# The Taxman Cometh: Behavioural Approaches to Improving Tax Compliance in India

Anirudh Tagat<sup>1</sup>\*

#### **Abstract**

Academics and policymakers are increasingly looking to understand the underlying behavioural motives for tax compliance in developing and developed countries. Contemporary models of tax compliance view the decision to evade as an act of dishonesty, and experimental approaches have tested the impact of social norms in influencing such behaviour. India is a prime avenue to explore such an intervention given the lack of past research in this area as well as recent policy focus on curbing tax evasion and widening the tax base. This paper provides an adapted behavioural intervention for curbing tax evasion in India tailored for its unique socio-cultural context. We outline the experimental design and potential challenges in implementation. Implications for policy and potential areas of government intervention are provided, such as adopting a stance of legitimate power that aims to build trust among citizens and the government, and improve tax morale.

#### **Keywords**

tax compliance — nudging — Gandhi — India — dishonesty

<sup>1</sup> Department of Economics, Monk Prayogshala, India

\*Corresponding author: at@monkprayogshala.in

### Introduction

Tax compliance refers to the degree to which taxpayers comply with enforced tax rules and regulations. There are a variety of factors determining tax compliance highlighted in traditional economic models of tax compliance (Allingham and Sandmo, 1972; Srinivasan, 1973). In such models, the tax compliance decision is assumed to depend on tax rates and existing levels of enforcement by the taxation authority, and the return from 'hiding' income or holding money in the black economy. Additional determinants include liquidity constraints for the taxpayer (such as cost of compliance), and behavioural constraints (such as tax morale). In particular, recent focus on tax compliance has adopted an experimental approach to understanding underlying behavioural factors in filing tax returns (Mascagni, 2018). Indeed, policymakers are also becoming more interested in the use of behavioural interventions (and experiments) that seek to influence taxpayer behaviour through the use of social norms (Holzinger and Biddle, 2016). Tax compliance is thus important for an economy as governments often employ tax revenues to invest in infrastructure, health, education (among other public goods) that seek to maximize social and economic welfare of taxpayers.

Setting aside policy instruments, such as the tax rate or levels of enforcement that can influence tax compliance, this paper focuses on behavioural factors; specifically, the paper aims to understand behavioural motives to dishonestly report incomes in tax returns, in order to achieve better tax compliance. Literature (Alm, Bernasconi, Laury, Lee, and Wallace, 2017) has suggested that deception in tax compliance can be either extensive (i.e., whether or not to report dishonest

incomes) or intensive (i.e., how much incomes are underreported in tax returns). Each of these are a different form of deception, and thus vary by different factors that influence them, such as disclosure mechanisms, voluntary or mandatory (Friesen and Gangadharan, 2013), as well as monitoring. Thus, in order to address the overall problem of dishonesty in tax compliance, targeted interventions could have a significant role to play in influencing these behavioural motives (Hofmann, Hartl, Gangl, Hartner-Tiefenthaler, and Kirchler, 2017).

India provides a useful framework for such a study since there are concerns around a low direct tax-to-GDP ratio (Chaudhuri et al., 2006) in addition to corruption (The Hindu, 2016). Furthermore, there have been very few studies in India that have sought to explore the behavioral dimensions of the tax compliance (or evasion) problem in India (but see Chattopadhyay and Das-Gupta, 2002; Das-Gupta et al., 1995).

Recent policy focus in India has shifted towards more transparency in data on tax returns filed as well as a push for 'clean money' and widening the tax base. Recently released data on tax compliance in India suggests that the current rate of compliance is at 11.6% (Central Board of Direct Taxes, 2018b), which does not include those individuals who do not have a taxpayer identity. This implies that of nearly 350 million individuals who have taxpayer status, only 43 million filed taxes as of 2017. This is precisely the problem that policymakers and enforcement agencies are looking to address with a slew of measures such as amnesty schemes. What has been lacking is a targeted and direct approach to changing behaviour related to tax compliance in India that has the po-

tential to guide policy toward efficient outcomes. To the best of our knowledge, this paper provides the first proposal for a field experiment to investigate tax compliance in India using behavioral interventions to capture social norms and cultural contexts (see also Tandon and Rao, 2017). In this context, this paper proposes a behavioural intervention adapted from other countries that can be used to improve tax compliance in India, using the unique socio-cultural context in the country.

