

Impact case study (REF3)

Institution: University of Warwick		
Unit of Assessment: C - Economics and Econometrics		
Title of case study: Using Nudges to Improve Tax Compliance		
Period when the underpinning research was undertaken: 2014 - 2020		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
Clement Imbert	Assistant Professor	September 2015 - present
Period when the claimed impact occurred: 2015 – (ongoing)		
Is this case study continued from a case study submitted in 2014? No		
1. Summary of the impact (indicative maximum 100 words)		
<p>Clement Imbert and co-investigators developed and tested applications of nudge theory that are being used by the Belgian Tax Authority to influence changes in taxpayer behaviour. The research has led to permanent changes in the way the tax authority communicates with personal income taxpayers, enabling them to increase tax compliance and make significant cost savings on enforcement measures. Following the success of the intervention, a formal unit within the tax authority has been established to study and apply behavioural insights across other areas of tax collection. Policymakers in Belgium and other European countries are now trialling and implementing behavioural nudges more widely, drawing on findings from the research.</p>		
2. Underpinning research (indicative maximum 500 words)		
<p>The study of determinants of individual behaviour that go beyond those stressed by standard theories of rational choice has become a prominent area in economics in recent years. One dimension of this research that has received a lot of attention from policymakers is 'nudging'. Nudges are used to influence individuals to take a desired action and can offer low-cost solutions to societal challenges. They often involve subtle changes to language or the use of imagery to prompt action. Research conducted by Dr Clement Imbert, with colleagues at the University of Oxford and London School of Economics, explored how the use of nudges in communication with taxpayers affects their compliance and improves the effectiveness of the tax collection process. The project builds on Imbert's background in conducting field experiments, in collaboration with policymakers that have aimed to improve the effectiveness of public services in India and France.</p> <p>Tax authorities devote considerable resources to the collection of taxes. Closing the 'tax gap' – with the potential of recouping millions in missing tax revenue – is a key objective for governments. It is also important that taxes are paid on time so that funds are available for public services, especially in times of austerity. Chasing overdue payments creates significant additional administrative and financial burden for authorities.</p> <p>Effective tax collection requires robust understanding of the drivers of tax compliance and the cost-effectiveness of interventions to improve compliance. Imbert and colleagues carried out four population-wide natural field experiments with the Belgian tax authority over the course of three fiscal years (2014-2016). They tested how a series of sixteen different types of nudges in letters sent to taxpayers affected compliance throughout the tax process, across the entire population subject to self-assessment personal income tax in Belgium.</p> <p>The tax authority writes to personal income taxpayers to request them to file a tax return and again to request payment of taxes. Follow-up correspondence is sent if taxpayers are late in filing their tax return or late in paying taxes. The team applied nudges to correspondence sent at</p>		

each of these four stages of the tax collection process including in the 'Tax on Web' system, an online interface through which people can file taxes.

They tested the effect of simplifying correspondence by shortening letters, reducing information overload, and highlighting action-relevant information using colour or boxes. For a subset of taxpayers, they tested the effect of adding 'deterrence' messages to simplified letters that make explicit the financial penalties of not paying and/or highlight enforcement actions that will be taken. Lastly, they tested 'tax morale' messages that highlight the public value of taxes and/or the social norms attached to paying taxes.

Key findings [3.1] include:

- Simplifying communication consistently and substantially increases tax compliance. Simplification makes more people pay taxes on time and makes both late filers and late payers comply more swiftly than they otherwise would.
- Simplified tax filing reminders increased subsequent filing by 8% compared to the standard reminder.
- For late taxpayers, receiving a simplified payment reminder increased the probability of tax payment by as much as 23% in the subsequent 14 days, compared to the standard reminder. After 6 months, the effect equated to nearly EUR 4,000,000 additional revenue (EUR 3,160,000 extra in taxes plus enforcement cost savings of EUR 700,000.)
- Reducing information overload and emphasising action-relevant information are particularly effective in increasing compliance.
- Including deterrence messages in simplified letters has an additional positive effect.
- Communication that includes 'tax morale' messages is not effective – and sometimes even backfires.
- Taxpayers who receive simplified communication one year continue to be more compliant the following year.
- Regardless of the method of cost-benefit analysis used, simplified communication is far more cost-effective than standard enforcement measures (e.g., bailiffs).

