



## ***Research report***

# **Hidden Economy: Quantitative Feasibility Study**

Establishing effective research methods for future quantitative analysis of the Hidden Economy

**Business Customer & Strategy**

**18 May 2012**

## *About Business Customer and Strategy (BC&S)*

Business Customer and Strategy is part of Business Tax.

The goal of BC&S is to maximise Business Customer compliance for HMRC at best cost for both HMRC and the customer. This is done by developing business tax strategies through customer understanding, working with teams in HMRC and across government departments.

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## *Research requirement (background to the project)*

Last year BC&S undertook qualitative research into why SMEs enter and operate in the hidden economy and what actions HMRC can independently, or in partnership with others, take to prevent businesses entering the hidden economy<sup>1</sup> \* and/or get them to re-join the formal economy.

This work provided us a number of fresh insights, unbiased by previous assumptions; it dispelled some historical myths (i.e. the hidden economy is not exclusively cash industries); helped us identify various tipping points within a customer's business / tax journey; and revealed a number of key influences which can facilitate a customer's journey into the Hidden Economy. These influences operate on an individual level (for example, a customer's own attitudes and beliefs), a community level (for example, explaining peer norms and herd-like behaviour) and at a population level (for example, social norms).

This work identified six Hidden Economy customer 'typologies'<sup>2</sup>\* which, stretching from 'well paid hobby' and 'entrepreneur at heart', through to 'catch me if you can', had distinct profiles which framed differing barriers to change, interventions, advice on how to reach the target population, and what messages / interventions to avoid for each group.

This work, allied to other research, has enabled HMRC to develop an early understanding of:

- Hypotheses as to why businesses enter, and continue to operate in, the hidden economy
- The motivations and wider social and societal drivers which drive some into the Hidden Economy
- The business strategies and processes they adopt to remain hidden
- What levers might be successful in encouraging businesses back into the formal economy

The overall aim of this work was to build on earlier thinking, and establish effective research methods which would facilitate future quantitative analysis of the Hidden Economy.

## *Who did the work (research agency)*

The research was conducted by Quadrangle.

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<sup>1</sup>\* Reference to (SME) 'hidden economy' throughout this paper refers to those (business) activities completely unknown to HMRC, and thus is distinguished from evasion and/or under-declaration from customers in the formal economy. Other terms sometimes used for 'hidden economy' include "black economy", "informal economy", "underground economy", etc.

<sup>2</sup>\* Will be made available to the successful agency.

### *When the research took place*

The research programme took place between February – March 2012.

### *Method, Data and Tools used, Sample*

A review was conducted of relevant literature published on the web from a wide range of sources, such as academic institutions, national research centres, specialist journals (e.g. Journal of Public Economics, Journal of Economic Literature) and international bodies (e.g. World Bank, IFM, IFC, OECD) as well as that which had been provided by HMRC.

The literature review served a number of purposes:

- identified key challenges in undertaking quantitative research on the hidden economy
- identified various approaches which have been used elsewhere and provided learning as to what may be relevant to HMRC
- identified further external stakeholders to interview

Interviews were conducted with external stakeholders recommended by HMRC as well as those discovered through the literature review. The stakeholders (a combination of academics, public sector experts from other departments, local authorities and third sector organisations) provided expertise on the following:

- the issues around participation in the hidden economy, and
- the methodological approaches which have been used to quantify the hidden economy: what they are, their respective strengths and weaknesses and what their recommendation is for their use in estimating the size of the UK hidden economy

## *Main Findings*

- *There are two distinct sets of approaches to determine the scale of the hidden economy*
  - **Indirect methods** which aim to estimate, through various economic indicators designed for other purposes, the size of the problem; or
  - **Direct methods** which rely on asking people directly about their attitudes and behaviours in relation to various hidden economic activities.

These two sets of methods are entirely different and they provide completely divergent, and in the main inconsistent, estimates of the size of the hidden economy. Furthermore, there is no agreement to assess with any certainty which method produces the most accurate estimates.