The remainder of the paper is organized as follows. Section 2 describes the history of taxation policy in India as well as extent of the tax compliance (from available secondary data) in recent years. Section 3 reviews past interventions in developing and developed countries that are behaviourally informed and invoke social norms to spur tax compliance. There is special emphasis here on relating literature and evidence on dishonesty to tax compliance behaviour. Section 4 provides an overview of the proposed intervention, detailing the specific socio-cultural aspects that could be employed in inducing tax compliance, as well as potential challenges in implementation. Section 5 concludes the paper and contains implications for policy.

# **Background: Taxation Policy and Evasion** in India

Direct taxation in India largely consists of the income tax and corporate profit tax (Rao and Rao, 2005). The Direct Tax to GDP ratio in India has seen a steady trend at around 5.7% over the past decade, which rose significantly from the below 4% levels at the start of 2001-02 (Figure 1). Variations in the growth rate of taxes could also reflect various policy changes in personal income tax (and corporate tax), with the most recent change taking place under the Income Declaration Scheme (IDS) in 2016-17. The IDS was essentially a tax amnesty scheme for past evaders, who were given an opportunity to pay taxes based on their undisclosed income from previous years. <sup>1</sup>

Personal income tax collections have risen, on average, by 16.65% between 2000 and 2016-17 – the highest increase came between 2005 and 2006, where personal income tax collections increased by nearly 41% (Income Tax Department, 2017). The sharp reduction in taxes collected between 2001-02 is perhaps a reflection of the restructuring of the Income Tax department that was taking place in 2000-01, with a reduction in overall workforce and stagnation in work (Central Board of Direct Taxes, 2018a). The subsequent increase (up to 2006-07, when e-filing of returns was introduced) could be on account of the computerization of processing returns as well as submission of the Kelkar Committee Report that recommended an overhaul of existing tax policies.

The Income Tax (IT) Department in India has, in recent years, steadily intensified the monitoring of fund flows and enforcement by identifying high-value cash transactions. In recent years, the growth in the number of effective assesses (individuals filing tax returns) has been decreasing, with the growth rate slowing to 2.5% between 2015 and 2016. This data should be seen in the context of the total number of entities eligible to pay tax during the same period. CBDT data released in 2018 (CBDT, 2018) showed that, of approximately 370 million PAN allottees, 70.32 million had paid taxes, at a compliance rate of approximately 19%.<sup>2</sup>

There are very few studies that have looked at tax compliance in India, with even fewer that focus on income tax.<sup>3</sup> Of these, Das-Gupta et al. (1995) explore the impact of changing tax policies between 1965 and 1992 (including demonetization of high-value currency notes and tax amnesty schemes). They test for two distinct effects of increases in tax rates – an investment effect (switching from white assets to black given a decrease in post-tax returns on white assets) and the disclosure effect (lower reporting of incomes in tax returns filed). They find that increases in enforcement efficiency (e.g., more searches into asset holdings) significantly affect the number of income tax returns filed, but do not have any influence on compliance rates. They also do not find any significant impact of tax amnesty schemes or demonetization policies<sup>4</sup> on tax compliance rates. This suggests that tax compliance (and conversely, tax evasion) depended largely on the intensity and effectiveness of enforcement by the government.

Chattopadhyay and Das-Gupta (2002) use self-report survey data on cost of compliance at the individual-level to suggest that increase in compliance costs (in terms of time, money, or both) led to a reduction in tax compliance in 2000-01. One of the key drivers of a reduction in taxes collected is having paid bribes (informal payments) to tax authorities (or other advisors) that are compliance costs that can be addressed by policy.

Another strategy that has been used by tax authorities in India to improve tax compliance is related to communication via mass media. These include mass media campaigns that are aimed at informing taxpayers regarding filing deadlines, procedures, and taxpayer amnesty schemes. A part of these communications has attempted to focus on priming individuals to their 'national duty' to pay tax (along the lines of building tax

<sup>&</sup>lt;sup>1</sup> Along with the IDS, Operation Clean Money (OCM) was launched by the Central Board for Direct Taxes (CBDT) to take charge of undisclosed income in light of the demonetization of high value denominations in November, 2017. Given the recency of these policies, it is difficult to empirically assess their impact at this stage.

<sup>&</sup>lt;sup>2</sup>Recent policy measures in India have been more direct in attempting to widen the tax base: the recent demonetization exercise (where high value currency notes were removed from circulation) was coupled with greater scrutiny of tax returns (Krishnan, 2018). The revised tax return form asked individuals if they deposited demonetized banknotes, as well as their source.

