Department for
Business, Energy
& Industrial Strategy

Companies House

VALUING THE USER BENEFITS OF COMPANIES HOUSE DATA

Report 2: Direct Users

BEIS Research Paper Number 2019/015

September 2019

Any enquiries regarding this publication should be sent to us at:
enquiries@beis.gov.uk

Contents

1 Introduction

This report has been prepared by Economics for the Environment Consultancy (eftec) in collaboration with ICF Consulting Services Limited (ICF). It is part of a series of reports that presents the findings of research commissioned by the Department for Business, Energy and Industrial Strategy (BEIS) to value the user benefits of Companies House (CH) data.

1.1 Outline

This report (Report 2) estimates the value of CH search and data services to direct users. It summarises the design, implementation, and analysis of a stated preference survey that was administered to a sample of search service users. These are primarily businesses and organisations – companies, creditors, investors, researchers, and public sector bodies – that use the Companies House Service (CHS), Companies House Direct (CHD), or WebCHeck services to access information about registered companies in England, Wales, Scotland and Northern Ireland[1]. The main results are user willingness to pay (WTP) estimates for company information and data, which are supplemented by estimates of cost savings to users due to CH making the data readily available.

The methodological approach for this study is described in detail in Report 1: The Methodological Framework. This report concluded that a stated preference approach would be the preferred approach to valuing the use of CH data, given data limitations. The stated preference survey questionnaire and material was developed through an iterative design and testing phase of work over the period September 2018 – January 2019. This included a series of one-to-one cognitive interviews with a small sample of users of the CH services that was followed by a pilot survey with almost 100 respondents, which was administered online. The main survey fieldwork took place between February and March 2019, with a sample of just over 500 users of CH search services.

Other reports in the series consider the benefits of CH data for specific subsets of users: intermediaries (Report 3) and providers of public goods (Report 4). These reports also include qualitative findings for significant intermediaries and users who are considered to provide 'public goods' (e.g. law enforcement agencies and transparency organisations) who rely on bulk data products. All results are summarised in a separate policy summary, which also draws overall conclusions about the value of CH data to users.

[1] Overall, these users are estimated to account for around 95% of the total use of the company information and data search services (see Section 4.1). The general public is estimated to account for the remaining 5% of total use and the value of CH data to these users is not captured within this study.

1.2 Objectives

The specific objectives of the user survey study were to:

1. Specify the attributes of the open access and free-of-charge company information and data made available by CH from which users derive benefits;

2. Design, develop and test a stated preference-based approach to estimating the user benefit estimates for company information and data;

3. Implement the stated preference survey with a sample of CH search services users;

4. Undertake analysis to estimate the value of user benefits for the open-access company information and data, including examining how values may differ across different user characteristics;

5. Assess the validity and robustness of results, including whether and to what extent user preferences and values differ based on methodological factors, such as survey complexity;

6. Estimate the (annual) aggregate benefits of CH search services in terms of the use of company information and data; and

7. Develop an illustrative policy analysis to demonstrate the practical application of the survey's results.

The iterative development of the survey involved input from a BEIS steering group, which includes representatives from BEIS, CH and Defra. All aspects of the study have also been subject to independent peer review by Professor Ken Willis (Newcastle University).

1.3 Structure of this report

The remainder of this report is structured as follows:

- Section 2 describes the stated preference methodology that provides the underlying framework for the development of the survey;

- Section 3 summarises the design and testing process, including the survey content and main findings from the pilot survey;

- Section 4 presents the main aspects of the sampling strategy for the main survey implementation phase;

- Section 5 provides a summary of user survey sample profiles and findings in relation to the use of the CH search services and the company information and data that is provided, as well as the use of alternative sources of information;

- Section 6 reports the stated preference choice task analysis, including user benefit value estimates and associated validity testing assessments;
- Section 7 presents estimates of annual aggregate user benefits for CH search services, based on user data provided by CH. An illustrative policy application is also provided, which assesses the impact of introducing an annual user charge for the company information and data search services; and
- Section 8 summarises the main findings and provides concluding remarks.

The main content of the report is supported by eight annexes:

- Annex 1 provides a fuller summary of the cognitive interviews approach and findings;
- Annex 2 presents the stated preference questionnaire for CH search services users;
- Annex 3 presents the onscreen appearance and layout of the stated preference questionnaire;
- Annex 4 summarises results from a supplementary survey that gathered user profile information for CH search services to support the user survey sampling approach;
- Annex 5 provides summary statistics for the user survey, including breakdowns for intermediate users and public good users captured within the overall sample;
- Annex 6 sets out results from a user time savings calculator that was included in the survey to provide supplementary estimates of cost savings to search service users;
- Annex 7 describes the stated preference methodology (discrete choice experiment) and provides the full set of econometric results from the choice model analysis; and
- Annex 8 provides the peer review reports for the survey development and reporting.

2 Stated preference methods

This section provides an introduction to stated preference research and describes the different methods that can be applied.

2.1 Background

Stated preference methods are survey-based approaches that present respondents with simulated choices to measure their preferences and valuations for goods and services. Whilst these methods are often used to value the provision of non-market goods and services, they can also be applied in relation to marketed products; for example, to examine demand for product enhancements and innovations.

The central component of a stated preference survey is a 'choice task', or sequence of choice tasks, in which respondents are asked to make choices about the provision of the good/service of interest. The choice task(s) usually involves trade-offs between improved, maintained, or deteriorated levels of provision. The choices that respondents make reveal their priorities (demand) for the provision of the good or service; i.e. what they want and care about most.

Where trade-offs with monetary amounts are included (e.g. a price for the good or service) respondents' choices also reveal the value they derive from its provision. Most commonly, this value is measured in terms of the respondent's willingness to pay (WTP). This measures the benefit that the respondents derive from improved or maintained (avoided deterioration) provision of a good, in terms of the monetary amount they are prepared to sacrifice to secure that level of provision[2].

2.2 Range of methods

A stated preference approach offers a particularly flexible research method in the context of open-access provision of public sector information. It can be used to assess user priorities for: (a) the current levels of provision; and (b) future levels of provision (either enhanced or deteriorated) beyond the current or historic service level. The scope of stated preference methods, however, can be broadly defined and associated with a wide range of terminology which varies across applications in different sectors. Table 2.1 provides a summary of the main variants.

[2] Willingness to pay (WTP) is a measure of economic value. It applies (universally) to all types of goods and services, whether they are traded in competitive markets, provided in a regulated market setting (e.g. energy), or non-market (e.g. open-access public sector information).

Table 2.1: Stated preference choice formats

Method/format	Description	Role for user preference research
Dichotomous choice contingent valuation (DCCV)	• Single choice question • Respondent selects preferred option from 2 alternatives	• Valuing a discrete change in service (e.g. WTP for a package of improvements)
Paired comparison	• Repeated choice exercise • Respondent asked to choose between two alternative options/scenarios • Some applications combine respondent choice with a rating scale to gauge strength of preference	• Quantifying priorities (e.g. preference weights) • Valuing incremental changes in service levels (e.g. WTP for maintaining/improving)
Discrete choice experiment (DCE)	• Repeated choice exercise • Respondent asked to choose preferred option/scenario from 2 or more alternatives	• Quantifying priorities (e.g. preference weights) • Valuing incremental changes in service levels (e.g. WTP for maintaining/improving)
Contingent rating/ranking	• Usually a repeated choice exercise • Respondent asked to rank (1st, 2nd, etc.) or rate (e.g. Likert or scale 1-10) their preference for a single of multiple options/scenarios	• Quantifying priorities (e.g. preference weights) • Usually not consistent with estimating valuations by itself
Best-worst scaling (BWS) (incl. max-diff)	• Repeated choice exercise • Respondent asked to select most (best) and least (worst) preferred aspects of a single option/scenario ('profile')	• Quantifying priorities (e.g. preference weights) • Usually not consistent with estimating valuations by itself
DCE – BWS hybrid	• Repeated choice exercise • Respondent asked to select most (best) and least (worst) preferred option/scenario from three or more alternatives	• Quantifying priorities (e.g. preference weights) • Valuing incremental changes in service levels (e.g. WTP for maintaining/improving)

Table 2.1 also highlights that different stated preference approaches are suitable for eliciting different types of preference evidence. The discrete choice experiment (DCE) and dichotomous choice contingent valuation (DCCV) are the theoretically valid methods for estimating willingness to pay. This is because these methods – if applied appropriately – meet certain criteria concerning the measurement of economic value. Other methods, such as rating and scaling approaches, can provide quantitative views on preferences (priorities) but are not consistent with underlying economic theory[3].

2.3 Validity of stated preference research

Stated preference methods are adaptable and hence can be applied to a wide range of settings to produce valuation evidence. However, these methods require careful application to ensure that the results are both valid and robust. They are (questionnaire) survey-based approaches and consequently their reliability is dependent on respondents' understanding the topics of these surveys and providing responses and making choices that genuinely reflect their preferences for the good or service in question. Poorly-designed and implemented surveys can be subject to a range of validity concerns that can be related to respondent understanding or design-induced biases (Table 2.2)

Table 2.2: Stated preference methods – validity testing

Aspect of study	Key issues	
Content validity	• Do respondents understand the survey purpose and explanatory material? • Are the simulated market and choice tasks credible? • Is the potential for biases in responses addressed and minimised?	Content validity is addressed in the survey design and testing phase and then tested for in the analysis phase
Construct validity	Do results align with reasonable expectations based on: • Underlying economic theory • Findings from similar studies using comparable methods	Construct validity is tested in the analysis phase.

[3] See for example: Louviere, J.L., Flynn, T.N. and Carson, R.T. (2010) Discrete choice experiments are not conjoint analysis. Journal of Choice Modelling 3(3), pp 57-72.

Good practice guidance for applying stated preference methods emphasises the importance of the validity testing process, which is integral to the survey design and analysis phases[4]. A key area of focus is the complexity of survey and choice task(s) and respondent understanding in terms of: (i) the explanatory material describing the good/service, its features ('attributes') and levels of provision; and (ii) the cognitive burden of the choice task exercise(s).

As described subsequently, the survey design process has followed an iterative test-re-test process, which is consistent with good practice recommendations, to test respondent understanding and balance the amount of information presented with the requirements of the choice tasks. The cognitive burden of a stated preference choice task is determined by a combination of survey design factors. This includes: (i) the number of attributes respondents are asked to consider; (ii) the levels of provision for these attributes and the range they cover; (iii) the number of alternative options respondents are asked to choose between; and (iv) the number of choices they are asked to make.

[4] Johnston et al. (2017) 'Contemporary Guidance for Stated Preference Studies', Journal of the Association of Environmental and Resource Economists 2017 4:2, 319-405

3 Survey design and testing

This section describes the user survey and its various components and explains the approach used to develop and test the survey.

3.1 Overview of approach

The overall approach to the user survey features three main phases of work: (i) survey design and testing; (ii) main survey fieldwork; and (iii) analysis and reporting. The main elements are described below.

Design and testing

- *Survey design and testing*: the survey testing process provided the basis for addressing content validity issues concerning respondent understanding. The user survey material was developed and tested through a series of one-to-one cognitive interviews with users of the CH services (Section 3.3; Annex 1). Feedback from these interviews has then informed subsequent revisions. The approach and survey material have also been subject to independent peer review.

- *Experimental design:* this is a central component of stated preference methodology, where the objective is to 'optimise' the amount of preference information that is generated by the choice task given the sample size[5]. An initial design for the choice task was prepared for the pilot survey and then updated for the main survey implementation phase.

- *Pilot survey:* this represented the final stage of the design phase of the study, providing a quantitative 'field test' of the survey and experimental design prior to the main survey implementation.

- *Sampling strategy:* this addressed various choices regarding the implementation of a survey of CH service users (e.g. sampling frame, sample, survey mode, sample size). The sampling approach was supported by a supplementary survey that gathered data on the profile of search service users over a 12-week period (December 2018 – February 2019) (Section 4.1; Annex 4).

[5] There are numerous ways in which the choice task attribute levels (Section 3.5) can be combined into alternative options for respondents to considers. The purpose of the experimental design task is to ensure that the effects of interest – i.e. users' preferences for CH information and data - can be adequately and efficiently estimated from the available sample size. The design therefore specifies combinations of attribute levels for each choice task presented to a respondent; i.e. it determines which levels of attributes will be presented on a given choice card.

Main survey fieldwork

- *Main survey*: following from the sampling strategy, the survey was implemented via an online approach with direct users of CH search and data services. Respondents were recruited from: (i) the CH user panel; and (ii) a panel of users who participated in the CH 2018 Customer and Stakeholder Survey.

Analysis and reporting

- *Data analysis*: a range of analyses have been undertaken on the overall survey data and choice task data. This includes the estimation of the direct user's WTP for CH information and data.

- *Aggregation:* the study's WTP results have been combined with user data provided by CH to estimate annual aggregate benefits for CH information and data.

3.2 Survey development

The starting point for the survey development was the information about registered companies made available by CH via the various search channels (e.g. CHS, CHD, WebCHeck, Companies House API). This includes:

- Basic company information, including the company type and registered address;
- The nature of the business, based on Standard Industrial Classification (SIC) codes;
- Company status, e.g. whether the company is live or dissolved;
- Previous and dissolved company names;
- The date at which the last account or confirmation statement was filed;
- The date at which the next account or confirmation statement is due to be filed;
- The full transaction filing history;
- Images of filed documents;
- Current and resigned officers;
- Persons with significant control;
- Disqualified directors;
- Mortgage charge data; and
- Insolvency information.

Prior to the initial set of cognitive interviews, a candidate set of choice task attributes were specified (Table 3.1). The attributes describe the different features and dimensions of the information and data made available by CH and/or is available via commercial data service providers (e.g. type of information, coverage, cost of access). Through the cognitive interviews the importance of each attribute was tested with respondents, along with their understanding of the description and alternative levels of provision. The appendix to Annex 1 summaries the attribute combinations and descriptions tested in each wave of cognitive interviews.

Table 3.1: 'Candidate' choice task attributes tested in cognitive interviews

Attribute	Definition
Company information	Basic information about a company (registered office, sector).
Ownership and control	Information on persons of significant control (PSC) or shareholders.
Financial information	Annual reports and financial statements, and analysis and interpretation of its financial performance (financial strength indicators).
Credit information	Analysis of company probability of default (credit limits and scores) and/or comparisons of company credit position (credit assessments and benchmarking).
Coverage	The number of companies in England and Wales, Scotland and Northern Ireland the service has information on and can provide data for.
Historic information	Number of years of archived information from the current time period that the service makes available.
Use limit	The monthly use limit for the number of searches for company information.
Cost	Annual cost (£) for accessing the company information.

Specifying a wider range of services/provision than currently provided by CH offers more trade-offs to survey respondents. Given the purpose of the survey – to estimate the value of CH search and data services to direct users – an explicit cost attribute is required. Incorporating 'value-added' and substitute services from commercial providers within the choice is a mechanism for including a cost attribute. This approach avoids the requirement for a scenario in which the services provided by CH are charged for; i.e. directly asking respondents to pay for CH search services to estimate WTP for their provision[6]. Instead,

[6] Following discussions with BEIS and CH it was agreed that the survey should not give the false impression to respondents that introducing charging for data and information currently provided for free via the CHS was being considered as a policy option. To avoid raising undue concern with current users, the explanatory content in the survey stated to respondents that: (i) the company data and information that CH makes publicly available will continue to be provided free of charge; and (ii) the purpose of the research is not to understand how much money can be charged for the information and data provided by CH, but is instead to understand the value of that information to its users.

the choice is between the provision of CH services for free, and priced offerings from commercial providers (see Section 3.5).

Based on the findings from the cognitive interviews, a refined set of four attributes was specified (Table 3.2). The selection is primarily based on the requirement to value the service provided by CH and the importance/ relevance of the wider attribute levels to respondents in the testing process.

Table 3.2: Final company information and data attributes

Attribute	Description	Features
Company information	Information about a company, its ownership, and structure, including:	• **Basic details: registered address, company number, date of incorporation, nature of business** • **Persons of significant control: individuals with more than 25% of shares or voting rights in a company** • Shareholders: legal owners of a company
Financial and credit information	Information about a company's financial performance, including:	• **Annual reports and financial statements: statutory filings by a company** • Credit limits and scores: assessment of a company's probability of defaulting on debts • Financial strength indicators: assessment of a company's financial performance
Historic information	Number of years of archived information from the current time period that is available:	• From 1 year (current) to **5+ years**
Annual cost	Annual cost (£) for accessing the company information	• From **free** to £4,000 per year

Note: Bold indicates CH level of service

3.3 Cognitive interviews

The user survey questionnaire material – the wording, attribute descriptions, explanatory information and instructions for respondents, visual layout and appearance, and choice task format – was developed iteratively through the cognitive interviews. The main objectives for the qualitative testing were to:

- Test and develop the choice task format, including the range of attributes and the trade-offs presented to respondents;
- Determine what and how much contextual information was required by respondents to assist them in completing the survey and providing considered responses;

- Understand how much effort was required by respondents to complete the survey, including the clarity of choice task instructions, how easy or difficult it was to answer the choice tasks, and the number of repeated choices; and

- Assess respondents' motivations for their choices and whether these were based on the aspects of the choice task scenarios, or unintended effects from the survey design.

A total of 19 one-to-one interviews were completed with a varied group of users. Following an initial telephone briefing explaining the purpose of the interview and research (approx. 5 minutes), respondents self-completed the survey online (approx. 15 minutes). They then participated in a follow-up debriefing telephone interview (approx. 20 minutes).

An overall summary of the approach and findings from the cognitive interviews, including the iterative development of the choice task format, is provided in Annex 1.

3.4 Survey structure and content

Survey structure

The structure of the user survey (Table 3.3) is based on the typical format for a stated preference questionnaire[7]. Annexes 2 and 3 provide the survey material (questionnaire and explanatory content for respondents including showcards/showscreens).

[7] See: Bateman et al. (2002) Economic Valuation with Stated Preference Techniques: A Manual, Edward Elgar.

Table 3.3: Survey structure

Section	Content
Section A: Screening and profile questions	• User type (business; research; household / public) and role • Location, legal status, economic activity, organisation size, and turnover
Section B: Use of company search services	• Services used • Frequency and duration of use • Importance of different types of information • Reason for using CH search services
	• Use of alternative information sources • Cost of alternative information sources
Section C: Benefits of CH data	• Choice task instructions and attribute descriptions • Choice task [DCE]
Section D: Follow-ups	• Ease / difficulty of choice tasks • Attribute importance • Motivations for choice task responses
	• Timing savings calculator
	• Satisfaction with CH search services

The key elements of the survey structure and content were:

- Screening and respondent profile questions: these were included to: (i) help assess the representativeness of the sample; and (ii) to help explain patterns in choice task responses based on user characteristics (e.g. for validity testing).

- Use profile questions: 'warm-up' questions to prompt respondents to think about: (i) uses of CH search services; (ii) frequency and duration of use (time/search effort); (iii) the information and data accessed and how it used; and (iv) substitute/ alternative information sources.

- Explanatory material and respondent instructions: including an example of the choice task format and attribute description showcard. The purpose of this material was to: (i) engage respondents and ensure understanding of survey purpose; (ii) provide information on the attributes featured in the choice task; and (iii) explain the format of the choice task. As noted above, all aspects of the explanatory material, including the attribute descriptions, were developed, tested and refined through the cognitive testing.

- Stated preference choice task: see Section 3.5.

- Follow-up questions: these collected extra information from respondents to aid validity testing, both in terms of respondent understanding of the survey and choice tasks and the motivations for their choices. This includes direct questions concerning the ease/difficulty of the choice task, and most importance attribute(s).

- Time-savings calculator: see Section 3.6.

3.5 Stated preference choice task

The choice task format used in the study is a discrete choice experiment (DCE) (Figure 3.1). As noted in Section 2.2, the DCE format is a theoretically valid method for estimating WTP. It is a good match to the overall requirements of the research project as the attribute-based approach enables WTP to be estimated for specific features of a good or service (e.g. the persons of significant control register). Annex 7 provides further detail on the DCE methodology.

Figure 3.1: Choice task format

Which option do you prefer?

MORE INFORMATION

	OPTION A Commercial Provider	OPTION B Commercial Provider	OPTION C Companies House
Company information	None	Basic details + Persons of significant control + Shareholders	Basic details
Financial and credit information	None	Annual reports & financial statements + Credit limits and scores	None
Historic information ***Number of years***	3 years	3 years	3 years
Cost ***Annual subscription***	£500 per year	£1,000 per year	Free
	○	○	○

Note: screenshot from pilot survey version.

The respondent instructions and introduction to the choice task included:

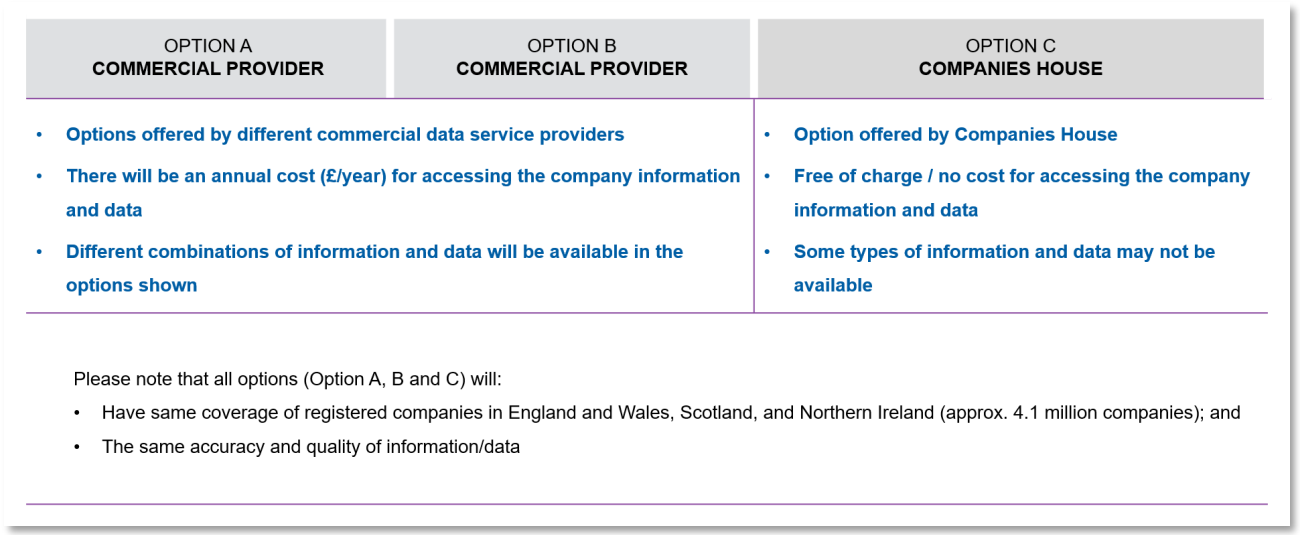
- An explanation of the layout and format of the choice task and the information presented for each option, including the attribute description showcard (Figure 3.2);
- An explicit statement that CH information and data will continue to be provided free of charge;
- Prompts for respondents to think about use and benefit of CH information and data to their organisation; and
- Conventional 'cheap talk' and budget reminder information (i.e. choices offered are consequential)[8].

Figure 3.2: Attribute description showcard

The features of each option		*The different types of information that could be provided and the cost*
Provider	The service provider for the company information and data – either:	• **Companies House**, or • **Commercial provider**
Company information	Information about a company, its ownership, and structure, including:	• **Basic details:** registered address, company number, date of incorporation, nature of business, previous company names, mortgage charges, insolvency information • **Persons of significant control:** individuals with more than 25% of shares or voting rights in a company • **Shareholders:** legal owners of a company
Financial and credit information	Information about a company's financial performance, including:	• **Annual reports and financial statements:** statutory filings by a company • **Credit limits and scores:** assessment a company's probability of defaulting on debts • **Financial strength indicators:** assessment of a company's financial performance
Historic information	Number of years of archived information from the current time period that is available:	• From **1 year (current)** to **5+ years**
Cost	Annual cost (£) for accessing the company information	• From **free** to **£4,000 per year**

[8] Budget reminders and 'cheap talk' scripts are conventional components of a stated preference survey. Their purpose is to address potential hypothetical bias where respondents may over-state their WTP in a simulated market due to the non-coercive nature of the payment commitment. This follows from observations in comparative studies where actual WTP is often less than stated WTP (Bateman et al, 2002). Budget reminders and cheap talk scripts therefore ask respondents to take into account constraints on WTP which includes their overall income and other expenses.

Figure 3.3: Option label descriptions showcard



OPTION A **COMMERCIAL PROVIDER**	OPTION B **COMMERCIAL PROVIDER**	OPTION C **COMPANIES HOUSE**
• Options offered by different commercial data service providers • There will be an annual cost (£/year) for accessing the company information and data • Different combinations of information and data will be available in the options shown		• Option offered by Companies House • Free of charge / no cost for accessing the company information and data • Some types of information and data may not be available

Please note that all options (Option A, B and C) will:

- Have same coverage of registered companies in England and Wales, Scotland, and Northern Ireland (approx. 4.1 million companies); and
- The same accuracy and quality of information/data

The choice task incorporated several design features:

- Labelled choice task – the format is a partially-labelled DCE, since Options A, B and C are defined in terms of the service provider, either: (i) CH; or (ii) a commercial provider[9]. Respondents were provided with a supplemental showcard that describes the option labels (Figure 3.3).

- Forced choice – whilst respondents were offered a CH option in each choice for no cost, there were trade-offs in terms of a deteriorated level of service. In some options, different types of information usually provided by CH were not available. The purpose was to encourage trade-off behaviour by respondents in terms of weighing up the service levels offered under the commercial provider options against the cost to their organisation.

- (Experimental) design constraints – several constraints were incorporated into the experimental design to avoid dominated or non-credible choice options. This included:

    - Constraining the levels of service in the CH option to the current level or lower (in line with the forced choice approach);

    - Excluding an option presenting a combination of attribute levels where CH does not provide any information at all; and

    - Ensuring that the commercial provider alternatives always feature a cost to the respondent's organisation; i.e. never provided for free.

[9] The inclusion of labels for the alternative options means that it is possible to empirically test whether respondents assign value to the service provider (i.e. CH) that is independent (in addition) to the value of the attributes and levels offered in the simulated choices – see Section 4.2.

The combination of attributes and levels presented in the choice task are set out in Table 3.4. Three or four attribute levels were specified for the service level attributes: company information; financial and credit information; and historic information. The attribute levels pivot around the current level of service provided by CH, which allows both enhanced and deteriorated levels of provision to be presented to respondents across the choice task options. The set of value-added attribute levels that are only offered in the commercial provider options were based on feedback from the cognitive interviews. These are offered as incremental additions over the CH level of service.

A total of nine levels were included for the cost attribute, which is specified as an annual cost for accessing the data and information (i.e. a subscription). The price range is informed by the cost of data services products that are currently available, as well as feedback from the cognitive interviews concerning ‘acceptable’ price levels, and organisation turnover. The final set of price-levels were specified following analysis of the pilot survey data (see Section 3.5).

Table 3.4: Choice task attributes and levels

Attribute	Description	Level and coding								
		1	2	3	4	5	6	7	8	
Company information	Information about a company, its ownership, and structure	None	Basic details	Basic details + Persons of significant control	Basic details + Persons of significant control + Shareholders	-	-	-	-	
Financial and credit information	Information about a company's financial performance	None	Annual reports and financial statements	Annual reports and financial statements + Credit limits and scores	Annual reports and financial statements + Credit limits and scores + Financial strength indicators	-	-	-	-	
Historic information	Number of years of archived information from the current time period that is available	1 year (current)	3 years	5+ years	-	-	-	-	-	
Annual cost	Annual cost (£) for accessing the company information	Free	£50 per year (approx. £4 per month)	£75 per year (approx. £6 per month)	£150 per year (approx. £13 per month)	£250 per year (approx. £21 per month)	£500 per year (approx. £42 per month)	£1,000 per year (approx. £83 per month)	£2,000 per year (approx. £167 per month)	£4,000 per year (approx. £333 per month)

Note: Blue highlight indicates current CH level of service

3.6 Time savings calculator

The survey includes a supplementary set of 'time savings calculator' questions. This was developed through the cognitive testing process to estimate potential time savings to users from using the CH search services. The time savings are framed against an alternative scenario of the CH search services not being available and the additional effort (time) to the respondent in having to obtain the information from another source (e.g. time saved per week/month/year).

The purpose was to collect data that provides an alternative perspective on the value of the CH service to users. Whilst respondents in the cognitive interviews found it difficult to articulate the value of the data and information to their organisation in terms of improved outcomes (i.e. better decisions, more certainty), they were able to answer questions about the search effort (time and resources) to obtain it. These responses can – in principle – be used to proxy the value of information to the respondent; i.e. it is worth at least as much as the effort put into finding it. This provides a comparator to the WTP estimates from the choice task.

The calculator features a sequence of questions:

- Initially respondents are presented with an estimate of the amount of time their organisation spends using the company search services (with per week, per month, and per year equivalents presented). This estimate is calculated based on their previous survey responses regarding frequency and duration of use of the search services. Respondent are asked if the calculation is a reasonable estimate (Figure 3.4). Respondents that reply 'no' are asked in a follow-up question to provide their own best estimate.

- Respondents are then asked to state how much additional time and effort would be incurred by their organisation to obtain the CH information from an alternative source. Response options are pre-coded (e.g. twice as much, three times as much, etc.) (Figure 3.5).

- The calculator then estimates the potential regular time savings to the respondent's organisation based on the preceding responses. Respondents are again asked if the calculation is a reasonable estimate (Figure 3.6).

To provide an indicative valuation, time savings estimates from the calculator can be combined with an estimate of the opportunity cost of time for the respondent/ organisation. To facilitate this, the calculator includes a follow-up question that asks respondents to apportion the time savings across different roles within their organisation. The response codes are consistent with ONS data for average wage rates by region.

Figure 3.4: Time spent using search services (pilot survey screenshot)

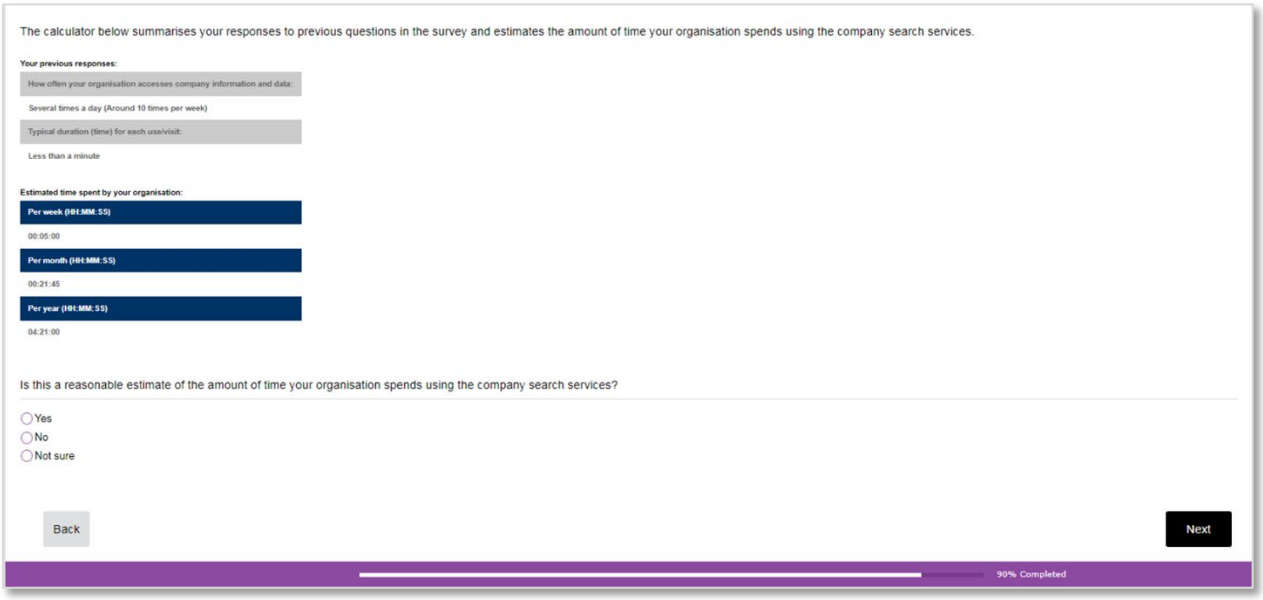


Figure 3.5: Additional time and effort (pilot survey screenshot)

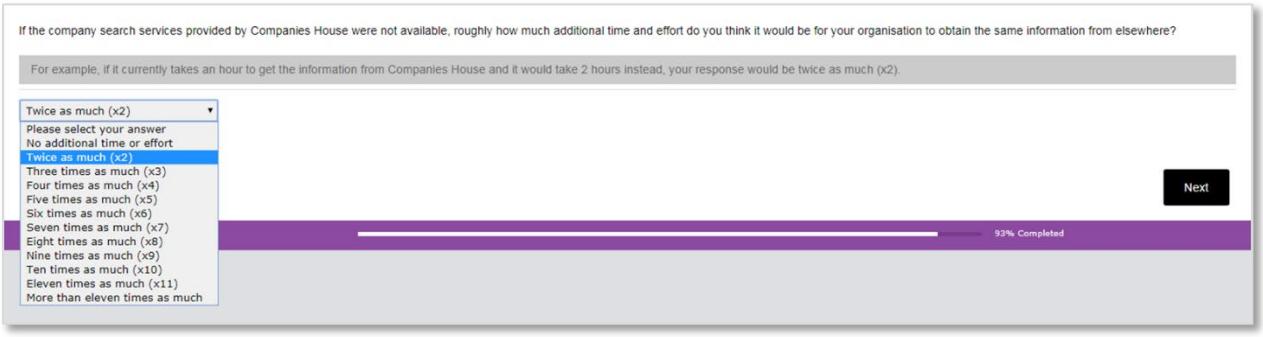
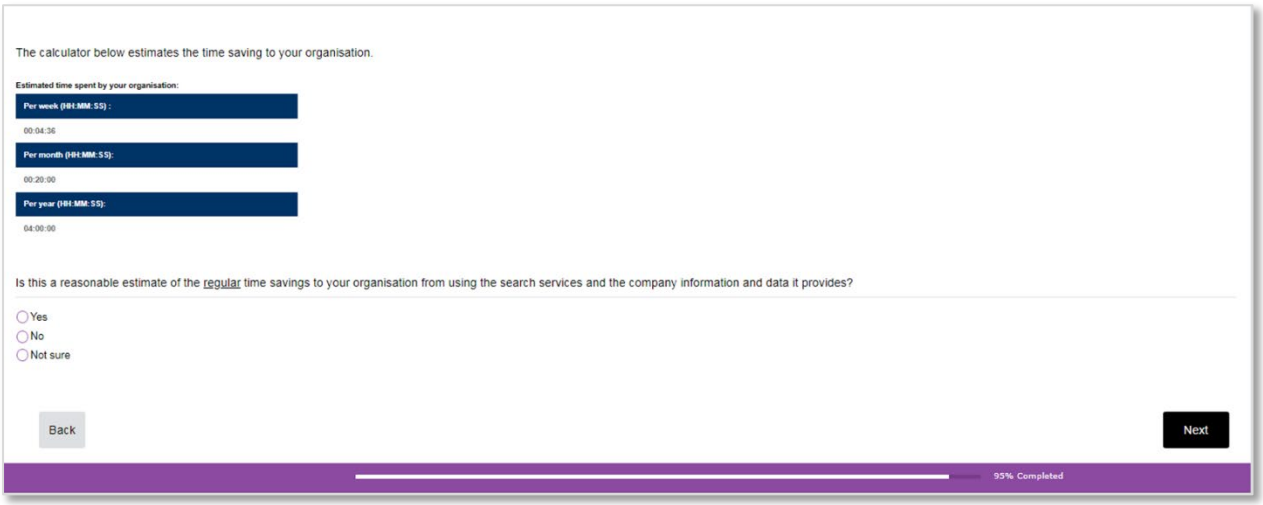


Figure 3.6: Estimated time savings (pilot survey screenshot)



3.7 Pilot survey

Implementation

The pilot survey was implemented between December 2018 and January 2019. Respondents were recruited from two panels provided by CH: (i) the CH user panel; and (ii) a panel of users who participated in the CH 2018 Customer and Stakeholder Survey (C&SS). The target sample size for the pilot survey was 100 respondents, split equally (50:50) between the two panels. The purpose of this was to compare survey responses between the two panels to understand if there are potential differences in aspects such as frequency of use of CH search services and WTP for data and information. Findings in this regard inform the main survey sampling strategy (see Section 5).

