

# Evaluating the Impact of SMS Reminders on Tax Compliance

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## Final Project Report

**SAT Project Team:** Sergio Monterroso Garcia, Juan Carlos Aguirre Argueta, Oscar Torres Morales, Antonio Carballo Chin

**BIT Project Team:** Monica Wills-Silva, Stewart Kettle, David Nolan, Chloe Bustin, Daniela Mendez, Joseph Cole

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## Executive Summary

### Background

This report outlines the Behavioural Insights Team's (BIT) second project with the Guatemalan Tax Authority (SAT) under a programme of work with the Global Innovation Fund (GIF). The aim was to evaluate the impact of SMS reminders on tax declarations by 'General Taxpayers'.

The General Taxpayer Regime comprises individual taxpayers and small companies with an annual income of over GTQ 150,000 (USD 20,400). They are required to make income tax and VAT declarations on a monthly basis.

Approximately 30% of General Taxpayers have overdue VAT declarations.<sup>1</sup> SAT estimates that, amongst the General Taxpayers who have mobile phone numbers, there are overdue VAT declarations amounting to approximately GTQ 15 million (approximately USD 1.9 million).

SAT had previously been sending SMS reminders to General Taxpayers. However, they had never evaluated their impact on taxpayer behaviour.

### Intervention

We sought to evaluate whether SMS reminders were an effective tool for encouraging VAT declaration among General Taxpayers.

In addition to testing the overall impact of SAT's SMS reminders on tax declaration and payment, we also sought to test the effect of:

- **Timing:** Evidence suggests that the same message conveyed at different times can have drastically different levels of success. To test this, messages were sent either before the declaration deadline or after.
- **Content:** We introduced different behavioural strategies, such as the use of simplification, personalisation and deterrence messaging.

The table below outlines the different SMS reminders that were sent to taxpayers.

Trial arm	'Before' messages	'After' messages
<b>Control</b>	No message	
<b>Standard</b>	Generic reminder of upcoming declaration deadline	Generic reminder of overdue declarations
<b>Personalised</b>	Reminder with personalised greeting	Reminder with personalised greeting
<b>Deterrence</b>	Reminder with personalised greeting and reference to fines	Reminder with personalised greeting and reference to fines

## Trial design and implementation

Our sample consisted of 107,756 General Taxpayers (with recorded mobile phone numbers) including both small companies and individuals.

We conducted a seven-arm, individual-level randomised controlled trial (RCT) to evaluate the impact of the different SMS reminders on VAT declaration rates. The 'before' SMS reminders were sent 4 days prior to the declaration deadline. Due to implementation issues, the 'after' messages were sent 20 days after the deadline.

## Main findings

All messages sent before the deadline, regardless of the content, were effective at increasing taxpayer declaration rates, with an effect for each message of ~1 percentage point.

This effect persisted over the six-month study period, suggesting the intervention had a lasting impact on individual behaviour.

All messages sent after the deadline were found to have no impact on declaration rates. These findings indicate that the timing of the

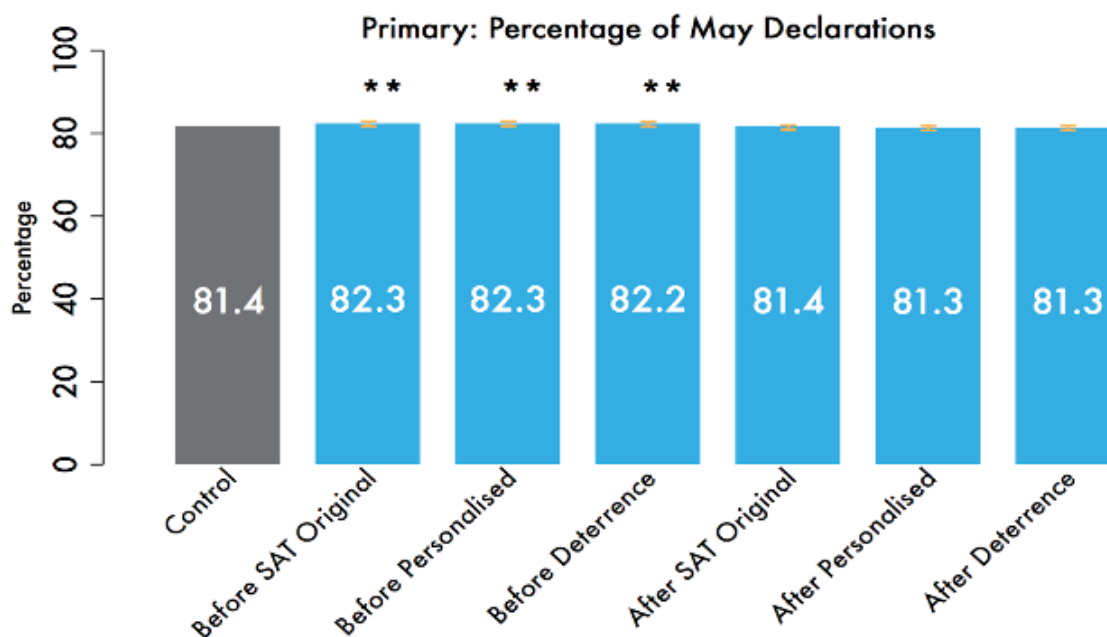
text message was more important than the content in this context.

