobs and revenues that will be lost when existing businesses in the area close down. Local communities are duped into thinking that these retailers will create limitless consumer markets and that residents will be content with minimum-wage jobs (Mitchell, 2006). It can be expensive to have a big-box business as a community member. Costs can be incurred because fire stations need larger trucks, roads need to be widened, and there is a drain on social services due to the low wages of employees. Additionally, these organizations try to change local laws to suit themselves, require more law enforcement time, and create additional pollution (Vachon, 2016).

Local merchants and big-box retailers operate differently in a community. For example, the owners of a local store may take out a loan from the local bank and rent a downtown storefront from a local landlord. Local organizations also tend to retain local advertising, legal, and accounting firms. As all of these entities thrive, there is a reciprocal effect. Alternatively, stores like Walmart often use services located near their headquarters rather than in the community. Additionally, the money made by a big-box store is usually drained from the local community, as it is sent to the organization's bank account overnight (Mitchell, 2006).

6. CONCLUSIONS AND FUTURE RESEARCH

This research examines the effect of the presence of large retailers on local property tax levies from sales tax and property tax perspectives. It studies the impact that big-box retailers have had on Wisconsin municipalities. It explains the phenomenon of dark store theory and its associated tax loophole. It uses data collected from preexisting research and secondary data to validate and measure the dark store theory from a legislative and a theoretical standpoint. It also considers opposing viewpoints from tax specialists within the field. It details the possible impacts of dark store theory and the accompanying tax reform on the local tax levy for residential property owners.

This study seeks to answer the question: “Do Wisconsin municipalities have a lawful basis to oppose recent rulings lowering the property tax assessments of big-box retailers?”. More generally, this research investigates whether the dark store theory has an adverse effect on the revenues of municipalities.

Overall, this research found the dark store loophole phenomenon to be a legal challenge under current tax legislation as determined through the court systems of Michigan, Wisconsin, Indiana, and several more to come. These tax courts have ruled that the tax loophole, as described by municipal officials, does not exist. The courts have also determined that the laws, as written, allow for the taxes paid in respect of a fully operational store to be compared to those paid in respect of a store that is vacant or “dark.”

Several other conclusions were reached. First, the entrance of big-box retailers into a local economy effectively increases the local sales tax base and causes growth within such an economy. On becoming operational, a big-box retailer draws customers from surrounding municipalities, which results in a higher volume of local sales. The growth in sales boosts the local government’s sales tax revenue. Greater revenue allows the municipality to either increase spending and grow its economy or to keep its previous budget in place and decrease its property taxes.

Second, the increase in sales tax revenue generated by larger retailers benefits local residents. When a local government chooses to grow its economy, its residents will benefit from improved public services provided to them through municipal spending. There may be increases to school budgets, infrastructure improvements, and increased library services. If the municipality chooses to use the revenues to reduce its property tax levy, residents will benefit from lower property taxes and will be able to retain funds that can be used to purchase services that are not publicly provided.

Third, though property taxes are supposed to be determined based on fair market value, many big-box properties are assessed at values well below their sales prices or fair value. The discount is often more than 50% of the sales price. Reassessments are often completed by

parties with vested interests or courts who do not have assessment expertise, rather than by professional assessors.

Fourth, local taxing authorities and municipalities need to work with state legislators to minimize the impact of dark store reassessments. As big-boxes want to join communities, they often tout the benefits that they can provide. These include higher sales tax and property tax revenues, and lower product prices. Municipal officials are concerned about a conflict, i.e., that big-box stores make public commitments to communities while quietly working to undermine those promises.

Finally, altering appraisal legislation for big-boxes in order to favor claims made by municipal officials would significantly increase valuations. This would then increase the property taxes paid by big-box retailers, allowing residential property taxes to decrease. If the property tax levy remains the same and fair value appraisals of big-box properties increase, the percentage of the local tax levy charged to residents will decrease.

Multiple benefits result from this research. First, this study increases public understanding of "dark store theory". The situation in Wisconsin is occurring elsewhere in the U.S. and if other states understand the theory, they can address the issue before it becomes a larger problem. Second, the work educates municipalities about the risks of assuming that a company wanting a property to be rezoned in order to enter the area will do what it claims and will not modify its "promise to the community" later. Third, it strengthens understanding of the direct sales tax and indirect property tax benefits provided to municipalities and local residential property owners. It also improves understanding of the dark store loophole and how the theory came to be conceptualized. Finally, it details current property tax legislation and analyzes multiple interpretations of it.

Several limitations exist with this research. There was no discussion of the differentiation in tax legislation between jurisdictions at state or local government levels. The specifics of sales tax and other forms of municipal revenue are not provided. The risk of big-box retailers moving operations in response to changes in tax legislation is not considered. Similarly, an analysis of the cost-benefit and risk of big-box retailers moving because of increased property or lower sales tax revenues is not performed. No specific data was gathered, or polls taken, in respect of residential property owners' opinions about the dark store theory and changing tax legislation. The relevance of the dark store loophole was not considered from an ethical perspective.

The concept of this study offers multiple opportunities for possible future research. Such research could expand on this study by including the ramifications of the dark store theory for the value of residential properties and implied tax. Different perspectives could be gained by conducting polls among various municipalities located throughout the United States. Another study could research the theory from an ethical standpoint to find out whether changes to local government tax legislation are morally justified. Since changes to tax legislature occur locally, big-box retailers could decide to shut down the stores they operate within that region, either to avoid increased taxes or to make a public statement. A study could research the economic loss that a municipality could experience in this scenario, and provide a risk assessment and cost-benefit analysis.

