Leveraging Behavioural Insights to improve Construction Businesses' Survey Response

Alessia Tosi (alessia.tosi@ons.gov.uk), Helen Moore (helen.moore@ons.gov.uk),
Pete Smith (peter.smith@ons.gov.uk), Beverly Best (beverley.best@ons.gov.uk)

Background

Behavioural Insights

Behavioural science provides a framework to understand what drives people's decisions: how and why people act the way they do in relation to themselves, others or a specific task. When applied to real world problems, behavioural science can help us predict how people will behave when "nudged" in a certain way in a specific context, thus endowing us with tools or "insights" to achieve behavioural change. In the public sphere, for instance, these insights have been used to get more people to register to be organ donors.

Business surveys at Office for National Statistics (ONS)

Data collection for official business surveys is undertaken by ONS Business Data Operations Division (BDOD). Data are collected for over 80 surveys; the majority via paper questionnaires with an increasing number moving to electronic collection. Policy makers and other stakeholders across research agencies and the private sector use the resulting statistics (for example, GDP, distribution of income and services sector activity) to evaluate the status of the UK economy and monitor policy performance. Businesses also use these statistics to assess their own performance within the relevant sector. All these important activities require timely, accurate and comprehensive responses to these surveys.

The Monthly Business Survey – Construction and Allied Trades

The Monthly Business Survey (MBS) – Construction and Allied Trades (to be referred to as "Construction Survey" from now on) collects information about the value of new work, repair and maintenance for both housing and non-housing projects carried out during the month, as well as quarterly information about employment [1]. Participation in the survey is mandatory.

The survey is relatively new to ONS and paper questionnaires are sent to business of all sizes, ranging from sole traders to large well-known building companies. The monthly survey sample is made of 8,000 construction businesses stratified by size (that is, number of employees) and industry type (for example, construction of domestic buildings, roofing activities) as follow:

- A random sample of approx. 6,000 businesses containing four size groups (0 to 4, 5 to 9, 10 to 19, 20 to 99 employees) and 14 industry type groups.
- A full enumeration of approx. 1,000 businesses with 100+ employees or turnover > £60m.

All businesses in the full enumeration are surveyed every month and they represent the "key respondents" to the survey (that is, the derived statistical estimates heavily depend on their data). The other businesses are surveyed every month for a period of either 27 or 15 months, depending on size. The allotted period is not constant for all businesses within each group (that is, the start and end date of the 15 months may vary across businesses). In addition, approximately 500 businesses join and leave the sample each month - with

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[1]

https://www.ons.gov.uk/surveys/informationforbusinesses/businesssurveys/monthlybusinesssurveyforconstructionandalliedtrades

these numbers being doubled every January. The January spike is due to the annual update of Inter-Departmental Business Register (IDBR) variables. See **Table 1** for a monthly survey sample example.

Table 1 *Survey sample size by size band for a case month (September 2017)*

Size band	Universe (N)	Sample (n)	% Universe	% of tot.sample
"0-4"	231,236	3,311	1.4%	42.0%
"5-9"	24,192	1,348	5.6%	17.1%
"10-19"	10,255	786	7.7%	10.0%
"20-99"	5,853	1,506	25.7%	19.1%
"100+"	855	855	100.0%	10.8%
">£60m"	79	79	100.0%	1.0%
Grand Total	**272470**	**7885**	**2.9%**	**100.0%**

The Problem

Many businesses do not respond to our business survey communications as we would ideally like: responses are typically late, and respondents complain that they are unable to provide the data. This leads to unnecessary administrative costs (up to £40,000 across all the business surveys) and increased respondent burden. After the "return by date" (RBD), which is communicated to respondents with their survey questionnaire, paper questionnaires are followed by paper reminders and then response chasing telephone calls to non-responders. These calls continue until agreed Service Level Agreement (SLA) targets are achieved (ONS's deadline to achieve these target is usually four weeks later than the RBD communicated to businesses). The volume of calls is monitored daily in the period running up to target date and resource levels (staff numbers) in our response chasing unit are distributed accordingly. Due to the ineffectiveness of these follow-ups, enforcement to return surveys may be necessary. We take sample sizes and the difficulty in achieving response into account when allocating resources and therefore in calculating survey costs.

In addition, across all business surveys, we receive 14,000 complaints and queries per year relating to our survey materials (letters, reminders). This causes additional expense such as follow up letters and calls.

When considering these factors, the Construction Survey is historically one of our most resource-intensive and expensive monthly surveys for response chasing (see **Figure 1** for an overview of historical response rates by RBD). This also raises quality issues for the Monthly Construction Statistical release as limited time is available for data quality checks and production of the estimates. For these reasons, the Construction Survey was identified as a good candidate for trialling some positive interventions.

There are several reasons why respondents in the Construction Survey might be late in providing their data or may not comply at all, despite mandatory participation. An analysis of the queries and complaints made by businesses to the survey enquiry line suggests four main possible obstacles:

a) The request is unclear and/or key information is not received in a timely manner (for example, "I have received a reminder but not an enrolment")
b) Perceived high cost associated with responding which ONS is not clearly recognising (for example, "I am receiving a lot of surveys")
c) Failure to understand/recognise the value of providing the information (for example, "What are my data used for?")
d) Perception that the ONS is not making full use of existing resources, and so it is wasting their time (for example, "Why not use administrative data?").