The increased declaration rate did not translate to more taxpayer payments. We found no statistically significant differences between the Control group and our trial arms, meaning our Treatment messages were not effective at increasing tax payments.

## Recommendations

Based on the findings of this trial, we recommend the following:

- Scaling the 'before' messages to all General Taxpayers.
- Exploring the impact of SMS reminders on other groups of taxpayers in Guatemala, such as Small Taxpayers.
- Establishing whether there is an optimal send date to increase declaration rates (e.g. one day before the deadline versus 10 days before).
- Incorporating mechanisms that reduce friction for individuals making VAT payments, in addition to reducing friction for making declarations.



N=107,756

Primary analysis

\*\* p<0.01, \* p<0.05, + p<0.1

## 01 / Introduction

In February 2017, the Behavioural Insights Team (BIT) and Guatemala's Tax Authority - Superintendencia de Administración Tributaria (SAT) - formed a partnership supported by the Global Innovation Fund (GIF) to apply behavioural insights and rigorous evaluation to tax administration in Guatemala. The purpose of the partnership is to: (i) increase tax compliance and tax revenues; and (ii) train SAT staff to independently apply behavioural approaches and rigorous impact evaluation to tax administration through 'learning-by-doing'.

In May 2017, BIT and SAT's Tax Collection Department - Intendencia de Recaudación - implemented our first joint project, where we tested the effect of different email reminders on the declaration and payment of overdue taxes during the May 2017 tax amnesty.<sup>2</sup>

Following the completion of our first trial, we began a subsequent collaboration with SAT in November 2017, with a focus on a different channel of communication frequently used by tax authorities around the world to encourage tax compliance - SMS reminders. The aim of the project was to evaluate the impact of SMS reminders on taxpayer compliance. This report summarises the findings.

## 02 / Background

### **A significant proportion of taxpayers have overdue VAT declarations**

All taxpayers in Guatemala are obligated to pay monthly Value Added Tax (VAT) on services.<sup>3</sup> However, approximately 30% of General Taxpayers have overdue VAT declarations.<sup>4</sup> SAT estimates that, amongst the General Taxpayers who have mobile phone numbers, there are approximately GTQ 15 million (approximately USD 1.9 million) in overdue VAT declarations.

#### **Who are General Taxpayers?**

The General Taxpayer Regime comprises individual taxpayers and companies with an income of over GTQ150,000 (USD20,400). They are required to declare and pay, on a monthly basis, both income tax and, where applicable, a 12% of VAT on sales and services.<sup>5</sup>

### **Low tax compliance exacerbates poverty in Guatemala**

Overdue VAT declarations represent funds that are not contributing to a range of budgetary items, such as paying salaries, expenditure on social programs or servicing debt. Furthermore, additional tax revenue could support economic growth and reduce poverty, by creating fiscal space to safeguard social expenditure and public investment.