An additional study could consider the financial impact on localities, cities, and residential property values. It should look at the overall impact on a town where a big-box store has been built and study the impacts at one-year, two-year, five-year, and ten-year intervals. This study

could analyze the impact on overall property values, the number of new business start-ups versus the number of closures, and the changes in residential property tax rates over time. It could compare the changes to the commercial tax rate to residential property tax changes to see if there is a relationship between these changes. The research hypothesis would be that, over time, residential property tax rates will decrease as commercial tax rates increase. As commercial development occurs in a locality, will the unemployment, property values, and the overall general financial health of the community improve?

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THE SHADOW ECONOMY DETERMINANTS - THE CASE OF PORTUGAL

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Abstract

Despite the existence of many studies regarding the meaning and measurement of the shadow economy, literature dedicated to the study of its determinants is almost inexistent. Thus, this study intends to explore the impact of several variables on the shadow economy in Portugal, using data from 1983 to 2015. The findings suggest that social security expenditure and the real Gross Domestic Product (GDP) growth rate exerted negative impacts on the size of the shadow economy.

JEL Classification Codes: E26, H55, K42, O17
Keywords: Shadow Economy, Social Security, Portugal

INTRODUCTION

The shadow economy is considered to be a phenomenon that is present in all economies, regardless of their level of development, and it remains a major problem in terms of fiscal, economic, and social consequences. Measuring the shadow economy proves to be an extremely challenging task, with a long list of studies using different methods to estimate its size and evolution. The absence of a common methodology for estimating its size makes any analysis of it difficult (Amendola & Dell'Anno, 2010; Feige, 2016; Medina & Schneider, 2018).

The relationship between the shadow economy and its determinants has not been given due attention. The debate has focussed on several factors, such as social security system expenditure, the unemployment rate, and indirect taxes. Indeed, the maturation of a public social security scheme seems to induce expenditures that follow a logistical curve, that is to say, a tilted s-shaped curve with a horizontal asymptote. On the other hand, as the shadow economy is not subject to labour regulations, it represents millions of contributions lost by the social security system every year (Cichon et al., 2004).

This paper focusses on the relationship between the shadow economy and its determinants in Portugal. It aims to make an important contribution to filling the existent gap in the literature regarding this issue.

The paper is organised as follows. Section 2 presents the literature review about the shadow economy and its possible determinant variables. Section 3 provides an overview of the Portuguese social security system. Section 4 presents the data and methodology, and Section 5 recounts the results. Section 6 concludes.

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SHADOW ECONOMY DETERMINANTS

The debate regarding the influence that the shadow economy has on the economy of a nation is not recent, with some authors mentioning its benefits and others its disadvantages. Different authors define the shadow economy in different ways (Dell'Anno, 2003; Feige, 2016; Schneider, 2014; Smith, 1994).

It is possible to observe a clear division between the shadow economy's components. It comprises two types of activities, legal and illegal, each of which include monetary and non-monetary transactions. It is also useful to differentiate these activities as leading to either tax evasion or tax avoidance, as summarised in Table 1. Sam (2010) divides the shadow economy into tax paying and non-tax paying activities, with the former being divided into legal and illegal ones. A number of authors make a distinction between tax evasion and tax fraud, considering that both represent some sort of tax avoidance. Therefore, while tax fraud is the adoption of an illegal procedure followed by an individual in ways that are reprehensible and punishable, tax avoidance includes all procedures followed by the taxpayer to minimise taxes, and the seizing of opportunities created by the existence of loopholes in the tax law without breaching those laws.

Table 1

	Monetary Transactions		**Non-Monetary Transactions**	
Illegal Activities	Trade in stolen goods, drugs; manufacture of drugs; prostitution, gambling, fraud		Barter, drugs, stolen goods, etc.	Produce or grow drugs for own use. Theft for own use.
	Tax Evasion	**Tax Avoidance**	**Tax Evasion**	**Tax Avoidance**
Legal Activities	Unreported income from self-employment, wages, salaries, and assets	Employee discounts, fringe benefits (cars, subsidised food, etc.)	Barter of legal services and goods.	Do-it-yourself work

Source: Professor H. G. Grubel, reproduced in Lippert & Walker (1997).

This study only considers the shadow economy as the legal production and provision of goods and services that are deliberately concealed from public authorities (Schneider, 2013). Consequently, illegal underground economic activities, criminal activities (such as drug dealing, robbery, etc.), and all household services and productions are excluded. These kinds of activities are often excluded from national accounts of the shadow economy due to estimation difficulties, which can limit international comparability (Dell'Anno, 2007; Feige, 2016).

The existence and growth of the shadow economy can be explained by distinct factors which can differ between countries and economies. The main ones are: increased tax burdens and social security contributions; increased regulation in the official economy; trust in the justice system and parliament; early retirement; unemployment and self-employment; the quality of state institutions; corruption; and *tax morale* (Petersen et al., 2010; Schneider & Enste, 2000; Williams & Schneider, 2016).