Main findings

A total of 88 online interviews were completed with users of CH search services, with 49 respondents from the user panel (56%) and 39 respondents from the C&SS panel (44%). Recruitment rates were approximately 20% and 8% for the user panel and C&SS panel, respectively. The main findings were:

- The pilot sample was primarily composed of company directors (32%) and those in professional occupations (42%) (e.g. accountants) working for limited companies (72%). There was also a sizeable minority of respondents representing sole traders (16%).

- The majority of the sample was made up of small companies, broken down by: 0-4 employees (50%); 5-9 (11%); 10-19 (9%). Accordingly, half of the sample comprised of organisations with annual turnover of less than £250,000 per year (50%).

- Typically, respondents used the CH search services a couple of times a week (26%; mode), with each use around 5 minutes duration (39%; mode).

- The most frequently stated uses of the search services were to check basic details of companies (28%), verify information provided by clients or suppliers (14%), or as part of due diligence (27%) or detailed research about a company (11%).

- Relatively few respondents stated that they used paid-for sources of company information (10%); instead the majority stated that they used general internet searches (76%) and/or open access resources (41%) in addition to CH search services.

- A sizeable minority of respondents (28%) did though state that they would purchase company information from a commercial provider if CH search services were not available.

The analysis of the pilot survey choice task data was encouraging, with a good level of model fit given the sample size. All the key parameters of interest (the basic company information, persons of significant control, and annual reports and financial statements attribute levels plus the annual cost attribute) were found to influence/ constrain respondent choices in line with the assumptions of the model. Overall, the findings suggested that minimal amendments were needed to the format of the choice task for the main survey. The key requirements were to update the experimental design, using the pilot survey results to improve the efficiency of the design, and adjust the cost attribute levels to include one or two smaller amounts in the price range to encourage greater trade-off behaviour in lower turnover organisations.

4 Sampling strategy

The purpose of the sampling strategy is to define the target population, sampling method, survey mode and sample size for the main survey implementation phase.

4.1 Target population

The original target population for the survey was businesses, creditors, investors, researchers and households that directly access and download information from CH search services (CHS / 'Search the Register'; CHD; WebCHeck). For the most part, these users access this information free of charge and do not use bulk data products (e.g. using an API). This population was modified slightly during the course of the research via the exclusion of household users (explained below).

Overall user profile

The profile of overall target population in terms of the breakdown between: (a) users of CH search services and non-users; (b) business users and household users; and (c) the composition business users in terms of company size, turnover, etc. is not known due to incomplete information. A range of partial data is available as summarised in Table 4.1. Only the pilot survey and the supplemental user profile survey targeted and screened respondents for use of company search services (see below). Other sources from previous CH research for the most part capture a wider sample frame, including web-filing and customer contact users in addition to search service users.

Table 4.1: Sources of user population profile information

Source	Year	Sample frame	Sample size	Notes
CH customer satisfaction survey (Wave 5)	2015	All CH services	639 respondents	• Online surveys and telephone interviews • Web sample provided by CH • Quota-based sampling
CH customer satisfaction survey (Wave 6)	2017	All CH services	680 respondents	• Online surveys and telephone interviews • Customer contact details supplied by CH • Nationally representative sample of private sector companies provided by Dun and Bradstreet
CH customer satisfaction survey (Wave 7)	2018	All CH services	692 respondents	• Online surveys and telephone interviews • Customer contact details supplied by CH • Nationally representative sample of private sector companies provided by Market Location
CH user panel survey	2018	All CH services	2,931 respondents	• Online survey • Respondents recruited via CH website
CH customer and stakeholder opinion (C&SS) survey	2018	All CH services	34,992 respondents	• Online survey • Respondents recruited via extensive promotional campaign, including social media channels
Supplemental user profile survey	2018-19	CH search services only	5,491 respondents*	• Online survey • Respondents recruited via CHS, CHD, WCK websites
Pilot survey	2018-19	CH search services only	88 respondents	• Online survey • Respondents recruited from User Panel and Customer and Stakeholder Survey Panel

Note: The total number of responses to the survey was 7,763. Analysis of the responses indicated that around 2,300 were potentially duplicates (i.e. responses from the same IP address). Results are reported for the sample with duplicates removed.

Supplemental user profile survey

The supplemental user profile survey was administered via weblinks on the CHS / 'Search the Register', CHD, and WebCHeck websites over a 12-week period (December 2018 – February 2019). Users of the search services were invited to complete a short (5 minute) survey that compiled information on the type of user (business, research, or general public) and corresponding profile information.

The supplemental user profile survey results indicate that around 4 out of 5 users of CH search services do so as part of their job or on behalf of the organisation they work for. General public users account for around 1 in 6 users (approx. 18%). In terms of volume of use, however, general public users represent about 5% of the total use the search services (Annex 4). Given this the user survey sampling focused on the 'core' users (businesses, creditors, investors, researchers, and public sector organisations).

Headline results for core users from the supplemental user profile survey are summarised in Tables 4.2 – 4.5 (see Annex 4 for full summary). In terms of the individuals using the search services, the largest proportion of respondents (47%) identified themselves as working in a professional occupation, such as accountancy (Table 4.2). A sizeable minority were company directors (20%).

Table 4.2: Supplemental user profile survey - respondent job title / role (n=5,491)

	n	%
Company director	1,100	20%
Manager	505	9%
Professional occupation (e.g. accountant, academic, journalist, research, public services)	2,562	47%
Technical occupation (e.g. science, engineering, technology, health services)	112	2%
Administrative or secretarial	690	13%
Sales or customer services	216	4%
Other (please write in below)	306	6%
Total	**5,491**	**100%**

Source: Supplemental user profile survey; ONS UK business; activity, size and location.

The user profile results for organisation type and size are compared to ONS statistics[10] to provide comparative context (Table 4.3; 4.4). The majority of search service users are limited companies (66%) and overall the general profile is consistent with the national picture.

Table 4.3: Organisation type (n=5,477)

		n	%
Limited company	User profile survey	3641	66%
	National profile		71%
Partnership	User profile survey	817	15%
	National profile		17%
Sole trader	User profile survey	259	5%
	National profile		8%
Public corporation	User profile survey	262	5%
	National profile		0%
Central Government	User profile survey	109	2%
	National profile		0%
Local Authority	User profile survey	201	4%
	National profile		0%
Non-profit organisation or mutual organisation	User profile survey	188	3%
	National profile		3%
Total		**5,477**	**100%**

Source: Supplemental user profile survey; ONS UK business; activity, size and location.

The observed user profile with respect to company size (no. employees) is noticeably distinct from the national profile, with a greater proportion of large organisations (30%) (Table 4.4). A point to note concerning the national profile, however, is that whilst most businesses in the UK employ fewer than 10 people, these organisations account for only one-third of total employment and one-fifth of total turnover of UK businesses. Large businesses with more than 250 employees represent 0.1% of UK businesses (approximately 8,000 UK businesses in 2018) but account for two-fifths of total employment and almost half of the total turnover of UK businesses[11].

[10] Office for National Statistics. (2018). Statistical Bulletin: UK business; activity, size and location: https://www.ons.gov.uk/businessindustryandtrade/business/activitysizeandlocation/datasets/ukbusinessactivitysizeandlocation

[11] House of Commons Briefing Paper (2018) Business Statistics, Number 06152, 12 December 2018: https://researchbriefings.files.parliament.uk/documents/SN06152/SN06152.pdf

Table 4.4: Number of employees (n=5,491)

		n	%
0 - 4	User profile survey	1231	22%
	National profile		78%
5 - 9	User profile survey	466	8%
	National profile		11%
10 - 19	User profile survey	483	9%
	National profile		6%
20 - 49	User profile survey	665	12%
	National profile		3%
50 - 99	User profile survey	454	8%
	National profile		1%
100 - 249	User profile survey	526	10%
	National profile		1%
250+	User profile survey	1666	30%
	National profile		0%
Total		**5,491**	**100%**

Source: Supplemental user profile survey; ONS UK business; activity, size and location.

The frequency of use for core users is shown in Table 4.5. The profile is weighted towards higher frequency users, who access the search services several times a day (33%). The supplemental user profile survey is, though, more likely to have captured high frequency users due to the relatively short timescale over which it was run (12-weeks). Users who access the services infrequently – say 2 to 3 times a year – will most likely be under-represented since they are less likely to have used the services during the survey period.

Table 4.5: Frequency of use of company search and data services (n=5,491)

	n	%
Several times a day (Around 10 times per week)	1,831	33%
Every day (5 times per week)	525	10%
Almost every day (3-4 times per week)	657	12%
A couple of times a week (2 times per week)	788	14%
About once a week (1 time per week)	374	7%
A few times a month (2-3 times per month)	680	12%
Once a month (1 time per month)	173	3%
Less than once a month (1-6 times per year)	353	6%
Not sure	110	2%
Total	**5,491**	**100%**

Source: Supplemental user profile survey.

4.2 Sample frame

Two panels of search service users were available from CH for sampling – the user panel and the CS&S survey panel. Combined, these feature approximately 11,200 users that have consented to being contacted for research purposes. Both panels can be segmented by frequency of use based on survey response data held by CH. A comparison of the frequency of use profile for each panel is provided in Table 4.6.

Table 4.6: Comparison of frequency of use of search services (User panel vs. CS&S panel)

	User panel *Use 1 of the 3 search services*	CS&S panel *Use one type of search service*
No. users	2,945	8,251
Daily	13%	23%
Weekly	19%	21%
Fortnightly	7%	19%
Monthly	24%	19%
Once or twice a year	37%	17%
Never	-	1%

Source: CH

Applying the response rates achieved in the pilot survey (Section 4.2), the 'effective' sample frame for the main survey was calculated to be approximately 1,140 users (accounting for the 88 users that had already participated in the pilot survey and 19 taking part in the cognitive interviews).

Table 4.7: Estimated sample frame – potential no. of respondents (User panel vs. CS&S panel)

	User panel (20% response rate)	CS&S panel (8% response rate)
Daily	75	151
Weekly	113	141
Fortnightly	42	129
Monthly	140	125
Once or twice a year	220	114
Total	589	660

Source: CH

A key consideration for the two panels is the potential for sample frame bias – i.e. how representative the panels are of the overall target population for the survey. Both panels are 'opt-in' and therefore can exclude certain types of user if they are less likely to agree to participate in research activities. Judging the degree of bias, however, is challenging due to incomplete information for both the target population and the profile of the panels. Table 4.7 shows that the user panel and CS&S panel have a different pattern of use than respondents to the supplementary user profile survey. The user panel and CS&S panel may under-represent larger organisations and relatively high frequency users of CH search services. Therefore, the sample was weighted (in terms of no. respondents) towards the CS&S panel in the main survey sampling as it showed higher frequencies of use compared to the user panel.

4.3 Sampling method

The Terms of Reference for the study suggested the use of stratified random sampling. This is one of several options that can be used in stated preference surveys, including:

- Simple random sampling - the most basic method and ensures that every individual or organisation within the sample frame has an equal chance of being selected for the survey.
- Systematic sampling - is related to simple random sampling in that every x^{th} individual or organisation is selected from a randomly ordered population frame (e.g. selecting every 10th organisation in a user panel).
- Stratified sampling - divides the sample frame population into distinct sup-populations (or 'strata'). Within each sub-population an independent sample is selected using random sampling. The data are used to develop separate estimates for each sub-population group before being weighted and combined to create an overall estimate for the entire population.
- Clustered sampling - divides the population into a set of "clusters" but only a random sample of the clusters are selected to administer the survey to.

Candidate strata include user role (accountant vs. director), organisation size (no. employees or turnover), sector, frequency of use, etc. The pilot survey results suggested that user WTP was most strongly differentiated based on total use (i.e. 'volume' as a combination of frequency of use and typical duration per individual use). In effect, greater volume of use of search services over a year is associated with a greater value of the information and data provided by CH.

4.4 Survey mode

The study uses an online survey mode with respondents randomly selected from the user panel and CS&S panel within the defined strata and invited to take part in the survey via email invitation sent by CH. Participation and completion of the survey was incentivised by the option to take part in a prize draw to win an iPad[12].

4.5 Sample size

Based on the analysis of the pilot survey data, a minimum of 250 respondents per sampling strata was expected to give reliable estimates in terms of the precision of WTP estimates. This factors in potential heterogeneity in user preferences within segments (strata), which would be examined via a mixed logit (MXL) choice model estimation (see Annex 7).

Based on two stratifications in total (high vs. low total use), the total required sample size was 500 respondents. This was expected to be achievable based on the profile of the available sampling frame and the observed pilot survey response rates.

[12] The prize draw was open to survey respondents from England, Wales and Scotland who completed the survey and consented to participating in the draw. The draw was administered in April 2019 after the completion of the main survey fieldwork.

5 User profile

This section presents the user survey results, including the sample profile and findings with respect to the use of CH search services, company information and data, and alternative sources. Full summary statistics are provided in Annex 5.

5.1 Survey administration

Online interviews for the main survey fieldwork were carried out in February and March 2019. A total of 520 interviews were completed with users of CH search and data services, comprising 219 respondents from the user panel (42%) and 301 respondents from the C&SS panel (58%). The sample stratification was in line with the requirements reviewed in Section 5.3, providing a varied sample in terms of frequency of use and 'total use' (frequency x duration).

The survey response rate was 15%, with 520 completed interviews from a total of 3,500 invites across the two panels[13]. The average survey completion time was approximately 15 minutes.

5.2 Sample profile

Overall survey results and findings are reported for the pooled main survey (n = 520) and pilot data (n = 88). The data can be pooled because there were minimal changes to the survey between the pilot and main survey phases. Combining the two sets of observations gives a total sample size of 608 respondents.

The profile of the sample is compared to the supplemental user profile survey results (Section 4.1; Annex 4) and ONS statistics[14] where possible. The purpose is not to judge the representativeness of the sample – since supplemental survey results are likely weighted towards higher frequency users – but to provide some comparative context.

[13] This is judged to be a reasonable response rate for an approx. 15 minute online stated preference survey with a modest respondent incentive.
[14] Office for National Statistics. (2018). Statistical Bulletin: UK business; activity, size and location: https://www.ons.gov.uk/businessindustryandtrade/business/activitysizeandlocation/datasets/ukbusinessactivitysizeandlocation

Respondent profile

The breakdown of respondent job title/role is provided in Table 5.1. A comparison to the supplemental user profile survey results is provided (Section 4.1). Just over 2 in 5 (44%) of respondents have a professional occupation, which aligns well with the user profile survey result (47%). In the sample, roughly 1 in 3 respondents were company directors (30%), which is higher than the observed proportion in the user profile survey (20%). This is likely a result of the composition of the panels from which respondents were recruited. All other categories account for less than 9% of the responses, which in general is in line with the user profile survey findings.

Table 5.1: Respondent job title/role (n=608)

	Sample		Supplemental user profile survey
	n	%	%
Company director	181	30%	20%
Manager	47	8%	9%
Professional occupation	266	44%	47%
Technical occupation	14	2%	2%
Administrative or secretarial	43	7%	13%
Sales or customer services	13	2%	4%
Other (please specify)	44	7%	6%
Total	608	100%	100%

Sources: Direct user survey; Supplemental user profile survey

Most respondents stated they were the main user of the company search services (78%). Of those who are not the main user (n=84), just under half (46%) reported that within their organisation the main user of the company search services was from a professional occupation. Other occupation/roles represented less than 15% each.

Organisation profile

The breakdown of the sample by organisation location is shown in Table 5.2. Overall the survey sample compares well to the supplemental user profile survey, as well as national statistics. Aside from the East England (+ 4 percentage points) and South East England (- 7 percentage points) all other areas from the sample are within + / - 2 percentage points difference of the national profile.

Table 5.2: Organisation location (n=608)

		n	%
North East Region	Sample	18	3%
	User profile survey		3%
	National profile		3%
North West Region	Sample	55	10%
	User profile survey		10%
	National profile		9%
Yorkshire and the Humber Region	Sample	33	7%
	User profile survey		6%
	National profile		5%
East Midlands Region	Sample	43	7%
	User profile survey		6%
	National profile		7%
West Midlands Region	Sample	42	8%
	User profile survey		7%
	National profile		7%
East Region	Sample	39	10%
	User profile survey		6%
	National profile		6%
London Region	Sample	129	19%
	User profile survey		25%
	National profile		21%
South East Region	Sample	132	15%
	User profile survey		17%
	National profile		22%
South West Region	Sample	64	9%
	User profile survey		9%
	National profile		11%
Wales	Sample	20	4%
	User profile survey		3%
	National profile		3%
Scotland	Sample	30	7%
	User profile survey		6%
	National profile		5%
Northern Ireland	Sample	3	3%
	User profile survey		1%
	National profile		0%
Total			**100%**

Sources: Direct user survey; Supplemental user profile survey; ONS statistics.

Most respondent organisations were limited companies (72%) (Table 5.3). The sample is also reasonably well aligned to national statistics for limited companies, sole traders, and non-profit organisations which represent only small proportion of the supplemental user profile survey and national statistics comparators. Only partnerships (8%) appear to be under-represented compared to the findings of the supplemental user profile survey (15%). Public corporations, Central Government and Local Authority respondents – 'public good' users (see Report 4) make-up a small proportion of the sample (approx. 3%).

Table 5.3: Organisation type main survey (n=608)

		n	%
Limited company	Sample	435	72%
	User profile survey		64%
	National profile		71%
Partnership	Sample	51	8%
	User profile survey		15%
	National profile		17%
Sole trader	Sample	54	9%
	User profile survey		5%
	National profile		8%
Public corporation	Sample	18	3%
	User profile survey		5%
	National profile		0%
Central Government	Sample	5	1%
	User profile survey		2%
	National profile		0%
Local Authority	Sample	11	2%
	User profile survey		4%
	National profile		0%
Non-profit or mutual (membership) organisation	Sample	34	6%
	User profile survey		3%
	National profile		3%
Total			**100%**

Sources: Direct user survey; Supplemental user profile survey; ONS statistics.

Organisations engaged in professional, scientific and technical (26%), finance and insurance (20%), and business administration and support services (16%) have the highest representation in the sample (Table 5.4). All other sectors account for 7% or less of the overall sample. In each case the sample is within ±5 percentage points of the findings from the supplemental user profile survey. This gives some assurance that the observed differences from national statistics with lower representation of primary and secondary sectors, is reflective of the overall user profile for CH search services.

Table 5.4: Main activity of organisation (n=608)

		n	%
Agriculture, forestry & fishing	Sample	9	1%
	User profile survey		1%
	National profile		6%
Manufacturing	Sample	22	4%
	User profile survey		5%
	National profile		6%
Construction	Sample	18	3%
	User profile survey		5%
	National profile		12%
Motor trades	Sample	5	1%
	User profile survey		1%
	National profile		3%
Wholesale	Sample	9	1%
	User profile survey		2%
	National profile		4%
Retail	Sample	11	2%
	User profile survey		2%
	National profile		8%
Transport & storage (warehousing)	Sample	6	1%
	User profile survey		2%
	National profile		4%
Accommodation & food services	Sample	5	1%
	User profile survey		1%
	National profile		6%
Information & communication	Sample	39	6%
	User profile survey		7%
	National profile		8%
Finance & insurance	Sample	119	20%
	User profile survey		24%
	National profile		2%
Property	Sample	36	6%
	User profile survey		5%
	National profile		4%
Professional, scientific & technical	Sample	157	26%
	User profile survey		22%
	National profile		18%
Business administration & support services	Sample	100	16%
	User profile survey		11%
	National profile		8%
Public administration & defence	Sample	15	2%
	User profile survey		4%
	National profile		0%
Education	Sample	15	2%
	User profile survey		2%
	National profile		2%
Health	Sample	11	2%
	User profile survey		2%
	National profile		4%
Arts, entertainment, recreation & other services	Sample	31	5%
	User profile survey		3%
	National profile		6%
Total			**100%**

Sources: Direct user survey; Supplemental user profile survey; ONS statistics.

As shown in Table 5.5, organisations with 0-4 employees (micro-enterprises) represent the largest proportion of the sample (43%). In contrast, the largest proportion observed in the supplemental user profile survey results is organisations with 250+ employees (30%) (followed by micro-enterprises with 0-4 employees; 22%)[15]. Small to medium sized organisations (5 – 249 employees) represent 42% of the sample. In general, the sample is reasonably aligned to the supplemental user profile survey, which as noted in Section 4.1 is somewhat distinct from the national profile in terms of the representation of large business (with 250+ employees).

Table 5.5: Number of employees (n=608)

		n	%
0 - 4	Sample	262	43%
	User profile survey		22%
	National profile		78%
5 - 9	Sample	78	13%
	User profile survey		8%
	National profile		11%
10 - 19	Sample	56	9%
	User profile survey		9%
	National profile		6%
20 - 49	Sample	61	10%
	User profile survey		12%
	National profile		3%
50 - 99	Sample	30	5%
	User profile survey		8%
	National profile		1%
100 - 249	Sample	33	5%
	User profile survey		10%
	National profile		1%
250+	Sample	88	14%
	28.43		30%
	National profile		0%
Total			**100%**

Sources: Direct user survey; Supplemental user profile survey; ONS statistics.

In line with organisation size (no. employees), the majority of organisations in the sample reported annual turnover less the £500,000 (52%), with 20% falling within the category up to £49,999 per year (Table 5.6). Conversely, in the supplemental user profile survey the majority of respondent organisations reported annual turnover over £1,000,000 (62%). Also consistent with the company size profile, there is a higher representation of high annual turnover organisations (£50m per year or more) in the sample compared to national statistics (14% sample; 24% supplemental user profile survey).

[15] As noted in Section 4.1, the user profile result for large companies needs to be checked against ONS classification.

Table 5.6: Annual turnover (n=608)

		n	%
Up to £49,999	Sample	123	20%
	User profile survey		11%
	National profile		16%
£50,000 - £99,999	Sample	79	13%
	User profile survey		7%
	National profile		23%
£100,000 - £249,999	Sample	70	12%
	User profile survey		8%
	National profile		32%
£250,000 - £499,999	Sample	44	7%
	User profile survey		5%
	National profile		12%
£500,000 - £999,999	Sample	39	6%
	User profile survey		7%
	National profile		7%
£1,000,000 - £1,999,999	Sample	49	8%
	User profile survey		9%
	National profile		4%
£2,000,000 - £4,999,999	Sample	46	8%
	User profile survey		9%
	National profile		3%
£5,000,000 - £9,999,999	Sample	26	4%
	User profile survey		7%
	National profile		1%
£10,000,000 - £49,999,999	Sample	47	8%
	User profile survey		13%
	National profile		1%
£50,000,000 or more	Sample	85	14%
	User profile survey		24%
	National profile		0%
Total			**100%**

Sources: Direct user survey; Supplemental user profile survey; ONS statistics.

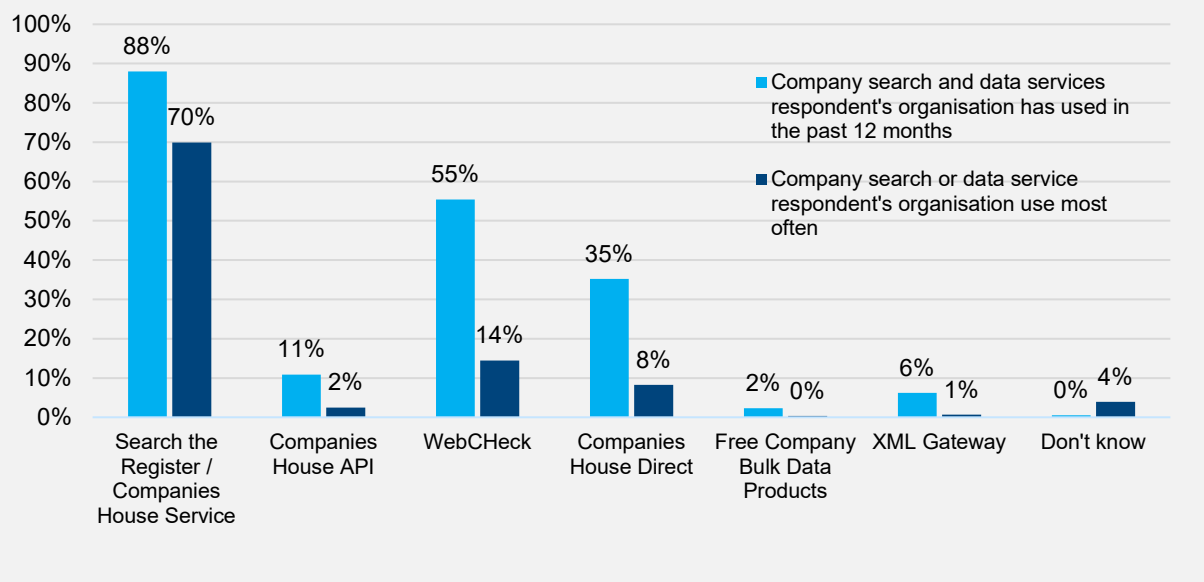
5.3 Use of CH search services

Use of search services

Nearly all respondents reported that their organisation had used CH search services in the past year. Only three (0.5%) reported not having used the services in the last 12 months. Of these, two reported using the services 1-2 years ago, and the other respondent did not know when their organisation had last used the services.

CHS / 'Search the register' was reported to be the main service used, with 88% of respondents stating their organisation had used it in the last 12 months (Figure 5.1). 70% stated that it was the service their organisation used most often. Fewer respondents reported use of WebCHeck and CHD services, with 55% and 35% reporting using these services in the past 12 months, respectively. However, WebCHeck was the main service for only 14% of respondents, and CHD just 8%. All other services (API, bulk data, XML) have low incidences of use across the sample.

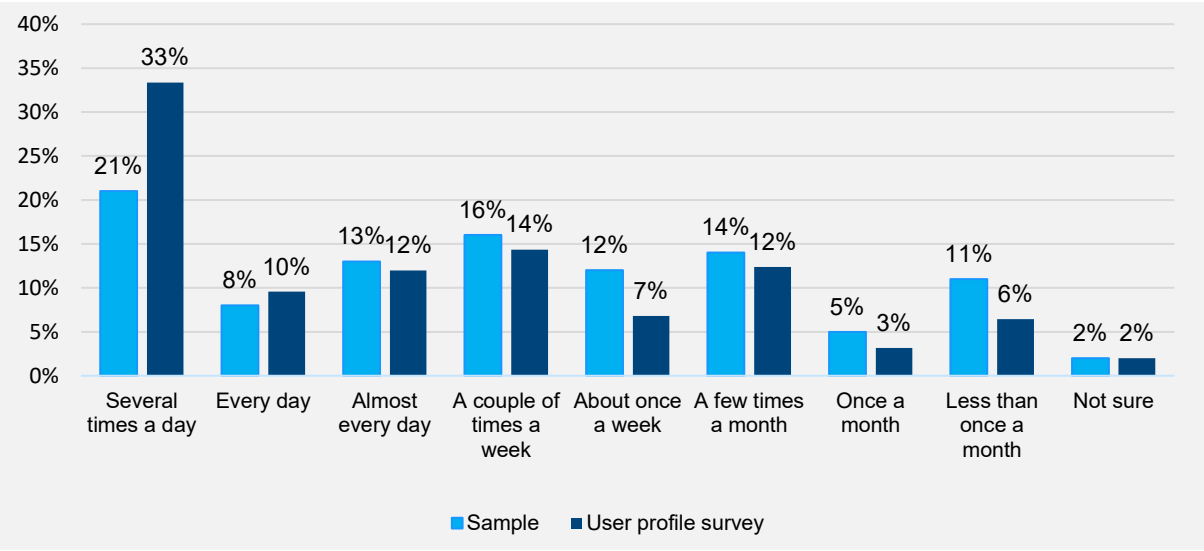
Figure 5.1: Use of company search and data services (n=608)



Source: Direct user survey

Figure 5.2 summarises respondents' reported frequency of use of the search services. This is also compared to the results from the supplemental user profile survey (Section 4.1; Annex 4). Almost 1 in 3 stated that their organisation accessed company information at least once a day (several times a day, 21%; every day, 8%). A further 2 in 5 reported using services at least weekly (almost every day, 13%; a couple of times a week, 16%; about once a week, 12%). The main distinction with the supplemental user profile survey is the comparatively lower proportion of higher frequency users (21% vs. 33% several times a day). This is consistent with the expectation that the supplemental user profile survey would have captured more frequent users of the search services and hence its weighting in that direction.

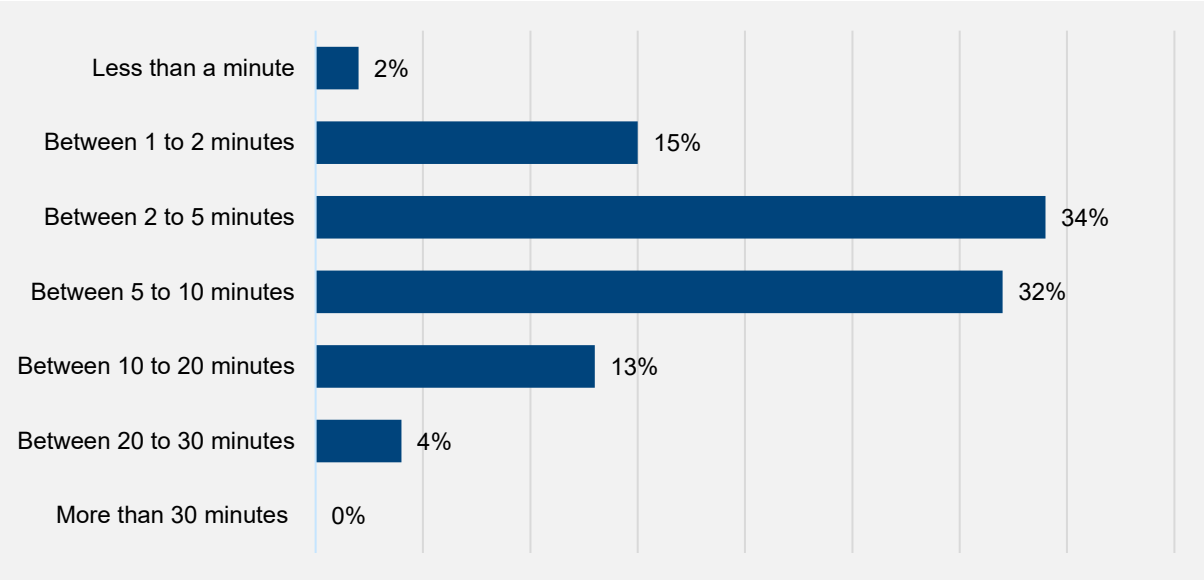
Figure 5.2: Frequency of use (n = 608)



Sources: Direct user survey; Supplemental user profile survey.