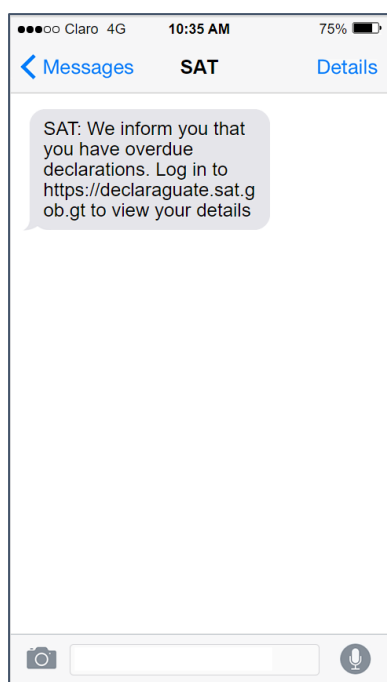
### **SAT's existing SMS reminders had not been rigorously evaluated**

The Tax Collection Department used to send generic SMS reminders to taxpayers with overdue VAT declarations (see below). However, they had neither tested the impact of these messages on taxpayer behaviour, nor evaluated their cost-effectiveness.

This presented the opportunity to:

- a) Design an intervention that would test if sending SMS reminders to taxpayers had an impact on tax declaration.
- b) Build capacity within SAT to apply behavioural insights and rigorous evaluation to tax administration.

Figure 1: SAT's existing SMS reminder (English translation)



## 03 / Intervention

In addition to evaluating the general impact of the reminders, we sought to test whether varying the timing and content of the SMS reminders had a differential impact on tax declaration and payment.

Specifically, we aimed to employ the following behavioural principles:

### **Timing: Sending the messages before or after the deadline**

For this trial, taxpayers were randomly allocated to receive the messages either before or after the declaration deadline. Evidence suggests that the same message conveyed at different times can have drastically different levels of success.

Communicating with people at the right moment - when the context makes an individual more receptive and susceptible to altering their behaviour - can enhance compliance.<sup>6</sup>

### **Simplification: Providing direct access to SAT portal declaration page**

When constructing the messages we also sought to make the process easier for taxpayers. One of the most important lessons from the behavioural literature, and our own work, is that small details that make a task more challenging or effortful ('friction costs') can make the difference between doing something and putting it off – sometimes indefinitely. For instance, a BIT trial, run in partnership with Her Majesty's Revenue and Customs (HMRC), the UK tax authority, demonstrated that sending taxpayers a link that took them directly to the tax form they needed to complete, as opposed to the HMRC web page containing the form, increased response rates from 19 to 23%.<sup>7</sup>

A direct link to the SAT portal declaration page was included in all messages to remove the 'hassle factor' of having to search for the relevant link or navigate the SAT website.

### **Personalisation: Making the SMS reminder personal**

We introduced a personal greeting within a subset of the SMS reminders. Several BIT-led trials have shown that making a message personal can have a considerable positive impact on the behaviour of the recipient. For instance, simply adding someone's name to an otherwise generic text message increased the amount of money paid in a trial conducted with Her Majesty's Courts Service.<sup>8</sup>

The General Taxpayer regime includes both individual taxpayers and companies. In the case of companies, the legal representative was the assigned contact who received the text message. To avoid confusion as to whether the message was for the company or the legal representative's personal fiscal obligations, we replaced the individual's name in the Personalisation and Deterrence message with the company's Número de

Identificación Tributaria (NIT), a unique tax ID number assigned to all taxpayers.<sup>9</sup> The messages also incorporated a more personal greeting than the Control SMS (see Table 1).

### **Deterrence: Referencing fines for non-compliance**

Finally, we tested whether highlighting information about the consequences of non-compliance affected declaration among Guatemalan taxpayers. A number of studies have shown that highlighting the cost of non-compliance can increase declaration.<sup>10</sup> BIT's trial with the Mexican tax authority, for instance, evaluated the impact of different SMS reminders among taxpayers registered to a highly subsidised regime. The best performing reminder, which used a deterrence message, increased timely declaration by 39% compared to a no-message control.<sup>11</sup>

Altogether, we evaluated three types of SMS reminders: (a) the original SAT SMS reminder, (b) a personalised version and (c) a personalised version containing a deterrence message. These three types of reminders were sent to taxpayers either four days before the deadline on 3rd July 2018 (28th June, the before messages) or 20 days after (23rd July, the after messages).<sup>12</sup> In total, six different SAT SMS reminders were sent to taxpayers (see Table 1 at the end of this section for the exact content of the SMS reminders).