While this study focusses on the influence that economic factors have on the shadow economy, it is also important to mention that this can only partly explain the shadow economy's existence and growth. Social and political factors are also determinant considerations when measuring the shadow economy (Losby et al., 2002). Regardless of the type of forces driving the shadow economy, it is noteworthy that these variables, in empirical terms, can be subject to endogeneity issues. Therefore, they must be seen as indicative evidence (Bovi, 2003).

Taxes affect labour-leisure choices and also stimulate labour supply in the shadow economy. Therefore, the greater the difference between the total cost of labour in the official economy and after-tax earnings, the more incentive there is to avoid this difference and participate in the shadow economy (Schneider & Klinglmair, 2004). Tax burden can be defined as being the ratio of state tax revenues to personal income. Similarly, social security burden is defined as being the ratio of social security contributions to personal income. The burden of tax and social security contributions is often considered to be the key determinant for the existence of the shadow economy (Frey & Schneider, 2001; Schneider & Enste, 2000; Schneider, 2013). Schneider (1994) says that the direct tax burden (including social security payments) has the greatest influence of all factors, as it is the driving force for shadow economy activities, although he also concludes that a major reduction in the direct tax burden would not necessarily lead to a similar reduction in the shadow economy. Generally, if the tax burden increases in a country, economic units move from operating in the formal economy to the informal economy over time. This is reflected in the Laffer curve (Trabandt & Uhlig, 2011). After a certain point, which can vary from country to country, the optimal level is reached and tax revenue starts to decrease. In this context, social security expenditure is expected to negatively affect the shadow economy.

Unemployment is usually associated with a decrease in a country's Gross Domestic Product (GDP). This is denoted as Okun's Law. Unemployment imposes costs on society and contributes to instability and less employment in the formal economy, which drives people who have difficulty finding jobs to engage in the shadow economy (Ball et al., 2012). For a more in-depth study of the impact of unemployment on the shadow economy, see Bajada and Schneider (2009). Feld and Schneider (2010) and Schneider and Williams (2013) found that, *ceteris paribus*, the higher the unemployment and self-employment rates are, the more activities are performed in the shadow economy. The fact that one can observe such high and persistent unemployment levels in the European Union (EU) throughout the years may also be explained by the existence of a significant level of shadow labour market activity in these countries.

Corruption is defined by the Organisation for Economic Co-operation and Development (OECD) as the "abuse of public or private office for personal gain" (OECD, 2008, p. 22), while the International Chamber of Commerce, Transparency International, the United Nations Global Compact, & the World Economic Forum Partnering Against Corruption Initiative (2008) consider it to be "the single greatest obstacle to economic and social development" (p. 2). Efficient and discretionary application of the tax code and regulations by the government

plays a crucial role in the decision to work underground, whereas bureaucracy associated with highly corrupt government officials is usually linked to a larger shadow economy (Schneider & Buehn, 2012). This was demonstrated by Johnson et al. (1999), who found that a one point increase in the corruption index[3] was associated with a 5.1 percent decrease in the unofficial economy, *ceteris paribus*. Empirical studies by Dreher et al. (2005) showed that institutional quality can reduce the size of the shadow economy and corruption simultaneously. This positive correlation may reflect peoples' overall perceptions of a country's institutional environment, whereby when public institutions and government officials demonstrate low levels of corruption, the shadow economy tends to be lower and vice versa, suggesting that the quality of institutions and the size of the shadow economy go hand in hand (Friedman et al., 2000). This becomes especially true when one considers the endogenous linkage between institutional quality and taxation, as tested by Loayza (1997) and Friedman et al. (2000). Therefore, the greater the distance perceived by taxpayers between what they pay to the State and what they get from it, the more they are predisposed to engage in the shadow economy. Tanzi (1998) notes that countries such as Portugal have managed to reduce the incidence of corruption significantly[4], considering the existence of an inversely proportional relationship between the development level of a country and corruption-bribery, which could, therefore, affect the size of the shadow economy.

In summary, bureaucracy with highly corrupt government officials tends to be associated with more unofficial activity, while the proper application of laws through the securing of property rights and the enforceability of contracts increases the benefits of being engaged in the formal economy for citizens. Efficient policymaking is characterised by the imposition of a certain level of taxation, with most of the income received being spent on productive public services. Accordingly, production in the formal sector benefits from a higher provision of productive public services and is negatively affected by taxation, with the opposite applying in the shadow economy (Schneider & Buehn, 2012). Fraud (including corruption) usually precedes, follows, or succeeds the shadow economy, even though the shadow economy can exist without fraud and fraud can exist without the shadow economy.

Tax morale is defined by OECD (2013) as being the motivation of an individual to pay their taxes. Deterrence is the probability of being audited and the size of the penalty applied, which, according to Schneider (2011), can also impact the intrinsic motivation to pay taxes. In this way, the former is influenced by the latter and thus there is always a reciprocal link between the two, although this is also influenced by the quality of state institutions and the constitutional differences among states. Tax morale is particularly affected by the efficiency of the public sector, as it has an indirect effect on the size of the shadow economy (Schneider & Buehn, 2012). However, citizens are willing to honestly declare income, even if they do not receive a full public good that is equivalent to their tax payments. If the political process is perceived to be fair and legitimate, representing a fair interaction between taxpayers and the government, a reciprocal exchange that involves the giving and taking of both parties is accepted, with the government providing public services to citizens in exchange for their tax payments (Alm & Torgler, 2004; Feld & Frey, 2007).