<sup>&</sup>lt;sup>3</sup>Mishra, Subramanian, and Topalova (2008) study the impact of customs reforms in India on the likelihood of evasion of duties for a given tariff. Given that such tariffs vary by product-related characteristics, the study shows that not only does evasion increase in response to an increase in tariffs, but particularly so when the value of the product is difficult to ascertain for tax officials.

<sup>&</sup>lt;sup>4</sup>The first instance of demonetization of large currency notes took place in 1978. The more recent demonetization policy was undertaken in 2017, the effects of which remain to be studied in this context.



**Figure 1.** Direct Taxation in India Source: Direct Taxes data, CBDT (2018a)

morale), as well as instill fear in potential evaders (particularly in advertisements for tax amnesty schemes such as the IDS). Despite greater communication efforts through mass media by the IT Department, there have been only marginal improvements in tax compliance rates, which are difficult to ascribe solely to change in communications strategy. Such mass media campaigns have also thus far not been designed to specifically target tax evaders and its effects are therefore difficult to isolate. Thus, there is scope to explore policy interventions that are targeted to a specific class of taxpayers (and non-taxpayers) and informed by behavioural science.<sup>5</sup>

## Behavioural Interventions to improve compliance

Findings from behavioural science studies applied to public policy have suggested that low-cost reminders for taxpayers to pay their taxes can raise compliance levels dramatically (e.g. Hallsworth, List, Metcalfe, and Vlaev, 2017). Recent largescale field experiments in public economics have attempted to tackle the problem of incentivizing tax compliance. In the United Kingdom, researchers working with the Treasury Department were able to increase taxes collected by approximately £12 million. The authors show that this increased overall tax compliance levels by nearly 15% in the 23-day period before taxes were due. The most common intervention involves priming a social norm that implies notions of equity, fairness, or levels of enforcement (Castro and Scartascini, 2013; Cummings, Martinez-Vazquez, McKee, and Torgler, 2009; Iyer, Reckers, and Sanders, 2015). These have found mixed impacts, with no robust impacts on the rate of tax payment. There is extensive evidence from OECD countries that shows the extent to which behavioural insights are used in tax policies (OECD, 2017). As is the case with other intervention areas, many 'nudges' here are highly context-specific to the country's tax policies. For example, in Canada, the state revenue agency used reminder letters to ensure that money put aside in tax-free savings accounts did not exceed the legal limit.<sup>6</sup>

Evidence has suggested that the mode of reporting plays an important role in truthful disclosure, with mandatory reporting resulting in more reporting than voluntary mechanisms (Friesen and Gangadharan, 2013). Thus, there are two underlying (and conflicting) behavioural preferences that can be measured: aversion to lying, or preference for truth-telling (Sánchez-Pagés and Vorsatz, 2009). Innes (2017) builds a theoretical model to study the implications of lie aversion for self-reporting mechanisms (such as tax compliance). The model shows that a society stands to benefit from heterogeneous preferences towards lie aversion, but also that having an aversion to lying (relative to no lie aversion) is welfare-increasing.

Typically, experiments in truth-telling involve a mechanical task (e.g., basic arithmetic operations) wherein participants earn a piece-meal rate for each self-reported item completed correctly. The self-report earnings are compared with the actual number of successful responses to determine whether or not individuals were dishonest as well as the extent of dishonesty (Friesen and Gangadharan, 2012). An important variation in measuring truth-telling in experiments comes in the form of the sender-receiver game (Gneezy, 2005). Here, lying increases one's payoff at the expense of the other, which may be applicable in the tax compliance context – where evading taxes leads to lower revenue for the government, and therefore reduced benefits from public goods provision (among others) to the general public. Complying truthfully with existing tax laws could also be seen as the willingness to accept a loss in

<sup>&</sup>lt;sup>5</sup>More recently, the Central Board for Indirect Taxes and Customs (CBIC) has undertaken efforts to institute a behavioural insights unit with the intention of improve compliance rates (Press Trust of India, 2018). With the rollout of a consolidated indirect tax in the Goods and Services Tax (GST), the CBIC is looking to intervene using experimental designs similar to the ones employed in the UK.