#### **Tax Declaration Timelines**

General Taxpayers are obligated to declare and pay monthly VAT on any applicable income. The VAT declaration deadline is the end of the proceeding month or the first working day following that (i.e. the deadline for May 2018 VAT tax declaration and payments was 3rd July 2018).

For this specific project, SAT were interested in whether prompts issued around the deadline improved declaration rates. Therefore, to test the efficacy of the timing of messages, we measured our outcomes within the first month post-deadline (i.e. for the month of May we accounted for declarations and payments until 31st July).

Table 1: SMS message overview (English translation, see Annex for Spanish original version)

	Before: 4 days prior to the declaration deadline (28th June)	After: 20 days after the declaration deadline (23rd July) <sup>13</sup>
<b>Control</b>	No message	
<b>Original</b>	SAT: You must present your VAT declaration before [XX.XX]. Go to: <a href="https://declaraguante.sat.gob.gt">https://declaraguante.sat.gob.gt</a>	SAT: You have overdue VAT declarations. Please go to: <a href="https://declaraguante.sat.gob.gt">https://declaraguante.sat.gob.gt</a>
<b>Personalised</b>	<p>[To individual taxpayers]: Dear Taxpayer. Please present your VAT declaration before [XX.XX], by going to: <a href="https://declaraguante.sat.gob.gt">https://declaraguante.sat.gob.gt</a></p> <p>[To legal representatives of companies]: [NIT]. Please present your VAT declaration before [XX.XX], by going to: <a href="https://declaraguante.sat.gob.gt">https://declaraguante.sat.gob.gt</a></p>	<p>[To individual taxpayers]: Dear Taxpayer. You have overdue VAT declarations. Please declare now at: <a href="https://declaraguante.sat.gob.gt">https://declaraguante.sat.gob.gt</a></p> <p>[To legal representatives of companies]: [NIT]. You have overdue VAT declarations. Please declare now at: <a href="https://declaraguante.sat.gob.gt">https://declaraguante.sat.gob.gt</a></p>
<b>Deterrence</b>	<p>[To individual taxpayers]: Dear Taxpayer, Please present your VAT declaration before [XX.XX], to avoid a fine. Declare now at: <a href="https://declaraguante.sat.gob.gt">https://declaraguante.sat.gob.gt</a></p> <p>[To legal representatives of companies]: [NIT] Please present your VAT declaration before [XX.XX], to avoid a fine. Declare now at: <a href="https://declaraguante.sat.gob.gt">https://declaraguante.sat.gob.gt</a></p>	<p>[To individual taxpayers]: Dear Taxpayer, You have overdue VAT declarations. To avoid a fine, declare now at: <a href="https://declaraguante.sat.gob.gt">https://declaraguante.sat.gob.gt</a></p> <p>[To legal representatives of companies]: [NIT]. You have overdue VAT declarations. To avoid a fine, declare now at: <a href="https://declaraguante.sat.gob.gt">https://declaraguante.sat.gob.gt</a></p>



## 04 / Trial design and implementation

### Sample

The sample for this trial comprised of Guatemalan General Taxpayers for which SAT holds mobile phone numbers.

General Taxpayers can be both small companies or individuals that have an annual income of GTQ 150,000 (USD 20,400) or more. We excluded any companies which are considered mutuals to make sure taxpayers were certain what overdue declaration the SMS referred to. Our final sample consisted of 107,756 taxpayers.

### Randomisation

We conducted a seven-arm, individually randomised RCT to evaluate the impact of both: (1) three different types of SMS reminders, and (2) the timing at which the messages were sent (either before or after the declaration deadline), on tax declaration rates (ie. whether individuals had declared their monthly VAT tax returns).

For the three trial arms scheduled to receive texts after the deadline, messages were not sent to individuals who had already declared. To ensure our trial arms were comparable, we retained and included all individuals in our

analysis regardless of whether they had received a message or not. The control group did not receive any message. The design is illustrated in Figure 2.