The shadow economy allegedly mitigates government-induced distortions and, as a result, leads to enhanced economic activities in the official sector. In this sense, the unofficial sector acts as a complement to, rather than a substitute for, the official economy (Choi & Thum,

[3] This index ranks between 0 and 10 (10 means an absence of corruption).
[4] In 2016, Portugal ranked 29th out of 176 countries in Transparency International's Corruption Perception Index.

2005). Therefore, it is not possible to simply say that the elimination of the shadow economy would benefit the economy and society as whole. Nor is it possible to simply say that the shadow economy can have a positive side, although this might be the case under certain conditions. Schneider (2013) assumes that two-thirds of all activities that take place in the shadow economy complement those in the official sector as that amount returns to the official economy via consumption. He concludes that the development of the shadow economy can lead to higher value-added figures given the fact that total GDP is formed by the official GDP and part of the shadow economy GDP (Schneider, 2013). Considering these facts, if the shadow economy disappeared or suffered a huge decline, it would only improve a country's total welfare if almost all of it was transferred to the official economy.

On the negative side, an increase in the size of the shadow economy results in lower tax revenues and, consequently, in the availability of fewer public services and goods. The erosion of tax and social security bases not only results in significantly larger budget deficits, but also causes inefficiency in government policies, which are a consequence of unreliable indicators (Dreher et al., 2005). This erosion is partly explained by the existence of undeclared work which, according to the European Commission (2007), tends to obstruct growth-oriented economic, budgetary, and social policies. It is particularly harmful for the social security system when a person decides to enter the informal economy whilst also receiving social security benefits, as this creates a system of responsibility without creating a source for the system financing. Considering that public infrastructure plays a key role in economic growth (Loayza, 1997), the idea that a country may face a decrease in economic growth related to a growth of the shadow economy might become true. Loayza (1997) discovers some evidence of this by studying the correlation between the shadow economy and economic growth. He finds that the relative size of the informal sector is negatively correlated with the rate of economic growth. His findings also suggest that an increase in the size of the informal sector negatively affects growth by reducing the availability of public services and increasing the number of activities that either do not use the existing public services or use them less efficiently. In fact, the growth of the shadow economy represents a huge risk to the public sector which obviously depends on tax and social security contributions to keep the protective welfare state running smoothly. This growth represents less revenue and, consequently, an additional pressure on public finance, reducing the quality and quantity of publicly provided goods and services. This can lead to increased tax rates in the official sector, which are often combined with a deterioration in the quality of public goods and their administration, creating even stronger incentives for citizens to participate in the shadow economy (Schneider & Enste, 2000), resulting in a snowball effect.

The shadow economy is often considered to be a force that debilitates the official economy by attracting factors of production away from the official economy and creating unfair competition for legally established firms. As such, most countries attempt to control underground economic activities through various punitive measures rather than through reforms of the tax and social security systems. Cebula (1997) empirically concluded that the size of the shadow economy can be diminished by increased Internal Revenue Service (IRS) audits and penalties, although the evidence also suggests that an exclusive reliance on deterrence is not a reasonable strategy for increasing tax compliance (Feld & Frey, 2007). Research has shown that people's decisions to participate in the shadow economy are barely influenced by detection rates and depend far more on other factors, such as the acceptance of the tax system, perceived values, and the overall situation in the labour market (Feld & Schneider, 2010). However, if the population perceives the existence of tax evasion without penalties, this tends to increase the sense of injustice among those who pay their taxes, which eventually leads to an increase in size of the

shadow economy. A more pragmatic way of reducing the size of the shadow economy is to query who is participating in the shadow economy and how they are doing it. If companies and wealthier individuals are more frequent participants in the shadow economy, the authorities should turn their attention to bigger fiscal frauds and capital flights rather than smaller businesses, although they should not leave these out either.

To mitigate the movement of workers to the shadow economy, and as a way of increasing social protection coverage, some nations with significant shadow economies and environments in which most employment relations are informal have created systems of matching contributions, providing some incentives for greater participation in the formal labour market and therefore the pension system (Carranza et al., 2012), which is focussed on individuals who would otherwise have no coverage at all. However, in countries such as Colombia and Peru, the results were disappointing. Not only did coverage remain low, but it actually became even lower. It is still too early to develop more in-depth conclusions about these programmes, but Hinz et al. (2013) consider that matching is moderately effective for increasing programme participation, although it is generally not an effective measure for raising contributions and thus benefit levels.

In conclusion, the shadow economy cannot be counteracted by simply increasing the probability of detection and increasing the level of penalties, as these measures only deal with the effects, rather than causes, of the problem (Williams & Schneider, 2016). The strengthening of institutions and tax morale also plays a crucial role in the mitigation of the shadow economy. Berrittella (2015) emphasises the role that education plays in decreasing shadow economy size, suggesting that policies devoted to improving education levels contribute to a decrease in the shadow economy.