For most respondents (66%), the average amount of time spent for each use of the search services was between 2 and 10 minutes (2 to 5 minutes, 34%; 5 to 10 minutes, 32%) (Figure 5.3). Similar proportions reported spending between 1 to 2 minutes, or 10 to 20 minutes (15% and 13% respectively) for each use of the search services.

Figure 5.3: Average time for each use of company search or data services (n=608)



Source: Direct user survey.

Just over half of respondents (53%) stated that the purpose of each use of the search services was usually to find information for a single company (Annex 5). Around 2 in 5 of respondents (39%) indicated that each use was sometimes to find information for a single company and sometimes for several companies at the same time.

Table 5.7 summarises the estimated ‘total use’ of CH search services by the sample of organisations, segmented by five categories for total hours of use per year. This is calculated based on the average time per visit (duration) and the average number of visits per year (frequency) for each segment. As noted above, in line with sample stratification (Section 4.3), there is relatively even representation across each category, providing a varied sample for subsequent data analysis and aggregation.

Table 5.7: Estimated 'total use' of company search services (n=608)

Segment (total use per year)	Average number of visits per year	% sample
0 – 3 hours per year	45.3	22%
3 – 10 hours per year	82.4	24%
10 – 20 hours per year	207.3	21%
20 – 40 hours per year	283.2	19%
>40 hours	392.4	14%
Total (average)	**182.8**	**100%**

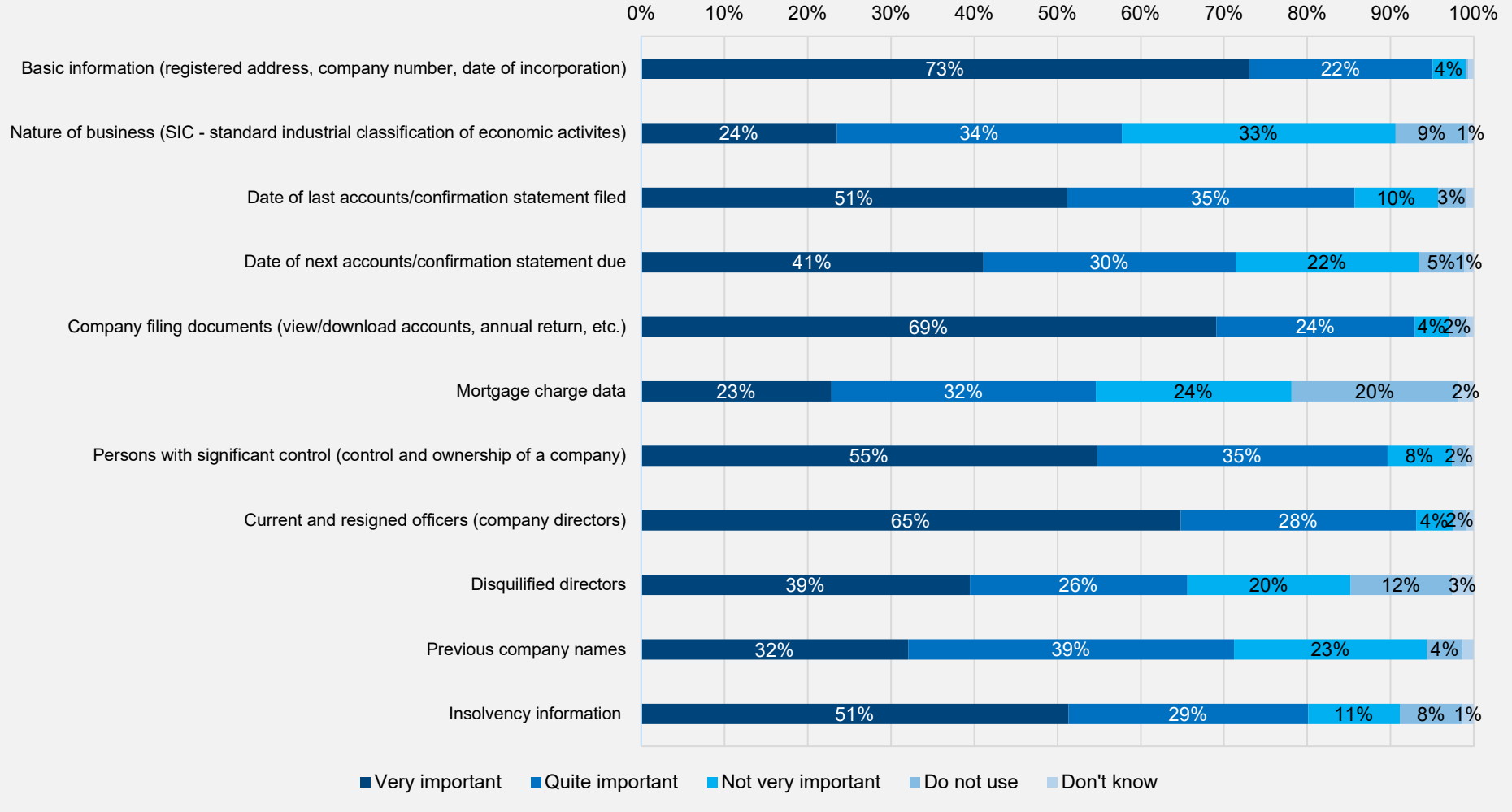
Source: Direct user survey.

For the sample overall, the average number of visits is 183 per year, corresponding to an average 'total use' of around 10 hours per year. The lowest intensity users (0-3 hours per year) use the CH search services 45 times per year on average (i.e. less than once a week), while the highest intensity users (more than 40 hours per year) use the search services 392 times per year on average (i.e. 1.1 times per day).

Uses of company information and data

Respondents were asked to rate the importance of the different aspects of the company information and data to their organisation (Figure 5.4). Overall, most respondents (>50%) indicated that all aspects of the information were 'very important' or 'quite important' in all categories. This includes 'very important' rating for: basic information (73%), company filing documents (69%), current and resigned officers (65%), persons with significant control (55%), date of last accounts (51%) and insolvency information (51%). In all but one category (mortgage charge data), fewer than 15% of respondents stated 'didn't use' or 'don't know'.

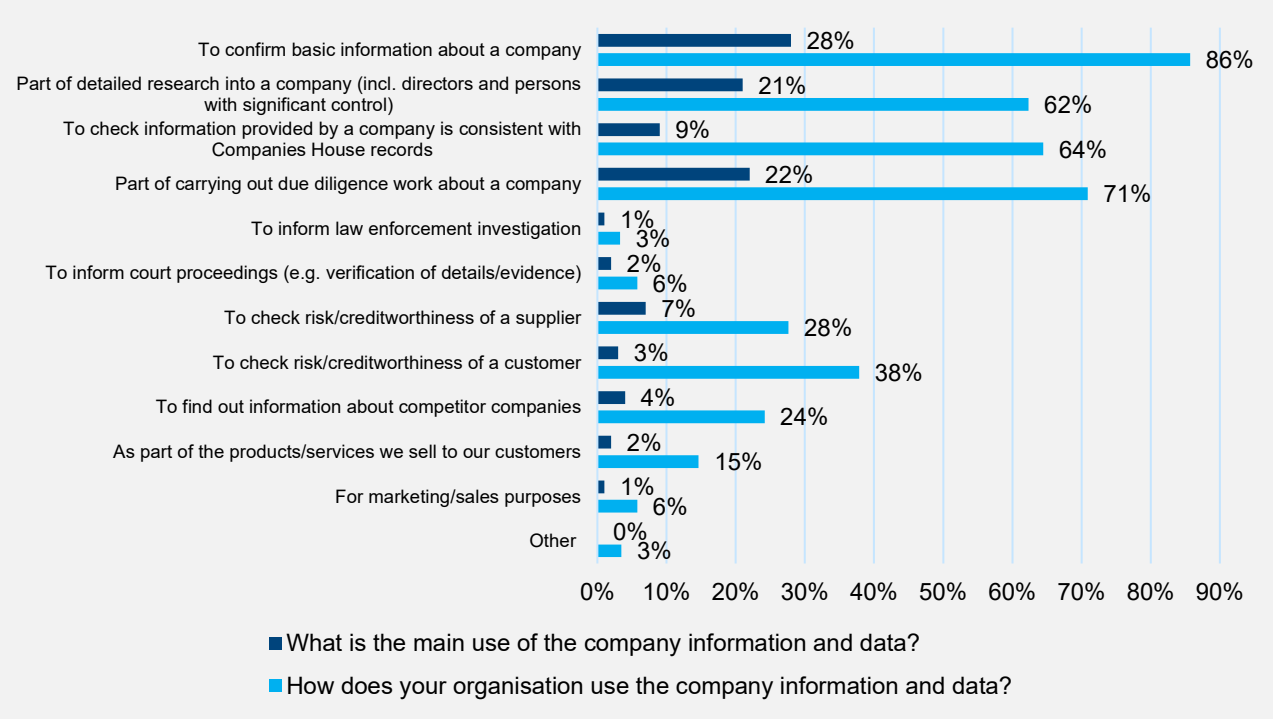
Figure 5.4: Importance of different aspects of company services and data



Source: Direct user survey.

Respondents reported a range of uses of company information and data, with most indicating using it confirm basic information (86%), as part of detailed research into a company (71%), checking the consistency of information they have been given (64%) and as part of due diligence work (62%) (Figure 5.5). Around 1 in 7 respondents stated that one of their uses of the data was a part of the products/services sold to customers (15%) - this use of the company information and data is consistent with intermediaries (Report 3).

Figure 5.5: Use of company information and data (n=608)



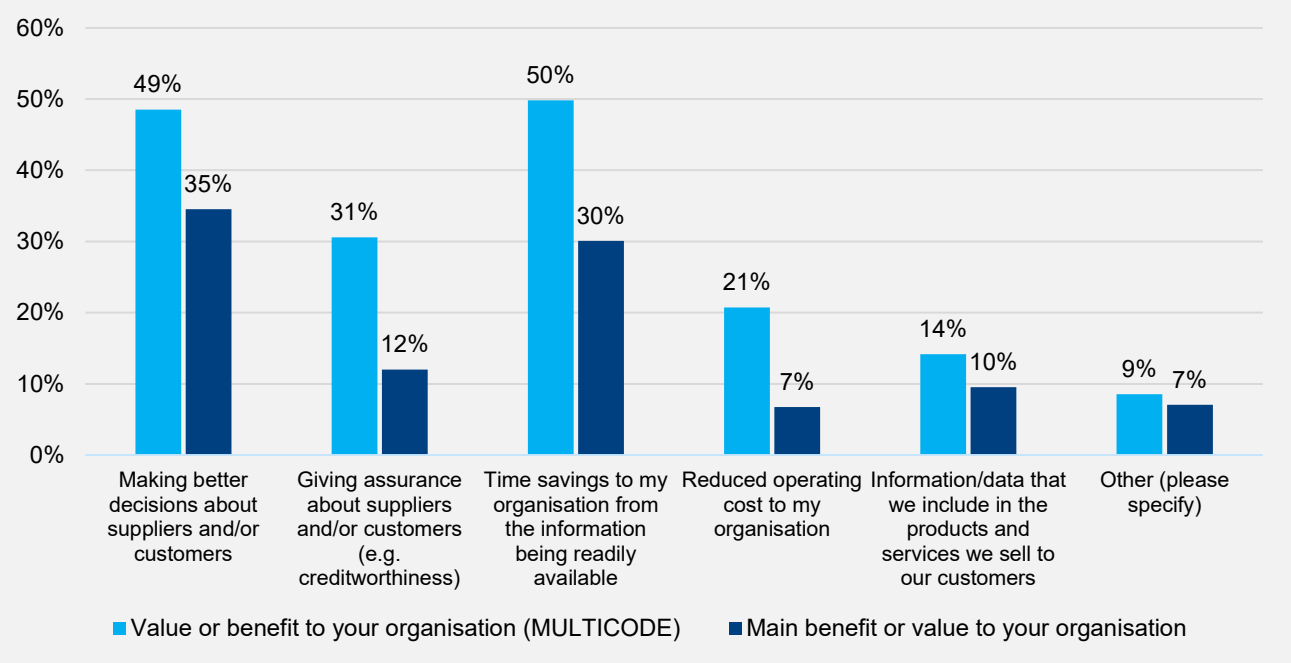
Source: Direct user survey

In terms of the main use of the data, the most common responses were to confirm basic information about a company (28%), part of due diligence (22%), or part of detailed research (21%). No other response category had more than 9% of responses concerning the main uses of the data by an organisation.

Benefits of company information and data

In a set of follow-up questions, respondents were asked to state what the beneficial outcomes were to their organisation from using company information and data provided by CH (Figure 5.6). The two most frequent responses were ‘making better decisions about suppliers and/or customers’ (49% of respondents) and ‘time savings to my organisation from the information being readily available’ (50% of respondents). When asked to specify the main beneficial outcome, the largest proportion of respondents stated ‘better decisions about suppliers/customers’ (35%), although there was not much distinction with ‘time savings’ (30%).

Figure 5.6: Beneficial outcomes of CH information and data (n=608)



Source: Direct user survey

Consistent with Figure 5.5 a small proportion of respondents stated that one of the beneficial outcomes for them was information and data that they include in products and services for their customers (14%). Overall, 10% of respondents indicated that this was the main benefit for their organisation[16].

Respondents were also asked to state how confident they are that the company information and data CH provides is accurate and reliable. 85% of respondents were ‘extremely confident’ or ‘very confident’, (30% and 55% respectively) in the accuracy of the data (Annex 4). Only 2% stated that they were ‘not so confident’ in the accuracy of the data.

Overall, 2 in 3 respondents reported that their organisation was ‘very satisfied’ with the search services provided by CH (67%), with a further 21% being ‘fairly satisfied’. 11% were either equivocal or dissatisfied with the services.

[16] Note that Figure 5.5 reports ‘use’ of CH data whilst Figure 5.6 reports the ‘beneficial outcomes’ from the use of the data to direct users. In general, the main use of the data (i.e. its most frequent use) may not be the most beneficial use for an organisation (i.e. a less frequent use could give a greater benefit). In relation to Figure 5.6 reporting a higher proportion of ‘intermediate’ uses (i.e. the main beneficial outcome being in the product/services sold by an organisation), it is possible that the organisation uses the data as an input to its own activities and sells the output of those activities (e.g. selling due diligence and advisory services).

5.4 Use of alternative services and products

Respondents were asked to indicate the alternative actions and products their organisations used to source company information and data (Table 5.8). Around 1 in 3 respondents stated that their organisation undertook general internet searches (35%), while a further 1 in 5 reported using free of charge online resources (20%) and/or conduct their own due diligence search (20%). A small proportion indicated that organisation purchases information from a data services provider. 6% of respondents either did not use other services/actions in addition to the Companies House Service (4%) or didn't know (2%).

Table 5.8: Use of alternative data and information sources (n=608)

	n	%
Purchase company information from a data services provider	107	9%
Use free of charge online resources to research companies	252	20%
General internet search (e.g. Google)	434	35%
Obtain references and background information from partner and associate organisations	130	10%
Conduct own due diligence research	245	20%
Nothing	47	4%
Other (please specify)	19	2%
Don't know	22	2%
Total	1,256	100%

Source: Direct user survey. Note: Respondents were able to select multiple response options to this question.

Table 5.9: Data services respondents' organisation purchases or subscribes to (n=107)

	n	%
Callcredit	2	1%
Creditsafe	41	24%
Company Check	10	6%
DueDil	10	6%
Dun & Bradstreet	28	16%
Endole	2	1%
Equifax	8	5%
Experian	36	21%
FAME - Bureau van Dijk (BvD)	9	5%
First Report	2	1%
Gradon	1	1%
Jordans	9	5%
Other (please specify)	16	9%
Total	174	100%

Source: Direct user survey. Note: Respondents were able to select multiple response options to this question (hence table total = 174).

For the respondents who reported that their organisation purchases or subscribes to commercial data services (n=107), the largest proportions used either Creditsafe (24%), Experian (21%) or Dun & Bradstreet (16%) (Table 5.9). Other providers, such as FAME/Bureau van Dijk, Equifax, and Jordans were reported to be used by small proportions of respondents (around 5% each).

Table 5.10 details the average amounts respondents reported for their organisations' expenditure on company information and data products. Across all products the mean (average) is approx. £1,600 per year. The median amount is £240 per year, indicating the significant skew in the overall average due to the high annual amount for some service reported by a small number of users[17].

Table 5.10: Annual expenditure on company information and data products (£/year) (n=107)

	Mean	Median	Max	n
Callcredit	150.00	150.00	300.00	2
Creditsafe	1,378.28	425.00	12,000.00	41
Company Check	100.00	100.00	250.00	10
DueDil	640.00	-	2,000.00	5
Dun & Bradstreet	2,475.38	325.00	10,000.00	28
Endole	-	-	0.00	2
Equifax	770.00	60.00	3,000.00	8
Experian	1,037.54	100.00	15,000.00	36
FAME - Bureau van Dijk (BvD)	7,428.71	2,500.00	30,000.00	9
First Report	300.00	300.00	300.00	2
Graydon	1,000.00	1000.00	1,000.00	1
Jordans	860.00	30.00	5,000.00	9
Other	1,261.43	430.00	6,000.00	16
Total	1,640.07	240.00	30,000.00	-

Source: Direct user survey.

[17] In each case, the high reported annual amount represents less than 0.025% of the organisation's stated annual turnover.

6 Choice tasks analysis

This section presents a summary of the choice task analysis, including users' preferences for the provision of company information and data and their willingness to pay (WTP) for different attributes of the information. Results are reported for the pooled main survey and pilot dataset (n=608).

6.1 Choice model analysis

Choice task (DCE) responses are analysed in 'choice models' that examine how respondents selected their preferred option (Option A, B, or C) in each repeated choice. The models quantify users' preferences for company information and data, estimating the likelihood of a respondent selecting an option as a function of levels of provision for each choice task attribute (see Table 3.3). In effect, the analysis shows users' demand by quantifying how much the provision of different types of company information influences their simulated market choices.

The choice model analysis provides a series of results: (a) user priorities in terms of the strength of preference for changes in provision of company information in conjunction with changes in payment amounts (Section 6.2); (b) user willingness to pay (WTP) estimates that quantify the benefit of the different aspects of company information data to users (Section 6.4); and (c) predicted shares that estimate user demand for company information and data. The choice model estimation strategy and full econometric results are provided in Annex 7. The summary of the estimation results, in terms of user priorities and WTP estimates for company information are supported by findings from the follow-up questions concerning respondents' motivations for their choices (Section 6.3).

6.2 User priorities

Linear vs. non-linear model estimations

Two main model formulations have been used to quantify user priorities. The linear model formulation provides a general interpretation of user preferences for company information and data and the reliability choice task results. However, since the choice task features a mix of categorical (ordinal and interval) attribute levels, the linear model results have limited interpretation in terms of the importance (and value) of specific aspects of company information and data. The non-linear model formulation in contrast treats each attribute level as a categorical variable and provides the basis for estimating user WTP for the individual aspects of CH data.

Specification of choice model (MNL vs. MXL)

Both the linear and non-linear formulations can be estimated using a multinomial logit (MNL) or mixed logit (MXL) specification of the choice model.

The MNL specification is the default choice model but it is based on some practical but restrictive assumptions about user preferences (see Annex 7). In contrast the MXL model specification relaxes these assumptions, for example by allowing user preferences to vary across observed characteristics. The MXL model specification applied in the analysis of users' preferences for the provision of company information and data is the random parameter logit (RPL) model. This specification allows the estimate of the utility coefficient to vary across users instead of being fixed at the same level for all; hence it allows coefficient estimates to vary over respondents according to some distribution reflecting their tastes.

Interpretation of model results

The primary interpretation of the linear and non-linear model results is based on: (a) the sign (positive/ negative) of the estimated model coefficients for each explanatory variable; and (b) their statistical significance. In combination, this indicates how respondents' choices were influenced by the levels of the attributes and the change in cost presented in the choice task. The main expectations for the different aspects of the choice task are:

- *Company information and data attributes*: the coefficient estimates have a positive sign and are statistically significant;

- *Annual cost attribute*: the coefficient estimate has a negative sign and is statistically significant; and

- *Alternative specific constant (ASC) for CH option*: this model parameter measures strength of preference for the CH option independent of the attribute levels (see Box 6.1).

Note that the MXL model estimations also feature an additional set of coefficient estimates, which describe the distribution of the company information and data attributes coefficients – in terms of its standard deviation in accordance with the random parameter assumption noted above. These results are reported in Annex 7. A statistically significant standard deviation parameter estimate signals that there is observed variance in user preferences. In turn this implies that the MNL assumption of a fixed effect does not adequately reflect the varying strength of preference for changes in the provision of company information across different users.

Box 6.1: Interpreting the for ASC parameter

The main purpose of using a labelled DCE format in the user survey (Section 3.4) is to make the choices offered to respondents less abstract. This is a conventional strategy for addressing the potential for hypothetical bias in a stated preference survey. The option label therefore conveys additional information to respondents and the effect of this on their choices needs to be controlled for. An alternative specific constant (ASC) parameter is included in the estimation to capture the effect of the CH label. Without this, there is potential for an omitted variable effect that would bias the coefficient estimates for the company information attributes.

In practice, the ASC quantifies the strength of preference that users have for CH as the service provider over alternative commercial data service providers. This effect is estimated independent of the level of service provided by CH and the associated cost to users. If users assign some value to CH as the provider of company information and data services (in contrast to alternative commercial providers) then the coefficient estimate will be (statistically significant) positive.

The value of the information and data provided by CH search services is captured via coefficient estimates for the choice task attributes and the associated willingness to pay (WTP) calculations. These are the appropriate results to apply in policy analyses that are concerned with assessing the user benefits of the information and data within the current institutional framing or in the context of CH introducing user charges. The WTP values are independent of any effect that would be induced by the inclusion of a labelled option in the choice task.

The strength of preference assigned to the CH option would only be relevant to policy analyses that are concerned with understanding the value of CH within the context of change in the institutional framing. It represents the importance of CH as the service provider - either as a brand, goodwill, public good provider, or a combination of these aspects – independent of the value of the data and information that it makes available. From an economic perspective, the value that can be assigned to this dimension of CH would represent the reduction in social welfare that would arise if users were forced to switch to an alternative commercial provider (note, from a user perspective there is also the reduction in consumer surplus that would result from having to pay for company data and information – see Section 8).

Linear model

Table 6.1 presents the linear model specification results for the choice task.

Table 6.1: Linear model estimation

Explanatory variable	Coefficient estimate	Interpretation – effect on user choices	Attribute level range
Company information	0.236*** (0.046)	All else equal, respondents more likely to select options with improved level of provision	• None • Basic details • Persons of significant control • Shareholders
Financial and credit information	0.492*** (0.044)	All else equal, respondents more likely to select options with improved level of provision	• None • Annual reports and financial statements • Credit limits and scores • Financial strength indicators
Historic information	0.367*** (0.039)	All else equal, respondents more likely to select options with improved level of provision	• 1 year • 3 years • 5+ years
Annual cost	-0.001*** (0.000081)	All else equal, respondents less likely to select options with higher annual cost	• Free • £50 per year • £75 per year • £150 per year • £250 per year • £500 per year • £1,000 per year • £2,000 per year • £4,000 per year
ASC for CH option	2.578*** (0.146)	All else equal, respondents more likely to select option provided by CH than alternatives commercial providers	-

Notes: MXL (RPL) linear model (pooled sample); n = 10,944; pseudo r2 = 0.44. Standard error in brackets. Full results reported in Annex 7. * denotes statistically significant at the 10% level; ** denotes statistically significant at the 5% level; *** denotes statistically significant at the 1% level.

The main observations are:

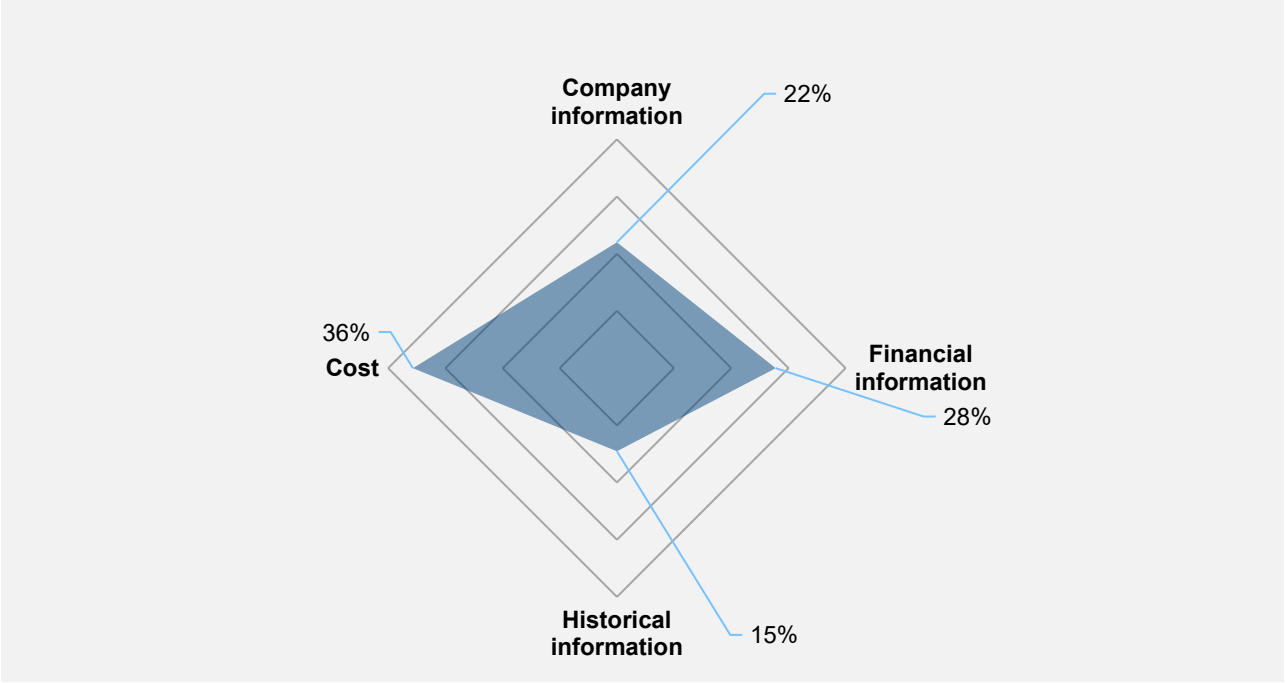
- *Company information and data attributes*: all coefficient estimates show the expected positive sign and are statistically significant (at the 1% level). This means that, all else equal, respondents preferred options that offered higher levels of provision for each company information and data attribute, compared to options that offered lower levels of service.

- *Cost attribute*: the coefficient estimate has the expected negative sign and is statistically significant (at the 1% level). This means that respondents' choices were constrained by budget considerations and, all else equal, respondents preferred lower cost options, compared to options that are higher cost.

- *Companies House ASC parameter*: the coefficient estimate has a positive sign and is statistically significant (at the 1% level) indicating that users assign an additional weight to CH as the service provider; i.e. all else equal, users would opt for a service offering provided by CH over alternative commercial providers (even if the provision of company information and cost were identical).

Whilst the results reported in Table 6.1 are a key indicator of the validity of the choice tasks – in terms of demonstrating that respondents were trading-off changes in the provision of company information and data and associated cost in the intended way – they do not provide a ready interpretation of the strength of users' preferences for the different aspects of the data. Figure 6.1 therefore presents the calculated 'attribute importance'[18] for the company information/data and cost attributes. It shows how much weight respondents assigned to each attribute when making their choice; i.e. how important each attribute was in making a choice option more appealing to users.

Figure 6.1: Linear model estimation - attribute importance



Notes: attribute importance calculated based on MXL linear model results across the range of attribute levels and cost levels reported in Table 6.1.

Across the set of choice task attributes, the greatest weight is placed on the cost attribute (36%) and financial information (28%) attribute. Overall, these are the two most important factors that influenced respondents' selection of options in the choice task. The lowest weight was placed on the historical information attribute (15%), consistent with the qualitative findings from the survey design and testing phase (Annex 1).

[18] See: Orme, B. (2010) Getting Started with Conjoint Analysis: Strategies for Product Design and Pricing Research. Second Edition, Madison, Wis.: Research Publishers LLC.

Non-linear model

The non-linear model specification has a similar interpretation to the linear model, but separate parameter estimates are provided for each (categorical) attribute level (Table 6.2). Coefficient estimates for each company information/data attribute level are reported relative to a base or reference case. For the company information and financial information attributes the base case is the lowest level specified in the choice task, which is 'none'; i.e. this information is not provided. This allows the relative importance of the provision of specific aspects of company information and data to be quantified. To assist this interpretation, the coefficient estimates are accompanied by the calculated odds ratio (OR) for each attribute level relative to the base case. These provide a direct measure of respondents' relative preference for each incremental change in service provision for an attribute[19].

Overall the set of results are consistent with expectations. The main findings include:

- *Company information*: users have the strongest preference for provision of basic details, which is approx. 2.1 times better than the base case of no information (OR = 2.11). Comparatively, the additional weight that is assigned to persons of significant control is relatively small (OR = approx. 2.3 for basic details + PSC vs. OR = 2.1 for basic details only). Furthermore, no additional weight is placed on shareholder information over and above basic details plus persons of significant control (OR = 2.29).

- *Financial information*: users have the strongest preference for provision of annual reports & financial statements, which is approx. 2.7 times better than the base case of no information (OR = 2.73). Whilst additional weight is assigned to annual reports & financial statement plus credit limits and scores (OR = 3.86), the addition of financial strength indicators does not offer any additional value to users (OR = 3.48).

- *Historical information*: the pattern of results indicates the expected 'shelf life' of company information and data for most users, with declining additional weight assigned to each incremental attribute level for the number of years' data that is available (ORs = 1.00; 1.30; 1.50).

The interpretation of the coefficient estimates for the annual cost attribute and ASC for the CH option are the same as for the linear model.

[19] Odds ratios are calculated from the model coefficient estimates. They are a measure of the relative strength of preferences (or priority) that users assign to each attribute level. The odds ratio for each attribute is interpreted relative to a 'base case' or reference point in the analysis presented.

Table 6.2: Non-linear model estimation

	Explanatory variable	Coefficient estimate	Odds ratio
Company information	None	-	1.00
	Basic details	0.748*** (0.078)	2.11
	Basic details + Person of significant control	0.826*** (0.081)	2.28
	Basic details + Person of significant control + Shareholders	0.828*** (0.109)	2.29
Financial information	None	-	1.00
	Annual reports & financial statements	1.005*** (0.071)	2.73
	Annual reports & financial statements + Credit limits and scores	1.350*** (0.100)	3.86
	Annual reports & financial statements + Credit limits and scores + Financial strength indicators	1.246*** (0.106)	3.48
Historical information	1 year	-	1.00
	3 years	0.266*** (0.072)	1.30
	5 years	0.408*** (0.056)	1.50
Annual cost	Annual cost	-0.001*** (0.00007)	-
ASC for CH option	Alternative specific constant for CH option	1.535*** (0.068)	-

Notes: CL dummy-coded model (pooled sample); n = 10,944; pseudo r2 = 0.36. Standard error in brackets. Full results reported in Annex 7. * denotes statistically significant at the 10% level; ** denotes statistically significant at the 5% level; *** denotes statistically significant at the 1% level.

6.3 Validity of choice model results

As summarised in Section 2.3, the two main aspects for assessing the validity of stated preference studies are 'content validity' and 'construct validity'. These considerations cover both the main empirical results from the study (i.e. choice model analysis) and wider considerations in relation to respondent understanding and the motivations for their responses.

Construct validity

Construct validity is primarily concerned with the robustness of the choice models and how well they explain customers' preferences based on reasonable expectations:

- *Linear model estimation*: all results are in line with expectations, where all coefficient estimates have the expected sign and are found to be statistically significant at the 1% level. Overall, the most important consideration for users in the choice responses was the annual cost of the option, followed by the provision of financial information and then basic company information (including persons of significant control). Less weight was placed on increasing provision of information in terms of historical records.

  An added finding to the results summarised in Section 6.2 is that the best fit to the data is provided by the mixed logit (MXL) model. In contrast to the multinomial logit (MNL) model - which is constrained to estimating the 'average' level of preference - the MXL model accounts for preference heterogeneity, recognising that different users will have stronger or weaker levels of preference than the average result. These results are reported in Annex 7.

- *Non-linear model*: the non-linear model is a more appropriate specification for examining the importance of the individual aspects of CH information. In general, these show that the greatest weight is placed on the information that is currently provided by CH (i.e. basic information and annual reports and financial statements). The value-added service levels that are provided by alternative commercial providers are found to have some additional value for users, but in relative terms these aspects are less important than the core information provided by CH. In general, this result is consistent with the wider findings of the user survey, including the relatively small proportion of respondents that reported their organisations purchased or subscribed to commercial services and value-added products in addition to using CH search services (approx. 10%; Section 5.4).

- *Preference for CH as the service provider*: the ASC parameter in the linear and non-linear model estimation quantifies the strength of preference that users have for CH as the service provider over alternative commercial data service providers. This effect is estimated independent of the level of service provided by CH and the associated cost to users. Overall, the estimation results signal that users have a strong preference for

the CH option. This is consistent with prior expectations and wider findings. For example, as noted above, only a small proportion of respondent organisations purchase information and data from commercial providers. In addition, around only 1 in 8 respondents stated that their organisation would be likely to purchase company information and data from a commercial provider if CH information was not available (Annex 4).