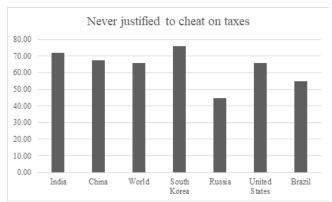
<sup>&</sup>lt;sup>6</sup>Canada has witnessed various behavioural interventions in tax policy, targeted at both taxpayers seeking benefits as well as employers who owe tax debt (OECD, 2017, chap. 12).

gross income at the individual level, where disclosing a truthful amount (as opposed to a lower, or zero amount to be taxed) could be influenced by risk attitudes and loss/gain frames. Grolleau et al. (2016) suggest that loss aversion plays an important role in deception, where the fear of a loss motivates a higher level of lying than the incentive to gain.

In viewing tax evasion as an act of deception, it is important to understand the non-economic factors that could affect deception in such contexts. Apart from gender differences (where men are more likely to be dishonest and to a greater extent; Friesen and Gangadharan, 2012), there are personality differences and social preferences studied by Cappelen et al. (2013). Most importantly, individuals with pro-social preferences (in this case, those who transferred a positive amount in the dictator game) were more likely to tell the truth in the sender-receiver game.

What emerges from these strands of literature is that social norms could shape the (intrinsic and extrinsic) motivations of individuals to pay tax (Luttmer and Singhal, 2014). The decision to comply with existing tax regimes and truthfully report one's income is therefore closely tied to understanding how acceptable it is for others in that society (social norms), and whether there is an existing 'culture' of such behaviour. However, it remains unclear from extant literature whether tax morale – which may be described as the desire to meet income disclosure (and tax payment) requirements regardless of incentives – is significantly correlated with tax compliance.

Various survey-based measures of tax morale exist, such as questions on how justified tax cheating is (Inglehart et al., 2014). Data from past waves of the World Values Survey (WVS) exhibit cross-country variations in response to this question, suggesting that cultural values could be an important determinant of attitudes toward (and perceptions of) tax compliance. India ranks on the conscientious side of the distribution, with 72% of respondents (on average, over 5 waves) arguing that it was never justified to cheat on one's taxes. Figure 2 reports the corresponding average percentages for other select countries – with the world average at 65.6% and Russia being the lowest at 45%. These data suggest that Indians are not outliers when it comes to perceptions toward tax evasion and deception in tax compliance. Designing interventions that are behaviourally informed and targeted toward a general population may be of interest to policymakers seeking to improve tax compliance in India. At the same time, it is worth considering some of the socio-cultural context in India in a bid to improve the current levels of tax compliance.



**Figure 2.** Percentage reporting tax cheating is never justified (average over waves 2 to 6);  $N_{wave2} = 9,505; N_{wave3} = 12,482; N_{wave4} = 7,778; N_{wave5} = 13,494; N_{wave6} = 20,894$  Source: World Values Survey, waves 2 to 6

### **Curbing tax evasion in India**

We propose a novel experimental approach to measuring the likelihood and extent of deception (in the context of tax evasion) in India. Given that secondary data on tax evasion remains unavailable, such an experiment could be carried out on specific subsamples of taxpayers and non-taxpayers.

#### **Designing a Tax Compliance Intervention for India**

We adapt experimental approaches from other countries such as the UK, Costa Rica, and Guatemala that employ social norms to nudge tax compliance. The proposed intervention aims to add cultural context to nudges in order to assess whether there are specific motivations for tax compliance (or evasion) arising out of cultural beliefs. We outline this intervention as an illustration of how it could be implemented suited to the context of India and, in the following section, we discuss potential challenges and opportunities in implementing these interventions.

Since the tax authority in India is increasing data availability related to filing of tax returns at the individual level, a good starting point for the sample in consideration is the PAN (Permanent Account Number) database that is an indicator of income-earning (or spending) economic status in India. This PAN database can be used to narrow down specific subsamples where interventions can be tested.