The research was initiated through De Neve and Spinnewijn, who had connections with the Belgian tax authority. Imbert, De Neve and Spinnewijn designed and conducted the trial in consultation with Maarten Luts, Nudging & Tax Compliance Project Manager at the tax authority. Imbert analysed and drew conclusions from the data, designed the cost-benefit analysis, and led on writing the paper, with the support of Tsankova, a Warwick PhD student.

3. References to the research (indicative maximum of six references)

3.1 Imbert, C., De Neve, J.-E., Luts, M., Spinnewijn, J., and **Tsankova, T.** (2019). "How to improve tax compliance? Evidence from population-wide experiments in Belgium." *Warwick Economics Research Papers Series (TWERPS)* No. 1194. Coventry: University of Warwick. Department of Economics.

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4. Details of the impact (indicative maximum 750 words)Improving tax compliance in Belgium

The research was conducted in collaboration with the General Administration of Collection and Debt Recovery within the Belgian Finance Ministry (Federal Public Service (FPS) Finances). Throughout the course of the experiments, the team had regular meetings with senior government officials, including the President of FPS Finance, the Administrator-General for Collection and Debt Recovery and the Administrator-General for Taxation for Individuals.

Following the research, FPS Finance has now permanently adopted simplified communication to taxpayers, using the same simplification techniques tested in the experiments, as well as a deterrence message highlighting the penalties for not paying. [5.1]

Simplified letters with deterrence messages are sent to all individuals subject to completing a personal income tax return in Belgium (approximately 2,000,000 people annually), throughout the tax process. This includes letters sent to taxpayers to request them to file a return and again to request payment of taxes, as well as reminders where submissions or payments are late. [5.1] Letters are sent in all the main languages spoken in Belgium: French, German and Flemish.

The new approach to tax collection has had a significant ongoing effect on compliance, both in terms of revenue gained and timeliness of payments. It has also led to substantial cost-savings by reducing the need for traditional enforcement methods. Replying to a Parliamentary question about the results of the trial, the Belgian Finance Minister at the time, Johan Van Overtveldt [5.2], confirmed that:

- EUR 4,000,000 additional revenue was collected in 2015 and EUR 3,000,000 in 2016.
- EUR 30,000,000 was collected more quickly in 2015 (compared to previous years when simplified letters were not used), and EUR 25,000,000 in 2016.
- EUR 1,000,000 was saved in enforcement costs in 2015, and EUR 1,400,000 was saved in 2016. (This compares to EUR 79,550 for the one-off cost of the simplification intervention.)

The Minister also confirmed that, following the success of the intervention, the use of behavioural insights has been included as an objective in FPS Finance's governance agreement, and a formal unit within the tax authority has been established to study and apply behavioural insights throughout the tax process. [5.2]

Referring to the research, he said: "The undeniable positive results of the various experiments that the Federal Public Service (FPS) Finance has carried out in recent years clearly demonstrate the added value of the use of behavioural theories. Small, low-cost interventions can have a big impact on the behaviour of those liable for payment and reporting...The current and future Governance Agreement with FPS Finance refers to the importance of applying nudging and behavioural insights to incentivise taxpayers to fulfil their tax obligations. In this context, a new unit is currently being set up within the General Administration of Collection and Recovery that will specifically deal with Tax Compliance and the role behavioural insights can play in this." [5.2, translation from French]

The 'Tax Compliance and Behavioural Insights' unit was established November 2018 and is led by Maarten Luts. It initiates and oversees the use of behaviour nudging methods to enhance the effectiveness and cost-efficiency of all policies targeting tax compliance. For example, all letters sent to debtors are now reviewed in the context of the nudge messages trialled in the research. This includes VAT payment reminders, communication about split payment plans and reminder letters to pay penal fines. [5.1]