A variety of motivations, though, can underlie the result, including the low experience/ participation in paid-for data services, along with considerations such as affordability (i.e. zero financial cost of the Companies House Service), strategic behaviour (e.g. free-riding), a status quo/inertia or endowment effect (e.g. unwillingness to switch), not engaging with choices (protest responses[20]), etc. From a stated preference survey design perspective, these reflect a mix of valid reasons (i.e. user preferences) and potential response biases.

Overall, the supplementary assessments of the survey responses indicate that the strength of preference for the CH option is mainly due to 'legitimate' reasons, rather than survey complexity and respondents resorting to a simplifying choice heuristic (e.g. choosing the CH alternative as the default option). In this regard Annex 6 presents further empirical analysis that decomposes the CH option choices and label effect, whilst the content validity assessment below draws on responses to the wider survey to examine the motivations underlying respondent's choices.

Content validity

While the choice model analysis demonstrates that respondents provided valid responses to the choice tasks – i.e. respondents' choices can be satisfactorily explained, and they are consistent with conventional expectations for company information and data – it is also necessary to examine wider aspects of the survey.

The assessment of the content validity is a more qualitative exercise and draws on both the survey design and testing process, and responses to the follow-up 'diagnostic' questions in the survey. The follow-up questions are intended to aid the interpretation of the choice model results and provide a basis for further assessing the study's validity in terms of respondent understanding and motivations for their choices. This includes considerations such as the perceived credibility of the survey and the cognitive burden imposed on respondents in the choice tasks (i.e. respondent understanding):

[20] Protest responses are a rejection of the stated preference simulated market. For example, a respondent opting for a zero-cost option because they do not feel they should pay for the service. This does not necessarily reflect the value they attach to the service (i.e. the benefit they derive from it), but rather their view on the institutional or market framing.

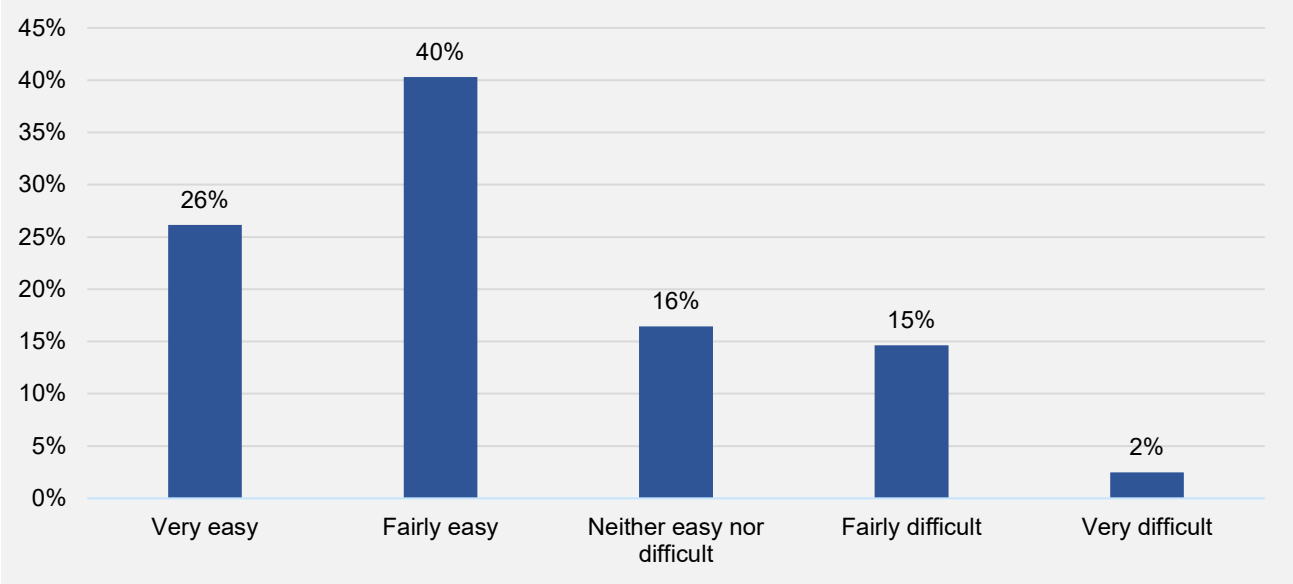
Feedback from survey design and testing

The survey design and testing stage provided the first opportunity to assess respondent understanding and engagement with the survey and choice tasks (Annex 1). Whilst the primary objective of testing is to develop the survey materials, it also provides insight on how and why users answered questions, which helps to validate the subsequent choice model results. Overall, there was a good understanding of the survey purpose and all respondents were highly familiar with the search service provided by CH. The debriefing sessions indicated that respondents had a good level of recall of the survey content and were able to explain the purpose of the survey. Overall, this suggests that customers were engaged by the survey materials and able to provide considered responses in the survey.

Ease/difficulty of choice tasks

Figure 6.2 summarises respondent feedback on the ease/difficulty of the choice task. Two-thirds stated that it was either 'very easy' or 'fairly easy' (66%). Approximately 1 in 7 respondents stated, 'neither easy or difficult' (16%). A relatively small proportion stated that the choice task was 'fairly difficult' (15%). Very few – just 2% – stated that the choice task was 'very difficult'.

Figure 6.2: Easy or difficulty of the choice task (n=608)



Source: Direct user survey.

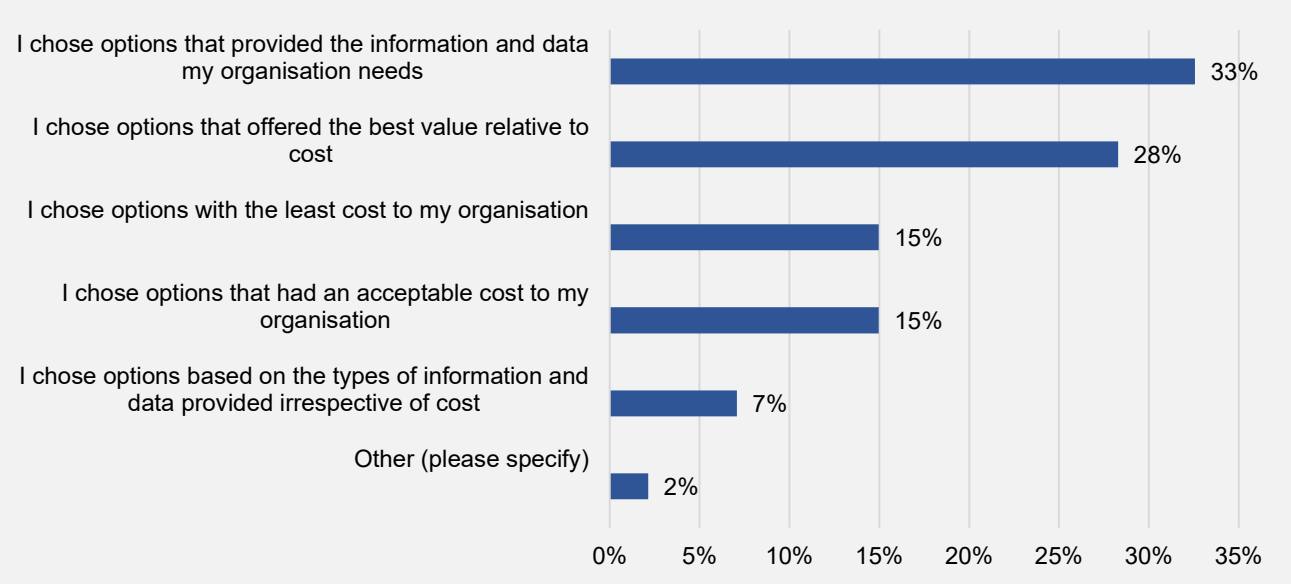
Respondents who stated that the choice task was either 'fairly difficult' or 'very difficult' (n=106) were asked a follow-up question to gauge why the exercise was challenging (Annex 4). The largest proportion of respondents (45%; n=48) stated that it was hard to decide which option their organisation would prefer; i.e. weighing up the alternative options, attribute levels and associated cost. This is to be expected, since the DCE format can present respondents with challenging trade-offs; hence respondents stating that the choices were fairly difficult likely reflects the effort and consideration they gave to the survey, rather than an inherent difficultly in understanding the requirement of the choice task.

Encouragingly, fewer respondents stated that not enough information was provided to make a choice (17%; 18 respondents) or that the instructions for the choice task were not clear (18%; 19 respondents). A further 20% (21 respondents) provided a mix of other reasons.

Motivation for choice task responses

Figure 6.3 reports the reasons that respondents stated for their choice of option in the choice task. Overall these responses indicate that respondents were weighing up the alternative options in terms of provision of company information and data and the associated cost. Around 1 in 3 users stated that they 'chose options that provided the information and data my organisation needs' (33%). Added to this, just over 1 in 4 stated that they opted for combinations of service level and cost that they judged to represent good value for money (28%).

Figure 6.3: Motivations for choice task responses (n=608)



Source: Direct user survey.

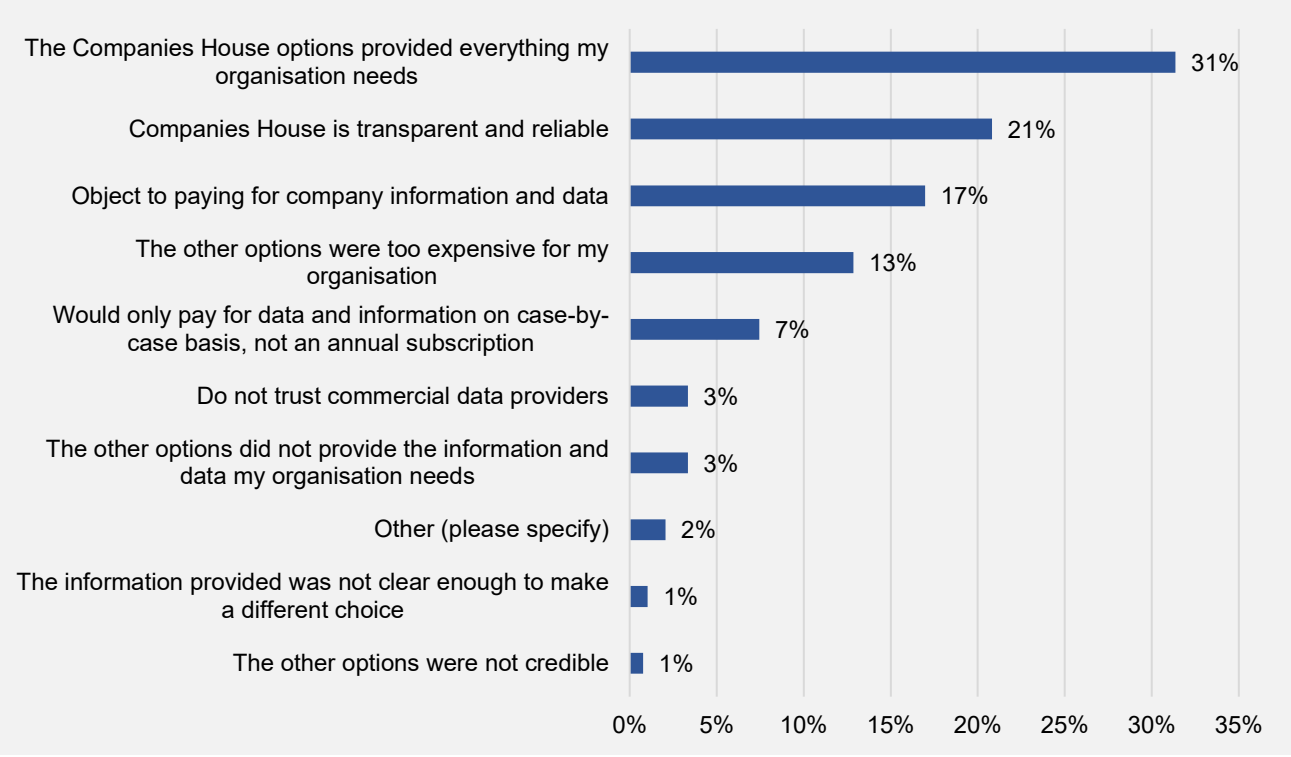
For other respondents, greater weight was placed on cost as the driving factor. This was the primary consideration for 1 in 3 respondents (33%), with the combined motivations 'I chose options with the least cost for the organization' (15%) and 'I chose option that had an acceptable cost to my organisation' (15%). Fewer respondents reported that cost was not a key consideration, stating that they 'chose option based on the types of information and data provided irrespective of cost' (7%).

Overall, the mix of responses demonstrates that respondents' choices were based on 'valid' motivations; including those particularly mindful of a cost constraint for their organisation, to those more explicitly balancing cost with the level of provision, to those whose choices were less constrained by cost.

Motivation for choosing the CH option

Respondents who mainly opted for the CH option (Option C) in the choice task responses were also asked a follow-up question concerning their main reason for this[21] (Figure 6.4).

Figure 6.4: Motivations for choosing the CH option (n=389)



Source: Direct user survey.

[21] This question was asked to respondents who selected Option C (CH option) either 4, 5, or 6 times in the choice task (n=389).

The range of responses and motivations can be summarised in four main groupings:

- *Sufficient level of provision*: around 1 in 3 (31%) stated that the CH option provided the information and data their organisation required, or that alternatives did not meet their needs (3%);

- *Cost*: a smaller proportion of respondents (around 1 in 7) indicated that they opted for the CH option because the cost of alternatives was prohibitive for their organisation (13%). A further subset stated that their organisation would not pay for an annual subscription, but only pay for company information on a case-by-case basis (7%).

- *Trust/confidence*: around 1 in 4 cited reasons related to confidence in CH as the service provider, either in terms of transparency (21%) or not trusting services offered by commercial providers (3%).

- *Protest responses*: in total approx. 1 in 5 cited reasons related to objecting to paying for company information and data (17%), the credibility of alternative options (1%), or insufficient information (1%).

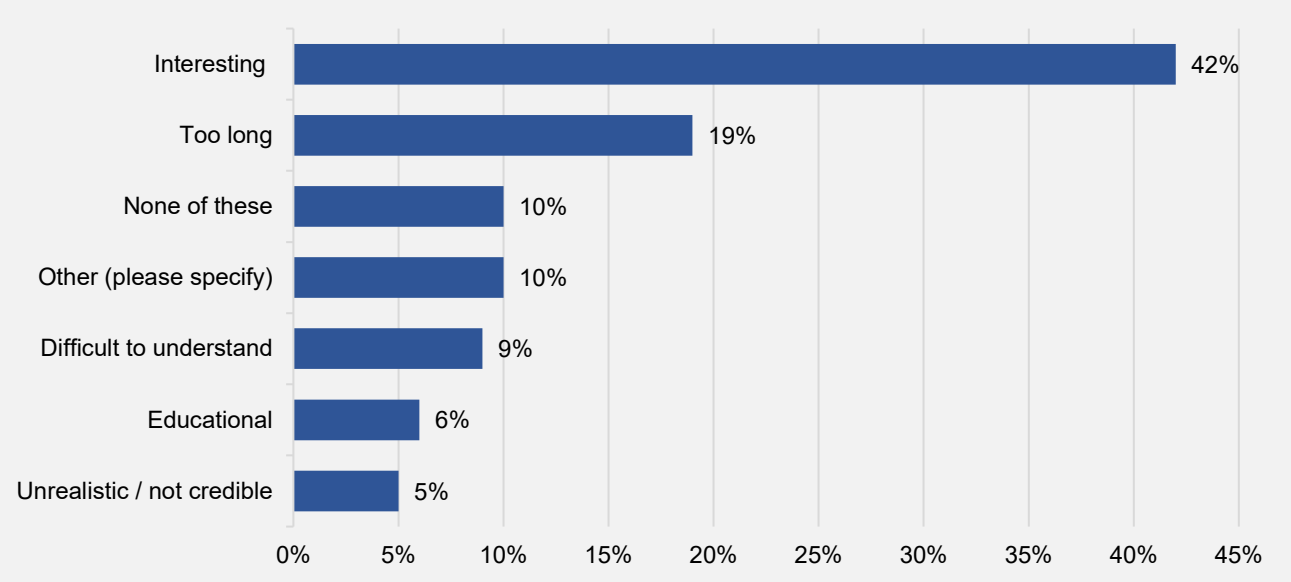
Generally, the respondent feedback indicates that most CH choices are based on motivations related to satisfaction with the level of service provision or budget constraints (51%) or due to trust in CH (24%). The remaining reasons are mainly due to a rejection of the simulated market construct – i.e. protest responses – rather than issues with the complexity of the choice task or respondent understanding. Supplemental analysis reported in Annex 7 tests the effect inclusion/ exclusion of protest responses from the main estimation results. Overall these are found to have minimal effect on the results reported in Section 6.2[22].

[22] This is mainly because the protest response effect is embedded within the ASC parameter for the CH option.

Overall feedback on the survey

Respondents' views on the overall survey are reported in Figure 6.5 (note that respondents could select multiple response options).

Figure 6.5: Overall respondent feedback on survey (n=608)



Source: Direct user survey. Note: Respondents were able to select multiple response options to this question.

The largest proportion respondents stated that the survey was interesting (42%), indicating a good level of engagement across the sample. A relatively large minority – around 1 in 5 - felt that the survey was too long (19%), but by itself this is not necessarily cause for concern. Compared to other surveys that panellists participate in, stated preference surveys do tend to be longer; however based on the consistency of the main estimation results there is no obvious indication that responses were subject to a fatigue effect for respondents. Also consistent with other findings outlined above, few respondents stated the survey was difficult to understand (9%) and very few stated that it was not credible (5%).

On the whole, the mainly positive view of the survey and its perceived consequentiality by respondents appears to hold from the qualitative testing phase through to the main survey implementation.

6.4 User willingness to pay

The trade-offs that users are willing to make between the provision of different levels of company information and data and their organisation's income (represented by changes in annual cost for accessing the data) provides a measure of the benefits of CH search services. Specifically – as described in Section 2.1 - the trade-off measures in monetary terms users' maximum willingness to pay (WTP) for the provision of company information and data.

User WTP is calculated from the choice model estimation results reported in Section 6.2. The non-linear model specification provides the basis of estimating WTP for the specific types of information and data currently provided by CH: company information (basic details and persons of significant control) and financial information (annual reports and statements) [23].

Annual user benefit estimates

Mean average *annual* values for user WTP are reported in Table 6.3. These represent the annual benefit to users from the provision of each type of information under the current CH service offering.

Table 6.3: User benefits – mean (average) WTP per year (£/year/user) (n=608)

Company information and data attribute	Central	Lower	Upper
Company information (basic details)	832	634	1,030
Person of significant control	86	-58	231
Annual reports & financial statements	1,118	903	1,333
Total WTP	2,036	1,478	2,593

Notes: All values are rounded to the nearest £1. WTP is calculated from the non-linear model (CL dummy-coded model; pooled sample – Table 6.2). Lower – upper bounds are estimated using a 95% confidence interval. Person of significant control value (£86.24 per year) is calculated as the difference between respective attribute levels: basic details + persons of significant control (WTP = £918.01 per year) minus basic details (WTP = £831.77 per year).

The total value, summed across all attributes, is approximately £2,000 per year per user, with a lower – upper bound of approximately £1,500 - £2,600 based on the corresponding 95% confidence interval estimates. Within this, the greatest value is attributed to the provision of financial information (annual reports and financial statements), which represents 55% of the total benefit (approximately £1,100 per year). Company information

[23] WTP is calculated as the ratio of estimated coefficients for the attribute (level) and the annual cost (marginal utility of money) parameter; i.e. WTP = $-\beta x / \beta cost$, where x is the attribute level and the β's are the coefficient values.

accounts for 41% of the total benefit (approximately £800 per year). The benefits of persons of significant control information represents the remaining 4% (approximately £100 per year)[24].

An illustrative value per use (i.e. a single visit to/use of CH search services) can be obtained by dividing the annual benefit estimate by the sample average for the number of times that CH search services are accessed per year (approximately 183 times per user). This gives a benefit value of approximately £11 per user per individual use (with a lower – upper bound of approximately £9 - £13).

Annual user benefit estimates by total use segmentation

Table 6.4 reports user WTP by 'total use', calculated from the choice model estimation results for each segment. The pattern of results shows the expected diminishing marginal WTP relationship; as the total use of CH search services increases (in terms of total hours per year), the unit value per use decreases. However, it is important to note that there is less precision in these WTP estimates, particularly for the individual attributes, due to the smaller sample sizes for each segment compared to the overall sample results reported in Table 6.3.

Table 6.4: User benefits by total use segmentation – mean (average) WTP per year (£/year/user)

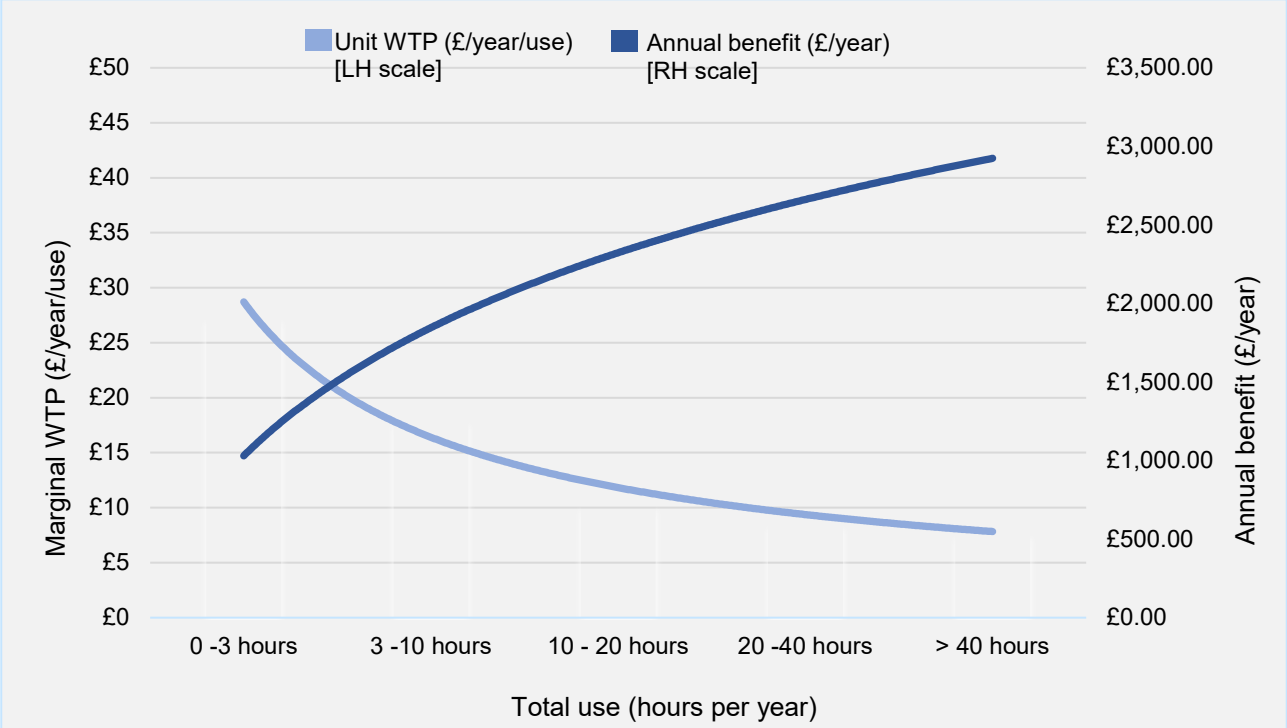
Company information and data attribute	Total use (hours per year)				
	0 – 3 hours (n = 130)	3 – 10 hours (n = 140)	10 – 20 hours (n = 122)	20 – 40 hours (n = 113)	>40 hours (n = 84)
Company info. (basic details)	494 [156 – 832]	655 [300 – 1,010]	659 [211 – 1,106]	1,089 [666 – 1,512]	1,554 [610 – 2,497]
Person of significant control	45 [-201 – 290]	0 [-260 - 260]	269 [-95 – 633]	106 [-174 – 386]	416 [-256 – 1088]
Annual reports & financial statements	721 [369 – 1072]	867 [496 – 1,236]	1,296 [748 – 1,843]	1,368 [874 – 1,861]	1,247 [428 – 2,064]
Total WTP	1,260 [324 – 2,194]	1,522 [536 – 2,506]	2,223 [864 – 3,582]	2,563 [1,366 – 3,759]	3,216 [782 – 5,649]
Avg. no. visits/year (sample avg.)	45.3	82.4	207.3	283.2	392.4
WTP per use (£/visit)	28	18	11	9	8

Notes: All values rounded to nearest £1. WTP calculated from non-linear models for each segment (CL dummy-coded model). Lower – upper bounds are 95% confidence interval. Person of significant control values calculated as difference between respective attribute levels: basic details + persons of significant control minus basic details.

[24] Note that this estimate is less precise, as signified by the negative lower value for the 95% confidence interval. For the most part this is due to the smaller sample size and the calculation for separating the value for PSC (an attribute level) from the combined value for basic information plus PSC, which for the overall sample has the expected result (WTP basic information + PSC > WTP for basic information).

The segmented WTP results are also illustrated in Figure 6.6, which reports the estimated annual user benefit in terms of total WTP per year (right-hand scale) and marginal benefit (unit WTP value; left-hand scale). Again, this shows the expected diminishing marginal benefit relationship, with: (a) total benefit increasing at a declining rate as total use per year increases; and (b) the corresponding declining marginal WTP value as total use per year increases.

Figure 6.6: Total WTP per year vs. marginal WTP per use by segment



Note: The marginal WTP curve uses the data points reported in Table 6.4 (WTP/uses).

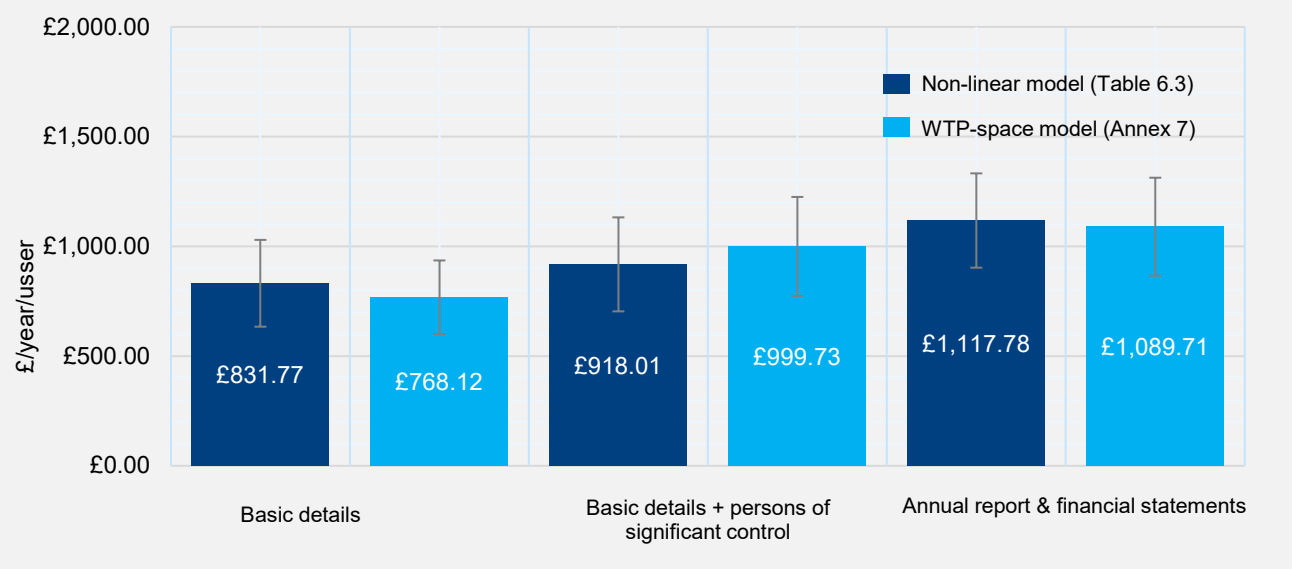
Validity assessment

The validity of the annual user benefit values is assessed through two supplemental analyses: (i) a comparative assessment that uses an alternative econometric specification to estimate user WTP using alternative assumptions concerning the distribution of parameter estimates (see Annex 7; WTP-space estimation); and (ii) comparison to results from the time saving cost calculator (Section 3.4 Annex 6), which conceptually provides a lower-bound resource cost-based estimate of user benefits.

Comparison to WTP-space estimation

Figure 6.7 compares estimated user benefits (Table 6.3) to the results from the alternative WTP-space estimation[25].

Figure 6.7: Comparison of utility space and WTP space benefit estimates – mean (average) and interval estimates for WTP per year (£/year/user)



Overall, there is consistency in the two sets of values. Whilst minor differences are observed between the mean (average) estimates – for example the higher value placed on persons of significant control information in the WTP-space model[26] - the interval estimates that are represented by the 95% confidence intervals overlap substantially. This means that it is not possible to conclude the valuations are significantly different from each other. Overall the total value summed for the WTP-space estimation is approximately £2,100 per user per year, compared to approximately £2,000 per user per year for the Table 6.3 results.

[25] The WTP-space estimation procedure directly estimates user WTP via the model parameters; i.e. the coefficient estimates. The conventional 'utility-space' model specification (Table 6.2) requires the assumption of a log-normal distribution of the coefficient estimates and WTP is calculated as the ratio of the attribute coefficient and marginal utility of money (see footnote 23). In some cases, this can lead to WTP distributions (and average values) that are significantly skewed. The WTP-space estimation instead directly estimates the distribution of WTP and therefore can provide more reliable results. Here the WTP-space formulation is applied as a validity test to provide assurance as to the reliability of benefits estimates. See Train, K. and Weekes, M. (2005) 'Discrete Choice Models in Preference Space and Willingness-to-Pay Space', Applications of Simulation Methods in Environmental and Resource Economics pp 1-16.

[26] The minor differences in the mean value estimates are a result of the different distributional assumptions for the model parameters.

Time savings calculator results

Table 6.5 summarises results from the time savings calculator questions. As described in Section 3.6 these can be interpreted as a proxy for the value of company information and data to users, representing a lower-bound cost-based comparator or benchmark that can help assess the plausibility of user WTP estimates. This is because time saving estimates reflect resource costs to users; they are not expected to be directly related to the benefits associated with using the information (e.g. more informed decisions/better outcomes). User WTP should - as a minimum - be at least equal to the cost of accessing the information, otherwise the cost of obtaining the information exceeds the value to the user.

Results are reported per user per year, weighted according to use of company search services by the job title/role (at the sample average)[27]. The value of time savings is calculated based on ONS Annual Survey of Hours and Earnings (ASHE) statistics for gross hourly pay[28].

Table 6.5: Estimated timing savings (£/year/user)

	Time saving per year (hh:mm:ss)	Estimated value (gross hourly pay)			
		Mean	Median	10th percentile	90th percentile
Company director	15:41:18	408.68	322.24	150.29	760.10
Manager	04:32:52	118.47	93.41	43.57	220.34
Professional occupation	12:56:20	287.89	259.17	163.68	435.91
Technical occupation	00:46:36	13.89	11.92	7.57	20.76
Administrative or secretarial	05:57:09	74.05	63.87	47.14	110.54
Sales or customer service	01:03:02	10.44	8.89	7.85	14.14
Other	02:23:02	42.22	35.81	22.59	67.18
Total	**43:20:19**	**955.64**	**795.31**	**442.69**	**1628.97**
Total incl. non-wage labour costs*	**-**	**1162.99**	**968.55**	**539.11**	**1983.77**

Notes: * Uplift for non-wage labour costs of 21.78% to cover additional employee benefits such as pensions, National Insurance contributions, sickness pay as well as maternity and paternity pay. The uplift factor is consistent with the approach applied in Impact Assessments by BEIS (Pers. Comm. BEIS, July 2019). Source: http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=lc_lci_lev&lang=en

[27] In the calculator questions respondents were asked to validate the estimate of the time spent using the services by their organisation (per week, per month, per year), which was calculated from their earlier survey responses regarding the frequency and average duration of use of CH search services by their organisation. Respondents were then asked to assess how much additional effort would be incurred by their organisation to obtain the same information if the company search services were not available. This was used to calculate the time saving to their organisation, which the respondent was then asked to validate and then attribute in proportional terms across different job title/roles. Full summary results are provided in Annex 5.

[28] See: https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours/datasets/allemployeesashetable1

The average time saving for users is approximately 43 hours per year, with the benefits primarily accruing in terms of the time of director's (36%) and employees in professional occupations (e.g. accountants) (30%) (see Annex 5). Based on average wage rates, this corresponds to a weighted average value of around £800 - £950 per user per year (median vs. mean gross pay, respectively). Factoring in other costs to employers (e.g. National Insurance, pensions, etc.), the uplifted values are approximately £1,000 - £1,160 per user per year. Applying the wider distribution of wage rates – using the 10th and 90th percentiles for illustrative purposes – gives a range of approximately £540 - £1,980 per user per year.

Overall there is encouraging degree of consistency between the time saving estimates and user WTP estimates. The former – as expected – are lower than the calculated benefit values for users, but they are of a similar order or magnitude. This represents a form of convergent validity, demonstrating that the estimated WTP values can be reconciled against an alternative measure of benefits (avoided cost)[29]. By and large this should be interpreted as a form of 'validity by association', with the finding reflecting reasonable prior expectations as to why the comparative results would differ within reasonable bounds.

[29] It is also noted that the WTP values and time saving estimates are similar in magnitude to the mean (average) expenditure reported for commercial data services (approx. £1,600 per year; Table 5.9), although it is noted that this is skewed due to a number of high expenditure values (median = approx. £240 per year). As expenditure values, however, they do not include the surplus (net benefit) to users, which is the difference between price paid and maximum WTP. Hence the expenditure values also represent a lower bound estimate of the benefit to users. A further factor to consider is the extent to which the alternative products are (full) substitutes for the data and information provided by CH – meaning some caution is required in interpreting the comparative result.

