Research report

Antecedents, Behaviours and Consequences

Behavioural Modelling

17 October 2012

Contents

Purpose of this document

This research forms part of a larger programme of work designed to compliment the individuals segmentation (http://www.hmrc.gov.uk/research/individuals-prioritisation-publication.pdf).

The primary purpose of this programme of research was is to understand segment antecedents – what puts an individual into the segment they're in. The work is a quantitative follow up of the qualitative segmentation deep-dive.

Research requirement (background to the project)

In March 2007, HM Revenue & Customs (HMRC) commissioned a large project called the Individuals Prioritisation Project to develop an overarching segmentation of individual customers, and a prioritisation of what mattered to individuals from their perspective. This aimed to identify:

- how to increase compliance/reduce cost of compliance
- how to improve customer experience
- what innovations/different ways of doing things could be considered

The segmentation was built on four key dimensions which were:

- awareness (of one's obligations)
- motivation (to comply with one's obligations)
- ability (to comply with those obligations)
- opportunity (to not comply)

In 2008 HMRC began the process of embedding the Individuals Segmentation. This project has been directed by four key business objectives, to:

- Help HMRC to identify what drives segment membership and the relative impact different factors have
- Understand the extent to which HMRC can influence and change an individuals behaviour with regards to compliance
- Explain the impact of different behavioural drivers and as a result the implications for HMRC
- Provide HMRC with an understanding of the implications of a 'do nothing' policy: how the segments might evolve naturally over time

Who did the work (research agency)

The research was conducted by Quadrangle (www.**quadrangle**.com/) and Decision Technology (UCL) (http://www.uclconsultants.com/).

When the research took place

Interviews were conducted between late March and early April 2008 in **14** locations across the UK.

Method, Data and Tools used, Sample

- The survey provided a **nationally representative** sample of the UK population using a **face to face** methodology so it could successfully measure respondent attitudes on the full range of behavioural drivers which the segmentation is built on.
- Crucially, it also needed to test the actual ability of respondents using a specially designed exercise at the end of the survey.
- A total of **2016** 25 minute interviews were completed.
- The behavioural modelling was completed by Decision Technology using Structured Equation Modelling (SEM).
- The behavioural modelling was designed to test this hypothesis and provide;
    - a quantitative understanding of the inter-relationships identified in the earlier qualitative work
    - an understanding of which factors are most significant in explaining individuals scores on the core segmentation dimensions
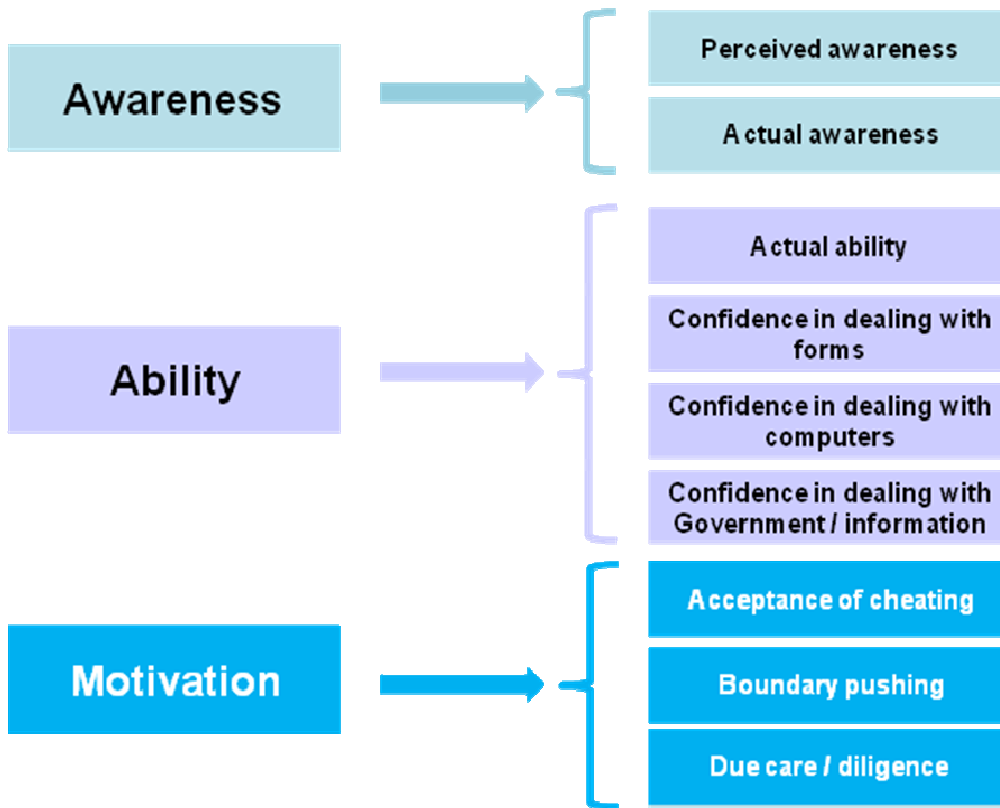
Main Findings