The shadow economy is a phenomenon which is present in all economies, regardless of their development, and it is considered to be of major concern for national authorities and institutions. In terms of its influence from a macroeconomic perspective, the shadow economy decreases tax revenues and undermines the financing of social security systems (European Commission, 2007). According to Schneider (2014), every activity in the shadow economy, by definition, involves a "shadow labour market" to some extent (p. 35). Therefore, this labour market includes all cases where employees or employers, or even both, are engaged in the shadow economy. It is important to note not just the effect that the shadow economy has on the sustainability of the social security system, but how the social security system affects the shadow economy. According to Bajada and Schneider (2009), substantial and prolonged participation in the shadow economy by the unemployed not only distorts the intended equitable distribution of the social security system, but can also engender what the authors call the "dependency trap", whereby shadow economy income (when supplemented by social security payments) discourages active participation in the formal economy. However, even though the social security burden is considered to be one of the main driving forces of the shadow economy, social contributions have never shown a positive correlation with the shadow economy (Bovi, 2003) and, therefore, the effect of this variable is not straightforward. In fact, associated costs are taken into account by economic agents at the time they plan to engage in shadow economy activity and these costs seem to prevent them from doing so. This applies to employees and employers. If social contributions are considered to be fair, and when faced with the prospect of earning a fair wage, employees may perceive that they will lose social benefits by engaging in the shadow economy. This incentivises them to make these contributions. Employers, meanwhile, may consider that social contributions lead to higher productivity and are an appreciated source of credit, and may not, therefore, feel tempted to go

underground. The costs of participating in the informal sector, which are also known as "costs of concealment", are usually modelled in terms of exclusion from certain public goods and services (e.g. social infrastructure, property rights, and the justice system) (Blackburn et al., 2012). The lack of social security entitlements is one of the major consequences of working in the shadow economy (European Commission, 2014).

Brown (2008) identifies three main priorities of a well-designed social security pension system: the mitigation and alleviation of poverty amongst the elderly; to help citizens maintain an acceptable standard of living post-retirement; and solidarity. Brown (2008) referred to solidarity as being the desire of workers and employers to contribute to and support the social security system. To achieve this, he assumes that there should not be a substantial proportion of workers who do not participate in and benefit from the system at the same time. The shadow economy plays a key role in this scenario. If people perceive that the total burden of taxes and social security contributions is too high[5], and that they do not benefit enough from the system, they will enter the shadow economy. As such, social security systems should not create what Brown (2008) defines as "perverse economic incentives" which can lead people to enter the shadow economy. However, the implementation of an effective social security system should always be subject to in-depth analysis by policymakers. If the level of generosity is too low, the social security system fails to maintain adequate support for those experiencing financial hardship, while a very generous system may encourage welfare dependency (Bajada & Schneider, 2009).

Góra (2014) enumerates several ways in which the pension system could be adjusted in order to become properly sustainable, ranging from an increase in the retirement age to an increase in the contribution/tax rate to finance pension expenditures. However, all of these measures would eventually lead to an increase in unemployment and a higher fiscal burden, which are the main driving forces of the shadow economy.

METHODOLOGY AND DATA

Hypothesis

Given the literature review, the following hypothesis is tested: the shadow economy is negatively influenced by social security expenditure and real GDP growth, and is positively determined by the unemployment rate, indirect taxes, and self-employment. Table 2 presents the variables and the expected impact of independent variables on shadow economy size.

[5] According to Brown (2008), "too high" varies from time to time and culture to culture, even though there is always a limit on the total of taxes and contributions applied.

Table 2: Description of the variables

Variables	Expected Impact	Unit	Source
Dependent			
Shadow economy size		Percentage of GDP	Dell'Anno (2007) (from 1983 to 2002) and Schneider (2015) (from 2003 to 2015).
Independent			
Social security expenditure	-	Percentage of GDP	PORDATA
Unemployment rate	+	Percentage	PORDATA
Indirect taxes	+	Percentage of total taxes	PORDATA
Real GDP growth	-	Percentage	PORDATA
Self-employment	+	Percentage of total employment	PORDATA

Models

Two models are estimated in order to study the relationship between shadow economy size and its determinants.

Considering the arguments of Schneider (2014), the first regression model only includes social security expenditure as an independent variable (simple regression model), as follows:

$$ShadowEconomySize_t = \beta_0 + \beta_1 Social\ Security\ Expenditure_t + \epsilon_t$$

where $\beta_1$represents the marginal impact of social security spending on the shadow economy.

On the other hand, considering that other factors might also explain shadow economy size, as previously reviewed in the literature, a multiple regression analysis is conducted which uses the unemployment rate, indirect taxes, real GDP growth, and self-employment as independent variables. All of these variables were chosen based on the most relevant determinants presented by Schneider and Buehn (2012). Therefore, the second model is depicted below:

$$ShadowEconomySize_t = \beta_0 + \beta_1 Social\ SecurityExpenditure_t +$$

$$\beta_2 UnemploymentRate_t + \beta_3\ IndirectTaxes_t +$$

$$\beta_4 RealGDPGrowth_t + \beta_5 SelfEmployment_t + \beta_6 Dummy + \beta_7 Year + \epsilon_t$$

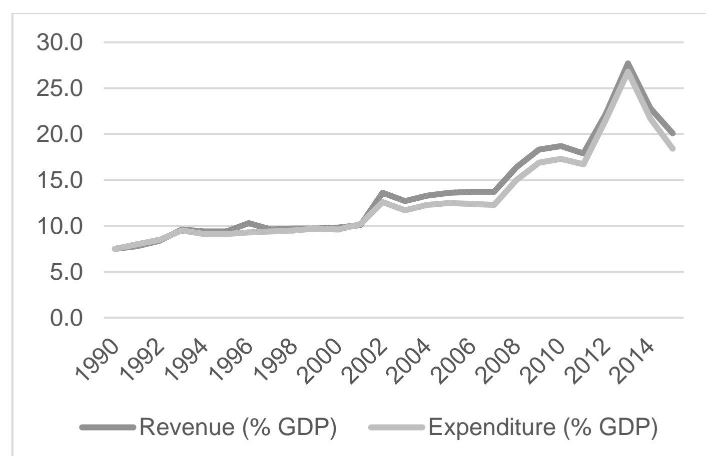
where Dummy = 1, from 2003 onwards, which allows for the correction of any systematic difference that the change of the source regarding shadow economy size data from 2002 to 2003 could cause, while the variable *Year* controls year effects.