7 Aggregation

This section presents estimates of annual aggregate user benefits for CH search services, based on user data provided by CH. An illustrative policy application is also provided, which assesses the impact of introducing an annual user charge for the company information and data search services.

7.1 Approach

The annual aggregate benefit estimates presented in this section are reported for 2018 and for use of the CHS service, based on user data provided by CH. To provide a range of estimates that account for key sensitivities in estimating aggregate user benefits, two alternative aggregation approaches have been used:

1. Aggregation based on the estimated number of direct users for CHS: this approach applies estimates of annual WTP for each user, which is effectively the benefit associated with an annual subscription to CHS; and

2. Aggregation based on the estimated use of CHS by direct users: this approach applies estimates of the value of CHS for each individual use of the service.

Both approaches compare the application of a constant unit WTP value across all users (Table 6.3) to a diminishing marginal WTP value for the user segments based on levels of ‘total use’ (Table 6.4). High to low ranges are also reported for reference based on the 95% confidence intervals for each set of WTP values.

Two alternative aggregation approaches are also used to address a limitation in the CHS user data, where it has not been possible to identify multiple users from the same organisation. As a result, Approach 1 may over-estimate the aggregate benefits by double-counting the user benefits for an individual organisation. For example, if an organisation has two users of CHS services, this would be counted as two separate organisations and would double-count the estimated benefits. In contrast, Approach 2 applies the calculated unit value per use (i.e. each individual visit / use of CHS) which avoids the potential for double-counting since each 'use' is valued at its marginal rate. This results in more conservative estimates of aggregate benefit.

7.2 CHS user data

Estimates of annual use (i.e. number of visits) and annual users have been calculated from a sample of CHS user data provided by CH. The sample estimates have been 'scaled-up' to estimate annual usage based on the observed intensity of use for the CHS search services, measured in terms of the number of uses per minute (see below).

Summary statistics for the CHS data sample are provided in Table 7.1. A total of almost 148,000 individual uses of the search services (website visits) were included in the data sample from CH. The data was provided as 84 separate extracts from the CHS website database, with each extract covering an approximate 20-minute time slot. The 84 time slots were randomly selected across seven randomly selected days in 2018[30].

Table 7.1: CHS data extract – summary

Sample splits	N	% data sample	% user sample	Notes
Total sample	147,581	100%	-	Data extracts from 84 time slots (of approximately 20 minutes) across 7 randomly selected days in 2018
UK users	101,742	69%	-	Observations for all UK users, based on the country of origin of the users' IP address, incl. non-search actions
UK sample – search actions	92,863	63%	100%	Observation for UK users that correspond to use of CHS company information and data search services*
No. unique users	89,171	-	96%	Number of unique visitor IDs for UK users – search actions only sub-sample
No. repeat users	3,692	-	4%	Number of repeated visitor IDs among UK users – search actions only sub-sample

Source: CHS data extract.

Notes: *Based on first 10 actions observed.

In the data sample, 69% of the observed uses of the CHS services were for UK-based users (identified via the country of origin of their IP address). Excluding UK users who did not undertake any search-related actions resulted in a total of approximately 93,000 observations (63% of the total data sample). Around 96% of these observations were for 'unique' users, based on the (anonymous) visitor ID assigned in the CHS data. Only 4% of the observations in the subset of the data were for repeated visitor IDs (i.e. users who were observed to use the search services more than once in the sample data).

[30] The CHS data sample represents approximately 0.5% of the overall use in 2018 (based on number of minutes covered). A random selection of 'times slots' across the year is judged to be an appropriate sampling approach since CH reports that there is no apparent seasonal pattern in monthly usage of the company search services; all variation is around a steady trend. Weekly usage exhibits an expected sawtooth pattern, with high levels of use on weekdays compared to weekends. (Pers. Comm. Companies House, June 2019). The sawtooth pattern is factored into the aggregation process by 'scaling up' estimated use for weekdays and weekends separately.

The average results for the use of the CHS search services among this sample of users are reported in Table 7.2. The results are reported for UK users undertaking search actions and indicate that: the average number of search actions was nine per user; each use (visit) lasted approximately 6 minutes; and the average number of visits per year was 43. The CHS count data also indicate that the sample is typically made up of lower frequency users (averaging 17 days since their last visit) who are relatively new users of the service (averaging 133 days since their first visit)[31].

Table 7.2: Average usage results for CHS data sample– UK search action users

	n
Average number of search actions per user (no. of actions)	9
Average visit duration (hh:mm:ss)	00:06:08
Average visit count (no. of visits)	43
Average number of days since last visit (no. of days)	17
Average number of days since first visit (no. of days)	133

Source: CHS data extract. Notes: Total no. observations = 92,863 (UK users; search actions)

The CHS data extract also recorded the type of information that users accessed. For reference, this is reported in Table 7.3, categorised according to the choice task attributes (Table 3.2). The most frequently accessed information was the company overview (representing 42% of observed actions), followed by officers (23%), filing history (21%), and personal appointments (11%). Information related to charges, insolvency and persons with significant control was accessed less frequently in the sample data (with each representing less than 2% of the total observed actions).

[31] CHS visitor ID count data covers a time period of up to 6 years. The highest number visits recorded for a visitor ID was 3,814; the highest number of days since first visit was 2,192 (approx. 6 years).

Table 7.3: Summary of CHS company information and data search actions

Type of information		N	%
Basic details	Charges	5,017	1.8%
	Insolvency	1,193	0.4%
	Officers	63,219	22.7%
	Overview	116,305	41.7%
	Personal appointments	30,587	11.0%
Annual reports and financial statements	Filing history	58,394	21.0%
Persons with significant control	Persons with significant control	3,964	1.4%
Total		278,679	100%

Source: CHS data extract.

Notes: Total no. observations = 92,863 (UK users; search actions). The data feature a total of 316,216 observed user actions; 278,679 (approximately 12%) of which are for the types of information categorised in Table 7.3.

7.3 Estimated annual usage

Observed intensity of use

Annual usage of the CHS search services (in terms of numbers of users and uses) was estimated by scaling-up from the 84 individual data extracts, based on the intensity of use (calculated in terms of the observed number of uses per minute). Table 7.4 summarises the observed intensity of use for three different time periods (before 8am; 8am – 6pm; and after 6pm) across each of the seven randomly selected days. As expected, the highest intensity of use is observed during weekday working hours, with an average of 362 uses per minute. Lower intensity of use is observed for weekday evenings (an average of 161 uses per minute) and weekends.

Table 7.4: Observed intensity of use (average use per minute)

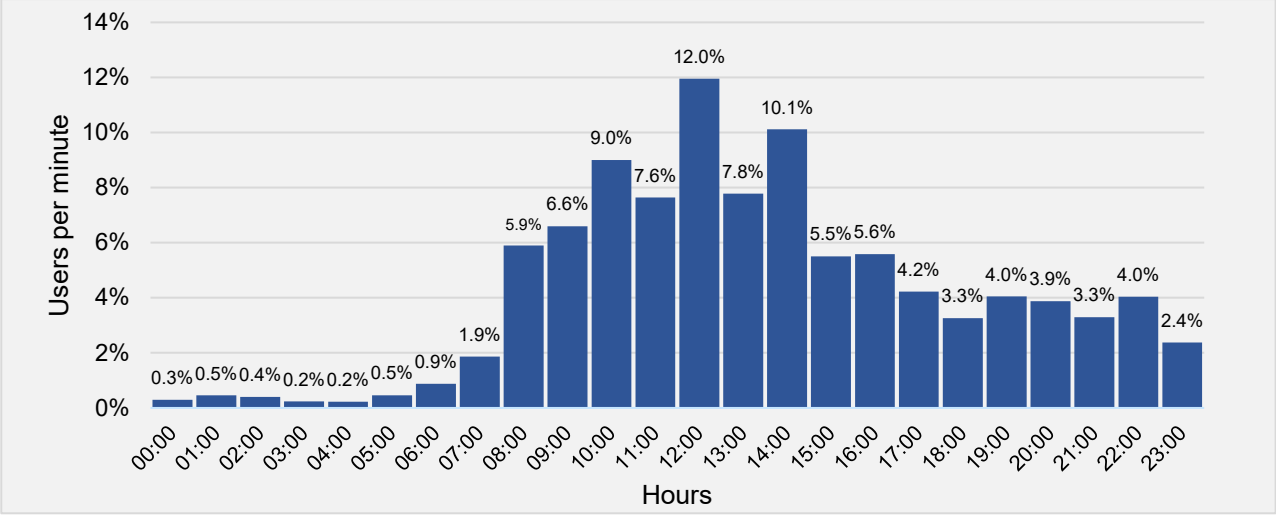
Intensity of use	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Overall (avg.)	Week day (avg.)	W/end day (avg.)
	Mon	Tues	Weds	Thurs	Fri	Sat	Sun			
	31/12/18	18/09/18	07/02/18	01/03/18	26/10/18	27/01/8	05/08/18			
Night (00:00 - 07:59)	46.8	41.8	17.4	24.0	24.2	0.6	1.0	21	32	1
Day (08:00 - 17:59)	198.5	561.0	485.7	430.7	384.2	140.8	0.3	276	362	53
Evening (18:00 - 23:59)	73.3	177.4	219.7	128.7	165.3	114.3	5.6	127	161	49

Source: Analysis of CHS data extract.

Note: Inclusion of the 31st December within the data sample likely results in more conservative estimates of average intensity of use, particularly for weekday use. However, given this is the result of a random selection process the observations are retained in the analysis.

The hourly profile of use is charted in Figure 7.1, illustrating the peak use during working hours, and relatively lower but constant use in the evening (6pm – midnight) and overnight (midnight – 8am).

Figure 7.1: Profile of use of CHS search services by hour (% of observed users)



Source: Analysis of CHS data extract.

Estimated annual use (no. of visits)

The annual use of CHS search services for 2018 has been estimated by multiplying the observed intensity of use by the number of minutes in a year (525,000 minutes). The calculation is split by time of day and the number of weekdays (261) versus weekend days (104) in 2018. Table 7.5 shows the parameters for an interim calculation that estimates the number of uses per day (i.e. visits). For a weekday, the estimate is approximately 278,000 uses; and approximately 49,500 uses for a weekend (i.e. roughly 18% of weekday usage).

Table 7.5: Estimated no. users per day

Time of day	Number minutes per day	Observed intensity of use (Table 7.4)		Estimated no. of uses per day	
		Weekday (no. uses per minute)	Weekend (no. uses per minute)	Weekday	Weekend
Night (00:00 - 07:59)	480	32	1	15,285	339
Day (08:00 - 17:59)	540	362	53	195,214	28,621
Evening (18:00 - 23:59)	420	161	49	67,477	20,525
Total	1,440	-	-	277,977	49,485

Source: Analysis of CHS data extract.

Table 7.6 shows the calculation for estimating the total number of uses/visits per year, by scaling-up the results reported in Table 7.5 by the respective number of working and weekend days. Overall, the estimated annual use of CHS search services for UK users in 2018 is approximately 77.7 million uses/visits.

Table 7.6: Estimated visits per year

Type of day	Number of days in 2018	Estimated no. uses per day (Table 7.5)	Estimated no. of uses per year
Week	261	277,977	72,551,966
Weekend	104	49,485	5,146,415
Total	**365**	**327,462**	**77,698,381**

Source: Analysis of CHS data extract.

Estimated number of users

The number of CHS users has been calculated by dividing the total number of visits in 2018 (approximately 77.7 million) by the average number of uses (visits) per year for an individual organisation. The calculation applies the 'total use' segments to approximate the varying level of use across the user base. The proportion of users within each segment was identified using the CHS visitor count (i.e. number of visits and date since first visit) and the (average) duration per visit. This shows that the average number of visits per year ranges from 42 times for the 0 – 3 hours segment (i.e. less than once a week), to almost 500 times for the greater than 40 hours segment (approximately 1.4 times per day).

The results estimate the number of UK users of CHS search services to have been approximately 1.5 million in 2018. The majority (1.4 million) are low frequency users, using the search services for 3 hours or less in total across the year.

Table 7.7: Number of users per year – by segmentation (average number of uses per year)

Segmentation	%	N	Average number of uses per year	Estimated number of users
0 – 3 hours	76%	58,736,061	42	1,414,760
3 – 10 hours	10%	7,431,355	195	38,083
10 -20 hours	4%	3,308,436	224	14,760
20 – 40 hours	2%	1,674,289	274	6,108
>40 hours	8%	6,548,242	493	13,274
Total				**1,486,985**

Source: Analysis of CHS data extract.

Direct users versus general public

The CHS use data does not distinguish between the general public (i.e. households) and direct users (i.e. businesses and organisations such as companies, creditors, investors, researchers and public sector bodies). To account for this, the estimates of annual use (number of visits) and annual users have been adjusted using results from the supplemental user profile survey (described in Section 4.1), which found that approximately 95% of the respondents stated they were using CH search services on behalf of the organisation they worked for. Hence, a 95% weighting factor has been applied to calculate the following estimates of usage for CHS in 2018:

- Estimated number of direct users: approximately 1.41 million UK organisations; and
- Estimated number of uses (visits) by direct users (UK organisations): approximately 73.8 million.

Sense check on CHS usage estimates

CH management information reports approximately 2.2 billion free data requests via CHS, CHD and WebCHeck for 2017/18[32]. Of these, CHS accounts for approximately 1.39 billion. Based on information provided by CH, a ‘data request’ is understood to be equivalent to an ‘action’ that is observed in the CHS data sample. The estimated number of visits for UK users (63% of total users) of approximately 77.7 million (Table 7.6), can therefore be scaled up to approximately 106 million visits to include non-UK users and 'non-search' use types.

[32] See: https://www.gov.uk/government/statistical-data-sets/companies-house-management-information-tables-2017-18. The latest management information for 2018/19 additionally includes downloads of company information and data via API (which is often used by intermediaries). Currently, the split between CHS, CHD, WCK, and API use is not reported, hence 2017/18 is used as the reference point for the sense check.

Applying the average number of actions observed in the data sample (9.47 per user), gives a total of approximately 1,008 million actions for 2018, which is within the same order of magnitude as the CH management information for 2017/18 (i.e. it is approximately 28% lower). Given that the estimate of total actions is extrapolated from a relatively small data sample, this is judged to be a satisfactory comparison and provides assurance that the calculated CHS usage estimates (in Tables 7.6 and 7.7) are reasonable.

7.4 Estimated user benefits

This section presents annual aggregate benefit estimates for 2018, which have been calculated by applying user WTP estimates (Section 6.4) to the CHS usage estimates (Section 7.3). As noted above, several sensitivities have been tested to provide a range estimate for the value of CH data and information.

Approach 1: Aggregation based on the estimated number of direct users

Table 7.8 presents annual user benefits for Approach 1, which has applied estimates of annual user WTP to the estimated number of direct users for CHS (i.e. approximately 1.4 million).

Table 7.8: Annual user benefit – constant vs. diminishing marginal WTP (Approach 1)

	A. Constant mWTP	B. Diminishing mWTP – total use segmentation				
		0 – 3 hours	3 – 10 Hours	10 – 20 hours	20 – 40 hours	>40 hours
User WTP (£/year)	£2,036	£1,260	£1,522	£2,223	£2,563	£3,216
No. users (million)	1.41	1.12	0.14	0.06	0.03	0.13
Annual benefit (£m)	£2,876m	£1,416m	£216m	£141m	£80m	£403m
Total (£m) [95% CI]	**£2,876m [£2,088m – £3,663m]**	**£2,256m [£637m – £3,878m]**				

Note: estimated annual use benefits for the choice task attributes for company information and data are: basic information = approx. £1,175m per year; persons of significant control (PSC) = approx. £122m per year; financial information = approx. £1,579m per year. High-low bound estimates can be estimated by applying a 95% CI for each mWTP amount, and sensitivity checks can be applied to the WTP-space estimation results (Figure 6.7). For example, the estimated annual benefit for PSC is £327m per year based on the WTP-space model results.

Applying the constant marginal WTP (of approximately £2,000 per user per year) gives an annual user benefit estimate of £2,876 million for CHS in 2018 (with a lower/upper bound of approximately £2,088 million/£3,663 million based on a 95% confidence interval for the WTP estimate). However, accounting for the observed diminishing marginal WTP across the 'total use' segments, results in a lower annual user benefit estimate of £2,256 million (with a lower/upper bound of £637 million/£3,878 million). The wider 95% confidence interval for the segmented results stems from the smaller sample sizes that are used to estimate WTP for each segment, compared to the overall sample.

Approach 2: Aggregation based on estimated use of CHS by direct users

Approach 2 provides a more conservative aggregate benefit estimate, by valuing the use of CHS at the (average) marginal rate. The intention is to account for the possibility of multiple users from the same organisation, which could double-count some benefits.

Table 7.9: Annual user benefit – constant vs. diminishing marginal WTP (Approach 2)

	A. Constant mWTP	B. Diminishing mWTP – total use segmentation				
		0 – 3 Hours	3 – 10 Hours	10 – 20 hours	20 – 40 hours	>40 Hours
WTP per use (£/use/year)	£10.94	£27.81	£7.80	£9.92	£9.09	£6.52
No. uses (million/year)	73.8m	55.8m	7.1m	3.1m	1.6m	6.2m
Annual benefit (£m)	£808m	£1,552m	£52m	£25m	£15m	£51m
Total (£m) [95% CI]	**£808m [£587m – £1,029m]**	**£1,694m [£447m –£2,938m]**				

The results in Table 7.9 show that the use of a constant unit WTP value (of approximately £11 per use as shown in Table 6.3) gives an annual user benefit estimate of approximately £808 million for CHS in 2018 (with a lower/upper bound of approximately £587 million/ £1,029 million). Applying unit values for each user segment results in an annual user benefit estimate of approximately £1,694 million (with a lower/upper bound of £447 million/ £2,938 million). Again, the wider 95% confidence interval for the segmented results is due to the smaller sample sizes for estimating WTP. Overall, the aggregate benefit estimates for Approach 2 are estimated to be around 30-75% of the calculated values for Approach 1.

7.5 Illustrative policy application

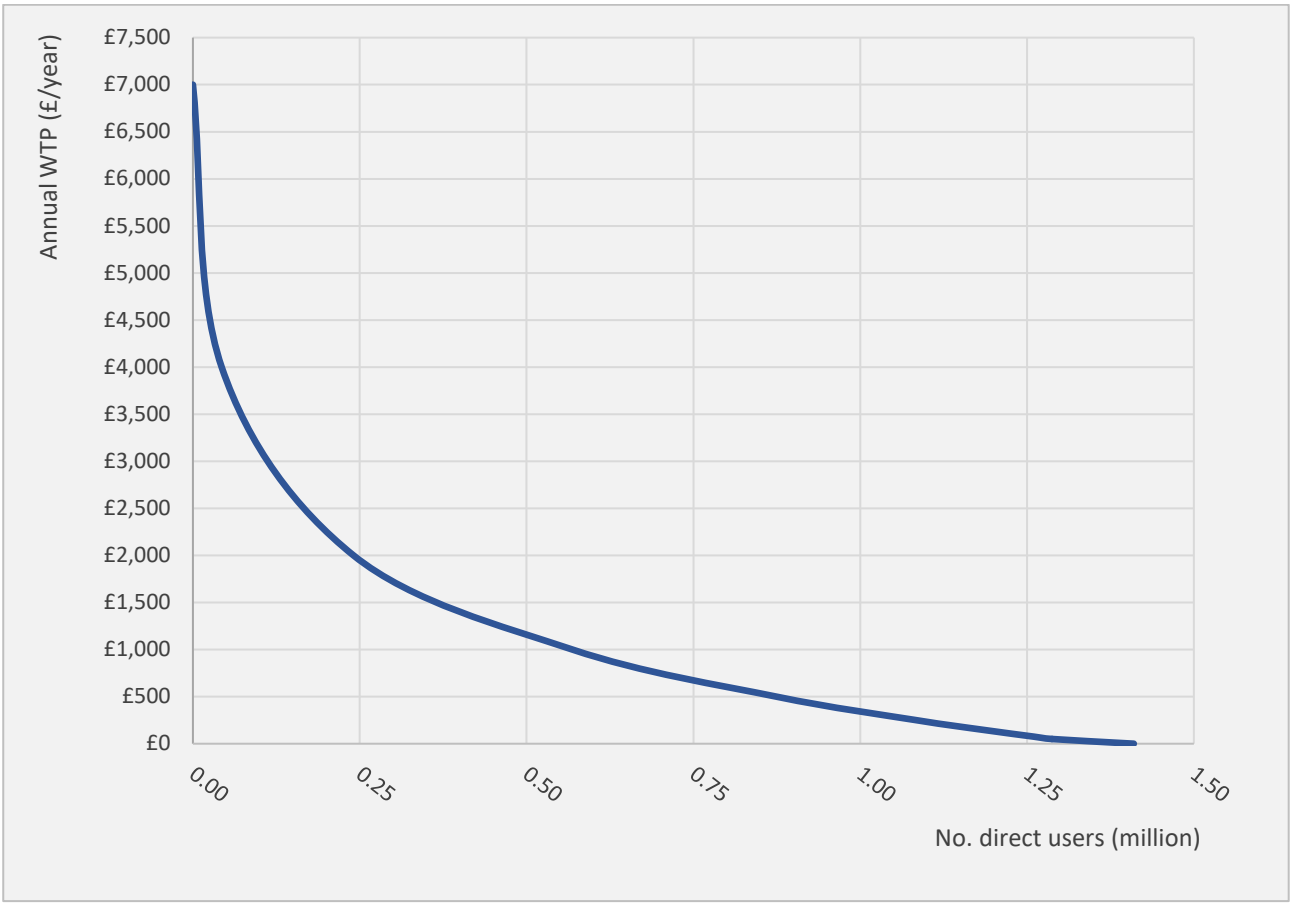
The illustrative policy application considers the welfare impact from the introduction of charges for direct users. Welfare impacts are assessed in terms of changes in consumer surplus (i.e. changes in annual user benefits) and the revenue raised from the introduction of the user charge. Two hypothetical scenarios are considered with different annual user subscriptions for accessing company information and data: (i) a £50 per year subscription; and (ii) a £1,000 per year subscription. The analysis uses the choice model results (Table 6.2) to predict the proportion of current users that would participate in the 'market' for CH data and information within each scenario. The good/service is specified in terms of the current CH service levels[33].

[33] The estimated choice model is used to calculate the 'predict share' for a vary set of price points, holding constant the other parameters in the function. The current CHS service level is specified as: company information = level 3; financial and credit information = level 2; historical information = level 3 (see Table 3.2).

Estimated demand for CHS information and data

Figure 7.2 presents the estimated demand curve for CHS data and information, which shows the proportion of current users that are expected to continue to use CH search services following the introduction of annual charges. The accompanying Table 7.10 reports the predicted share from the choice model for a range of price points, from 100% of current users if there was no charge (£0 per year), to 0% of current users for a charge of approximately £7,000 per year (i.e. the 'choke' price).

Figure 7.2: Estimated demand for CHS company data and information



Notes: Demand curve estimated from linear MXL model (see Table 6.1). The function is smoothed between price points for illustrative purposes (see Table 7.10).

Note that it is not possible to plot an accompanying supply curve for the demand schedule. The main costs of provision relate to IT costs for uploading company information, which CH must incur anyway, to perform its statutory functions. It is therefore assumed that the release of that data to the public incurs minimal additional cost.

The results reported in Table 7.10 show that the introduction of a flat annual subscription of £50 per year for all direct users would be expected to result in a 9% reduction in users, with the number of users falling from the current estimate of 1.41 million to 1.29 million. In comparison, the introduction of a £1,000 per year subscription is expected to result in a 60% reduction in demand, reducing the number of users to approximately 0.57 million.

Table 7.10: Predicted share for CHS company data and information by annual charge amount

Annual user charge (£/year)	Predicted share (% current users)	Estimated demand (no. direct users)
£0	100%	1.41m
£50	91%	1.29m
£150	84%	1.18m
£250	77%	1.08m
£500	62%	0.87m
£1,000	40%	0.57m
£2,000	17%	0.24m
£4,000	3%	0.04m
£7,000	0%	0.00m

Notes: Predicted shares are calculated from a linear MXL model. Estimated demand is based on a calculation from the CHS data extract and the supplemental user profile survey (approx. 1.41 million direct users in 2018).

Impacts of direct user charges – changes in welfare

The associated changes in economic welfare for the two pricing scenarios are reported in Table 7.11. These are presented in percentage terms, relative to the current 'free of charge' (£0 per year) baseline.

Table 7.11: Calculated changes in economic welfare

Annual user charge (£/year)	Consumer surplus	Revenue (transfer)	Reduction in consumer surplus vs. baseline	
			Reduced level of demand	Reduced demand + transfer
£0 (baseline)	100.0%	-	-	-
£50	95.9%	3.9%	0.2%	4.1%
£1,000	45.3%	34.2%	20.5%	54.7%

Notes: Changes in consumer surplus and revenue calculated in percentage terms based on illustrative demand schedule set out in Figure 7.2 and Table 7.10.

An illustrative annual user benefit of approximately £2,000 million (i.e. a rough midpoint for the range of estimates set out in Section 7.4) has been assumed as the sum of consumer surplus in the base case (with free access to CHS data). Introduction of a £50 annual subscription per user would raise revenue for the Exchequer of £77 million, while

consumer surplus would be expected to fall to £1,919 million. In this scenario, the overall loss of consumer surplus (in terms of the sum of the transfer to the Exchequer and the loss due to a reduction in demand) would be approximately £81m.

Under the second scenario with a £1,000 annual subscription per user, consumer surplus would be expected to fall to £906 million, while revenue for the Exchequer is estimated to be £684 million. The overall loss of consumer surplus compared to the base case is therefore estimated to be £1,094 million.

Distribution effects

The distributional effects of introducing user charges for CH information and data are likely to be disproportionate across current users. For example, under the first pricing scenario (£50 per year user charge), around 1 in 10 current users would be excluded from the market. Based on estimated demand schedules for each 'total use' segment, the reduction in users would be focused on the 0-3 hour 'total use' segment. For the second pricing scenario (£1,000 per year user charge), around 4 in 5 of the 0-3 hour 'total use' segment would drop-out from the market.

In general, the 0-3 hour 'total use' segment is made up of small companies with around 30% reporting turnover of less than £50,000 per year and just over 60% reporting turnover of less than £250,000 per year. As well as being constrained by income (and therefore less likely to be able to pay for alternative services), these organisations are also resource constrained, with just under 60% reporting 0-4 employees. Hence the opportunity cost of employee time to search for substitute information could be towards the higher end of the range of cost savings reported in Table 6.5.

8 Conclusions

This section summarises the key findings of the research and presents conclusions regarding the value of CH search and data services to direct users.

8.1 Estimating the value of CH data for direct users

Direct users are businesses and organisations, such as companies, creditors, investors, and researchers, that use CH data services to access information about registered companies in England, Wales, Scotland and Northern Ireland. The study used a survey-based, stated preference approach to understand the value of CH search and data services to direct users.

The survey findings present a consistent view of the importance of company information and data to direct users. Most respondents had a positive view of the data services provided by CH and perceived the data and information as accurate and reliable. The most common reasons for using the company search services were to confirm and check the consistency of information provided by companies (e.g. suppliers and/or customers), or as part of more detailed due diligence research into a company. The main beneficial outcomes for direct users were stated to be improved decision-making about suppliers or customers, or time savings to their organisations due to the information being readily available.

CHS / 'search the register' was reported to be the main service for direct users, with around 7 in 10 survey respondents stating it is the service used most often by their organisation. A relatively small proportion of direct users reported that their organisation also purchases information from other providers (around one in six). A larger proportion, though, noted that they also used a range of other 'free' services to supplement the information obtained from CH (e.g. internet searches and other online resources).

The research identified a varied profile of direct users in terms of the frequency of their use of CH search services. Around a third of respondents (one in three) reported at least daily use, while a larger proportion (around two in five) accessed services at least once a week. Roughly one in five direct users reported using the services at least once a month, and a further one in ten used the services less than once a month. For most users, the average amount of time spent per visit was between two and ten minutes. Ordinarily the purpose of each use was to find information for a single company.

The annual benefit to direct users – in terms of average willingness to pay (WTP) for company information and data – is estimated to be around £2,000 per user per year. This is the central estimate for the overall sample of respondents. For 'higher use' users (i.e.

those with a 'total use' of more than 40 hours per year), the annual benefit is greater at approximately £3,200 per user per year. For ‘lower use’ users (i.e. those with a 'total use' of up to 3 hours per year), the annual benefit is lower at approximately £1,300 per user per year. Based on the reported frequency of use of the CH search services, the value per individual use is estimated to average £11 per visit. As expected, the value per use shows a pattern of diminishing marginal benefit as levels of use increase, ranging from approximately £8 per visit for ‘higher use’ users to £28 per visit for ‘lower use’ users.

8.2 Changes in benefit values over time

The overall aggregate benefit for UK users of CHS in 2018 is estimated to be within the approximate range of £1 billion to £3 billion. This range is based on alternative calculations using: (a) an estimate for the total number of direct users (approximately 1.4 million); or (b) an estimate for the total number of uses (visits) by direct users (approximately 74 million).

In the short to medium term (up to five years) it is reasonable to expect that year on year changes in aggregate benefit values will be driven by increases or decreases in user numbers rather than changes in unit benefit values (i.e. changes in direct user WTP). Understanding how aggregate benefit values change over time will therefore require updated estimates for the number of direct users of CH search services.

Changes in user WTP will either be driven by changes in the factors that constrain an organisation’s consumption (i.e. revenue/income), or the product/service offered by CH (e.g. an extended/reduced service). If these factors are relatively stable in the short to medium term, then the conventional expectation is that user WTP will also be stable over that time period. Use of WTP estimates in policy analyses, therefore, only needs to account for the effect of changes in nominal prices (inflation) in order to provide an updated aggregate benefit estimate in future years.

Over a longer timescale, however, there will be a need to review the reliability of the WTP estimates for their continuing use in policy analyses. This should account for changes in contextual factors (e.g. economic conditions), the types of information and data made available by CH, the uses of CH data by organisations, as well as the profile of the organisations in the direct user population (e.g. in terms of turnover or income). Where changes are observed, it may be possible to use the current survey results to update the values used in policy analyses. For example, if the average frequency of use is observed to increase over time, then higher WTP values can be applied based on the estimated relationship between frequency of use (i.e. total use per year) and annual benefit (£/year/user) (see Table 6.4 and Figure 6.6). In cases that entail a more fundamental change, such as the provision of a type of information not covered in the survey, new research may be required.

8.3 CH data that generates the greatest user value

The survey found that direct users attributed the greatest value to the provision of financial information (e.g. annual reports and financial statements). The annual benefit associated with this type of information is estimated to be approximately £1,100 per user per year. In terms of the annual aggregate benefit, this is approximately 55% of the total (i.e. approximately £0.6 billion to £1.7 billion per year). The value of basic company information (e.g. registered addresses, company numbers, dates of incorporation, nature of business) is estimated to be slightly lower, at approximately £800 per user per year. This accounts for 41% of the annual aggregate benefit (i.e. approximately £0.4 billion to £1.2 billion per year). Annual WTP for persons of significant control (PSC) information is estimated to be approximately £100 per user per year, accounting for the other 4% of the annual aggregate benefit (i.e. approximately £40 million to £120 million per year).

8.4 Validity of research results

A comprehensive design and testing phase of work was undertaken to develop the stated preference survey for direct users, focusing on ensuring respondent understanding of the survey content and the discrete choice experiment (DCE) choice task format. The iterative design process tested the draft questionnaires through a series of cognitive interviews. Feedback from the testing was largely positive and contributed to subsequent revisions of the survey and refinement of the DCE component. Review and comment from the BEIS steering group and peer reviewer was also incorporated.

The peer review (see Annex 8) concluded that the staged preference survey was appropriately designed and tested, and that the survey sample was as representative of direct users of CH search services as can be expected. It further noted that the WTP results appear to be accurate, reliable and intuitively reasonable. Overall, the research is commended as an excellent application of the stated preference methodology.

ANNEXES

Annex 1 Summary of the cognitive interviews

1.1 Introduction

As part of the development of the user survey, a series of cognitive testing interviews were conducted with users of CH search services. As part of the iterative development phase of the survey material, the main objectives for the interviews were to:

- Test and develop the choice task format, including the range of attributes and types of trade-off presented to respondents;
- Determine what and how much contextual information was required by respondents to assist them in completing the survey and providing considered responses;
- Understand how much effort was required by respondents to complete the survey, including the clarity of choice task instructions, how easy or difficult it was to answer the choice tasks, and the number of repeated choices; and
- Assess respondents' motivations for their choices and whether these were based on the aspects of the choice task scenarios, or unintended effects from the survey design.

The interviews also provided an opportunity to understand how the search services are used, and what value users place on the services provided by CH. This has provided added insight on the usage patterns according to different user groups, and gauge in general terms what benefits users are deriving in terms of time savings and cost efficiencies.

1.2 Research aims

The specific research aims for the cognitive interviews were to explore a range of questions about the use of CH services, including:

- User details – e.g. company type, employee size, turnover and sector;
- How companies and other users use the search services and what they use them for;
- The extent to which they use alternative search/data services;
- How they would behave in terms of switching to substitutes, if CH services were unavailable;

- What the main benefits are to users of CH search services; and
- How satisfied users are with the service provided.