- In 2008 HMRC began the process of embedding the Individuals Segmentation.
- Follow up qualitative work to fully explore the segment dimensions – Awareness, Ability, Opportunity and Motivation
- We developed our hypothesis that understanding tax behaviours can be derived from an understanding of the **Sense of Citizenship** that emerges from an individual's **Personal Code** (or norms) and **Social Contract**.
- The dimensions at the heart of the Individuals' Segmentation form the foundation for modelling segment antecedents.
- Each dimension is modelled individually, in isolation of others to avoid creating a circular model. Each can then be built back into the overarching framework of the segmentation
- The dimensions were also split into different components that form our target variables. These components reflect the different aspects inherent in each dimension.

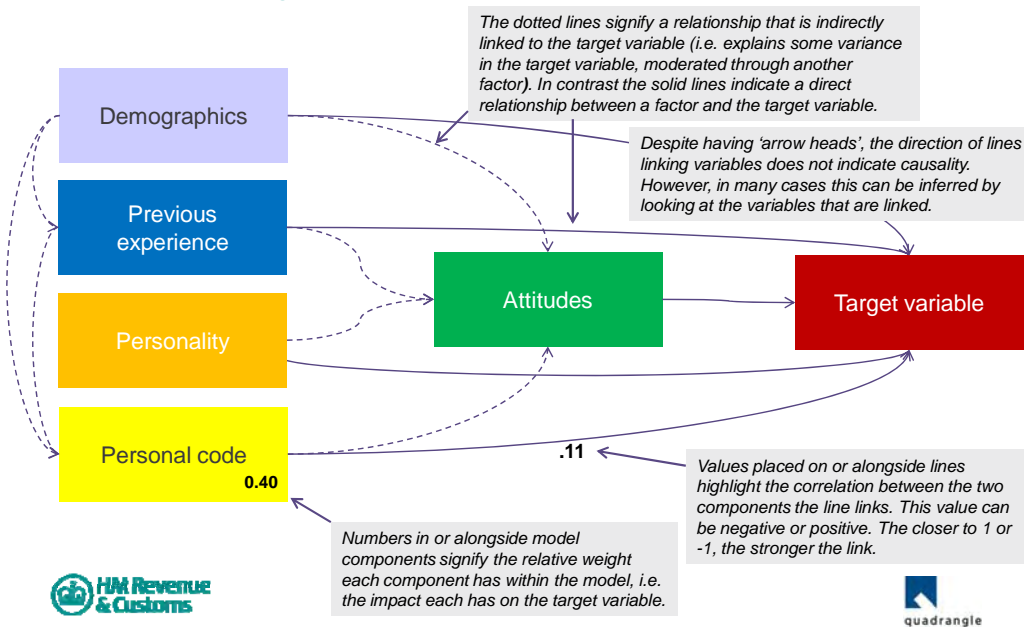17/10/12

- The four dimensions are:
    - Awareness
    - Ability
    - Motivation
    - Opportunity
    - Opportunity was not modelled using SEM
        - By nature, this dimension is situational, subject to a specific set of circumstances and moment in time. As such, it cannot be explained – or driven – by antecedent factors such as attitudes, personality etc.