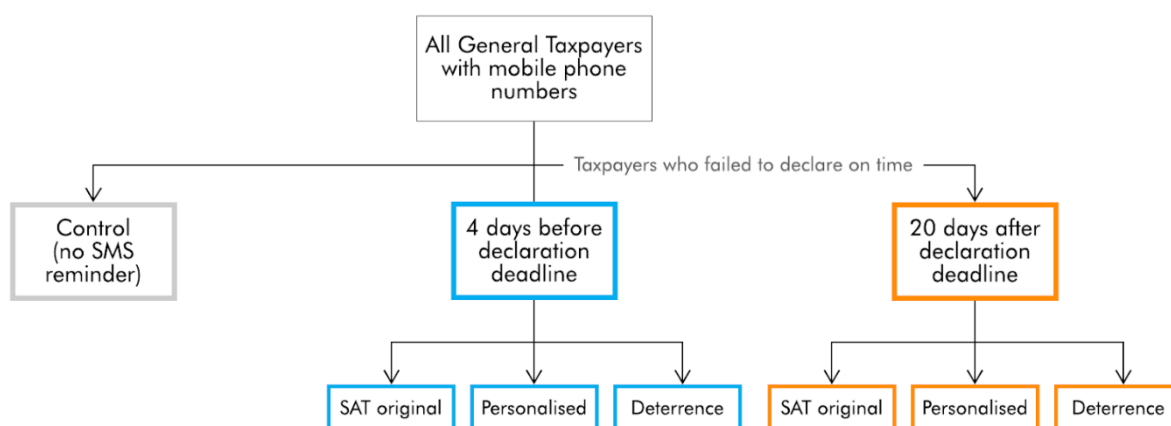
To maximise statistical power, our sample was divided evenly between our seven arms. However, during the implementation process approximately 3,000 individuals and businesses in each of the three before trial arms (in blue in Figure 2 below) were excluded from receiving messages by the trial partner due to capacity constraints on text message delivery.<sup>14</sup> These exclusions were accounted for in our randomisation. Roughly 9,000 individuals and businesses were then subsequently re-randomised into the three 'after' trial arms, meaning we had relatively more individuals in these arms than the others.

We stratified randomisation by whether the taxpayer was an individual or small business. We also conducted checks to ensure the trial arms were balanced across the following characteristics: (i) number of outstanding payments; and (ii) whether the taxpayer received an additional message. SAT had also sent an additional 2,000 messages during the implementation phase which were outside the remit of the trial.

### Implementation challenges

The 'after' messages were sent on a different date than initially intended. While we had originally intended for the 'before' and 'after' messages to be respectively sent out four

Figure 2: Overview of trial design



days before and after the declaration deadline, issues with the SMS platform led to considerable delays in the sending of the 'after' messages, which were eventually sent 20 days after the declaration deadline.

## 05 / Main findings

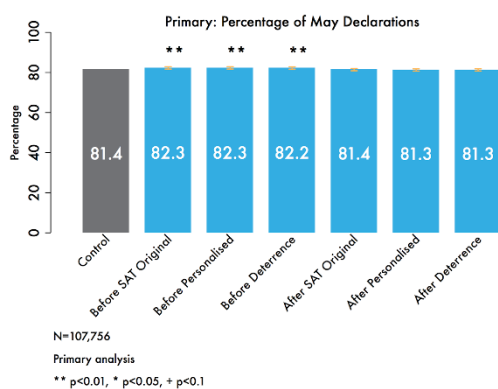
Declaration and payment data was collected monthly on an individual level for six months after the intervention was implemented.

### May declaration rates

**All 'before' messages, regardless of the content, were effective at increasing taxpayer declaration rates. All 'after' messages were found to have no impact.**

We found significant positive effects ( $p < 0.05$ ) for all three 'before' Treatment groups, with each increasing tax declarations by one percentage point. Figure 3 shows the percentages of May declarations made within four weeks of the deadline for the Control and Treatment groups.

Figure 3: Proportion of May tax declarations made within four weeks of the declaration deadline



This suggests that the timing of the text message was more important than the content in this context. One possible explanation for this is the impending deadline in the before messages prompts individuals to complete an action at a specific moment, as opposed to the after messages which simply highlight an individual's lack of compliance. In addition, the

send date of the after messages, i.e. 20 days after, rather than 4 days after, may have affected our results.

Although this is a small effect size, the impact of the trial was substantive, constituting roughly 1,100 extra taxpayers making their declaration each month if any of the messages were to be scaled and rolled out to the whole sample.