### *Indirect methods*

- *The most widely used indirect methods are:*
  - **Currency/cash demand method**

This method assumes that hidden economy transactions are undertaken in the form of cash payments, particularly large denomination notes. An increase in the size of the hidden economy will increase demand for this currency. An equation is used for estimating the excessive currency demand caused by the hidden economy over time.
  - **Cash deposit ratio**

This method estimates the size of the hidden economy by calculating the ratio of currency in circulation to demand deposits. An estimate of currency in circulation required by formal currency is subtracted from the actual currency in circulation. This is then multiplied by the velocity of money to estimate the size of the hidden economy.
  - **Transaction method**

Examines the relationship between the volume of transactions and GDP. The GDP of the hidden economy is calculated by subtracting formal GDP from total nominal GDP.
  - **Discrepancies in income/expenditure**

Examines the difference in accounted incomes and expenses. If the latter is greater, then the difference must consist of undeclared income obtained through the hidden economy.
  - **Capital indicator method**

The growth of total electricity consumption is considered to be an indicator for the growth of overall output. Subtracting formal output derives an estimate of hidden economy output.
  - **MIMIC method**

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**Establishing effective research methods for future quantitative analysis of the Hidden Economy**

The idea of the Multiple Indicator Multiple Cause (MIMIC) method is to represent the output (or income) of the hidden economy as a latent variable or index, which has causes and effects that are observable but which cannot be directly measured. The estimated hidden economy is based on developments in the variables which on the one hand affect the size and output growth of the hidden economy, and which on the other hand are the tracks of the hidden economy's activities in the official economy.

- o Labour input method

Considers labour as an input factor for both the hidden and the formal economies, whereby changes in the labour force indicates the dynamics of the hidden economy; a decline in labour force participation in the formal economy = an indication of increased activity in the hidden economy

- *Indirect methods are widely criticised.* All indirect methods have been heavily criticised, particularly by the OECD, which declared that such methods should not be used because they are “unreliable” and “unsuitable”.
- *Indirect methods’ estimates are varied.* Estimates vary widely both between methods and for the same method over time. For example, between 1970-75, five estimates were made using five different methods: the estimates ranged from 2% to 17% of GDP, illustrating the divergence of different methodologies.  
No method has produced a consistent estimate of the UK hidden economy over a period of more than 10 years. Some methods deviate by more than 5 percentage points in as many years.
- *Indirect methods’ assumptions are unwarranted.* Indirect methods are often based on indefensible assumptions, such as the theory that all hidden economic activity takes place cash-in-hand or involves the consumption of electricity. Some of these assumptions are increasingly problematic, as changes in the economic structure and the use of more varied forms of transactions (e.g. cheques, credit cards, PayPal) make them less valid estimates of contemporary economic practices.
- *Indirect methods are indiscriminate.* Not only do they fail to distinguish ghosts and moonlighters within what is determined as the hidden economy, they also fail to discriminate the hidden economy from other types of undeclared activities, such as evasion or organised crime. They therefore capture behaviours that are not relevant to the hidden economy, as defined by HMRC. As a result, they generally produce very high estimates that are completely out of sync with findings from direct methods. Crucially for HMRC, indirect methods generally express the size of the hidden economy in terms of a percentage of GDP but not as an estimate of the amount of tax lost.

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**Establishing effective research methods for future quantitative analysis of the Hidden Economy**

- *Indirect methods provide no understanding of hidden economy.* Indirect methods do not help to understand the composition of the hidden economy, the types of people involved or the reasons why they participate. They are not granular enough to generate any insights into the drivers of participation and to give local level insights.