Influencing wider applications of nudging in policymaking

As the only behavioural insights unit within the federal administration, the Tax Compliance and Behavioural Insights unit acts as a centre of expertise for other administrations within FPS Finance and more widely across federal ministries and regional governments in Belgium. Maarten Luts and colleagues have met directly to share learning from the research with representatives from the ministry for social security, ministry for labour, ministry for policy and support, and the Federal Agency for Administrative Simplification. They have also provided advice to the country's 3 regional governments (Wallonia, Brussels and Flanders) and the City of Antwerp. [5.1]

Following the success of the intervention, the federal government is considering how nudge theory can be used more widely in policy. The research was cited in a proposal to apply insights from behavioural science to the Belgian healthcare sector, which was adopted by the Chamber of Representatives in July 2018. The proposal mandates that the federal government test nudges within selected policy areas in the health sector, implement them if successful, and establish a Belgian centre of expertise in behavioural science. [5.3]

The research was also cited in an approved proposal to apply behavioural insights widely across Flemish regional policy. It commits the Flemish government to developing a framework for the application of behavioural sciences in policy, trialling behavioural science initiatives in selected policies annually and setting up a Flemish Behavioural Sciences expert team, which has since been established. [5.4]

The impact of the research has extended to other countries, in Europe and beyond, that are using learning from the research to inform behavioural interventions in tax compliance activities. Luts has presented the research to authorities in Bulgaria, Ethiopia, Netherlands, Poland, Germany, Macedonia, Serbia and Mali. The tax administration of the Czech Republic is starting behavioural trials to improve compliance, and Luts is one of the experts advising them throughout the process. The trials are testing the simplification nudges and the deterrence and social norm messages from the Belgian experiments and following the same design. [5.1]

The project has been featured in briefing documents that highlight best practice in the use of behavioural insights in policy, including from the European Commission Joint Research Centre (JRC) [5.5] and the Intra-European Organisation of Tax Administrators (IOTA). [5.6] The JRC is coordinating a cross-national experiment with several European tax administrations to test the use of nudge messages in tax collection, including the deterrence message nudge tested in the trial. Luts and his team are closely involved in this project, with Belgium providing a leading example of the effective use of nudging. The findings are due to be presented at a conference organised by the European Commission and the OECD Forum on Tax Administration. [5.1]

The research was also presented to 27 different countries at the OECD and IOTA conference hosted by Belgium in April 2017. After the conference, Belgium recommended that the OECD form a Community of Interest on Behavioural Insights. This was launched in late 2017 and shares best practice in applying behavioural insights to improve public policy worldwide. Belgium also leads the Tax Debt Management Network within the OECD and has promoted Behavioural Insights on the Network's agenda. [5.1]

5. Sources to corroborate the impact (indicative maximum of 10 references)

5.1 Supporting Statement from Maarten Luts, FPS Finance tax authority (July 2020).

5.2 Transcript of Parliamentary question from Senator Peter van Rompuy and response from Finance Minister Johan Van Overtveldt. Transcripts in French and Dutch (January 2019).

5.3 Proposal for resolution applying the insights of behavioural sciences to the healthcare sector in Belgium - reference to study on p. 9 (May 2017). Combined with **record** showing the progress and approval of the proposal in the Chamber of Representatives ("aangenomen" = approved). Transcripts in French and Dutch.

5.4 Proposal to apply behavioural science insights in the Flemish Government - reference to study on p. 5 and p. 8 (July 2016). Combined with **record** showing the progress and approval of the proposal in the Flemish Government (Transcript in Dutch) and webpage on Flemish Behavioural Insights Team.

5.5 European Commission Joint Research Centre briefing paper: "Behavioural Insights Applied to Policy: Belgium Country Overview" (May 2016).

5.6 Intra-European Organisation of Tax Administrators briefing paper: "Nudging in the context of taxation: How the Belgian FPS Finance use behavioural insights to encourage taxpayers to pay faster" (February 2019).