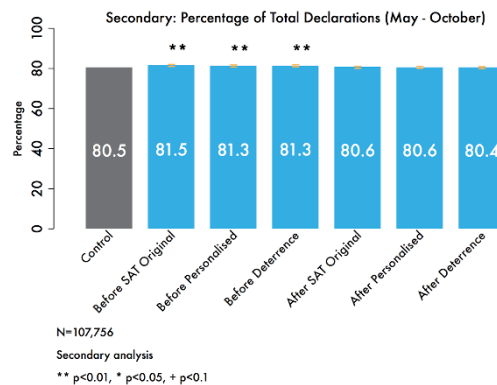
### 6-month declaration rates

We continued to measure both declaration and payment rates for six months after the intervention. We assessed the longevity of the treatment effect by looking at the proportion of declarations made between May and December 2018.<sup>15</sup>

Our findings are consistent over the six-month study period. Our estimated treatment effect for each before message is ~1 percentage point both for May (the declaration month for which the messages were sent), and for the following five months.

As shown in Figure 4, we found the effect does not attenuate over time, with a control group declaration rate of 80.5%, compared to roughly 81.5% in our three before trial arms. This result is of particular interest, as it indicates that one initial prompt can have a lasting impact on declaration behaviour, suggesting that individuals only need help getting started with the VAT declaration system.

Figure 4: Proportion of monthly declarations for May 2019 to October 2019 (submitted by December 2019 when the October declaration is due)



## Payment rates

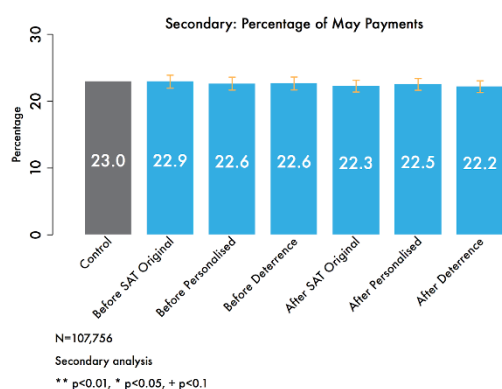
**We found no statistically significant differences between the Control group and our trial arms on the payment rate, meaning our Treatment messages were not effective at increasing tax payments.**

23% of taxpayers in the Control group and our treatment arms made tax payments prior to the end of May.

There are a number of plausible explanations for this null effect:

- We find a higher proportion of individuals in our 'before' treatment groups made declarations of zero value indicating we partly increased the number of 'zero' tax returns.
- Changing payment behaviour is relatively more difficult than declaration behaviour (as evidenced by the substantially lower baseline rate). The intervention was only strong enough to affect the latter.
- Individuals still experience friction when paying their VAT. The messages provided a link for individuals to declare but did not necessarily reduce friction for them paying the stated declaration.

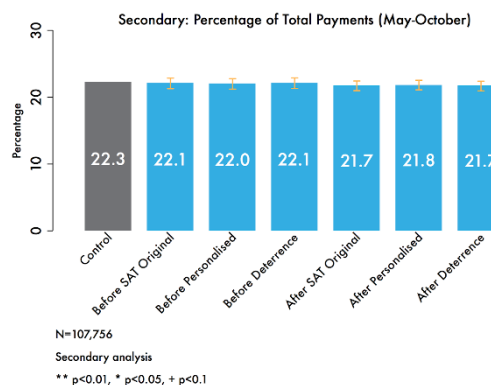
Figure 5: Proportion of May tax payments<sup>16</sup> made within four weeks of the declaration deadline



## Total value of May tax payments

The average value of each positive payment in the Control group was GTQ 436 (USD 55). We found no statistically significant differences between groups.

Figure 6: Proportion of payments<sup>17</sup> for May 2019 to October 2019 (submitted by December 2019 when the October declaration is due)



In parallel to our long-term declaration outcome, we also assessed the long-term effect of the intervention on monthly payment rates. In line with the May results, we found no effect of the treatment messages on long-term payment behaviour.

## Sub-group analysis

We conducted additional sub-group analysis by the type of taxpayer (individual or business). We found no differential effects of the treatments by the type of taxpayer. In other words, no treatment was more effective for individuals or businesses respectively. However, it must be noted that businesses had a higher baseline declaration rate but lower payment rate on average than individuals (87.1% and 20% compared to 81.1% and 23% respectively).