### **Social Norms and Public Goods Priming**

In the first case, taxpayers as well as non-taxpayers would be sampled and sent email reminders regarding the filing deadline for tax returns. They would be categorized into three groups: (a) social norms prime; (b) public goods prime; and (c) reminder only (control group). The norms-based messages can be found in Table 1 (Panel A). These are adapted from messages used in the Behavioural Insights Team (BIT) interventions in the UK and Guatemala, which have been shown to have a positive influence on tax compliance rates (Kettle, Hernandez, Ruda, and Sanders, 2016). Messages

<sup>&</sup>lt;sup>7</sup>The only study examining deception (using non-standard measures of extrinsic motivation to cheat) using data from an Indian participant sample can be found in Pascual-Ezama, Fosgaard, Cardenas, Kujal, Veszteg, Gil-Gómez de Liaño, Gunia, Weichselbaumer, Hilken, Antinyan, Delnoij, Proestakis, Tira, Pratomo, Jaber-López, and Brañas-Garza (2015). Here, the authors find that the level of cheating among Indian participants was similar to that of the overall average of participants from 15 other countries.

priming use of public goods are similar to what the CBDT has promoted previously, albeit not in a targeted manner toward specific taxpayers. These are found in Table 1 (Panel B) and could be supplemented with visual imagery like those used in the advertising campaigns.

Such messages will still be sent only to a fraction of taxpayers who access and use electronic filing of tax returns. With the use of available data on tracing whether email links are opened, the sample can be further narrowed to a specific subsample of (potential) taxpayers who use the e-filing system as well as check their email for notifications regarding filing of returns. The email reminder (in the control group) will be sent one month before filing due date (see Appendix A for example of email reminder sent currently), while individuals randomly assigned to the treatment group will receive any one of the two primed messages alongside the reminder.

In line with Mazar et al. (2008), we expect that those primed with messages of social norms are most likely to be strongly influenced by such email reminders, followed by those who are primed with the public goods message. Such a finding would be similar to what has been reported using similar messages in the UK and Guatemala (Kettle, Hernandez, Ruda, and Sanders, 2016). This is consistent with the theory of self-maintenance and reputation, where it matters to an individual to adhere to social norms.

#### **Cultural Beliefs and Local Norms**

The second intervention will be more targeted and will use specific cultural cues to understand what factors influence tax evasion at the level of the individual taxpayer. As with the first intervention, there will be two treatments and one control group. The messages that will be delivered to individuals using the e-filing system are reported in Table 2. The first set of messages are related to priming cultural norms of honesty associated with M.K. (Mahatma) Gandhi, a freedom fighter and national icon, often referred to as the central figure in the Independence movement in India (Rao, 2011). The use of Gandhi in priming individuals' cultural context is unique to India for several reasons. First, the image of Gandhi is a fixture on banknotes and hence easily associated with money.<sup>9</sup> Second, imagery associated with Gandhi has been used in other public policies (e.g., the Swachh Bharat Abhiyan, or Clean India Mission) aimed at promoting behaviour change through his ideology. 10 Invoking Gandhi in this context has

also been done before in spearheading national movements related to anti-corruption and transparency (Khandekar and Reddy, 2015; Sharma, 2014), suggesting that Gandhi continues to be strongly viewed as a crusader against wrongs in society.

The second arm of the intervention draws on socio-demographic data available with the CBDT that localize the decision to comply honestly with taxes to the immediate environment of the taxpayer. Although there has been some past work done in this type of intervention (e.g., the BIT experiment in the UK), the targeting of such a norm to specific subsamples may be useful in the Indian context because localized norms can have a much larger influence on decisions compared to national or global norms (Onu and Oats, 2014). The control condition remains the same as in the first intervention. To begin with, these could be in the form of pilot studies (a sample size of up to 1000-2000 individual tax payers) that use email reminders to assessees priming these various norms whose filing can be monitored once the reminder has been sent.

On the basis of past results from similar studies (e.g. Bott, Cappelen, Sørensen, and Tungodden, 2014), we expect that the cultural context message will affect the extensive margin since it makes a moral appeal to individuals considering whether, or not, they should truthfully report their incomes. On the other hand, we expect the social status message to influence the intensive margin, where existing taxpayers consider the magnitude of deviation from truthful reporting of their own incomes.

#### **Caveats and Limitations**

Given the nature of the intervention, it is important to outline some of the potential challenges associated with its implementation. One of the key challenges lies in identifying and recruiting the sample of interest, particularly since the taxpayer database is maintained by the CBDT. With the recent increase in number of tax returns filed electronically (CBDT, 2018), there is extensive scope to implement such an intervention. Moreover, the CBDT's past interest in using mass media campaigns in eliciting tax compliance, as well as the relatively low-cost-low-effort paradigm of the experiment, could be favourable in supporting implementation, even if at a pilot level to begin with. Given that there is presently no evidence on the effectiveness of such nudges in the Indian context, it might be challenging to convince tax authorities about their value. However, given the recent interest in implementing behavioural interventions in India (Press Trust of India, 2018), this might not be the most significant challenge. Rather, there might be more operational challenges as we describe below.