In addition, specific elements of the survey design were tested:

- Whether respondents understood the purpose of the survey;
- How difficult it was to complete the survey, and whether the instructions were clear;
- Whether respondents understood the choice tasks and what they were trying to achieve;
- How respondents found the terminology around different service providers;
- Whether respondents understood the descriptions of the different service attributes, and whether these made sense in terms of content, relevance and amount of information;
- How respondents felt about the layout and presentation of the choice tasks;
- The rationale for the choices respondents made; and
- Whether or not the number of choices was too difficult for respondents to handle.

2 Research Process

2.1 Sample

There were four waves to the cognitive testing, each with a small gap in between to allow for changes to the survey design as key findings emerged to help refine material and the choice task format.

In total, 20 cognitive interviews were required. To achieve this, 110 users were invited to participate, with 36 agreeing to participate, 28 of whom were accountants and directors. The remainder were a combination of journalists, academics and retirees. The composition of each of the interview phases was as follows:

- 1st wave – 6 completed (4 accountants, 2 directors)
- 2nd wave – 5 completed (3 accountants & 2 directors)
- 3rd wave – 4 completed (2 journalists, 1 academic & 1 retired)
- 4th wave – 4 completed (3 accountants, 1 director)

Overall 19 interviews were completed (1 respondent started but dropped out).

2.2 Process

The cognitive recruitment and interviewing was facilitated by CH. It was undertaken in accordance with the agreed process set out in Table 1 below.

Table 1. Recruitment and interview process

Task & activity	CH assistance and input
Cognitive interviews 20 users to participate in approx. 45-60 min telephone interview. Participants will be initially briefed, asked to complete the draft survey, then asked a series of debriefing questions. To be administered in 4 waves of 5 interviews.	Administer recruitment of users for each wave of 5 interviews: 1. Provide small sample of users to recruit from (i.e. from user panel) 2. Send invite emails (or telephone call) to recruit users for interviews 3. Collate responses and securely transfer contact details (name, company, telephone, email) of recruited users to project team to conduct interviews 4. Send 'thank you' email for user's participation

In regard to obtaining respondent participation, the above process of an initial briefing, followed by survey completion and a follow up telephone call to ask a series of debriefing questions worked very well.

3 Key Findings

3.1 Survey understanding and ease of completion

The majority of respondents found the survey interesting and/or educational. Nobody found it unrealistic or had anything negative to say about the survey. In addition, people were very comfortable with the duration of the survey, some being pleasantly surprised that it did not take as long as they expected.

"Bearing in mind what the survey was trying to achieve, I felt it was about right in terms of the length and time required"

Most participants understood the purpose of the survey saying it was asking about what people and businesses use the CH information for, how they use it and how effective it is. The comments below illustrate these points.

"It was about how much use people make of CH sites and facilities, and how easy they are to use"

"To determine how effective the information and site is, and what we use it for"

"To understand what exactly the user is getting out of the service"

"To verify who uses the existing service, and how much they use it"

"It's assessing the benefits that CH provides…as well as asking people's opinions of how good and reliable the data is"

"…the ease or otherwise, the various services from CH are available"

Some also said it was about comparing CH information to other providers who charge for their services, with some taking a view that CH might be considering a commercial proposition. It was stressed that this was not under consideration.

"It was looking at the services on offer from CH in line with other competitors"

"It was working out if they could introduce new products and services that they could start charging for"

"Assessing the information that is currently free; maybe someone thinks it would be a good idea if we paid to access that information."

"It was about developing a commercial proposition, where they might start to charge"

"…whether or not they could charge for the service if they could make it more substantive"

Regardless of user type, everyone found the survey quite easy to understand and straightforward to complete; some found it very easy.

"*Quite easy and no issues at all"*

"Very easy, no issues and could go back if I wanted to change my answer"

"Easy, there was nothing challenging and a clear explanation was provided"

"Very easy to read and understand, and I like the idea of being given the Powerpoint slide as there was a lot of information to consider"

"Easy, no problem at all, didn't have to think too hard"

"Extremely easy, I understood what was happening with the options…trying to get at what was most important to people"

There were a couple of people who initially found the choice experiments quite challenging, but who quickly worked out what they were supposed to do.

"..not quite sure about the choices, but quickly got the hang of it…thought I was looking at lines but realised it was packages I was choosing between"

"Some of the comparisons were a bit complicated, but I understood them"

In most cases, people answered the questions on behalf of the company they worked for, be it as a director or accountant. In a minority of instances, where participants were self-employed or consultants, they answered from an individual perspective.

In terms of completing the survey, a variety of devices were used, but mainly desktop PCs and laptops; one participant also used an iPhone. Regardless of the device that was used there were no issues, meaning the survey was compatible across different platforms. As one person pointed out, '*it's good to have more than one option*".

3.2 Use of CH information

Before detailing how respondents use CH information and what they use it for, it is worth noting that users were highly complimentary about CH services, with phrases such as *'the best in the world'* and *'exemplar'* being used to describe it. This view is supported by 15 of the 20 respondents who were fairly or very satisfied (13) with CH information.

Search the Register (Companies House Service - CHS) was the most commonly used search service, followed by WebCHeck. CHD and API were used to a much lesser extent.

Accessing CH information was a fairly frequent exercise for most users, with half accessing data either every day or several times a week, while the other half accessed it 'a few times a month'.

"…every day, two or three times a day, looking at four different companies that are clients of ours"

"…twice a week, today I've looked at three different companies"

"…several times a week, if not daily; doing research on one company and it's a trail of wholly owned subsidiaries, you end up searching five or six companies before you find what you're looking for"

Virtually everyone found this question easy to answer, although there was one person who found this quite hard to quantify as…

"I haven't been on this week, but the previous week I was probably on every day"

The amount of time that users spent accessing information on a single visit varied from as short as one to two minutes to more than 30 minutes, the median being around five minutes. On occasions, people reduced the length of their visit by printing off the relevant documents and reviewing them offline, rather than trying to assimilate the information online.

Most often, users were usually looking to find information about a single company, although there was a handful of users who sometimes sought information about several companies at the same time, as well as for a single company.

Before asking participants about the importance of a pre-defined set of information and data, they were asked to explain what information they were looking for when accessing CH, what they used if for, and why. A range of responses were provided but especially around looking at information on both current and potential clients.

"To find out about other companies and suppliers"

"To check on existing and prospective clients, and that accounts have been filed as planned"

"To get information on companies that we're involved with, and carrying out financial due diligence on them"

"Tracking other companies who we may do business with"

A couple of participants also expressed concern about clients submitting information to CH that was not consistent with what was agreed.

"We check what clients are saying is correct and that they haven't made changes without us knowing"

"We often check that what companies send aligns with CH information"

Several people also spontaneously mentioned some of the information presented in Table 2 below, such as filing accounts, current company officers and disqualified directors.

Most of the information and data provided by CH was considered important, some being much more important than others - these being basic information about the business, when the last accounts were filed and next due, company filing documents and current and resigned officers. A full list of the importance of each attribute is shown in Table 2 below.

Table 2. Importance of CH information and data (frequency)

	Very important	Quite important	Not very important	Do not use
Basic information (registered address, company number etc)	18	1	-	-
Date of last accounts	12	6	-	1
Company filing documents	12	6	1	
Date of next accounts	11	6	1	1
Current and resigned officers	10	7	2	
Insolvency information	8	7	3	1
Mortgage charge data	8	4	4	3
Persons of significant control	7	7	3	
Nature of business (SIC)	6	5	7	1
Disqualified directors	6	4	6	1
Previous company names	5	6	6	2

Note: table shows how many respondents (out of 20) indicated a particular piece of information was important, etc.

Usage often depended upon the user's role. Generally, accountants were more interested in last / next accounts, as well as company filing documents; the latter is about checking for consistency of data with existing clients. Some also liked to check out prospective clients for new business.

Directors were more interested in the basic information about a business and its nature (i.e SIC), director interests, Persons of Significant Control (PSC), and ownership and control. This was an area of high importance that was mentioned spontaneously by several people.

"...look at the directors, find out basic details of people and make sure they are who they say they are; who the main beneficiary of the company is, and are the directors of good standing"

"…see the history of directors, officers of company – resigned and current"

"…find out directors names and their history; I really want to know what involvement directors have elsewhere"

"…finding out what individuals are up to…"

Journalists and academics are more closely affiliated to Directors' usage.

In terms of the survey responses, there was a variety of reasons for people using CH information and data. The most frequently mentioned reasons were 'to find out basic information about a company' and carrying out 'detailed research into a company', the former being the main reason. As noted above, these aspects were frequently mentioned as spontaneous reasons for using the information.

Other, less frequently mentioned reasons included 'carrying out due diligence work about a company', 'checking company information is consistent with CH records', and decisions about the risk / creditworthiness of suppliers and customers.

Overall, it is clear that CH provides a comprehensive suite of services which covers the vast majority of user needs.

"It gives you all the information that you should be able to access"

"The information covers everything I require at the present time"

There were however, some limitations to the information provided by CH, such as the breadth and recency of the information; these are highlighted below

- It does not provide 'colour' (e.g. Google might show a company in the news providing up to date information which is unavailable at CH, but it was also understood that this is not the purpose of CH data)
- The legitimacy of information (i.e. what checks are done to ensure authenticity of the information?); and to a much lesser extent, the lack of any anti-money laundering information…

"There are things we can't get from CH, mainly further information about owners and directors, because anti-money laundering regulations are quite serious, and the information we have to get about people and companies is a lot more complicated than it used to be"

However, it was acknowledged that '*there are other companies out there which provide this information'* [i.e. the information made available by CH].

Table 2 above shows that some information is considerably more important than others. Mortgage charge data (MCD) and insolvency were two areas that divided participants. They

were clearly important to most people to some degree or another, but had less relevance than other areas of information.

A couple of people said that MCD *'was not relevant to them'* and that they weren't *'interested in it'*. Another said it was *'not something to worry about'.* And perhaps the comment that summed this up best is '*mortgage charge data and insolvency is relevant, but I don't use it a lot'*. Disqualified directors was another area that was spontaneously mentioned as being of less interest.

As mentioned earlier, this exploratory design phase, in the form of cognitive interviews, allowed for changes to the questionnaire before each wave of interviewing. After the first two waves of interviews, a question was added to understand how confident users were in the reliability and accuracy of the information provided by CH. Everyone said they were confident to some degree, with 7 out of the 12 respondents that were asked this question saying 'very confident', 2 saying 'extremely confident' and 3 saying 'somewhat confident'.

As well as providing useful user insight into the usage patterns of CH data services, it is clear from the responses that the questions are clear and straightforward to understand. From a survey design perspective there were some minor tweaks and amendments required to assist the flow of the survey and to ensure less ambiguity. These included changing questions where participants were originally asked to answer from an organisational perspective, to answering them from a personal viewpoint, as shown in Table 3 below.

Table 3. Questionnaire changes

Original question	Amended question
For each individual company that your organisation searches, roughly how much time – on average – is spent accessing information and data via our services?	For each individual company that ***you*** search, roughly how much time – on average – is spent accessing information and data via our services
And how much time – in total – would you say each use of our company search services is for your organisation?	And how much time – in total – would you say each use of our company search services is for ***you***?

3.3 Value of CH search services

Following the questions on how people use CH data and what they use it for, users were asked questions that probed the value of the information to their organisation. In the initial interviews, respondents found it difficult to articulate and quantify the value in terms of improved outcomes (i.e. better decisions, more certainty). The framing of the question was then changed to the search effort (time and resources) they were prepared to expend to obtain it.

This was first asked as an open-ended question, but participants also found this challenging.

"I don't know how much it would save because we don't use any substitutes"

"It's difficult to quantify, the information required is essential and we have got used to having it, so I can't say how much time it saves me"

"It saves a heck a lot of time because even Googling it, you won't get the right address"

"I don't know how long it would take"

The question was then changed to a coded list of time savings related to a single use/visit of the search services. This had the desired effect, as respondents were able to quantify single visits usually being around five minutes. Also, there is minimal cost involved as people know what they are looking for so the costs are only those borne from short CH visits.

The reality is that CH services are very easy to use. Users found it difficult to imagine anything different and were still quite challenged to state any potential time and cost savings. That said, when pressed to describe the potential impacts to users if CH data was unavailable, it would result in the following:

- Potentially many more hours being spent searching for relevant company information;
- Substantial extra cost in terms of man hours - some said tens of thousands of pounds; very rarely, people might spend money on alternative sources of information; and
- Considerable angst and effort trying to obtain the relevant information

Following the first couple of rounds of cognitive interviews, a specific question was inserted into the survey which asked users to quantify, through pre-defined response codes, how much additional time and effort would be required to carry out the same activities that users currently use CH information for. This showed that people would spend longer than eight hours, and although this started to provide some definition of the extra time required, it was still not specific enough to generate more exact additional time savings. This was evidenced in an additional question which asked how confident users were in the answers they provided; some were confident, others were not.

This resulted in a further iteration which saw the development of a calculator tool to enable users to be much more specific in their additional time requirements if CH data was

unavailable. This approach was concept tested in the final stage of cognitive interviewing and was largely understood; it was therefore tested further in the pilot survey.

"It all seems logical and makes sense"

The bottom line is that having access to CH information enables people to be much more efficient in their day to day activities.

"I'd spend three times as long to find the data, so it definitely makes me more efficient in my day job"

"It saves me an enormous amount of extra time, probably four or five times…"

As well as quantifying the value of CH services, people were asked the benefits of the information to their organisation. Two key benefits emerged as follows:

- making better decisions about suppliers and/or customers
- time savings to my organisation from the information being readily available.

Of these two, the latter was deemed to be the main benefit.

3.4 Alternative sources of information (substitutes)

In terms of the alternative sources, respondents might use if CH information was unavailable, a variety were cited. The most frequently mentioned was the 'use of free of charge online resources', such as Google. Other mentions included 'conducting their own due diligence research' and the use of web-based searches. Very few stated they would purchase company information from an alternative data services provider.

A very similar pattern of responses emerged when asked if they already use some of these sources, in addition to CH information. However, because CH services provide virtually everything users need, there is no real imperative to use other sources of information.

"With CH, all the information is one place and I can find it quickly, so it's a big time saving; if I had to go somewhere else, it would take me longer and I'd have to pay a fee"

CH is easier and quicker; it takes a couple of minutes on CH, but an hour on Google. CH makes one more efficient in the job"

"I've heard of Experian and Equifax, but I never need to use them"

There was some awareness of substitutes such as Experian, Dun & Bradstreet, Compass and Equifax.

"I would have to go Dunn and Bradstreet or Compass, with Dun and Bradstreet you have to subscribe which gives you unlimited data"

"I'd have to buy information from Dun and Bradstreet, but even good credit agencies don't necessarily have the latest information available"

"…Dun & Bradstreet to see what the credit rating is, but they are becoming more of a marketing tool, and losing their expertise"

However, these companies were rarely used on the basis of substitutes being cost prohibitive.

"Why would I pay for something when CH provides everything I need for free"

"I've never had a situation where we can't get the information from CH"

"All other providers do is rehash CH information and then charge you a fee, I can get it free of charge at CH"

Credit Safe was used by a small number for anti-money laundering purposes; generally though, there was still a reluctance to use fee-based substitutes on the basis of cost.

"I guess we'd have to pay, but wouldn't want to as all we're doing is checking what somebody has told us"

"I've never paid for any other service, and doubt I would pay unless forced to"

"I'm not really aware of any substitutes and can't afford to subscribe to a corporate database…and I'm not sure of their reliability anyway"

3.5 Choice tasks

To understand more explicitly the value of CH information, users were asked to choose their preferred option between CH (free) and alternative service providers (priced). In the first wave of five cognitive interviews, respondents were presented with a paired comparison task as shown in Figure 1 below:

Figure 1. Example choice card – paired comparison

Which product do you prefer?

	PRODUCT A	COMPANIES HOUSE
Company information	Basic information Current & previous directors Corporate structure	Basic information Current & previous directors
Financial information	Original filed documents Financial strength indicators	Original filed documents
Credit information	Credit scores and limits	-
User functions	Generate tailored company reports	-
Coverage *Number of companies*	500,000	4,000,000
Historic information *Number of years*	5 years	20 years
Use limit *Number of searches*	250 per month	-
Cost *Annual subscription*	£500 per year	Free

Five paired comparisons were shown to respondents and the CH option was chosen almost every time. Only two respondents selected an alternative over CH, the same choice card in both cases where Product D was chosen. The logic here was not based on strategic behaviour, just that CH provides the services users need for free (i.e. low demand for value-added services).

"…straight down the line on CH, there's nothing that other companies provide that CH isn't giving me".

"I always chose CH because it has everything I want"

"Get it for nothing at CH, so cost was the major driver"

The most important attributes in people making their choices at this stage were 'company information', 'financial information', 'credit information' and 'cost'. 'User functions' and 'use limit' had little to no traction in users' choices.

For the second wave of cognitive interviews a wider set of trade-offs was introduced in the form of a discrete choice experiment (DCE), an example of which is shown in Figure 2.

Figure 2. Example DCE choice task

Which do you prefer?	PRODUCT A	PRODUCT B	COMPANIES HOUSE
Company information	Basic information Corporate structure	Basic information	Basic information
Ownership and control	Persons of significant control Shareholders	Persons of significant control Shareholders	Persons of significant control
Financial and credit information	Annual reports & financial statements Credit limits and scores	Annual reports & financial statements Financial strength indicators	Annual reports & financial statements
User functions	Export data for analysis	Tailored reports	None
Coverage *Number of companies*	2 million	2 million	4 million
Historic information *Number of years*	10 years	10 years	20 years
Cost *Annual subscription*	£500 per year	£250 per year	Free

The introduction of the DCE approach revealed more variation in the choices between CH and the alternative products, indeed one or two different products were chosen over CH in four of the five choice cards. That said, CH was still the preferred option in each choice task.

In both the examples above, respondents were presented with seven attributes, including cost, to determine which product they preferred. From a cognitive perspective, evidence would suggest that this is too many to cope with. Notwithstanding, people were able to choose between the various options, and the results provided some good insight as to which attributes should be kept and which should be dropped.

The most important attributes in people's decision making, in rank order, were 'company information', followed by 'ownership and control' and then 'financial and credit information'. 'Historic information' was a consideration for some but most people questioned the value of having 20 years' worth of information. Most people were only interested in the last three years of data.

Respondents were split on 'coverage', some saying it was the second or third most important attribute, others saying it was the least important. Overall, though, the least important was deemed to be 'user functions', so it was recommended that this be dropped from the set of attributes for the third wave of cognitive interviewing.

With the 'user function' attribute being dropped for the third wave of cognitive interviews, two DCE formats were shown to users, one with six attributes and the other with five, 'coverage' being omitted from the latter. Examples of each are shown below in Figures 3 and 4.

Figure 3. Example DCE choice task, including coverage

Which do you prefer?	OPTION A COMMERCIAL PROVIDER	OPTION B COMMERCIAL PROVIDER	OPTION C COMPANIES HOUSE
Company information	Basic information + Corporate structure	Basic information	Basic information
Ownership and control	Persons of significant control + Shareholders	Persons of significant control + Shareholders	Persons of significant control
Financial and credit information	Annual reports & financial statements + Credit limits and scores	None	Annual reports & financial statements
Coverage *Number of companies*	2 million	2 million	4 million
Historic information *Number of years*	1 year (current)	3 years	5+ years
Cost *Annual subscription*	£500 per year	£250 per year	Free

. **Figure 4. Example DCE choice task, excluding coverage**

Which do you prefer?	OPTION A COMPANIES HOUSE	OPTION B COMMERCIAL PROVIDER	OPTION C COMMERCIAL PROVIDER
Company information	Basic information	Basic information	Basic information + Corporate structure
Ownership and control	None	Persons of significant control	Persons of significant control
Financial and credit information	Annual reports & financial statements	None	Annual reports & financial statements + Credit limits and scores
Historic information *Number of years*	1 year (current)	3 years	5+ years
Cost *Annual subscription*	Free	£100 per year	£500 per year

Two other points to note from Figures 3 and 4 above are that instead of labelling the options as A or B, the term Commercial Provider A or B is used. This was to make the choices more realistic, and respondents thought this worked well in testing.

Also, in Figure 4 the idea of putting CH as the first or second option, as opposed to the third, was tested. While the positioning made no material difference to how people made their choices, users generally preferred to keep CH as the third option, especially as moving it round meant an unnecessary layer of complexity.

"Initially, I thought it was the same screen, but quickly realised that CH had moved from the third column to the first column"

"It kept changing around between A, B and C, and you couldn't keep track of them..."

As a rule of thumb, five attributes are considered to be the limit for choice experiments of this nature. Given the mixed feedback it was decided that 'coverage' could be removed, as this would reduce the complexity of choices (i.e. all options could be assumed to have the same level of coverage).

Furthermore, for the final wave of cognitive interviewing, it was decided to introduce a 'forced choice' element. Whereas previous iterations had presented the CH option as the status quo (current service level provision, no charge), deteriorated service levels were introduced for this option. The rationale being that the CH option as a result may not fulfil the respondent's needs. They would therefore need to weigh the service provision from the alternative options against the cost. To facilitate this format, ownership and control attribute was merged with company information. This meant there was more flex around the levels in terms of improvements and deteriorations. An example of the choice experiment used in this wave is shown in Figure 5 below.

Figure 5. DCE choice card used in 4th wave

Which do you prefer?	OPTION A COMMERCIAL PROVIDER	OPTION B COMMERCIAL PROVIDER	OPTION C COMPANIES HOUSE
Company information	Basic details + Persons of significant control	Basic details + Persons of significant control + Shareholders	Basic details + Persons of significant control
Financial and credit information	Annual reports & financial statements + Credit limits and scores + Financial strength indicators + Credit assessments and benchmarks	None	Annual reports & financial
Historic information *Number of years*	1 year (current)	5+ years	5+ years
Cost *Annual subscription*	£1,500 per year	£100 per year	Free

These changes resulted in more trade-off behaviour. Although CH was still the preferred option overall, there was much wider variation in user's choices. Indeed, an alternative to CH was chosen on each choice card, and on two of them CH was only marginally the favoured option.

Although the most important factor in people's decisions was 'company information', all the other attributes, including 'the provider', were considered an important part of the choice process with little difference between them in rank order.

As mentioned above, this analysis suggests more trade-off behaviour in users' choices; as such it was recommended that this format be implemented for the pilot survey.

3.6 Ease of completing choice tasks

Overall, most respondents found the choice tasks straightforward and easy to complete.

"*All very intuitive, easy to read and understand"*

"It was all very clear to me"

"It was very easy, and it was all clear what I had to do"

"The choices were easy to understand"

Just two were indifferent and thought they could have been clearer, and two found them difficult to complete.

"There could have been better instructions at the start (of the choice tasks clarifying what was required"

The challenge for these people was not around the concept itself, but rather having to assimilate all the information and think carefully about their response. Some of the difficulty, as mentioned above, was a consequence of putting the CH option in different positions.

"Easy to understand, but you just need to be careful as they (options) all had subtle differences"

Notwithstanding this, everyone felt they had been provided with enough information in the survey to make the choices they were asked to make.

"It certainly allowed me to think what I needed to do to make the choices I wanted"

In addition, the choices seemed both credible and plausible.

To assist respondent understanding of the choice tasks, a set of instructions was provided. While these were clear to people, they were not always necessary as users felt the process was quite intuitive.

"It all seems pretty self-explanatory to me, I'm not sure there is a lot of description to make sense of it"

In addition to the set of instructions, a showcard detailing the features of each attribute was also provided (Figure 6).

Figure 6. Example of attribute descriptions for first three waves of cognitive interviewing

Provider	• Companies House or a commercial provider
Company information	• Basic information about a company: registered address, company number, date of incorporation, nature of business • Corporate structure: organisation of departments and units with the company
Ownership and control	• Persons of significant control : individuals with more than 25% of shares or voting rights in a company • Shareholders: legal owners of a company
Financial and credit information	• Annual reports and financial statements: filings by a company • Credit limits and scores: assessment a company's probability of defaulting on debts • Financial strength indicators: assessment of a company's financial performance • Credit assessments and benchmarking: comparisons of a company's credit position versus similar companies
Coverage *Number of companies*	• Number of companies in England and Wales, Scotland and Northern Ireland that the information/data can be provided for.
Historic information *Number of years*	• Number of years of archived information from the current time period that is available
Cost *Annual amount (£/year)*	• Annual cost (£) to your organisation for accessing the company information

Respondents found the attribute description showcard helpful as it enabled a good understanding of each attribute, even though some were not always relevant.

"The product features were all clear and straightforward, and although not important to us, I can see how it could be to others"

"5 years of data is plenty, it is of interest, but frankly what happened 10 years ago is less relevant to what happened 2 to 3 years ago"

"Straightforward, but none of it is that important as I'm only interested in company information and cost"

As such, its use was recommended for inclusion in the final wave of cognitive interviews and the pilot survey, but with some improvements to make it even clearer; see Figure 7 below.

Figure 7. Revised attribute description showcard

The features of each option		*The different types of information that could be provided and the cost*
Provider	The service provider for the company information and data – either:	• Companies House, or • Commercial provider
Company information	Information about a company, its ownership, and structure, including:	• Basic details: registered address, company number, date of incorporation, nature of business • Persons of significant control: individuals with more than 25% of shares or voting rights in a company • Shareholders: legal owners of a company • Corporate structure: organisation of departments and units with the company
Financial and credit information	Information about a company's financial performance, including:	• Annual reports and financial statements: statutory filings by a company • Credit limits and scores: assessment a company's probability of defaulting on debts • Financial strength indicators: assessment of a company's financial performance • Credit assessments and benchmarking: comparisons of a company's credit position versus similar companies
Historic information	Number of years of archived information from the current time period that is available:	• From 1 year (current) to 5+ years
Cost	Annual cost (£) for accessing the company information	• From free to £5,000 per year

As a result of the instructions and these attribute descriptions, people felt they had adequate information to make considered choices.

In total, respondents were presented with five or six choice tasks, five in the first three waves of interviewing and six in the final wave. From a cognitive perspective both worked, so for the pilot it was recommended that respondents were provided with six choice tasks as this allows for more data observations/trade-offs for estimating user's WTP.

3.7 Segmentation

At the beginning of the survey there is a series of questions relating to the user's role, as well as the nature of the organisation they work for. These included questions about the sector they operate in, what the annual turnover of the company is, how many employees it has and where it is based in the UK. The aim of these questions was to provide some intelligence on CH users.

Participants who took part in the cognitive interviews were all working for UK owned companies, although there were a couple where some of the activities were conducted overseas.

While in the majority of cases these questions were relevant, they were less relevant to consultants acting on behalf of organisations. Even so, all of these questions were very clear, easy to understand and straightforward to complete. As well as providing a useful lead in to the main purpose of the survey, they allow CH to have a better understanding of its user segments. It was therefore recommended that these questions be included in the survey moving forward.

Appendix to Annex 1

Choice task attributes and features – Wave 1

Attribute	Description
Company information	Basic information about a company (registered address, company number, date of incorporation, nature of business), company ownership / persons of significant control / shareholders, and/or corporate structure.
Financial information	Annual reports and financial statements filed by a company, as well as analysis and interpretation of its financial performance (financial strength indicators).
Credit information	Analysis of a company's probability of defaulting on debts (credit limits and scores) and/or comparisons of its credit position versus similar companies (credit assessments and benchmarking).
Coverage	The number of companies in England and Wales, Scotland and Northern Ireland the service has information on and can provide data for.
Historic information	The number of years of archived information from the current time period that the service makes available.
Use limit	The monthly use limit for the number of searches for company information.
Cost	The annual cost (£) to the organisation for accessing the product and company information that it provides.

Choice task attributes – Wave 2 and 3

Attribute	Description
Company information	Basic information about a company (registered address, company number, date of incorporation, nature of business), company ownership / persons of significant control / shareholders, and/or corporate structure.
Ownership and control	Information on persons of significant control (PSC) or shareholders.
Financial and credit information	Annual reports and financial statements filed by a company, analysis of a company's performance (financial strength indicators), analysis of a company's probability of defaulting on debts (credit limits and scores) and/or comparisons of its credit position versus similar companies (credit assessments and benchmarking).
Coverage	The number of companies in England and Wales, Scotland and Northern Ireland the service has information on and can provide data for.
Historic information	The number of years of archived information from the current time period that the service makes available.
User functions	Additional add-in functions that allow the user to produce tailored reports, export data for analysis, or integrate data in internal databases and management systems.
Cost	The annual cost (£) to the organisation for accessing the product and company information that it provides.

Annex 2 Main survey questionnaire

Main Survey
Version: Type B Users

RECORD:
VERSION
RESPONDENT ID
DATE OF INTERVIEW
START TIME
FINISH TIME
DURATION

INTRODUCTION

We are carrying out a survey to understand how the information Companies House make available about registered companies in England and Wales, Scotland, and Northern Ireland is used. Your responses will help Companies House make improvements to the services they provide. This includes the Companies House Service, which allows the public to access information about companies and their directors free of charge.

The survey will last about 15 minutes. Any answers you give will be treated in confidence in accordance with the Code of Conduct of the Market Research Society. The information we collect will be used for research purposes only. No personal information is collected in the survey and the data will be analysed at an aggregate level. It will not be possible to identify any particular individual, organisation, or address in the results.

At the end of the survey, you will be able to enter a free draw to win an Apple iPad Pro (terms of the free draw). LINK TO COMPANIES HOUSE T&Cs FOR FREE DRAW

SECTION A: ABOUT YOU AND YOUR ORGANISATION

NEW SCREEN - RESPONDENT SCREENING QUESTIONS

Q1. Do you use the company search services provided by Companies House?

PROVIDE 'MORE INFORMATION' AS A POP-UP ROLLOVER BOX

MORE INFORMATION
The company search services include:

- **Companies House Service (CHS) which provides company information and documents for free.**
- **WebCHeck search which provides company information and charges for some document images and data.**
- **Companies House Direct (CHD) which is an account-based service that for a nominal fee provides access to every public record document held by Companies House.**

You may access these services via the Companies House mobile app as well by desktop PC, laptop or tablet device.

Other services provided by Companies House are WebFiling (for submitting annual returns and accounts and company director information) and company incorporation and registration services (for setting up a private company). These are not company search services.

SINGLE CODE

1	Yes – I use the company search services	ASK Q2
2	No – I only use the WebFiling and/or company registration services	THANK AND CLOSE
3	No – I do not use any services provided by Companies House	THANK AND CLOSE

Q2. Which of the following best describes your use of the company search services?

SINGLE CODE

1	I use it as part of my job / on behalf of the organisation I work for	GO TO Q4
2	I use it for research purposes	ASK Q3
3	I use it as a member of the public	THANK AND CLOSE

Q3. ONLY ASK IF CODE 2 AT Q2. **What type of research do use the company search services for?**

SINGLE CODE
ROTATE

1	Academic research
2	Journalism/media research
3	Public policy research and/or advocacy
4	Business intelligence research (e.g. market/competitors)
5	Customer / supplier research
6	Due diligence research (incl. FCA compliance)
7	Other (please specify)

Q4. Which of the following best describes your job title or role?

SINGLE CODE
ROTATE

1 Company director
2 Manager
3 Professional occupation (e.g. accountant, academic, research, public services)
4 Technical occupation (e.g. science, engineering, technology, health services)
5 Administrative or secretarial
6 Sales or customer service
7 Other (please specify)

Q5. Within your organisation are you the main user of the company search services – i.e. the person who uses the search services most often?

SINGLE CODE

1	Yes	GO TO Q7
2	No	ASK Q6
3	Don't know	GO TO Q7

Q6. ONLY ASK IF CODE 2 AT Q5. **What is the job title or role of the main user of the company search services within your organisation?**

SINGLE CODE
ROTATE

1 Company director
2 Manager
3 Professional occupation (e.g. accountant, academic, research, public services)
4 Technical occupation (e.g. science, engineering, technology, health services)
5 Administrative or secretarial
6 Sales or customer service
7 Other (Please specify)

NEW SCREEN - SAMPLING QUESTIONS

Q7. Where is your organisation located? If your organisation has more than one site in the UK, please answer for the site where you are based.

SINGLE CODE
1 East Midlands
2 East of England
3 Greater London
4 North East
5 North West
6 Northern Ireland
7 Scotland
8 South East
9 South West
10 Wales
11 West Midlands
12 Yorkshire and the Humber
13 Isle of Man and Channel Islands

Q8. Which of the following best describes your organisation?

SINGLE CODE
1 Limited company
2 Partnership
3 Sole trader
4 Public corporation
5 Central Government
6 Local Authority
7 Non-profit organisation or mutual (membership) organisation

---

Q9. What is the main activity of your organisation?

SINGLE CODE

1 Agriculture, forestry & fishing
2 Manufacturing
3 Construction
4 Motor trades
5 Wholesale
6 Retail
7 Transport & storage (warehousing)
8 Accommodation & food services
9 Information & communication
10 Finance & insurance
11 Property
12 Professional, scientific & technical
13 Business administration & support services
14 Public administration & defence
15 Education
16 Health
17 Arts, entertainment, recreation & other services

Q10. How many people does your organisation employ?

NOTE
Please answer for the total number of employees based in the UK.

SINGLE CODE

1 0 - 4
2 5 – 9
3 10 – 19
4 20 – 49
5 50 – 99
6 100 – 249
7 250+

Q11. What is your organisation's annual turnover?

NOTE
Please answer for total annual turnover for UK-based operations only.

SINGLE CODE
1 Up to £49,999
2 £50,000 - £99,999
3 £100,000 - £249,999
4 £250,000 - £499,999
5 £500,000 - £999,999
6 £1,000,000 - £1,999,999
7 £2,000,000 - £4,999,999
8 £5,000,000 - £9,999,999
9 £10,000,000 - £49,999,999
10 £50,000,000 or more

SECTION B: USE OF COMPANY SEARCH SERVICES

NEW SCREEN – BASIC USE INFORMATION

Thank you for answering those questions. The next set of questions is about the company information and data that you access and use. Please continue to answer from the perspective of the organisation that you work for.