***Direct methods***

- *Direct methods are the most favoured method by experts.* These are essentially surveys which ask more or less directly questions on individuals and businesses' knowledge, attitudes, perceptions and behaviours in relation to the hidden economy. The key reported advantages of survey methods are that they can be tailored to be fit-for-purpose and designed to focus precisely on the hidden economy.
- *A bespoke survey could capture a range of information.* More specifically, it would enable HMRC to:
  - Define precisely what is meant by the hidden economy so that respondents know exactly what is being measured and can answer accordingly
  - Measure a broad range of HE activities such as undeclared salaries, in-turn or *quid pro quo* activities or any other activity
  - Identify *moonlighters* and *ghosts* among the respondent base
  - Measure both the supply side and the demand side of the hidden economy
  - Replicate if necessary – which allows HMRC to monitor changes in the hidden economy over time
  - Enable HMRC to understand the structure of the hidden economy, who participates and why
  - Provide an opportunity to compare the profile of hidden economy participants with that of the general population
- *Direct methods only provide lower bounds estimates.* Because of the sensitivity of the subject matter and of concerns over confidentiality, surveys are susceptible to non-response and under-reporting. They may therefore underestimate the actual volume, frequency and value of activity. The problem is most severe in relation to the supply side compared to the demand side because it is not illegal to purchase goods and services on which tax is not declared. In some cases purchasers will not even be aware that they are not buying from a legitimate source. There is also greater public tolerance of purchasing HE goods and services than of supplying them.
- *They are less reliable in relation to businesses.* In relation to individuals operating outside of a business structure they are more reliable because respondents within business structures are less likely to be willing to share information about concealed business activities. Also, public opinion is less tolerant of undisclosed activities from businesses than from individuals and full disclosure could jeopardize the business itself.

### *Recommendations for research*

- *Qualitative research is not scalable.* Qualitative research into the hidden economic practices of businesses has been successfully conducted by Futures Group for HMRC. It yielded very rich insights into the profile of the participants, their motivations and practices. The report specifically states that there were no significant problems in recruiting businesses to take part in the research. However, there are many reasons to doubt that recruitment for a survey would meet with the same degree of success:
  - snowballing is not an option
  - incentives cannot be paid to participants
  - there is very limited scope to build rapport and establish trust in a survey, because of the smaller amount of time spent with respondents and because questions are mainly closed

For these reasons, while it is possible to recruit 50 or even 100 hidden economy businesses to take part in an interview, this approach cannot be scaled up to generate a sample of 1,000 or more businesses.

- *Individuals could be used as the unit of analysis.* There are a number of advantages to using individuals as the unit of analysis, as the research found:
  - a representative sample frame can be created for individuals in the UK
  - individuals are more likely to discuss their hidden work
  - previous surveys have captured both the supply and demand sides

A nationally representative survey of individuals in the UK is therefore more likely to yield a more accurate and much richer picture of the hidden economy – both in terms of sizing the hidden economy (establishing the exact proportion of those who take part in the hidden economy, and the profile of the population that buy and sells goods and services), and in terms of understand attitudes, perceptions and behaviours.

It should be noted though that a survey of individuals will only capture undeclared work between individuals, and between individuals and businesses. It would provide evidence in relation to some undeclared work conducted by:

- a company for an individual (e.g. “man with a van” business helping with a house move)
- an individual supplying work to a company (e.g. bar tender working in a restaurant)
- an individual supplying work to another individual (e.g. a gardener looking after a neighbour’s garden)

It will not capture the undeclared work that businesses supply to / purchase from other businesses. Previous research in the Netherlands reported that this is a very small proportion of all hidden economic activity. There is no equivalent information for the UK.



- *Recommendations.* Using the learning from the interviews and literature review, Quadrangle provided four options for consideration in future analysis of the hidden economy. Each option is technically feasible and uses a very different approach or logic.

### *Option 1: Representative survey of individuals*

This research option is devised to provide HMRC with:

- a direct measure of the size (volume and value) of the hidden economy
- a profile of participants (suppliers and buyers)
- comparison between profile of participants and the adult UK population
- a detailed understanding of the attitudes, behaviours, drivers, etc. affecting participation in the hidden economy

This option would enable HMRC to size and understand the hidden economy and those who are active in it. It would also enable a robust comparison between the profiles of suppliers, buyers, and the rest of the UK population, so that any specific characteristics can be identified. It would capture the activities of both ghosts and moonlighters.