Conceptually, behavioural interventions typically require a large sample size to demonstrate any significant change in expected behaviour.<sup>11</sup> There is the risk that imagery of Gandhi may be 'normalized' among taxpayers, given that his

<sup>&</sup>lt;sup>8</sup>From recently released data (Central Board of Direct Taxes, 2018b), nearly 43 million tax returns were filed (as of late 2015) via the e-filing system, out of the total number of PAN allottees of 351 million (as of 2017). This puts the prospective sample between 11 to 15% of (potential) taxpayers.

<sup>&</sup>lt;sup>9</sup>Ironically, modern day descendants of Gandhi do not favour the 'commodification' and branding of Gandhi in this manner (Mazzarella, 2010), as was evident in recent events where the rights to his likeness were reported to have been sold to an advertising group.

<sup>&</sup>lt;sup>10</sup>It should be noted, however, that Gandhi, in his efforts to overthrow British rule in pre-Independence India, had strongly advocated tax noncompliance as a means of overthrowing the local governments (Financial Express, 2017). Given that his ideology and quotes in this context are not well known to taxpaying individuals, it is less likely that it will confound the original intent of the intervention.

<sup>&</sup>lt;sup>11</sup>In terms of isolating treatment effects, the lack of socio-demographic information (apart from age, sex, and location) is a limitation that can be overcome with the use of follow-up surveys embedded in feedback collection from the CBDT (so as to keep the original intention of the study private).

**Table 1.** Summary of First Intervention Messages

(A) Social Norms	(B) Public Goods	(C) Control
"Nine out of ten people pay their tax on time" (basic norm)		
"Nine out of ten people in India (or city) pay their tax on time" (country norm)	"Paying tax means we all gain from vital public facilities like hospitals, roads, and schools" (gain)	Our records show that your self-assessment tax filing online is over- due. The deadline for filing the return is/was XXX, 20XX. In case you have
"Nine out of ten people in India pay their tax on time. You are currently in the very small minority of people who have not paid us yet" (minority norm)	"Not paying tax means we all lose out on vital public services like hospitals, roads, and schools" (loss).	already filed for Income Tax for Assessment Year (AY) 20XX to 20XX, please ignore this message.

Table 2. Summary of Second Intervention Messages			
(A) Cultural Context	(B) Status	(C) Control	
A visual cue in which a caricature or likeness of Mahatma Gandhi is used, with the caption below that reads:	"In XXX city where you reside, x% of all PAN holders pay their taxes regularly and on time."	Our records show that your self-assessment tax filing online is over-due. The deadline for filing the return is/was XXX, 20XX. In case you have already filed for Income Tax for Assessment Year (AY) 20XX to 20XX, please ignore this message.	
"See no evil, hear no evil, speak no evil"	"In XXX city where you reside, x% have received special certificates for their timely and accurate tax filing."		

likeness appears regularly on currency notes. Furthermore, the language used in the email is often in English, excluding non-English email users or taxpayers from the intervention. While the latter issue may be necessitated as inclusion criteria, Gandhi's likeness is still unexpected by taxpayers in their email reminders, and therefore could nonetheless serve as a trigger.

# Policy Implications and Concluding Remarks

Tax compliance continues to remain a critical problem in a developing country such as India, where the government has repeatedly made efforts to widen the tax net through more enforcement and moral suasion, as well as technology-based improvements. The interventions proposed here are designed to form initial steps toward understanding the behavioural motives underlying tax evasion and dishonesty in tax compliance in India. In line with critiques of nudge policies (Mols, Haslam, Jetten, and Steffens, 2015), it is recommended to pilot this intervention in a smaller sample to identify its efficacy as well as potential scalability. As has been suggested elsewhere (e.g. Galle, 2014), it may be worth considering behavioural interventions as complements to other tax policies such as mandatory reporting of tax record numbers, or changing incentives associated with compliance.