While this feedback is not the result of a direct investigation concerning the reasons why businesses delay their return of the survey[2], it strongly suggests that psychological and behavioural barriers may exist driving the slow compliance to the Construction Survey.
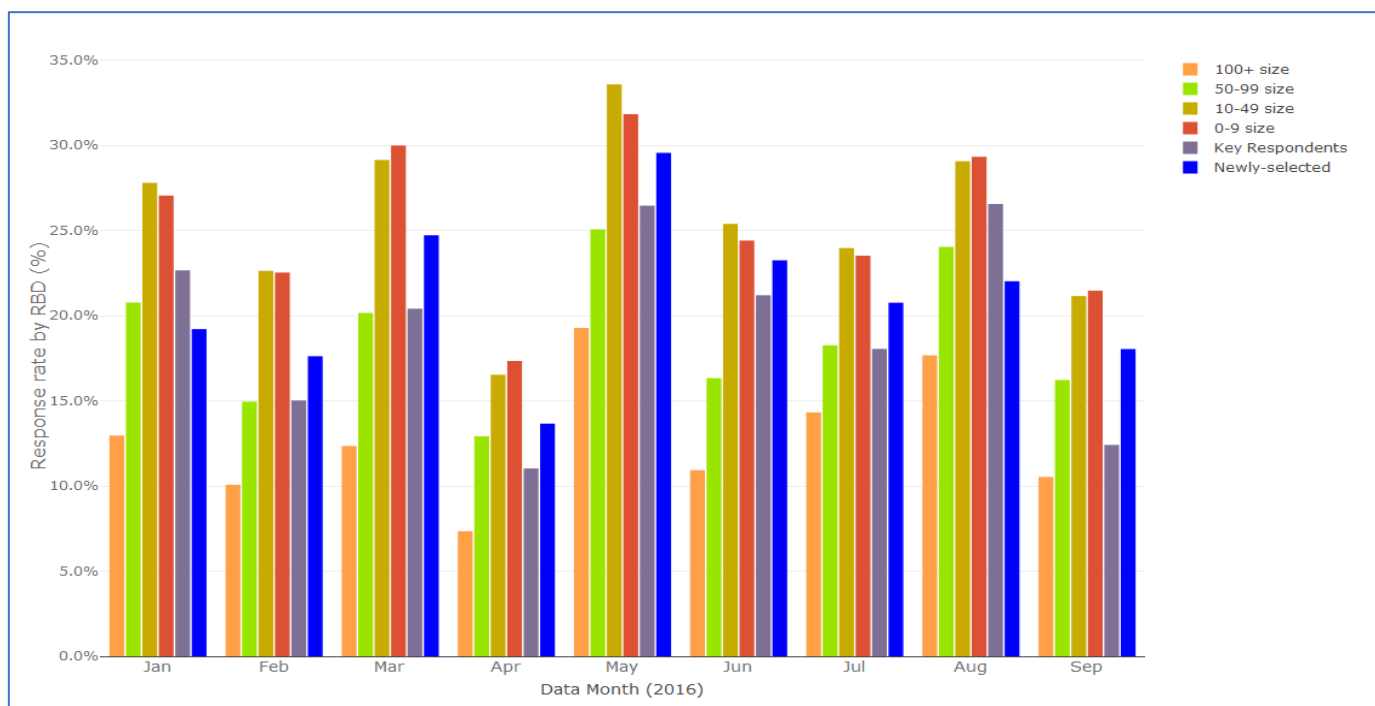

Figure 1 *Response rates by RBD for the months January-September 2016 for different groups of respondents. "Newly-selected" respondents refer to businesses that newly joined the survey sample in that month. "Size" refers to the number of business employees. The historical trend highlights the variability in response rate across respondent groups and survey months.*

Project Aims

We set up a project to explore the use of insights drawn from behavioural science literature to design an intervention that could address the psychological and behavioural barriers to the Construction Survey compliance.

There were two aims to the project:

1) Leveraging behavioural science principles to increase the number of businesses that return the survey questionnaire by the specified deadline, thereby reducing resources spent response chasing.
2) To assess the feasibility of behavioural insights trials across business surveys, and gauge the benefits of behavioural insights interventions weighted against the operational and reputational risks.

To this purpose, we designed and ran a two-arm stratified randomized control trial (RCT) while conducting the Construction Survey in the months of April and May 2018. For the businesses in the experimental group, we redesigned the material to include several behavioural 'nudges' to help them understand the purpose and expectation of the letters, build their trust that the ONS values their input and respects their effort, and

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[2] A qualitative investigation (that is, focus groups with the businesses and/or BDD staff handling queries, complaints and feedback) would have been required.

create a positive engagement loop. Businesses in the control group received the business-as-usual survey material.

Challenges

Challenge 1: Can we apply behavioural insights to businesses rather than individuals?

While the ONS has experience in testing the application of behavioural science principles to improve participation in surveys of household, this was the first time it had attempted to trial an intervention with businesses. Business surveys have very different features to social surveys that may affect the use of behavioural insights to change participation patterns:

1. We are **targeting organisations not individuals**:
   - Respondent must answer for the business, not for themselves
   - Questionnaire is usually mailed to the business (not a specific person)
   - Responding may require consulting records, and several people
   - Questions come with detailed instructions
2. Participation is **mandatory** not voluntary:
   - Less relevant to convince respondents about the importance to respond
3. The Construction survey is a multi-wave survey. **Long-standing respondents** may:
   - be 'biased' by prior survey experience
   - have developed reporting routines that may be hard to switch
   - be aware that the RBD is not a hard deadline and that ONS will prompt them in due time

Challenge 2: operational constraints and risk perception

We faced a series of practical challenges when designing the trial and the behavioural science intervention.

4. **Risk aversion** from the statistical outputs' side due to concerns that the intervention may adversely affect the data, especially from key respondents, and consequently the derived estimates.
5. We **could not change** the format, content or structure of the survey questionnaire, nor the mode of the survey (paper-based).
6. No Randomised Control Trial or other experimental interventions had been tried within business operations before and so we had **little pre-knowledge of the operational and processing obstacles** that we might be facing at the difference stages of the survey cycle.