All model estimations were implemented using the Stata statistical software package.

Data

The data used covers the period from 1983 to 2015, enabling a balanced time series sample. The Portuguese public pension system is financed through contributions from employers and employees (the earnings-related pension insurance provision or contributory pension system), and also through government or other public entities' transfers (the anti-poverty provision that is non-contributory and guarantees a minimum income in old age). In 1989, the government created the public pension reserve fund to cope with the maturation of the earnings-related pension insurance system. In 2015, this managed around €14,100M in assets, financed through its surpluses and a percentage of between 2% and 4% of obligatory contributions paid by employees to the social security system until the level of assets of the fund attains the equivalent value of two years' of pension benefits (Garcia, 2014). The assets value that year corresponded to 119.9% of the annual pension spending in Portugal and 7.9% of Portuguese GDP (Instituto de Gestão Financeira da Segurança Social, I.P., 2017). Moreover, in 2007, Law No. 4 introduced the sustainability factor (determined by life expectancy) in order to reduce the earnings-related old age pension benefit, and a legal age of retirement that started to be dependent on life expectancy. Therefore, in 2017, the legal age of retirement had already reached 66 years and 3 months.

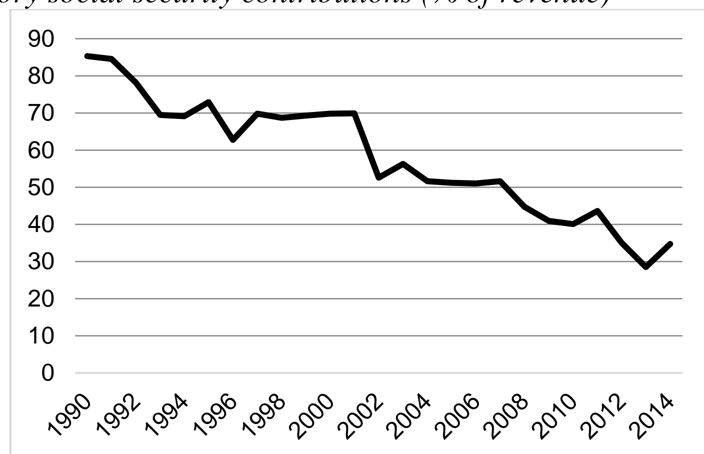
Figure 1. Social security revenue/expenditure (% of GDP)



Source: PORDATA.

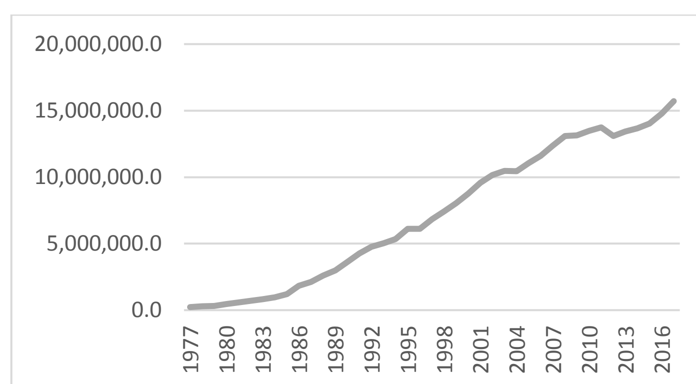
Figure 1 shows social security revenue and expenditures between 1990 and 2014, revealing some sustainability improvements. However, contributions represent a decreasing share of this revenue (Figure 2), which is possibly explained by the growth of unemployment and a labour force that had moved to the informal sector, although in absolute terms (Figure 3). In 2014, total pension expenditure accounted for 15.7% of GDP and almost 75% of all social security expenditure.

Figure 2. Mandatory social security contributions (% of revenue)



Source: PORDATA.

Figure 3. Mandatory social security contributions (thousands of euros)



Source: PORDATA.