Given the richness of tax compliance studies using experiments (laboratory and field) in recent years in economics as

well as legal sciences (Mascagni, 2018), this an appropriate time to adapt such studies to India. This is not only because there is a dearth of studies in this domain in the country, but also because there is little evidence on which tax policies and design of tax systems can be formulated or revised. The CBDT has only recently started releasing data on PAN allottees as well as volumes of returns filed, giving a glimpse into the extent of the levels of tax compliance in India since 2013-14 (Central Board of Direct Taxes, 2018b). Such secondary data can be complemented by evidence from tax compliance experiments, and targeted activities (in line with recent policies such as Operation Clean Money) seeking to curb tax evasion at both intensive and extensive margins.

The use of social norms and cultural context is particularly important in a country such as India, where past studies have indicated that behaviour change is possible in a number of contexts (see, for example, Tagat and Kapoor, 2018). The proposed interventions argue that use of culturally relevant imagery (such as Mahatma Gandhi) could influence tax compliance decisions, where dishonesty is discouraged by moral appeal. Additionally, the use of localized norms forms another potential intervention that has been effective in improving compliance elsewhere.

## **Acknowledgments**

I am grateful for comments and useful suggestions from Hansika Kapoor and Salil Bijur.

#### References

- Allingham, M. G. and A. Sandmo (1972, nov). Income tax evasion: a theoretical analysis. *Journal of Public Economics* 1(3-4), 323–338.
- Alm, J., M. Bernasconi, S. Laury, D. J. Lee, and S. Wallace (2017, aug). Culture, compliance, and confidentiality: Taxpayer behavior in the United States and Italy. *Journal of Economic Behavior and Organization 140*, 176–196.
- Bott, K., A. W. Cappelen, E. Ø. Sørensen, and B. Tungodden (2014, jun). You've Got Mail: A Randomized Field Experiment on Tax Evasion. NHH Norwegian School of Economics.
- Cappelen, A. W., E. Ø. Sørensen, and B. Tungodden (2013, sep). When do we lie? *Journal of Economic Behavior & Organization 93*, 258–265.
- Castro, L. and C. Scartascini (2013). Tax Compliance and Enforcement in the Pampas: Evidence from a Field Experiment.
- CBDT (2018). Direct Taxes Data.
- Central Board of Direct Taxes (2018a). Direct Taxes Data.
- Central Board of Direct Taxes (2018b). History of direct taxation.
- Chattopadhyay, S. and A. Das-Gupta (2002). The Personal Income Tax in India: Compliance Costs and Compliance Behaviour of Taxpayers. *National Institute of Public Finance and Policy, New Delhi*, 1–50.
- Chaudhuri, K., F. Schneider, and S. Chattopadhyay (2006). The size and development of the shadow economy: An empirical investigation from states of India. *Journal of Development Economics* 80(2), 428–443.
- Cummings, R. G., J. Martinez-Vazquez, M. McKee, and B. Torgler (2009, jun). Tax morale affects tax compliance: Evidence from surveys and an artefactual field experiment. *Journal of Economic Behavior and Organization* 70(3), 447–457.
- Das-Gupta, A., R. Lahiri, and D. Mookherjee (1995). Income Tax Compliance in India: An Empirical Analysis. *Word Development* 23(12), 2051–2064.
- Financial Express (2017, oct). Middle class burdened with tax: What Mahatma Gandhi would have done if he faced similar situation.
- Friesen, L. and L. Gangadharan (2012, dec). Individual level evidence of dishonesty and the gender effect. *Economics Letters* 117(3), 624–626.
- Friesen, L. and L. Gangadharan (2013, oct). Designing self-reporting regimes to encourage truth telling: An experimental study. *Journal of Economic Behavior and Organization* 94, 90–102.