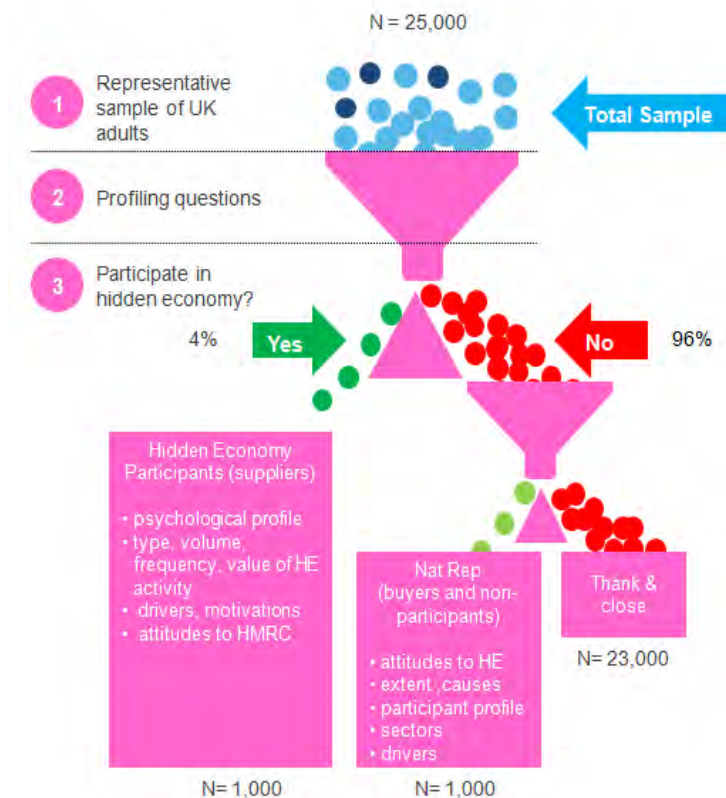


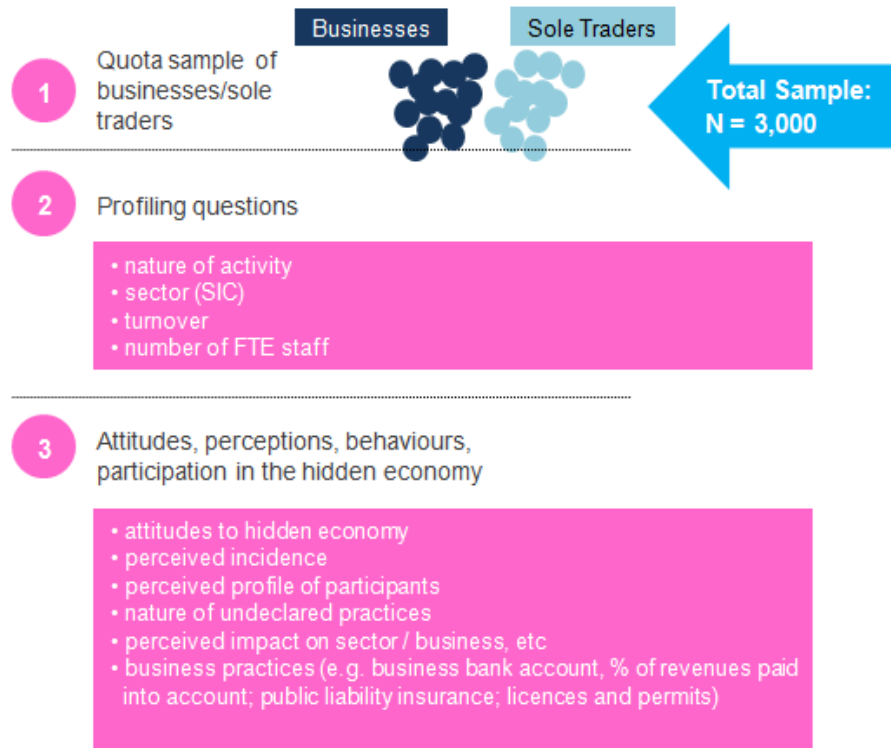
Figure 1: Structure of a representative survey of individuals

### *Option 2: Survey of business (including sole traders)*

This research option is devised to provide HMRC with;

- a better understanding of hidden economic activities, as perceived by businesses

This option does not focus on objective indicators of hidden economy activity. It provides only indirect, subjective assessments of the size of the hidden economy based on perceptions, attitudes to various hidden economic activities (e.g. level of acceptability) and their understanding of what is happening in their sector: who is involved, in which sectors, to what extent, in what ways, why and what with consequences.