From the segmentation dimensions we defined distinct target variables for the modelling to address. One model was developed for each target variable.

| Awareness | → | Perceived awareness |
| | | Actual awareness |

Ability	→	Actual ability
		Confidence in dealing with forms
		Confidence in dealing with computers
		Confidence in dealing with Government / information

Motivation	→	Acceptance of cheating
		Boundary pushing
		Due care / diligence

The modelling was done using the hypothesis outlined in the diagram below. This chart also outlines how to read the behavioural models.

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Understanding the model detail

The dotted lines signify a relationship that is indirectly linked to the target variable (i.e. explains some variance in the target variable, moderated through another factor). In contrast the solid lines indicate a direct relationship between a factor and the target variable.

Despite having 'arrow heads', the direction of lines linking variables does not indicate causality. However, in many cases this can be inferred by looking at the variables that are linked.

Demographics

Previous experience

Personality

Personal code

0.40

Attitudes

Target variable

.11

Values placed on or alongside lines highlight the correlation between the two components the line links. This value can be negative or positive. The closer to 1 or -1, the stronger the link.

Numbers in or alongside model components signify the relative weight each component has within the model, i.e. the impact each has on the target variable.

quadrangle

Key Findings.

Actual awareness

- Demographic factors and engagement with the system are the core drivers of awareness. Political engagement and education are both important in driving actual awareness of the tax system with individuals' level of engagement with the system directly influencing awareness of the tax system.
- Political engagement is directly correlated with the actual awareness and also has a significant impact on perceived awareness, which is linked to actual awareness
- Actual awareness drives perceived awareness.
- Engagement with politics and the State means an individual is closer to the system and therefore perceives themselves to be more knowledgeable and actually are more aware.
- Level of education has a major influence on actual ability which itself impacts significantly on actual awareness.
- Personal income is another demographic driver, indirectly impacting actual awareness through both ability and perceived awareness.

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Perceived awareness

- Those who have higher general efficacy are likely to think that they are aware about tax. This is strongly driven by individuals' level of organisation and engagement with the system.
- Both level of organisation and political engagement are also individually direct drivers of perceived awareness, so are key factors in the model.
- A positive disposition towards HMRC is correlated with perceived awareness indicating that confidence is built through positive experiences of the system
    - If individual's think they know about the system they see it as clearer and less intimidating, they also view HMRC more positively. The link to engagement further substantiates this connection.
- Age is directly linked to the target variable - the older one is the more aware we feel we are.
- Education is another important demographic driver as it has an affect on both actual awareness and having a positive attitude to HMRC.

Actual ability

- Level of education impacts very strongly on an individual's ability to complete a form, including all the requisite steps and processes
- Individual's exhibiting a self-centredness ('Me first') are likely to be less able. This is influenced by two factors:
    - People who display this trait are likely to be less well educated and thus less able per se
    - These individuals are less concerned about the consequences of their actions and therefore give less time and attention to a task – not seeking help, not checking their work, not following instructions - even though they are more likely to make mistakes given their lower level of education
- General efficacy and actual awareness are significantly correlated with actual ability demonstrating the importance of a belief in one's ability to complete a task

Confidence in dealing with Government / information

- Personal code and personality factors are most important in driving confidence, these are moderated only slightly by the social contract with HMRC
- An individual's ability to organise themselves is a key driver of their confidence in dealing with Government and finding information
- An individual creates the conditions for their success through their own ability to organise their affairs in relation to the state and tax specifically
- Collectivism and extroversion are directly linked to the confidence in dealing with government, indicating confidence in speaking to and collaborating with people to solve problems is key
- Individuals that are more confident are those most able to work themselves – and with the help of others – to find information and help themselves.