- Galle, B. D. (2014). Tax, Command...or Nudge? Evaluating the New Regulation. *Texas Law Review* 92(4), 837–894.
- Gneezy, U. (2005). Deception: The role of consequences. *American Economic Review 95*(1), 384–394.
- Grolleau, G., M. G. Kocher, and A. Sutan (2016, dec). Cheating and Loss Aversion: Do People Cheat More to Avoid a Loss? *Management Science* 62(12), 3428–3438.
- Hallsworth, M., J. A. List, R. D. Metcalfe, and I. Vlaev (2017, apr). The behavioralist as tax collector: Using natural field experiments to enhance tax compliance. *Journal of Public Economics 148*, 14–31.
- Hofmann, E., B. Hartl, K. Gangl, M. Hartner-Tiefenthaler, and E. Kirchler (2017). Authorities' coercive and legitimate power: The impact on cognitions underlying cooperation. *Frontiers in Psychology* 8(JAN), 5.
- Holzinger, L. A. and N. Biddle (2016, oct). Behavioural insights of tax compliance: An overview of recent conceptual and empirical approaches.
- Income Tax Department (2017). Income Tax DepartmentTime Series Data Financial Year 2000-01 to 2016-17.Technical report, Ministry of Finance, Government of India, New Delhi.
- Inglehart, R., C. Haerpfer, A. Moreno, C. Welzel,
  K. Kizilova, J. Diez-Medrano, M. Lagos, P. Norris,
  E. Ponarin, B. Puranen, et al. (2014). World values
  survey: Round six-country-pooled datafile 2010-2014.
  JD Systems Institute, Madrid.
- Innes, R. (2017, oct). Lie aversion and self-reporting in optimal law enforcement. *Journal of Regulatory Economics* 52(2), 107–131.
- Iyer, G. S., P. M. J. Reckers, and D. L. Sanders (2015). Increasing Tax Compliance in Washington State: A Field Experiment. *National Tax Journal* 63(1), 7–32.
- Kettle, S., M. Hernandez, S. Ruda, and M. Sanders (2016, jun). Behavioral interventions in tax compliance: evidence from Guatemala.
- Khandekar, A. and D. S. Reddy (2015, jul). An Indian summer: Corruption, class, and the Lokpal protests. *Journal of Consumer Culture* 15(2), 221–247.
- Krishnan, A. (2018, apr). What demonetisation did to tax collections.
- Luttmer, E. F. P. and M. Singhal (2014, nov). Tax Morale. *Journal of Economic Perspectives* 28(4), 149–168.
- Mascagni, G. (2018). From the lab to the field: A review of tax experiments. *Journal of Economic Surveys* 32(2), 273–301.
- Mazar, N., O. Amir, and D. Ariely (2008). The Dishonesty of Honest People: A Theory of Self-Concept Maintenance. *Journal of Marketing Research* 45(6), 633–644.

- Mazzarella, W. (2010, feb). Branding the Mahatma: The untimely provocation of Gandhian publicity. *Cultural Anthropology* 25(1), 1–39.
- Mishra, P., A. Subramanian, and P. Topalova (2008). Tariffs, enforcement, and customs evasion: Evidence from India. *Journal of Public Economics* 92(10-11), 1907–1925.
- Mols, F., S. A. Haslam, J. Jetten, and N. K. Steffens (2015). Why a nudge is not enough: A social identity critique of governance by stealth. *European Journal of Political Research* 54(1), 81–98.
- OECD (2017, mar). *Behavioural Insights and Public Policy*. Paris: OECD Publishing.
- Onu, D. and L. Oats (2014). Social Norms and Tax Compliance.
- Pascual-Ezama, D., T. R. Fosgaard, J. C. Cardenas, P. Kujal, R. Veszteg, B. Gil-Gómez de Liaño, B. Gunia, D. Weichselbaumer, K. Hilken, A. Antinyan, J. Delnoij, A. Proestakis, M. D. Tira, Y. Pratomo, T. Jaber-López, and P. Brañas-Garza (2015, aug). Context-dependent cheating: Experimental evidence from 16 countries. *Journal of Economic Behavior and Organization 116*, 379–386.
- Press Trust of India (2018). Revenue Dept to focus on behavioural patterns of taxpayers to improve GST compliance.
- Rao, M. G. and R. K. Rao (2005). *Trends and Issues in Tax Policy and Refrom in India*.
- Rao, V. (2011, apr). Hindu Modern: Considering Gandhian Aesthetics. *Public Culture* 23(2), 377–394.
- Sánchez-Pagés, S. and M. Vorsatz (2009). Enjoy the silence: An experiment on truth-telling. *Experimental Economics* 12(2), 220–241.
- Sharma, A. (2014, jul). Epic Fasts and Shallow Spectacles: The 'India Against Corruption' Movement, its Critics, and the Re-Making of 'Gandhi'. *South Asia: Journal of South Asian Studies* 37(3), 365–380.
- Srinivasan, T. N. (1973). Tax evasion: a model. *Journal of Public Economics* 2(4), 339–346.
- Tagat, A. and H. Kapoor (2018). "sacred nudging" and sanitation decisions in india. *India Review 17*(3), 301–319.
- Tandon, S. and R. K. Rao (2017). Tax compliance in India: An experimental approach.
- The Hindu (2016, dec). India needs higher tax compliance: Jaitley.