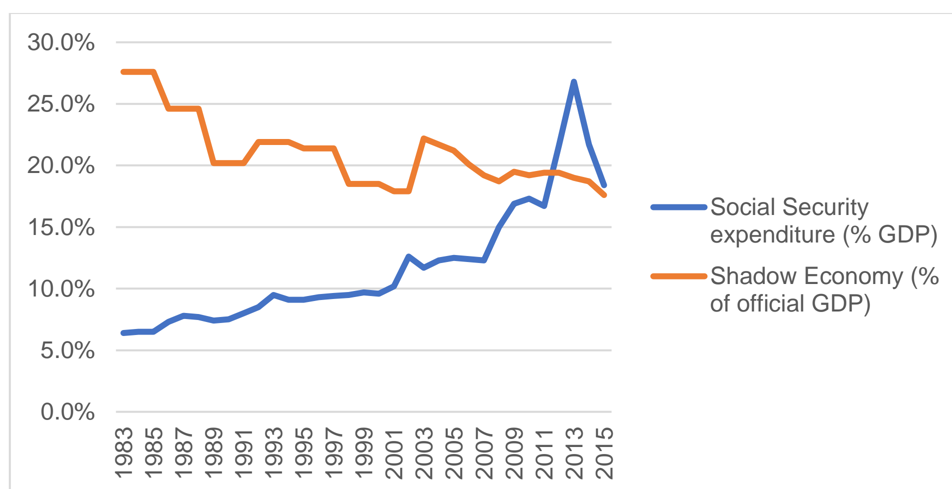
Undoubtedly, demographic factors represent a huge challenge for the sustainability of the Portuguese social security system. Life expectancy has increased substantially, from 67 years in 1970 to 80 years in 2014, and the overall fertility rate fell from above 3 in 1970 to just 1.3 in 2015. The potential sustainability index, which measures how many people aged between 15 and 64 years exist per each older citizen, fell from 6.6 in 1970 to 3.2 in 2015. Projections estimate that the Portuguese population will decrease from 10.3 million to 7.5 million in 2080, with the ageing index[6] doubling from the current ratio of 147 older people per 100 children to 317 older people per 100 children in 2080 (INE, 2017). In addition, the dependency ratio[7], which is directly linked to the potential sustainability index, is projected to rise rapidly from the current 31.8% to an impressive 73% in 2080.

On the other hand, the shadow economy could also have a significant impact on the financial performance of the Portuguese social security system, as its size was estimated to be 17.6% of GDP in 2015 albeit with a decreasing trend (Figure 4) (Schneider, 2015). The corresponding

[6] The ageing index is the ratio of the number of people of an age when they are generally economically inactive (aged 65 and over) to the number of young people (aged from 0 to 14)
[7] The ratio of the number of people of an age when they are generally economically inactive (aged 65 and over) to the number of people of working age (from 15 to 64).

monetary amount would be sufficient, for instance, to pay the total contributory pension system expenditure for approximately two years, and represents thousands of people whose contributions are not making it into the social security system. Therefore, shadow economy activities have a considerable impact on the pension system's sustainability by reducing the basis for calculating pension contributions and leading to the decline of those contributions, as unreported employment results in lower bases for calculating the pension contributions during labour activity, which leads to a smaller initial pension size. If increased black market activities cause a lower demand for the workforce in the official economy, and thus lower pay rises and a higher unemployment rate, the rate of pension increase for all pensioners will be lower and the dynamics of expenditure will be relaxed (Gankova-Ivanova, 2015).

Figure 4. Social security expenditure and shadow economy (% of GDP) (1983-2015)

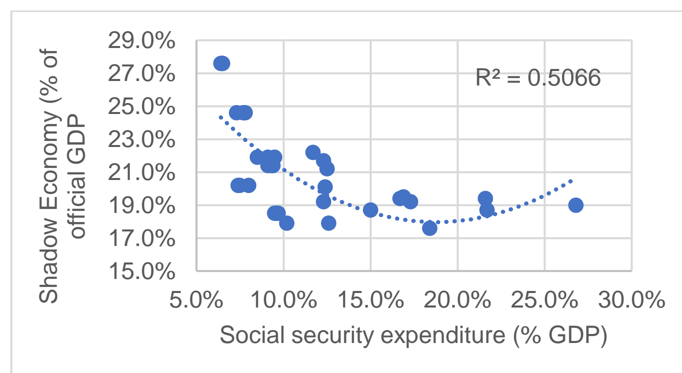


Sources: PORDATA, Dell'Anno (2007), and Schneider (2015).

Figure 4 presents the opposing trends displayed by social security expenditure (% of GDP) and shadow economy size (% of GDP) in Portugal from 1983 to 2015. While social security expenditure seems to increase throughout the years, the shadow economy seems to decrease, which corroborates William & Schneider's (2016) theory.

Figure 5 suggests that the marginal effect of a social security expenditure increase on the reduction of shadow economy has an effect until approximately the 17.5% threshold. After this, the result becomes negative and shadow economy size increases again, which seems to be in line with Schneider and Enste (2000), that is to say, more social transfers lead to stronger negative incentives for beneficiaries to work in the official economy.

Figure 5. Relationship between shadow economy size and social security expenditure (1983-2015)



Source: Author's calculations.

Indeed, Schneider and Enste (2000) mention the disincentives to search for work in the official economy that these systems provide for individuals receiving welfare payments, based on the fact that a person's overall income is higher if they receive these transfers while working in the underground economy. Therefore, the positive effect of an increase of social transfers to mitigate the shadow economy seems to disappear after a certain point. Thus, it seems that policymakers should be focussed not only on implementing economic measures to reduce the size of the shadow economy, but also, probably more importantly, on how the quality of public institutions and the application of certain measures are perceived by citizens, considering that the rationales for engagement in the shadow economy are only partly explained by fiscal and economic factors. This situation is reflected by the size of the shadow economy in different countries. Those with small public sectors and comparatively high tax morale (such as the U.S. and Switzerland) are also those with the smallest shadow economies (Schneider & Enste, 2000; Schneider, 2002), which might indicate a possible relationship between the two variables. Nevertheless, social transfers, allied with a proper level of investment in public services, seem to be truly effective at reducing the size of the shadow economy.