## 06 / Recommendations

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Based on the findings of this trial, we recommend the following:

### Scale without further testing

- All before messages had a positive impact on declaration rates. We recommend sending SMS reminder messages four days before the first declaration deadline to all new General Taxpayers.

### Adapt with further testing

- Test the impact of SMS reminders with other groups of taxpayers in Guatemala to assess whether the result replicates, for example by sending the messages to Small Taxpayers with outstanding declarations.
- Establish the optimal send date by altering the day on which pre-deadline reminders are sent. This could involve comparing the timing of declarations and declaration rates of taxpayers receiving reminders 10 days, four days or one day before the deadline.
- Test new messages which incorporate mechanisms that reduce friction for individuals making VAT payments, in addition to reducing friction for making declarations.

### Develop potential new projects

- Investigate the link between declaration and payments to convert increased declarations into increased payments.
- Develop projects with other SAT staff to transfer knowledge of behavioural insights and embed the use of evidence-based policy-making.

## 07 / SAT Project Team

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This project provided SAT with further insight into the application of behavioural science and the use of rigorous evaluation. Results from the project have given SAT staff motivation and credibility to design further interventions and evaluations.

### Antonio Carballo Chin, SAT Project Lead

*“We have since applied what we learned with BIT to lead other projects. We implemented, for instance, the SMS intervention with taxpayers who had not declared their vehicle taxes.”*

Carballo mentioned that, following BIT’s methodology, they selected a group of taxpayers and randomly allocated them into three groups of approximately 16,000 individuals to send different SMS reminders. *“It’s been very satisfying to be able to measure and quantify the impact of the interventions”.*

Additionally, Carballo explained that following up with the projects implemented in collaboration with BIT and leading new interventions has been possible because of the support and enthusiasm from SAT’s top management. *“Our projects have been looked at favourably by top managers, who encourage new initiatives and give follow-up to existing ones.”*

### Juan Carlos Aguirre Argueta, Data Collection and Analysis Lead

*“Today, data analysis and evaluation have become part of our declaration and compliance strategy,”* Aguirre explained. For instance, the SAT has been collecting and analysing more data, which will allow them to make comparisons over time.

The application of behavioural insights and rigorous evaluation has been widely accepted by SAT staff. Aguirre commented - *“I have learned about data segmentation, randomisation, regression analysis and social norms”.* This has allowed him to independently think about ways of scaling up interventions and reaching more taxpayers.

There is now significant interest in behavioural insights in SAT. With BIT's support, a BI group consisting of representatives from different divisions across SAT was formed. Its objective is to facilitate the implementation of BI projects within different departments at SAT. To date, the group has participated in (a) a workshop conducted by BIT where an overview of TESTS methodology was presented and (b) co-creation sessions using BIT's project methodology for identifying new BI projects. The group is currently working on its mission and vision statement. It is also seeking to consolidate its activities and select a senior leader to represent them at higher levels in SAT.

Additionally, the group is working on a potential trial aimed to support taxpayers with their monthly tax declarations. In total, four focus groups have been conducted to understand taxpayers' experience and an online questionnaire will be rolled out in early November.

We recommend testing the use of SMS reminders with other groups of taxpayers, testing different SMS prompts, and developing additional trials with other SAT departments.

## 08 / Conclusion

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A significant proportion of taxpayers in Guatemala have overdue tax declarations and payments. There are approximately GTQ 15 million (USD 1.9 million) in overdue VAT declarations. This represents funds that are not contributing to a range of budgetary items such as servicing debt, paying government salaries or expenditure on social programs, exacerbating poverty in the country.

Results from this RCT show that SMS reminders, sent four days before the deadline, are effective at increasing taxpayer declaration rates regardless of their content.

Results from this and previous trials run with BIT have led SAT to run their own trials, testing the impact of SMS reminders on different types of tax compliance and in different time periods. These initiatives have been promoted and accepted across the SAT in Guatemala, receiving particular support from the senior management team. This backing creates a variety of opportunities for further research.