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Confidence dealing with forms

- Confidence in dealing with Government and finding information - or self-confidence - is a key driver of the ability to complete HMRC forms.
- Self-confidence is influenced by how organised an individual feels they are and their emotional stability – how nervous or stressed they get when dealing with tax matters and the State.
- The rational emotional divide evident in individuals' approach to forms plays a role in driving their belief that they can complete forms alongside their actual practical capability to do so.
- An individual's level of organisation is a major factor in determining how confident they are with forms
- An individual creates the conditions for success themselves. To complete a task / form successfully it is important that they have well organised records / files to enable them to achieve success.

Confidence dealing with computers

- Individuals' general level of ability and self-confidence is strongly associated with this: if an individual feels they can find information in a more general sense, they also feel confident they can do it online using a computer.
- Age has a negative impact on confidence with computers – there is a relationship with age that currently exists but which over time, as younger cohorts move through the system, will become less marked
- Confidence in using a computer and the internet declines with age. This factor is a direct driver of the target variable.
- Those who are more educated are more confident with computers, as they are more likely to have access and be using them through their employment or education.
- An individual's actual ability influences how confident they are using a computer. Actual ability is linked to education and income and negatively correlated with social grade, demonstrating the direct link between demographic drivers and this variable.

Acceptance of cheating

- An acceptance of cheating is linked strongly to the societal perception of widespread cheating norms, suggesting that in groups where cheating is perceived to be the norm this is likely to be a strong driver of group behaviours.
- Attitudes to risk taking are a key driver of acceptance of cheating.
- Risky behaviours are linked to demographic drivers like Gender, SEG and Education.
- The fear of getting caught is a mediator of the acceptance of cheating. It is also driven by demographic factors.

Due care/ diligence

- Due care is driven by a combination of positive and negative factors – individuals need to be empowered but also cajoled to take due care.

- Risk taking behaviours, which correlate with a lack of overall motivation to comply with obligations to HMRC, are strongly linked to a lack of reasonable care. They also have an impact on individuals' fear of getting caught which is a significant driver of Due Care.
- Those individuals who are more prone to risk taking behaviours are also those least likely to take due care.
- Organisation and conscientiousness are directly linked to taking due care and so those who can equip themselves with the skills to complete the task are also best positioned to complete tasks successfully.
- Supporting individuals' organisation will have a direct effect on levels of due care as well as building confidence/efficacy - a further driver of care as individuals feel they are able to achieve tasks.
- The fear of getting caught is a negative driver of due care in that individuals are driven to take more care by the belief and fear that if they do not take the requisite care they will be taken to task.

Boundary pushing

- Risk taking and self-centredness are primary drivers of a willingness to push the boundaries on paying all the taxes individuals should.
- Pushing the boundaries is rooted deep in the personal code of those willing to push the boundaries.
- The lack of a strong social contract and pre-eminence of personality driven factors also drive the mediating factor – cheating norms.
- The perception that cheating is commonplace drives the likelihood that individuals will push the boundaries where they can, suggesting that altering the societal norms around tax evasion and avoidance offer fertile territory to influence overall willingness to push the boundaries.
- Gender has a significant impact on the likelihood to push the boundaries with males more likely to exhibit risk taking behaviours that directly drive boundary pushing also.

In summary

The behavioural modelling work demonstrated that in terms of individuals behaviours four key areas emerged as particularly important;

1. Demographics – Education and SEG are good predictors so can be monitored to project potential shifts in the overall balance of the segments over time
2. Confidence – individuals need to feel tasks are within their capabilities, that they can achieve them.
3. Personal code – engagement with the system is key to awareness and motivation, so any signs of declining overall engagement (e.g. voting patterns) would suggest declines on both dimensions – that means more Unaware and more non-motivated (Reluctant Conformists or Dodgers)
4. Cheating norms – social perceptions of the commonplace of evasion or cheating the system drive motivation.

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