The available data resulted in a sample size from 1983 to 2015. With the exception of the shadow economy size (in % of GDP), all variables were obtained from PORDATA. The former was provided by Dell'Anno (2007) (from 1983 to 2002) and Schneider (2015) (from 2003 to 2015), which justified the introduction of a dummy variable in the second model. Table 3 shows the descriptive statistics.

Table 3: Summary statistics

Variable	Observations	Mean	Std Dev	Min	Max
Year	33	-	-	1983	2015
Dependent Variable					
The shadow economy (% of GDP)	33	0.210	0.028	0.176	0.276
Independent Variables					
Social security expenditure (% of GDP)	33	0.117	0.050	0.064	0.268
Unemployment rate	33	0.077	0.033	0.039	0.162
Indirect taxes (% of total taxes)	33	0.590	0.039	0.520	0.712
Real GDP growth rate	33	0.020	0.028	0.040	0.079
Self-employment (% of total employment)	33	0.242	0.022	0.179	0.271

RESULTS

Table 4 presents the models' estimations. Model 2, with the Newey-West (1987) correction, was also estimated.

Social security expenditure as a proportion of GDP is always statistically significant. Therefore, the results suggest that an increase in social security expenditure as a share of GDP of one percentage point is associated with a decrease in the size of the shadow economy as a share of GDP of 0.224 percentage points, *ceteris paribus*. This corroborates the computations carried out by Williams and Schneider (2016). Furthermore, the negative coefficient on the real GDP growth rate is always statistically significant, in line with previous studies.

On the other hand, the unemployment rate also seems to affect the shadow economy, as an increase of one percentage point in the unemployment rate is associated with an increase of 0.438 percentage points in the size of the shadow economy, *ceteris paribus*.

In addition, both indirect taxes and self-employment are not significant explanatory variables. Furthermore, the R-squared value shows that the explanatory variables explain about 91.2% of the variation in the dependent variable.

To evaluate the quality of the model, regression diagnostics and tests were conducted (Wooldridge, 2015). First, the overall significance test was carried out to see if the model has explanatory power. The value of the F-statistic was 36.80 and the associated p-value was less than 0.01. Therefore, the estimated model coefficients were jointly significant at the 1% level and at least one estimated coefficient is statistically different from zero. We conclude that the chosen explanatory variables can be statistically related to the size of shadow economy. Second, the Breusch-Pagan test was carried out to check whether the residuals are heteroskedastic. Gauss-Markov assumptions stipulate that if residuals are heteroskedastic, then Ordinary Least Squares standard errors will be biased, which would mean that the t-statistic will not have the standard distribution under the null hypothesis and therefore cannot be used for hypothesis tests. The Breusch-Pagan test statistic has a p-value of 0.1913, suggesting that the null hypothesis of homoskedasticity cannot be rejected in Model 2. Similar results are found

when a more general test of heteroskedasticity is used, such as the information matrix test (Cameron & Trivedi, 1990).

Table 4: Regression estimation results

	(1)	(2)	(3)
Variables	**Model 1**	**Model 2**	**Model 2 with Newey-West (1987) correction**
Social security expenditure (% GDP)	-0.319***	-0.224*	-0.224*
	(0.0832)	(0.130)	(0.113)
Unemployment rate		0.438***	0.438***
		(0.128)	(0.128)
Indirect taxes (% of total taxes)		0.0112	0.0112
		(0.0648)	(0.0723)
Real GDP growth rate		-0.221**	-0.221**
		(0.0868)	(0.0953)
Self-employment (% of total employment)		0.0432	0.0432
		(0.151)	(0.130)
Dummy		0.0311***	0.0311***
		(0.00814)	(0.00752)
Year		-0.00366***	-0.00366***
		(0.000637)	(0.000622)
Constant	0.248***	7.498***	7.498***
	(0.0106)	(1.285)	(1.257)
Observations	33	33	33
R-squared	0.322	0.912	0.912

Source: STATA 13
Note: Standard errors in parentheses. ***, **, * denote significance at the 1%, 5%, and 10% levels.

In conclusion, the joint statistical significance and diagnostic tests reveal that social security spending and real GDP growth rate do indeed have a statistically significant negative impact on the size of the shadow economy, whereas the unemployment rate has a positive impact on it.

CONCLUSION

Our empirical analysis suggests that there is a statistically significant negative relationship between social security expenditure and the shadow economy, and between real GDP growth rate and the shadow economy. Therefore, the role of those two variables should be enhanced in reducing the shadow economy. As expected, the unemployment rate has a significant positive relationship with shadow economy size. This suggests that increasing social security expenditure and economic growth, and reducing unemployment, can help to reduce the size of

the shadow economy. It is worth noting that a reverse causality is possible. Thus, when a larger proportion of the economy, including the labour force, moves to the official sector, it allows for the collection of more taxes and social security contributions. This would lead to higher social security expenditure and could enhance economic growth, for example, through public investment in infrastructure. A more advanced analysis would need to take this potential endogeneity of explanatory variables into account.

Finally, not only is the shadow economy a threat to the financial sustainability of the social security system, it also causes macroeconomic data distortions which, consequently, affect policymakers' decisions. Therefore, reforms to solve the alleged financial problems of the social security system should take its present role in mitigating the shadow economy into account.

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