Q12. Which of the following company search and data services has your organisation used in the past 12 months? Please select all that apply.

NOTE
This includes services you may access via the Companies House mobile app as well by PC, laptop or tablet device.

MULTICODE FOR CODES 1-6
SINGLE CODE FOR CODES 7-8
ROTATE
1 Search the Register / Companies House Service
2 Companies House API
3 WebCHeck
4 Companies House Direct
5 Free Company Bulk Data Products
6 XML Gateway
7 Not used search and/or data services in the past 12 months
8 Don't know

IF CODE 7, ASK Q13. OTHERWISE GO TO Q14.

Q13. ONLY ASK IF CODE 7 AT Q12. **When was the last time your organisation used the company search and data services?**

SINGLE CODE
1 Between 1 – 2 years ago
2 Between 2 – 3 years ago
3 Between 3 – 4 years ago
4 Between 4 – 5 years ago
5 More than 5 years ago
6 Don't know

Q14. Which company search or data service does your organisation use most often?

SINGLE CODE
ROTATE
1 Search the Register / Companies House Service
2 Companies House API
3 WebCHeck
4 Companies House Direct
5 Free Company Bulk Data Products
6 XML Gateway
7 Don't know

NEW SCREEN – FREQUENCY OF USE

Q15. How often does your organisation access company information and data via the company search or data services?

SINGLE CODE

1	Several times a day	(Around 10 times per week)
2	Every day	(5 times per week)
3	Almost every day	(3-4 times per week)
4	A couple of times a week	(2 times per week)
5	About once a week	(1 time per week)
6	A few times a month	(2-3 times per month)
7	Once a month	(1 time per month)
8	Less than once a month	(1-6 times per year)
7	Not sure	

Q16. How much time – on average – is each use of the company search or data services by you / your organisation?

NOTE
Please answer for each time your organisation accesses the company search services.

SINGLE CODE
1 Less than a minute
2 Between 1 to 2 minutes
3 Between 2 to 5 minutes
4 Between 5 to 10 minutes
5 Between 10 to 20 minutes
6 Between 20 to 30 minutes
7 More than 30 minutes (Please specify time in minutes) ENTER NO. MINUTES

IF CODE 7, RECORD MINUTES

Q17. And, each time your organisation accesses company information and data, is it…?

SINGLE CODE
1 Usually to find information for a single company
2 Usually to find information for several companies at the same time
3 Sometimes to find information for a single company, sometimes for several companies

---

NEW SCREEN – USE OF INFORMATION

Q18. In general, how important to your organisation are the different pieces of company information and data?

RESPONSE OPTIONS
A VERY IMPORTANT
B QUITE IMPORTANT
C NOT VERY IMPORTANT
D DO NOT USE
E DON'T KNOW

LIST/ROTATE
1 Basic information (registered address, company number, date of incorporation)
2 Nature of business (SIC - standard industrial classification of economic activities)
3 Date of last accounts/confirmation statement filed
4 Date of next accounts/confirmation statement due
5 Company filing documents (view/download accounts, annual return, etc.)
6 Mortgage charge data
7 Persons with significant control (control and ownership of a company)
8 Current and resigned officers (company directors)
9 Disqualified directors
10 Previous company names
11 Insolvency information

Q19. How does your organisation use the company information and data? Please select all that apply.

MULTICODE
ROTATE
1 To confirm basic information about a company
2 Part of detailed research into a company (incl. directors and persons with significant control)
3 To check information provided by a company is consistent with Companies House records
4 Part of carrying out due diligence work about a company
5 To inform law enforcement investigation
6 To inform court proceedings (e.g. verification of details/evidence)
7 To check risk/creditworthiness of a supplier
8 To check risk/creditworthiness of a customer
9 To find out information about competitor companies
10 As part of the products/services we sell to our customers
11 For marketing/sales purposes
12 Other (please specify) RECORD

Q20. ONLY ASK IF MULTIPLE RESPONSES AT Q19 **What is the main use of the company information and data?**

ONLY DISPLAY RESPONSE CODES SELECTED AT Q19, INCLUDING CODE 9 TEXT ENTRY
SINGLE CODE
ROTATE
1 To confirm basic information about a company
2 Part of detailed research into a company (incl. directors and persons with significant control)
3 To check information provided by a company is consistent with Companies House records
4 Part of carrying out due diligence work about a company
5 To inform law enforcement investigation
6 To inform court proceedings (e.g. verification of details/evidence)
7 To check risk/creditworthiness of a supplier
8 To check risk/creditworthiness of a customer
9 To find out information about competitor companies
10 As part of the products/services we sell to our customers
11 For marketing/sales purposes
12 DISPLAY RESPONSE FROM Q19 CODE 9

Q21. How confident are you that the company information and data Companies House provides are accurate and reliable?

SINGLE CODE
1 Not at all confident
2 Not so confident
3 Somewhat confident
4 Very confident
5 Extremely confident

NEW SCREEN – ALTERNATIVES

Thank you for providing that information. Next, please consider alternative options to the search services provided by Companies House.

Q22. If the company search services provided by Companies House were not available, would your organisation do any of the following?

MULTICODE
ROTATE

1 Purchase company information from a data services provider
2 Use free of charge online resources to research companies (e.g. trade directories, review sites, free company check websites, free trials from data service providers, industry regulator information)
3 General internet search (e.g. Google) (incl. social media accounts)
4 Obtain references and background information from partner and associate organisations (incl. 'word of mouth' recommendations)
5 Conduct own due diligence research
6 Nothing
7 Other (please specify) RECORD
8 Don't know

Q23. And, in addition to using the company search services provided by Companies House, does your organisation <u>currently</u> do any of the following?

MULTICODE
ROTATE

1 Purchase company information from a data services provider
2 Use free of charge online resources to research companies (e.g. trade directories, review sites, free company check websites, free trials from data service providers, industry regulator information)
3 General internet search (e.g. Google) (incl. social media accounts)
4 Obtain references and background information from partner and associate organisations (incl. 'word of mouth' recommendations)
5 Conduct own due diligence research
6 Other (please specify) RECORD

Q24. ASK IF CODE 1 AT Q29. **Which data service(s) does your organisation purchase or subscribe to? Please provide brief details below.**

NOTE
These could be services or products that provide information on companies, directors, financial information, credit reports, and/or anti-money laundering checks

MULTICODE
ROTATE

1	Callcredit	
2	CreditHQ	
3	Creditsafe	
4	Company Check	
	~~Creditsafe~~	
5	DueDil	
6	Dun & Bradstreet	
7	Endole	
8	Equifax	
9	Experian	
10	FAME - Bureau van Dijk (BvD)	
11	First Report	
12	Graydon	
13	Jordans	
14	Other (please specify)	RECORD

Q25. **How much – approximately – does your organisation spend on purchasing company information from other sources? Please provide below the monthly or annual amount for each service/product your organisation purchases or subscribes to.**

DISPLAY RESPONSE CODES SELECTED AT Q31. PROVIDE OPTION FOR RESPONDENT TO INPUT MONTHLY AMOUNT OR ANNUAL AMOUNT FOR EACH RESPONSE CODE SHOWN

RECORD
AMOUNT (£) PER MONTH
AMOUNT (£) PER YEAR

SECTION C: BENEFITS OF COMPANIES HOUSE DATA

NEW SCREEN

Companies House provides information and data about registered companies in England and Wales, Scotland, and Northern Ireland. For the period April 2017 – March 2018 there were approximately 2.2 billion searches of company information and data, primarily via the free of charge 'Search the Register' / Companies House Service. This about 6 million searches per day.

The company data and information that Companies House currently make publicly available will continue to be provided free of charge.

NEW SCREEN

In the next set of questions, you will be presented with a series of choices between different options for accessing information and data about registered companies in England and Wales, Scotland, and Northern Ireland.

The purpose of these questions is to help us understand which aspects of company information and data are most important to your organisation. The next few screens explain the choices you will be offered in more detail. Please take time to read each screen as it will help you answer the choice questions.

NEW SCREEN

Here is an example of the choice you will be shown. You will be asked to select the option – A, B, or C – for accessing information and data about registered companies in England and Wales, Scotland, and Northern Ireland that your organisation would prefer most.

DISPLAY FIRST CHOICE CARD THAT RESPONDENT WILL BE SHOWN IN Q32

You will be asked to make 6 choices in total, each time choosing between 3 alternative options.

NEW SCREEN

Each option will feature different combinations of information and data. The information below describes the different types of the company information and data that will feature in the options.

DISPLAY ATTRIBUTE DESCRIPTION CARD [SHOWCARD 1]

NEW SCREEN

In each choice that you will be asked to make, Options A and B will be offerings from different commercial data service providers. Option C will always be an offering from Companies House. The Companies House option will always be provided free of charge, but some types of information and data may not be available.

DISPLAY SERVICE PROVIDER DESCRIPTION CARD [SHOWCARD 2]

NEW SCREEN

Please be assured that the purpose of this exercise is not to understand how much money can be charged for accessing the company information and data provided by Companies House. This will continue to be provided free of charge.

Instead your choices will help us understand what the information and data Companies House make publicly available is worth to the organisations that use it on a regular basis. For example, the amount of money your organisation is prepared to pay to access the information from an alternative provider provides an indication of its value.

NEW SCREEN

When making your choices please consider each option carefully, think about how your organisation uses the different types of information and data, and how important it is (or not) to your day-to-day operations. Please also consider:

- **Your organisation's overall income and expenses**
- **Any money your organisation pays for an option will not be available to spend elsewhere, and**
- **Other costs may go up or down affecting the amount of money your organisation has to spend in general**

Q26. [For your first choice] Which option do you prefer?

PRESENT CHOICE CARDS
SEE WORKBOOK FOR DATA TO RECORD
INCLUDE TIME STAMPS FOR EACH CHOICE CARD
DISPLAY CHOICE X OF 6 ONSCREEN

CHOICE NO.	OPTION A	OPTION B	OPTION C
1	1	2	3
2	1	2	3
3	1	2	3
4	1	2	3
5	1	2	3
6	1	2	3

PROVIDE SHOWCARD 3 'MORE INFORMATION' AS A POP-UP ROLLOVER BOX

SECTION D: FOLLOW-UP QUESTIONS

NEW SCREEN

Q27. Considering the information and instructions provided, how easy or difficult was it to answer the choice questions?

SINGLE CODE

1	Very easy	GO TO Q35
2	Fairly easy	GO TO Q35
3	Neither easy nor difficult	GO TO Q35
4	Fairly difficult	ASK Q34
5	Very difficult	ASK Q34

Q28. ASK IF CODE 4 OR 5 AT Q33. **Were the choice questions difficult because…?**

1	It was hard to decide which option your organisation would prefer	
2	Not information was provided about the alternative options to make a choice	
3	The instructions for the choice questions were not clear	
4	Other (please specify)	RECORD

Q29. In making your choices, what was…?

RESPONSE OPTIONS

A	MOST IMPORTANT TO YOUR ORGANISATION
B	SECOND MOST IMPORTANT
C	THIRD MOST IMPORTANT
D	LEAST IMPORTANT TO YOUR ORGANISATION

LIST CHOICE TASK ATTRIBUTES IN ORDER SHOWN ON CHOICE CARD
Company information [ATTRIBUTE 1]
Financial and credit information [ATTRIBUTE 2]
Historic information [ATTRIBUTE 3]
Cost [ATTRIBUTE 4]
The provider [OPTION LABEL]

Q30. Which of these statements best describes how you made your choices between the different options?

SINGLE CODE
ROTATE

1	I chose options with the least cost to my organisation	
2	I chose options that offered the best value relative to cost	
3	I chose options based on the types of information and data provided irrespective of cost	
4	I choose options that provided the information and data my organisation needs	
5	I choose options that had an acceptable cost to my organisation	
6	Other (please specify)	RECORD

Q31. ONLY ASK IF RESPONDENT SELECTED OPTION C (COMPANIES HOUSE) 4, 5, OR 6 TIMES IN Q32 CHOICE TASK. **You selected the Companies House option (Option C) in most or all of your choices. What was the main reason for this?**

SINGLE CODE
ROTATE

1 Object to paying for company information and data
2 The other options did not provide the information and data my organisation needs
3 The other options were too expensive for my organisation
4 The Companies House options provided everything my organisation needs
5 The other options were not credible
6 Do not trust commercial data providers
7 Companies House is transparent and reliable
8 Would only pay for data and information on case-by-case basis, not an annual subscription
9 The information provided was not clear enough to make a different choice
10 Other (please specify) RECORD

NEW SCREEN

Q32. Thinking about how you use the company information and data provided by Companies House, what is the value or benefit to your organisation? Please select all that apply.

MULTICODE
ROTATE

1 Making better decisions about suppliers and/or customers
2 Giving assurance about suppliers and/or customers (e.g. creditworthiness)
3 Time savings to my organisation from the information being readily available
4 Reduced operating cost to my organisation
5 Information/data that we include in the products and services we sell to our customers
6 Other (please specify)

Q33. ONLY ASK IF MULTIPLE RESPONSES AT Q38. **What would you say is the main benefit or value to your organisation?**

ONLY DISPLAY RESPONSES SELECTED AT Q37
SINGLE CODE
ROTATE

1 Making better decisions about suppliers and/or customers
2 Giving assurance about suppliers and/or customers (e.g. creditworthiness)
3 Time savings to my organisation from the information being readily available
4 Reduced operating cost to my organisation
5 Information/data that we include in the products and services we sell to our customers
6 Other (please specify)

NEW SCREEN – CALCULATOR

In the final part of the survey, we would like to understand if the company search services provide any time savings to your organisation on a regular basis.

Q34. The calculator below summarises your responses to previous questions in the survey and estimates the amount of time your organisation spends using the company search services.

DISPLAY ANSWERS TO Q15 AND Q16 AND CALCULATE TOTAL TIME SPENT

How often your organisation accesses company information and data: Q15 RESPONSE

Typical duration (time) for each use/visit: Q16 RESPONSE

Estimated time to your organisation: CALCULATE TIME PER WEEK, MONTH, AND YEAR EQUIVALENTS

Is this a reasonable estimate of the amount of time your organisation spends using the company search services?

SINGLE CODE

1	Yes	GO TO Q24
2	No	GO TO Q23
3	Not sure	GO TO Q23

Q35. ASK IF CODE 2 or 3 AT Q22. **Please provide your best estimate of the amount of time your organisation spends using the company search services:**

RESPONDENT TO ENTER EITHER TIME PER WEEK, MONTH, OR YEAR. EQUIVALENT PER WEEK/ MONTH/YEAR TO BE AUTOMATICALLY CALCULATED

1	TIME PER WEEK	RESPONDENT ENTRY OR AUTOMATICALLY CALCULATED
2	TIME PER MONTH	RESPONDENT ENTRY OR AUTOMATICALLY CALCULATED
3	TIME PER YEAR	RESPONDENT ENTRY OR AUTOMATICALLY CALCULATED

Q36. If the company search services provided by Companies House were not available, roughly how much additional time and effort do you think it would be for your organisation to obtain the same information from elsewhere?

For example, if it currently takes an hour to get the information from Companies House and it would take 2 hours instead, your response would be twice as much (x2).

SINGLE CODE

1	No additional time or effort	
2	Twice as much (x2)	
3	Three times as much (x3)	
4	Four times as much (x4)	
5	Five times as much (x5)	
6	Other	DROP DOWN WITH SCALERS STARTING FROM x6 UP TO x20

Q37. The calculator below estimates the time saving to your organisation.

CALCULATE ADDITIONAL TIME TO ORGANISATION BASED ON Q22 OR Q23 RESPONSE

Estimated time saving to your organisation: SHOW TIME PER WEEK, MONTH, AND YEAR EQUIVALENTS

Is this a reasonable estimate of the regular time savings to your organisation from using the search services and the company information and data it provides?

SINGLE CODE
1 Yes
2 No
3 Not sure

Q38. How would the time saving be apportioned across the different roles in your organisation?

NOTE
Please enter the approximate percentage for each role below – if N/A enter 0%.

TOTAL TO SUM TO 100%

1 Company director
2 Manager
3 Professional occupation (e.g. accountant, academic, research, public services)
4 Technical occupation (e.g. science, engineering, technology, health services)
5 Administrative or secretarial
6 Sales or customer service
7 DISPLAY FROM RESPONSE FROM Q4/Q6 CODE 7

Q39. How confident are you in the estimate of the time and effort saving to your organisation?

SINGLE CODE
1 Not at all confident
2 Not so confident
3 Somewhat confident
4 Very confident
5 Extremely confident

Q40. Overall, how satisfied are you with the company search services that Companies House provides?

NOTE
Please answer only for the company search services that you use, not WebFiling or other services.

SINGLE CODE
1 Very dissatisfied
2 Fairly dissatisfied
3 Neither satisfied nor dissatisfied
4 Fairly satisfied
5 Very satisfied
6 Don't know

Q41. Finally, did you think this survey was…?

MULTICODE
1 Interesting
2 Too long
3 Difficult to understand
4 Educational
5 Unrealistic / not credible
6 Other (please specify)
7 None of these

SECTION E: SURVEY CLOSE

That's the end of the survey. Thank you for your time and help, it is very much appreciated.

Please confirm that you wish to be entered into the free draw for an iPad Pro:

SINGLE CODE
1 Yes – I would like to be included in the free draw
2 No – I would not like to be included in the free draw

Annex 3 Onscreen layout and appearance

Valuing the User benefits of Companies House Data
Final Report
July 2019

ANNEX 3 - Onscreen layout and appearance

Use of Companies House Data

We are carrying out a survey to understand how the information Companies House make available about registered companies in England and Wales, Scotland, and Northern Ireland is used. Your responses will help Companies House make improvements to the services they provide. This includes the Companies House Service, which allows the public to access information about companies and their directors free of charge.

The survey will last about 15 minutes. Any answers you give will be treated in confidence in accordance with the Code of Conduct of the Market Research Society. The information we collect will be used for research purposes only. No personal information is collected in the survey and the data will analysed at an aggregate level. It will not be possible to identify any particular individual, organisation, or address in the results.

Next

Use of Companies House Data

Do you use the company search services provided by Companies House?

MORE INFORMATION 

Other services provided by Companies House are WebFiling (for submitting annual returns and accounts and company director information) and company incorporation and registration services (for setting up a private company). These are not company search services.

- ◯ Yes – I use the company search services
- ◯ No – I only use the WebFiling and/or company registration services
- ◯ No – I do not use any services provided by Companies House

Next

3% Completed

Use of Companies House Data

Do you use the company search services provided by Companies House?

MORE INFORMATION

The company search services include:

- *Companies House Service (CHS) which provides company information and documents for free.*
- *WebCHeck search which provides company information and charges for some document images and data.*
- *Companies House Direct (CHD) which is an account-based service that for a nominal fee provides access to every public record document held by Companies House.*

You may access these services via the Companies House mobile app as well by desktop PC, laptop or tablet device.

Other services provided by Companies House are WebFiling (for submitting annual returns and accounts and company director information) and company incorporation and registration services (for s

These are not company search services.

- ◯ Yes – I use the company search services
- ◯ No – I only use the WebFiling and/or company registration services
- ◯ No – I do not use any services provided by Companies House

Use of Companies House Data

Which of the following best describes your use of the company search services?

- ◯ I use it as part of my job / on behalf of the organisation I work for
- ◯ I use it for research purposes
- ◯ I use it as a member of the public

Next

5% Completed

Use of Companies House Data

Which of the following best describes your job title or role?

- ◯ Company director
- ◯ Manager
- ◯ Professional occupation (e.g. accountant, academic, research, public services)
- ◯ Technical occupation (e.g. science, engineering, technology, health services)
- ◯ Administrative or secretarial
- ◯ Sales or customer service
- ◯ Other (please specify) [ ]

Next

9% Completed

Use of Companies House Data

Within your organisation are you the main user of the company search services – i.e. the person who uses the search services most often?

- ◯ Yes
- ◯ No
- ◯ Don't know

Next

10% Completed

Use of Companies House Data

Where is your organisation located? If your organisation has more than one site in the UK, please answer for the site where you are based.

- ◯ East Midlands
- ◯ East of England
- ◯ Greater London
- ◯ North East
- ◯ North West
- ◯ Northern Ireland
- ◯ Scotland
- ◯ South East
- ◯ South West
- ◯ Wales
- ◯ West Midlands
- ◯ Yorkshire and the Humber
- ◯ Isle of Man and Channel Islands

Next

Use of Companies House Data

Which of the following best describes your organisation?

- ◯ Limited company
- ◯ Partnership
- ◯ Sole trader
- ◯ Public corporation
- ◯ Central Government
- ◯ Local Authority
- ◯ Non-profit organisation or mutual (membership) organisation

Next

Use of Companies House Data

What is the main activity of your organisation?

- ◯ Agriculture, forestry & fishing
- ◯ Manufacturing
- ◯ Construction
- ◯ Motor trades
- ◯ Wholesale
- ◯ Retail
- ◯ Transport & storage (warehousing)
- ◯ Accommodation & food services
- ◯ Information & communication
- ◯ Finance & insurance
- ◯ Property
- ◯ Professional, scientific & technical
- ◯ Business administration & support services
- ◯ Public administration & defence
- ◯ Education
- ◯ Health
- ◯ Arts, entertainment, recreation & other services

Next

Use of Companies House Data

How many people does your organisation employ?

NOTE
Please answer for the total number of employees based in the UK.

- ◯ 0 - 4
- ◯ 5 – 9
- ◯ 10 – 19
- ◯ 20 – 49
- ◯ 50 – 99
- ◯ 100 – 249
- ◯ 250+

Next

Use of Companies House Data

What is your organisation's annual turnover?

NOTE
Please answer for total annual turnover for UK-based operations only.

- ◯ Up to £49,999
- ◯ £50,000 - £99,999
- ◯ £100,000 - £249,999
- ◯ £250,000 - £499,999
- ◯ £500,000 - £999,999
- ◯ £1,000,000 - £1,999,999
- ◯ £2,000,000 - £4,999,999
- ◯ £5,000,000 - £9,999,999
- ◯ £10,000,000 - £49,999,999
- ◯ £50,000,000 or more

Next

Press F11 to exit full screen

Use of Companies House Data

Thank you for answering those questions. The next set of questions is about the company information and data that you access and use. Please continue to answer from the perspective of the organisation that you work for.

Next

19% Completed

Press F11 to exit full screen

Use of Companies House Data

Thank you for answering those questions. The next set of questions is about the company information and data that you access and use. Please continue to answer from the perspective of the organisation that you work for.

Next

19% Completed

Use of Companies House Data

Which company search or data service does your organisation use most often?

- ◯ Search the Register / Companies House Service (Beta)
- ◯ Companies House API
- ◯ WebCHeck
- ◯ Companies House Direct
- ◯ Free Company Bulk Data Products
- ◯ XML Gateway
- ◯ Don't know

Next

Use of Companies House Data

How often does your organisation access company information and data via the company search or data services?

- ◯ Several times a day (Around 10 times per week)
- ◯ Every day (5 times per week)
- ◯ Almost every day (3-4 times per week)
- ◯ A couple of times a week (2 times per week)
- ◯ About once a week (1 time per week)
- ◯ A few times a month (2-3 times per month)
- ◯ Once a month (1 time per month)
- ◯ Less than once a month (1-6 times per year)
- ◯ Not sure

Next

Use of Companies House Data

How much time – on average – is each use of the company search or data services by you / your organisation?

NOTE
Please answer for each time your organisations accesses the company search services.

- ◯ Less than a minute
- ◯ Between 1 to 2 minutes
- ◯ Between 2 to 5 minutes
- ◯ Between 5 to 10 minutes
- ◯ Between 10 to 20 minutes
- ◯ Between 20 to 30 minutes
- ◯ More than 30 minutes (please specify time in minutes) [ ]

Next

Press F11 to exit full screen

Use of Companies House Data

And, each time your organisation accesses company information and data, is it…?

- ◯ Usually to find information for a single company
- ◯ Usually to find information for several companies at the same time
- ◯ Sometimes to find information for a single company, sometimes for several companies

Next

Use of Companies House Data

In general, how important to your organisation are the different pieces of company information and data?

	Very important	Quite important	Not very important	Do not use	Don't know
Persons with significant control (control and ownership of a company)	○	○	○	○	○
Current and resigned officers (company directors)	○	○	○	○	○
Disqualified directors	○	○	○	○	○
Previous company names	○	○	○	○	○
	Very important	**Quite important**	**Not very important**	**Do not use**	**Don't know**
Insolvency information	○	○	○	○	○
Basic information (registered address, company number, date of incorporation)	○	○	○	○	○
Nature of business (SIC - standard industrial classification of economic activities)	○	○	○	○	○
Date of last accounts/confirmation statement filed	○	○	○	○	○
	Very important	**Quite important**	**Not very important**	**Do not use**	**Don't know**
Date of next accounts/confirmation statement due	○	○	○	○	○
Company filing documents (view/download accounts, annual return, etc.)	○	○	○	○	○
Mortgage charge data	○	○	○	○	○

Next

Press F11 to exit full screen

Use of Companies House Data

How does your organisation use the company information and data?

Please select all that apply.

- [ ] To check risk/creditworthiness of a customer
- [ ] To find out information about competitor companies
- [ ] As part of the products/services we sell to our customers
- [ ] To confirm basic information about a company
- [ ] Part of detailed research into a company
- [ ] To check information provided by a company is consistent with Companies House records
- [ ] Part of carrying out due diligence work about a company
- [ ] To inform law enforcement investigation
- [ ] To check risk/creditworthiness of a supplier
- [ ] Other (please specify)

Next

Use of Companies House Data

How confident are you that the company information and data Companies House provides are accurate and reliable?

- ◯ Not at all confident
- ◯ Not so confident
- ◯ Somewhat confident
- ◯ Very confident
- ◯ Extremely confident

Next

31% Completed

Use of Companies House Data

Thank you for providing that information. Next, please consider alternative options to the search services provided by Companies House.

Next

Use of Companies House Data

If the company search services provided by Companies House were not available, would your organisation do any of the following?

- [ ] Conduct own due diligence research
- [ ] Purchase company information from a data services provider
- [ ] Use free of charge online resources to research companies (e.g. trade directories, review sites, free company check websites)
- [ ] General internet search (e.g. Google)
- [ ] Obtain references and background information from partner and associate organisations
- [ ] Other (please specify) _____
- ( ) Nothing
- ( ) Don't know

Next

Press F11 to exit full screen

Use of Companies House Data

And, in addition to using the company search services provided by Companies House, does your organisation currently do any of the following?

- [ ] Conduct own due diligence research
- [ ] Purchase company information from a data services provider
- [ ] Use free of charge online resources to research companies (e.g. trade directories, review sites, free company check websites)
- [ ] General internet search (e.g. Google)
- [ ] Obtain references and background information from partner and associate organisations
- [ ] Other (please specify)
- ( ) Nothing
- ( ) Don't know

Next

Use of Companies House Data

Companies House provides information and data about registered companies in England and Wales, Scotland, and Northern Ireland. For the period April 2017 – March 2018 there were approximately 2.2 billion searches of company information and data, primarily via the free of charge 'Search the Register' / Companies House Service (Beta). This is about 6 million searches per day.

The company data and information that Companies House currently make publicly available will continue to be provided free of charge.

Next

Use of Companies House Data

In the next set of questions, you will be presented with a series of choices between different options for accessing information and data about registered companies in England and Wales, Scotland, and Northern Ireland.

The purpose of these questions is to help us understand which aspects of company information and data are most important to your organisation. The next few screens explain the choices you will be offered in more detail. Please take time to read each screen as it will help you answer the choice questions.

Next

Use of Companies House Data

Here is an example of the choice you will be shown. You will be asked to select the option – A, B, or C – for accessing information and data about registered companies in England and Wales, Scotland, and Northern Ireland that your organisation would prefer most.

Which option do you prefer?
MORE INFORMATION

	OPTION A **Commercial Provider**	**OPTION B** **Commercial Provider**	**OPTION C** **Companies House**
Company information	Basic details + Persons of significant control	Basic details	Basic details
Financial and credit information	None	Annual reports & financial statements + Credit limits and scores + Financial strength indicators	Annual reports & financial statements
Historic information ***Number of years***	1 year (current)	3 years	3 years
Cost ***Annual subscription***	£2,000 per year	£5,000 per year	Free
	○	○	○

You will be asked to make 6 choices in total, each time choosing between 3 alternative options.

Use of Companies House Data

Each option will feature different combinations of information and data. The information below describes the different types of the company information and data that will feature in the options.

The features of each option		*The different types of information that could be provided and the cost*
Provider	The service provider for the company information and data – either:	• **Companies House**, or • **Commercial provider**
Company information	Information about a company, its ownership, and structure, including:	• **Basic details:** registered address, company number, date of incorporation, nature of business, previous company names, mortgage charges, insolvency information • **Persons of significant control:** individuals with more than 25% of shares or voting rights in a company • **Shareholders:** legal owners of a company
Financial and credit information	Information about a company's financial performance, including:	• **Annual reports and financial statements:** statutory filings by a company • **Credit limits and scores:** assessment a company's probability of defaulting on debts • **Financial strength indicators:** assessment of a company's financial performance
Historic information	Number of years of archived information from the current time period that is available:	• From **1 year (current)** to **5+ years**
Cost	Annual cost (£) for accessing the company information	• From **free** to **£5,000 per year**

Next

Use of Companies House Data

In each choice that you will be asked to make, Options A and B will be offerings from different commercial data service providers. Option C will always be an offering from Companies House. The Companies House option will always be provided free of charge, but some types of information and data may not be available.

OPTION A **COMMERCIAL PROVIDER**	OPTION B **COMMERCIAL PROVIDER**	OPTION C **COMPANIES HOUSE**
• **Options offered by a commercial data services provider** • **There will be an annual cost (£/year) for accessing the company information and data** • **Different combinations of information and data will be available in the options shown**		• **Option offered by Companies House** • **Free of charge / no cost for accessing the company information and data** • **Some types of information and data may not be available**
• All options (Option A, B and C) will have same coverage of registered companies in England and Wales, Scotland, and Northern Ireland (approx. 4.1 million companies) • There will be no difference in the accuracy of the information and quality of the data provided in Options A, B, and C		

Next

Use of Companies House Data

Please be assured that the purpose of this exercise is not to understand how much money can be charged for accessing the company information and data provided by Companies House. This will continue to be provided free of charge.

Instead your choices will help us understand what the information and data Companies House make publicly available is worth to the organisations that use it on a regular basis. For example, the amount of money your organisation is prepared to pay to access the information from an alternative provider provides an indication of its value.

When making your choices please consider each option carefully, think about how your organisation uses the different types of information and data, and how important it is (or not) to your day-to-day operations. Please also consider:

- Your organisation's overall income and expenses
- Any money your organisation pays for an option will not be available to spend elsewhere, and
- Other costs may go up or down affecting the amount of money your organisation has to spend in general

Next

Use of Companies House Data

Choice **1** of 6

Which option do you prefer?

MORE INFORMATION

	OPTION A Commercial Provider	OPTION B Commercial Provider	OPTION C Companies House
Company information	Basic details + Persons of significant control	Basic details + Persons of significant control + Shareholders	Basic details + Persons of significant control
Financial and credit information	None	Annual reports & financial statements + Credit limits and scores + Financial strength indicators	None
Historic information ***Number of years***	5+ years	3 years	3 years
Cost ***Annual subscription***	£500 per year	£5,000 per year	Free
	○	○	○

Next

Use of Companies House Data

Which option do yo

The features of each option		*The different types of information that could be provided and the cost*
Provider	The service provider for the company information and data – either:	• **Companies House**, or • **Commercial provider**
Company information	Information about a company, its ownership, and structure, including:	• **Basic details:** registered address, company number, date of incorporation, nature of business, previous company names, mortgage charges, insolvency information • **Persons of significant control:** individuals with more than 25% of shares or voting rights in a company • **Shareholders:** legal owners of a company
Financial and credit information	Information about a company's financial performance, including:	• **Annual reports and financial statements:** statutory filings by a company • **Credit limits and scores:** assessment a company's probability of defaulting on debts • **Financial strength indicators:** assessment of a company's financial performance
Historic information	Number of years of archived information from the current time period that is available:	• From **1 year (current)** to **5+ years**
Cost	Annual cost (£) for accessing the company information	• From **free** to **£5,000 per year**

OPTION A **COMMERCIAL PROVIDER**	OPTION B **COMMERCIAL PROVIDER**	OPTION C **COMPANIES HOUSE**
• **Options offered by a commercial data services provider** • **There will be an annual cost (£/year) for accessing the company information and data** • **Different combinations of information and data will be available in the options shown**		• **Option offered by Companies House** • **Free of charge / no cost for accessing the company information and data** • **Some types of information and data may not be available**

- All options (Option A, B and C) will have same coverage of registered companies in England and Wales, Scotland, and Northern Ireland (approx. 4.1 million companies)
- There will be no difference in the accuracy of the information and quality of the data provided in Options A, B, and C

MORE INFORMATION

OPTION A	OPTION B	OPTION C
Commercial Provider	Commercial Provider	Companies House

Use of Companies House Data

Choice **2** of 6

Which option do you prefer?

MORE INFORMATION

	OPTION A Commercial Provider	OPTION B Commercial Provider	OPTION C Companies House
Company information	Basic details	None	Basic details
Financial and credit information	Annual reports & financial statements + Credit limits and scores	Annual reports & financial statements + Credit limits and scores + Financial strength indicators	Annual reports & financial statements
Historic information ***Number of years***	3 years	5+ years	1 year (current)
Cost ***Annual subscription***	£5,000 per year	£100 per year	Free
	○	○	○

Next

Use of Companies House Data

Choice **3** of 6

Which option do you prefer?