# Annex

## Spanish SMS reminders

	Antes de la fecha de declaración	Después de la fecha de declaración
<b>Control</b>	No recibe ningún SMS	
<b>Original</b>	SAT: debe presentar su declaración de IVA antes de [XX.XX]. Ingrese a <a href="https://declaraguante.sat.gob.gt">https://declaraguante.sat.gob.gt</a>	SAT: tiene omisos de IVA. Por favor ingrese a: <a href="https://declaraguante.sat.gob.gt">https://declaraguante.sat.gob.gt</a>
<b>Personal</b>	<p>[Para contribuyentes individuales]:</p> <p>[NIT]. Por favor presente su declaración de IVA antes de [XX.XX], ingresando a: <a href="https://declaraguante.sat.gob.gt">https://declaraguante.sat.gob.gt</a></p> <p>[Para contribuyentes individuales]:</p> <p>[NIT] Por favor presente su declaración de IVA antes de [XX.XX], ingresando a: <a href="https://declaraguante.sat.gob.gt">https://declaraguante.sat.gob.gt</a></p>	<p>[Para contribuyentes individuales]:</p> <p>[NIT]. Tiene [xx] omisos de IVA. Por favor declare ahora en: <a href="https://declaraguante.sat.gob.gt">https://declaraguante.sat.gob.gt</a></p> <p>[Para representantes legales]:</p> <p>[NIT] Tiene [xx] omisos de IVA. Por favor declare ahora en: <a href="https://declaraguante.sat.gob.gt">https://declaraguante.sat.gob.gt</a></p>
<b>Disuasión</b>	<p>[Para contribuyentes individuales]:</p> <p>[NIT]. Por favor presente su declaración antes de [XX.XX], para evitar una multa. Declare ahora en: <a href="https://declaraguante.sat.gob.gt">https://declaraguante.sat.gob.gt</a></p> <p>[Para representantes legales]:</p> <p>[NIT]. Por favor presente su declaración antes de [XX.XX], para evitar una multa. Declare ahora en: <a href="https://declaraguante.sat.gob.gt">https://declaraguante.sat.gob.gt</a></p>	<p>[Para contribuyentes individuales]:</p> <p>[NIT]. Tiene [xx] omisos de IVA. Para evitar una multa, declare ahora en: <a href="https://declaraguante.sat.gob.gt">https://declaraguante.sat.gob.gt</a></p> <p>[Para representantes legales]:</p> <p>[NIT]. Tiene [xx] omisos de IVA. Para evitar una multa, declare ahora en: <a href="https://declaraguante.sat.gob.gt">https://declaraguante.sat.gob.gt</a></p>

## Notes

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<sup>1</sup> According to the Collection Department's database from February 2018.

<sup>2</sup> The project report is available upon request

<sup>3</sup> Except for certain entities, such as universities, schools etc.

<sup>4</sup> According to the Collection Department's database from February 2018.

<sup>5</sup> For more information about General Taxpayers' VAT obligations, see <https://portal.sat.gob.gt/portal/capacitaciones/capacion-virtual/cursos-virtuales-2/>

<sup>6</sup> The Behavioural Insights Team. (2014). EAST: Four simple ways to apply behavioural insights

<sup>7</sup> *ibid*

<sup>8</sup> Behavioural Insights Team (2012). "Applying Behavioural Insights to Reduce Fraud, Debt and Error" Cabinet Office.

<sup>9</sup> While including the company name was our original preference, most company names are too long to include without resulting in the message exceeding the SMS character limit.

<sup>10</sup> Hallsworth, M., List, J. A., Metcalfe, R. D., and Vlaev, I. (2014). "The Behaviouralist as Tax Collector: Using Natural Field Experiments to

Enhance Tax Compliance". National Bureau of Economic Research.

<sup>11</sup> Behavioural Insights Team (2017), The Behavioural Insights Team Update Report 2016-17

<sup>12</sup> The after SMS reminders were not sent to taxpayers if they declared and paid after the first reminder.

<sup>13</sup> Issues with the SMS platform resulted in the after messages being sent 17 days later than originally anticipated. For further information on this issue, please see the 'Implementation Challenges' section under section 4 of this report.

<sup>14</sup> SAT were restricted to sending 40,000 messages per month

<sup>15</sup> If an individual has made all 6 of a possible 6 declarations, this would equate to 100%

<sup>16</sup> Where a payment is defined as an amount greater than 0. Where individuals may have declared no outstanding tax, they will not be considered as having paid for the purposes of this analysis.

<sup>17</sup> Where a payment is defined as an amount greater than 0. Where individuals may have declared no outstanding tax, they will not be considered as having paid for the purposes of this analysis.