*Figure 2: Structure of a survey of businesses (including sole traders)*

***Option 3: Stratified sample of individuals – maximum differentiation.***

This research option is designed to;

- address the common issues of poor response rates and partial disclosure
- maximise participation and disclosure by developing a partnership approach to fieldwork
- deliver the highest possible estimates of participation in the hidden economy that a direct method can yield

The partnership would bring together a specialist market research and representatives of trusted third sector organisations with extensive networks and credibility in selected local areas. The main function of these representatives would be to eradicate (as far as this is possible) the known barriers to participation and honest disclosure.

Importantly, this approach would enable HMRC to access the level of richness that can support the development of policy ideas. It would also become a benchmark against which it is possible to assess the validity of both direct and macro-estimates.

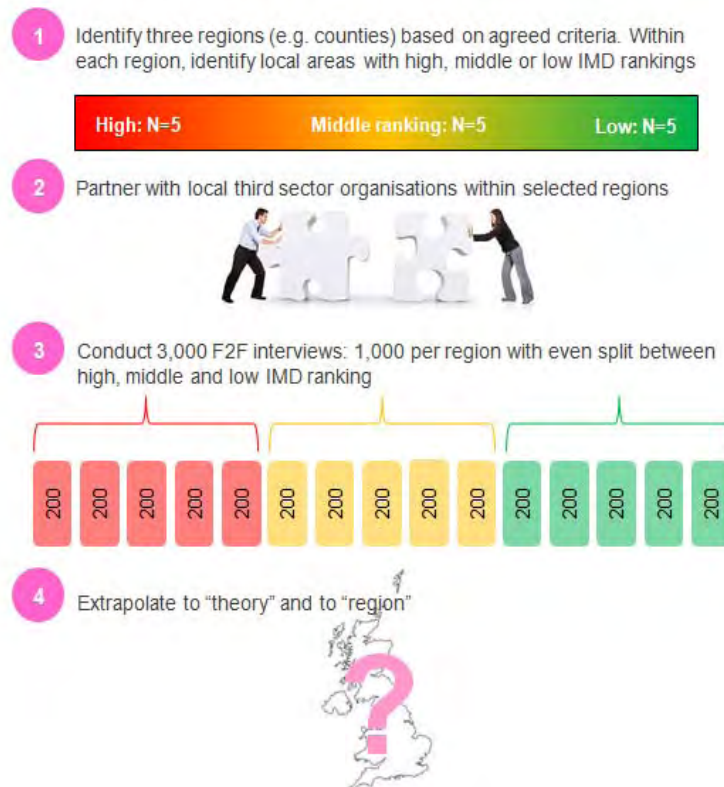


Figure 3: Structure of the stratified sample of individuals – maximum differentiation

#### *Option 4: Currency or cash demand methods.*

This option is designed to provide HMRC with;

- an estimate of the size of the total hidden economy

The Currency Demand or Cash Demand Methods constitute possible options. The reasons for suggesting these methods are as follows:

- They have been widely used, so they enable comparisons over time and across countries
- They produce high estimates, but not the most extreme values
- They yielded values that are not out of line with the electricity consumption method and one value for the transaction method
- They are still in use and, despite severe criticism, have some ongoing currency
- They are based on similar assumptions so yield consistent findings between them, which suggests a degree on internal validity

However, HMRC would need to be mindful that all the limitations noted in relation to indirect methods apply to these approaches too. In addition, these approaches are skewed by:

- their exclusive focus on cash transactions, which have become a smaller part of the overall economy and, presumably, the hidden economy too
- the fact that they are affected by inflation
- they assume that the velocity of money in the hidden economy is the same as in the formal economy, which may not be demonstrated

#### *In summary*

Using direct methods to estimate the size of the defined hidden economy will, at the same time, enable HMRC to gather understanding on why it exists and profile participants; by comparison, indirect methods will only provide an estimate of size. And although direct methods only provide a lower bounds estimate due to difficulties in obtaining complete response, indirect methods have sustained significant criticism for their inconsistent and unreliable estimates, most significantly from the OECD. The HMRC would not be able to replace the insights into the hidden economy by using an indirect method such as that described in option 4.