MORE INFORMATION

	OPTION A Commercial Provider	OPTION B Commercial Provider	OPTION C Companies House
Company information	Basic details + Persons of significant control	Basic details	None
Financial and credit information	Annual reports & financial statements + Credit limits and scores	None	Annual reports & financial statements
Historic information ***Number of years***	5+ years	5+ years	1 year (current)
Cost ***Annual subscription***	£1,500 per year	£250 per year	Free
	○	○	○

Next

Use of Companies House Data

Choice **4** of 6

Which option do you prefer?

MORE INFORMATION

	OPTION A Commercial Provider	OPTION B Commercial Provider	OPTION C Companies House
Company information	None	Basic details + Persons of significant control + Shareholders	Basic details
Financial and credit information	None	Annual reports & financial statements + Credit limits and scores	None
Historic information ***Number of years***	3 years	3 years	3 years
Cost ***Annual subscription***	£500 per year	£1,000 per year	Free
	○	○	○

Next

Use of Companies House Data

Choice **5** of 6

Which option do you prefer?

MORE INFORMATION

	OPTION A Commercial Provider	OPTION B Commercial Provider	OPTION C Companies House
Company information	None	Basic details + Persons of significant control + Shareholders	Basic details + Persons of significant control
Financial and credit information	Annual reports & financial statements + Credit limits and scores + Financial strength indicators	None	None
Historic information ***Number of years***	3 years	3 years	5+ years
Cost ***Annual subscription***	£2,000 per year	£1,500 per year	Free
	○	○	○

Next

Use of Companies House Data

Choice **6** of 6

Which option do you prefer?

MORE INFORMATION

	OPTION A Commercial Provider	OPTION B Commercial Provider	OPTION C Companies House
Company information	Basic details + Persons of significant control + Shareholders	Basic details	None
Financial and credit information	None	Annual reports & financial statements + Credit limits and scores + Financial strength indicators	Annual reports & financial statements
Historic information ***Number of years***	1 year (current)	1 year (current)	5+ years
Cost ***Annual subscription***	£100 per year	£500 per year	Free
	○	○	○

Next

Use of Companies House Data

Considering the information and instructions provided, how easy or difficult was it to answer the choice questions?

- ◯ Very easy
- ◯ Fairly easy
- ◯ Neither easy nor difficult
- ◯ Fairly difficult
- ◯ Very difficult

Next

Use of Companies House Data

In making your choices, what was...?

	Most important to your organisation	Second most important	Third most important	Least important to your organisation
Company information	○	○	○	○
Financial and credit information	○	○	○	○
Historic information	○	○	○	○
Cost	○	○	○	○
The provider	○	○	○	○

Next

Use of Companies House Data

Which of these statements best describes how you made your choices between the different options?

- ◯ I chose options that had an acceptable cost to my organisation
- ◯ I chose options with the least cost to my organisation
- ◯ I chose options that offered the best value relative to cost
- ◯ I chose options based on the types of information and data provided irrespective of cost
- ◯ I chose options that provided the information and data my organisation needs
- ◯ Other (please specify) [ ]

Next

Use of Companies House Data

You selected the Companies House option (Option C) in most or all of your choices. What was the main reason for this?

- ◯ The other options were not credible
- ◯ Do not trust commercial data providers
- ◯ Companies House is transparent and reliable
- ◯ The information provided was not clear enough to make a different choice
- ◯ Object to paying for company information and data
- ◯ The other options did not provide the information and data my organisation needs
- ◯ The other options were too expensive for my organisation
- ◯ The Companies House options provided everything my organisation needs
- ◯ Other (please specify) [ ]

Next

Use of Companies House Data

Thinking about how you use the company information and data provided by Companies House, what is the value or benefit to your organisation?

Please select all that apply.

- [ ] Information/data that we include in the products and services we sell to our customers
- [ ] Making better decisions about suppliers and/or customers
- [ ] Giving assurance about creditworthiness of suppliers and/or customers
- [ ] Time savings to my organisation from the information being readily available
- [ ] Reduced operating cost to my organisation
- [ ] Other (please specify)

Next

85% Completed

Use of Companies House Data

In the final part of the survey, we would like to understand if the company search services provide any time savings to your organisation on a regular basis.

Next

88% Completed

Use of Companies House Data

The calculator below summarises your responses to previous questions in the survey and estimates the amount of time your organisation spends using the company search services.

Your previous responses:

How often your organisation accesses company information and data:

About once a week (1 time per week)

Typical duration (time) for each use/visit:

Between 5 to 10 minutes

Estimated time spent by your organisation:

Per week (HH:MM:SS)

00:07:30

Per month (HH:MM:SS)

00:32:37

Per year (HH:MM:SS)

06:31:30

Is this a reasonable estimate of the amount of time your organisation spends using the company search services?

- ◯ Yes
- ◯ No
- ◯ Not sure

Use of Companies House Data

If the company search services provided by Companies House were not available, roughly how much additional time and effort do you think it would be for your organisation to obtain the same information from elsewhere?

For example, if it currently takes an hour to get the information from Companies House and it would take 2 hours instead, your response would be twice as much (x2

Please select your answer

- Please select your answer
- No additional time or effort
- Twice as much (x2)
- Three times as much (x3)
- Four times as much (x4)
- Five times as much (x5)
- Six times as much (x6)
- Seven times as much (x7)
- Eight times as much (x8)
- Nine times as much (x9)
- Ten times as much (x10)
- Eleven times as much (x11)
- More than eleven times as much

Next

93% Completed

Use of Companies House Data

The calculator below estimates the time saving to your organisation.

Estimated time spent by your organisation:

Per week (HH:MM:SS) :

00:15:01

Per month (HH:MM:SS):

01:05:15

Per year (HH:MM:SS):

13:03:00

Is this a reasonable estimate of the regular time savings to your organisation from using the search services and the company information and data it provides?

- ◯ Yes
- ◯ No
- ◯ Not sure

Next

95% Completed

Use of Companies House Data

How would the time saving be apportioned (%) across the different roles in your organisation?

NOTE
Please enter the approximate percentage for each role below – if N/A enter 0%.

Company director	
Manager	
Professional occupation (e.g. accountant, academic, research, public services)	
Technical occupation (e.g. science, engineering, technology, health services)	
Administrative or secretarial	
Sales or customer service	
=	0

Next

97% Completed

Use of Companies House Data

How confident are you in the estimate of the time and effort saving to your organisation?

- ◯ Not at all confident
- ◯ Not so confident
- ◯ Somewhat confident
- ◯ Very confident
- ◯ Extremely confident

Next

98% Completed

Use of Companies House Data

Overall, how satisfied are you with the company search services that Companies House provides?

NOTE
Please answer only for the company search services that you use, not WebFiling or other services.

- ◯ Very dissatisfied
- ◯ Fairly dissatisfied
- ◯ Neither satisfied nor dissatisfied
- ◯ Fairly satisfied
- ◯ Very satisfied
- ◯ Don't know

Next

Use of Companies House Data

Finally, did you think this survey was…?

- [ ] Interesting
- [ ] Too long
- [ ] Difficult to understand
- [ ] Educational
- [ ] Unrealistic / not credible
- [ ] Other (please specify) [ ]
- ( ) None of these

Next

100% Completed

Use of Companies House Data

That's the end of the survey. Thank you for your time and help, it is very much appreciated.

Next

100% Completed

Annex 4 Supplementary user profile survey results

Valuing the User benefits of Companies House Data

Final Report

July 2019

ANNEX 4 - Supplementary user profile survey results

SCREENING

Q1. Please can you confirm that you use the company search services provided by Companies House

	All responses		Duplicates removed*	
	n	%	n	%
Yes - I use the company search services ('Search the Register'/Companies House Services (CHS), WebCHeck, and Companies House Direct (CHD) services)	9,304	92%	7,763	90%
No - I only use the WebFiling and/or company registration services	404	4%	404	5%
No - I do not use any services provided by Companies House	425	4%	425	5%
Total	10,133	100%	8,592	100%

Q2. Which of the following best describes your use of the company search services?

	All responses		Duplicates removed*	
	n	%	n	%
I use it as part of my job / on behalf of the organisation I work for	6,999	75%	5,491	71%
I use it for research purposes	926	10%	908	12%
I use it as a member of the public	1,382	15%	1,364	18%
Total	9,307	100%	7,763	100%

SUPPLEMENTAL RESULTS

Total responses

	n	%
Completed responses	10,133	86%
Drop-outs	1,586	14%
Total	11,719	100%

Responses collected by search service

	n	%
Companies House Service	6,851	88%
Companies house Direct	699	9%
WebCHeck	246	3%
Companies House API	3	0%
Total	7,799	100%

Duplicate responses (based on IP address)

	n	%
Unique IP addresses	6,827	73%
Duplicated IP addresses	2,480	27%
Total	9,307	100%

Frequency weighted use (%)

		Business users		Research users		General public users	
		Weight	%	Weight	%	Weight	%
Several times a day	(Around 10 times per week)	10.0	63%	0.3	2%	0.1	1%
Every day	(5 times per week)	1.4	9%	0.1	1%	0.1	0%
Almost every day	(3-4 times per week)	1.3	8%	0.2	1%	0.1	1%
A couple of times a week	(2 times per week)	0.9	5%	0.2	1%	0.2	1%
About once a week	(1 time per week)	0.2	1%	0.1	0%	0.1	0%
A few times a month	(2-3 times per month)	0.3	2%	0.1	1%	0.2	1%
Once a month	(1 time per month)	0.0	0%	0.0	0%	0.0	0%
Less than once a month	(1-6 times per year)	0.0	0%	0.0	0%	0.0	0%
Not sure		-	-	-	-	-	-
Total			89%		6%		5%

Note: Use of search services weighted by (self-reported) frequency

BUSINESS USERS

Q3. Which of the following best describes your job title or role?

	All responses		Duplicates removed*		High frequency		Moderate frequency		Low frequency	
	n	%	n	%	n	%	n	%	n	%
Company director	1,147	16%	1,100	20%	193	8%	447	25%	460	35%
Manager	657	9%	505	9%	177	8%	170	9%	158	12%
Professional occupation (e.g. accountant, academic, journalist, research, public services)	3,379	48%	2,562	47%	1330	56%	792	44%	440	33%
Technical occupation (e.g. science, engineering, technology, health services)	135	2%	112	2%	37	2%	36	2%	39	3%
Administrative or secretarial	1,000	14%	690	13%	363	15%	218	12%	109	8%
Sales or customer services	265	4%	216	4%	126	5%	58	3%	32	2%
Other (please write in below)	415	6%	306	6%	130	6%	98	5%	78	6%
Total	6,998	100%	5,491	100%	2,356	100%	1,819	100%	1,316	100%

Q4. Where is your organisation located? If your organisation has more than one site in the UK, please answer for the site where you are based.

	All responses		Duplicates removed*		High frequency		Moderate frequency		Low frequency	
	n	%	n	%	n	%	n	%	n	%
East Midlands	444	6%	347	6%	177	8%	105	6%	65	5%
East of England	395	6%	329	6%	127	5%	98	5%	104	8%
Greater London	1,614	23%	1,323	25%	605	26%	421	24%	297	23%
North East	258	4%	180	3%	78	3%	59	3%	43	3%
North West	679	10%	513	10%	239	10%	155	9%	119	9%
Northern Ireland	103	1%	71	1%	32	1%	20	1%	19	1%
Scotland	477	7%	321	6%	125	5%	115	6%	81	6%
South East	1,131	16%	937	17%	364	16%	350	20%	223	18%
South West	602	9%	462	9%	195	8%	159	9%	108	9%
Wales	221	3%	172	3%	73	3%	49	3%	50	4%
West Midlands	490	7%	377	7%	173	7%	130	7%	74	6%
Yorkshire and the Humber	444	6%	326	6%	129	6%	119	7%	78	6%
Isle of Man and Channel Islands	34	0%	30	1%	14	1%	7	0%	9	1%
Total	6,892	100%	5,388	100%	2,331	100%	1,787	100%	1,270	100%

Q5. Which of the following best describes your organisation?

	All responses		Duplicates removed*		High frequency		Moderate frequency		Low frequency	
	n	%	n	%	n	%	n	%	n	%
Limited company	3,975	57%	3,461	64%	1,366	58%	1,205	67%	890	68%
Partnership	1,160	17%	817	15%	546	23%	214	12%	57	4%
Sole trader	268	4%	259	5%	45	2%	120	7%	94	7%
Public corporation	471	7%	262	5%	145	6%	69	4%	48	4%
Central Government	351	5%	109	2%	58	2%	27	1%	24	2%
Local Authority	298	4%	201	4%	78	3%	75	4%	48	4%
Non-profit Body or Mutual Association	219	3%	188	3%	49	2%	53	3%	86	7%
Other (e.g. Higher Education Corporation)	204	3%	149	3%	53	2%	40	2%	56	4%
Total	6,946	100%	5,446	100%	2,340	100%	1,803	100%	1,303	100%

Q6. What is the main activity of your organisation?

	All responses		Duplicates removed*		High frequency		Moderate frequency		Low frequency	
	n	%	n	%	n	%	n	%	n	%
Agriculture, forestry & fishing	76	1%	60	1%	31	1%	13	1%	16	1%
Manufacturing	300	4%	275	5%	38	2%	118	6%	135	10%
Construction	270	4%	248	5%	60	3%	100	5%	94	7%
Motor trades	57	1%	53	1%	18	1%	23	1%	11	1%
Wholesale	138	2%	125	2%	28	1%	54	3%	56	4%
Retail	147	2%	136	2%	39	2%	50	3%	51	4%
Transport & storage (warehousing)	103	1%	83	2%	20	1%	41	2%	29	2%
Accommodation & food services	41	1%	37	1%	10	0%	7	0%	17	1%
Information & communication	407	6%	382	7%	115	5%	136	7%	136	10%
Finance & insurance	1,958	28%	1,329	24%	807	34%	356	20%	173	12%
Property	354	5%	298	5%	85	4%	120	7%	106	7%
Professional, scientific & technical	1,534	22%	1,214	22%	627	27%	394	22%	215	15%
Business administration & support services	710	10%	602	11%	276	12%	201	11%	144	10%
Public administration & defence	431	6%	220	4%	101	4%	68	4%	42	3%
Education	151	2%	137	2%	40	2%	43	2%	61	4%
Health	113	2%	102	2%	14	1%	36	2%	51	4%
Arts, entertainment, recreation & other services	208	3%	190	3%	47	2%	59	3%	79	6%
Total	6,998	100%	5,491	100%	2,356	100%	1,819	100%	1,416	100%

Q7. How many people does your organisation employ?

	All responses		Duplicates removed*		High frequency		Moderate frequency		Low frequency	
	n	%	n	%	n	%	n	%	n	%
0 - 4	1266	18%	1,231	22%	272	12%	448	25%	511	39%
5 - 9	508	7%	466	8%	202	9%	158	9%	106	8%
10 - 19	533	8%	483	9%	238	10%	163	9%	82	6%
20 - 49	723	10%	665	12%	311	13%	225	12%	129	10%
50 - 99	506	7%	454	8%	219	9%	155	9%	80	6%
100 - 249	633	9%	526	10%	260	11%	176	10%	90	7%
250+	2829	40%	1,666	30%	854	36%	494	27%	318	24%
Total	6,998	100%	5,491	100%	2,356	100%	1,819	100%	1,316	100%

Q8. What is your organisation's annual turnover?

	All responses		Duplicates removed*		High frequency		Moderate frequency		Low frequency	
	n	%	n	%	n	%	n	%	n	%
Up to £49,999	622	10%	575	11%	137	6%	175	10%	263	21%
£50,000 - £99,999	351	5%	342	7%	94	4%	128	7%	120	10%
£100,000 - £249,999	414	6%	391	8%	114	5%	147	9%	130	10%
£250,000 - £499,999	300	5%	280	5%	129	6%	91	5%	60	5%
£500,000 - £999,999	395	6%	366	7%	177	8%	126	7%	63	5%
£1,000,000 - £1,999,999	537	8%	477	9%	242	11%	139	8%	96	8%
£2,000,000 - £4,999,999	534	8%	457	9%	193	9%	182	11%	82	7%
£5,000,000 - £9,999,999	440	7%	362	7%	175	8%	114	7%	73	6%
£10,000,000 - £49,999,999	842	13%	648	13%	287	13%	233	14%	128	10%
£50,000,000 or more	2,098	32%	1,247	24%	635	29%	378	22%	234	19%
Total	6,533	100%	5,145	100%	2,183	100%	1,713	100%	1,249	100%

Q9. How often do you and your organisation access company information and data via our services?

		All responses		Duplicates removed*		High frequency		Moderate frequency		Low frequency	
		n	%	n	%	n	%	n	%	n	%
Several times a day	(Around 10 times per week)	2640	38%	1,831	33%	1831	78%	-	0%	-	0%
Every day	(5 times per week)	719	10%	525	10%	525	22%	-	0%	-	0%
Almost every day	(3-4 times per week)	836	12%	657	12%	-	0%	657	36%	-	0%
A couple of times a week	(2 times per week)	919	13%	788	14%	-	0%	788	43%	-	0%
About once a week	(1 time per week)	411	6%	374	7%	-	0%	374	21%	-	0%
A few times a month	(2-3 times per month)	751	11%	680	12%	-	0%	-	0%	680	52%
Once a month	(1 time per month)	187	3%	173	3%	-	0%	-	0%	173	13%
Less than once a month	(1-6 times per year)	372	5%	353	6%	-	0%	-	0%	353	27%
Not sure		163	2%	110	2%	-	0%	-	0%	110	8%
Total		6,998	100%	5,491	100%	2,356	100%	1,819	100%	1,316	100%

RESEARCH USERS

Q10. Which of the following best describes your use of the company search services?

	All responses		Duplicates removed*		High frequency		Moderate frequency		Low frequency	
	n	%	n	%	n	%	n	%	n	%
For academic research	121	11%	139	14%	15	15%	34	10%	70	12%
For journalism/media research	68	6%	47	5%	10	10%	19	5%	28	5%
For public policy research and/or advocacy	93	9%	60	6%	12	12%	20	6%	48	8%
Business intelligence research (e.g. market/competitor)	259	24%	264	26%	23	22%	86	25%	143	25%
Customer/Supplier research	287	26%	295	29%	27	26%	127	36%	159	28%
Due diligence research	139	13%	145	14%	12	12%	42	12%	76	13%
Other (please write in below)	123	11%	69	7%	4	4%	20	6%	45	8%
Total	1,090	100%	1,019	100%	103	100%	348	100%	569	100%

Q11. Please select the region where you are based.

	All responses		Duplicates removed*		High frequency		Moderate frequency		Low frequency	
	n	%	n	%	n	%	n	%	n	%
East Midlands	69	7%	67	7%	7	7%	26	8%	34	6%
East of England	68	6%	65	7%	3	3%	27	8%	35	6%
Greater London	226	21%	210	21%	23	24%	69	20%	118	21%
North East	51	5%	47	5%	6	6%	11	3%	30	5%
North West	94	9%	92	9%	7	7%	33	10%	52	9%
Northern Ireland	16	2%	12	1%	0	0%	8	2%	4	1%
Scotland	93	9%	87	9%	7	7%	21	6%	59	11%
South East	176	17%	163	17%	19	20%	56	17%	88	16%
South West	89	8%	85	9%	8	8%	28	8%	49	9%
Wales	40	4%	37	4%	3	3%	14	4%	20	4%
West Midlands	60	6%	55	6%	7	7%	20	6%	28	5%
Yorkshire and the Humber	60	6%	53	5%	3	3%	24	7%	26	5%
Isle of Man and Channel Islands	11	1%	11	1%	3	3%	2	1%	6	1%
Total	1,053	100%	984	100%	96	100%	339	100%	549	100%

Q12. What is the main activity of your organisation?

	All responses		Duplicates removed*		High frequency		Moderate frequency		Low frequency	
	n	%	n	%	n	%	n	%	n	%
Retail	76	7%	75	7%	4	4%	26	7%	47	9%
Information & communication	129	12%	128	13%	16	16%	58	17%	57	10%
Finance & insurance	137	13%	110	11%	23	23%	36	10%	43	8%
Property	75	7%	72	7%	6	6%	28	8%	38	7%
Professional, scientific & technical	149	14%	137	13%	9	9%	52	15%	85	15%
Business administration & support services	102	9%	98	10%	12	12%	36	10%	54	10%
Public administration & defence	33	3%	22	2%	2	2%	1	0%	7	1%
Education	96	9%	94	9%	10	10%	22	6%	56	10%
Health and social work activities (includes charities)	27	2%	27	3%	2	2%	10	3%	17	3%
Arts, entertainment, recreation	49	4%	49	5%	3	3%	13	4%	32	6%
Other services (includes business/employers and other membership organisations, trade unions, political and advocacy organisations - please writ	217	20%	207	20%	15	15%	66	19%	116	21%
Total	1,090	100%	1,019	100%	102	100%	348	100%	552	100%

Q13. How often do you access company information and data via our services?

		All responses		Duplicates removed*		High frequency		Moderate frequency		Low frequency	
		n	%	n	%	n	%	n	%	n	%
Several times a day	(Around 10 times per week)	70	6%	61	6%	61	60%	-	0%	-	0%
Every day	(5 times per week)	44	4%	41	4%	41	40%	-	0%	-	0%
Almost every day	(3-4 times per week)	91	8%	87	9%	-	0%	87	25%	-	0%
A couple of times a week	(2 times per week)	162	15%	158	16%	-	0%	158	45%	-	0%
About once a week	(1 time per week)	106	10%	103	10%	-	0%	103	30%	-	0%
A few times a month	(2-3 times per month)	202	19%	194	19%	-	0%	-	0%	194	34%
Once a month	(1 time per month)	89	8%	89	9%	-	0%	-	0%	89	16%
Less than once a month	(1-6 times per year)	168	15%	166	16%	-	0%	-	0%	166	29%
Not sure		158	14%	120	12%	-	0%	-	0%	120	21%
Total		1,090	100%	1,019	100%	102	100%	348	100%	569	100%

GENERAL PUBLIC USERS

Q14. What is the main reason for using our company search services today? Select all that apply.

	All responses		Duplicates removed*		High frequency		Moderate frequency		Low frequency	
	n	%	n	%	n	%	n	%	n	%
To find basic information about a company (e.g. registered address, date of incorporation)	1088	30%	1,055	30%	29	26%	257	27%	768	31%
To find information about the directors of a company (current and/or past)	930	25%	908	25%	28	25%	251	26%	629	25%
To look at a company's annual accounts and financial information	861	23%	835	23%	28	25%	241	25%	566	23%
To find the previous names of a company	366	10%	352	10%	12	11%	108	11%	232	9%
To find out the type of information that Companies House provides	257	7%	250	7%	9	8%	58	6%	183	7%
Other (please write in below)	178	5%	172	5%	6	5%	38	4%	128	5%
Total	3,680	100%	3,572	100%	112	100%	953	100%	2,506	100%

Q15. Where do you live?

	All responses		Duplicates removed*		High frequency		Moderate frequency		Low frequency	
	n	%	n	%	n	%	n	%	n	%
East Midlands	100	7%	98	7%	2	5%	30	9%	66	6%
East of England	104	7%	100	7%	2	5%	16	5%	82	8%
Greater London	270	18%	258	18%	10	24%	63	18%	185	17%
North East	41	3%	41	3%	0	0%	10	3%	31	3%
North West	157	10%	155	11%	3	7%	42	12%	110	10%
Northern Ireland	20	1%	16	1%	0	0%	3	1%	13	1%
Scotland	133	9%	128	9%	6	14%	30	9%	91	9%
South East	274	18%	266	18%	10	24%	70	20%	186	18%
South West	153	10%	147	10%	2	5%	31	9%	114	11%
Wales	50	3%	49	3%	1	2%	11	3%	37	3%
West Midlands	100	7%	94	6%	2	5%	17	5%	75	7%
Yorkshire and the Humber	97	6%	92	6%	4	10%	24	7%	64	6%
Isle of Man and Channel Islands	7	0%	6	0%	0	0%	-	0%	6	1%
Total	1,506	100%	1,450	100%	42	100%	347	100%	1,060	100%

Q16. Which of the following best describes your current employment status?

	All responses		Duplicates removed*		High frequency		Moderate frequency		Low frequency	
	n	%	n	%	n	%	n	%	n	%
Self-employed	249	16%	245	17%	13	30%	62	18%	170	16%
Employed full-time (30 hours per week or more)	517	34%	475	32%	13	30%	125	36%	337	31%
Employed part-time (8 - 29 hours per week)	86	6%	82	6%	2	5%	20	6%	60	6%
Employed working less than 8 hours a week	7	0%	7	0%	-	0%	3	1%	4	0%
Student	70	5%	70	5%	2	5%	16	5%	52	5%
Unemployed - seeking work	64	4%	64	4%	2	5%	24	7%	38	4%
Unemployed - not seeking work/other	23	2%	23	2%	2	5%	4	1%	17	2%
Looking after the home/children full-time	16	1%	16	1%	-	0%	3	1%	13	1%
Retired	404	26%	404	27%	3	7%	80	23%	321	30%
Unable to work due to temporary sickness	4	0%	4	0%	-	0%	1	0%	3	0%
Unable to work due to long-term sickness or disability	26	2%	25	2%	2	5%	6	2%	17	2%
Prefer not to say	63	4%	58	4%	4	9%	4	1%	50	5%
Other (please specify)	-	0%	-	0%	-	0%	-	0%	-	0%
Total	1,529	100%	1,473	100%	43	100%	348	100%	1,082	100%

Q17. Are you the main income earner (including pension income) in your household?

	All responses		Duplicates removed*		High frequency		Moderate frequency		Low frequency	
	n	%	n	%	n	%	n	%	n	%
Yes	1,029	67%	997	68%	31	76%	250	72%	716	66%
No	404	26%	387	26%	8	20%	89	26%	290	27%
No income earners	92	6%	86	6%	2	5%	10	3%	74	7%
Total	1,525	100%	1,470	100%	41	100%	349	100%	1,080	100%

Q18. What is the main income earner's occupation (if the main income earner is retired, please select occupation before retirement)?

	All responses		Duplicates removed*		High frequency		Moderate frequency		Low frequency	
	n	%	n	%	n	%	n	%	n	%
Higher managerial, administrative or professional	582	41%	569	41%	23	59%	154	45%	392	39%
Intermediate managerial, administrative or professional	439	31%	416	30%	3	8%	96	28%	317	32%
Supervisory or clerical and junior managerial, administrative or professional	205	14%	195	14%	5	13%	42	12%	148	15%
Skilled manual worker	113	8%	112	8%	4	10%	20	6%	88	9%
Semi or unskilled manual worker	49	3%	48	3%	2	5%	15	4%	31	3%
Casual worker, dependent on state pension only, or dependant on state welfare	40	3%	40	3%	2	5%	12	4%	26	3%
Total	1,428	100%	1,380	100%	39	100%	339	100%	1,002	100%

Q19. Please can you indicate your age?

	All responses		Duplicates removed*		High frequency		Moderate frequency		Low frequency	
	n	%	n	%	n	%	n	%	n	%
Under 16	12	1%	12	1%	0	0%	3	1%	9	1%
16 - 24	96	6%	93	6%	3	7%	22	6%	68	6%
25 - 34	193	13%	182	12%	11	26%	48	14%	123	11%
35 - 44	209	14%	198	13%	3	7%	58	17%	137	13%
45 - 54	256	17%	240	16%	6	14%	59	17%	175	16%
55 - 64	364	24%	352	24%	15	36%	82	23%	255	24%
65 - 74	304	20%	303	21%	3	7%	67	19%	233	22%
75+	91	6%	90	6%	1	2%	11	3%	78	7%
Total	1,525	100%	1,470	100%	42	100%	350	100%	1,078	100%

Q20. Including yourself, how many people are there in your household in each age group?

	Under 5 years		5 - 15 years		16 - 64 years		65+ years	
	n	%	n	%	n	%	n	%
None	1,149	84%	1059	81%	344	21%	761	59%
1	81	6%	119	9%	505	30%	267	21%
2	42	3%	76	6%	506	30%	229	18%
3	23	2%	23	2%	158	9%	10	1%
4	20	1%	13	1%	105	6%	6	0%
5	22	2%	10	1%	29	2%	8	1%
5+	24	2%	8	1%	24	1%	11	1%
Total	1,361	100%	1308	100%	1671	100%	1292	100%

*Note: * Duplicates removed*

Q21. Please can you indicate your gender?

	All responses		Duplicates removed*		High frequency		Moderate frequency		Low frequency	
	n	%	n	%	n	%	n	%	n	%
Female	390	25%	368	25%	5	11%	63	18%	300	28%
Male	1021	66%	1,000	68%	31	70%	266	76%	703	65%
Prefer not to say	117	8%	105	7%	7	16%	18	5%	80	7%
Other (please specify)	8	1%	8	1%	1	2%	2	1%	5	0%
Total	1,536	100%	1,481	100%	44	100%	349	100%	1,088	100%

Q22. Which of the following best describes your ethnic group? Please choose one option that best describes your ethnic group or background.

	All responses		Duplicates removed*		High frequency		Moderate frequency		Low frequency	
	n	%	n	%	n	%			n	%
White British	1,151	71%	1,116	72%	28	64%	288	80%	800	70%
White Irish	34	2%	32	2%	1	2%	7	2%	24	2%
Any other White background (please specify)	75	5%	73	5%	1	2%	10	3%	62	5%
Mixed - White and Black Caribbean	5	0%	4	0%	-	0%	-	0%	4	0%
Mixed - White and Black African	6	0%	6	0%	2	5%	-	0%	4	0%
Mixed - White and Asian	8	0%	7	0%	-	0%	4	1%	3	0%
Any other Mixed background (please specify)	8	0%	8	1%	-	0%	3	1%	5	0%
Indian	39	2%	39	3%	-	0%	9	3%	30	3%
Pakistani	11	1%	11	1%	1	2%	-	0%	10	1%
Bangladeshi	3	0%	3	0%	1	2%	-	0%	2	0%
Any other Asian Background (please specify)	8	0%	8	1%	-	0%	1	0%	7	1%
Black Caribbean	10	1%	9	1%	1	2%	1	0%	7	1%
Black African	15	1%	15	1%	-	0%	2	1%	13	1%
Any other Black background (please specify)	3	0%	3	0%	-	0%	-	0%	3	0%
Chinese	8	0%	8	1%	1	2%	1	0%	6	1%
Prefer not to say	132	8%	119	8%	5	11%	19	5%	95	8%
Other (please specify)	95	6%	94	6%	3	7%	15	4%	76	7%
Total	1,611	100%	1,555	100%	44	100%	360	100%	1,151	100%

Q23. How often do you access company information and data via our services?

		All responses		Duplicates removed*		High frequency		Moderate frequency		Low frequency	
		n	%	n	%	n	%			n	%
Several times a day	(Around 10 times per week)	25	2%	21	1%	21	49%	-	0%	-	0%
Every day	(5 times per week)	23	1%	22	1%	22	51%	-	0%	-	0%
Almost every day	(3-4 times per week)	53	3%	51	3%	-	0%	51	15%	-	0%
A couple of times a week	(2 times per week)	176	11%	170	11%	-	0%	170	49%	-	0%
About once a week	(1 time per week)	133	9%	129	9%	-	0%	129	37%	-	0%
A few times a month	(2-3 times per month)	337	22%	329	22%	-	0%	-	0%	329	30%
Once a month	(1 time per month)	157	10%	156	11%	-	0%	-	0%	156	14%
Less than once a month	(1-6 times per year)	462	30%	451	30%	-	0%	-	0%	451	41%
Not sure		174	11%	155	10%	-	0%	-	0%	155	14%
Total		1,540	100%	1,484	100%	43	100%	350	100%	1,091	100%

Annex 5 Summary statistics

Valuing the User benefits of Companies House Data
Final Report
July 2019

ANNEX 5 - Summary Statistics

SCREENING

Q1.Do you use the company search services provided by Companies House?

	All users	%	Intermediate users	%	Public good users	%
Yes - I use the company search services	608	100%	85	100%	16	100%
No - I only use the WebFiling and/or company registration services	0	0%	0	0%	0	0%
No - I do not use any services provided by Companies House	0	0%	0	0%	0	0%
Total	608		85		16	

Q2. Which of the following best describes your use of the company search services?

	All users	%	Intermediate users	%	Public good users	%
I use it as part of my job / on behalf of the organisation I work for	515	85%	74	87%	15	94%
I use it for research purposes	93	15%	11	13%	1	6%
I use it as a member of the public	0	0%	0	0%	0	0%
Total	608		85		16	

Q3. What do you use the company search services for?

	All users	%	Intermediate users	%	Public good users	%
Academic research	2	2%	1	9%	0	0%
Journalism/media research	4	4%	1	9%	0	0%
Public policy research and/or advocacy	1	1%	1	9%	0	0%
Business intelligence research (e.g. market/competitors	3	3%	2	18%	0	0%
Customer/supplier research	31	33%	4	36%	1	100%
Due diligence research (incl. FCA compliance)	21	23%	0	0%	0	0%
Other (please specify)	31	33%	2	18%	0	0%
Total	93		11		1	

Q4. Which of the following best describes your job title or role?

	All users	%	Intermediate users	%	Public good users	%
Company director	181	30%	17	20%	0	0%
Manager	47	8%	5	6%	1	6%
Professional occupation (e.g. accountant, academic, research, public services)	266	44%	55	65%	10	63%
Technical occupation (e.g. science, engineering, technology, health services)	14	2%	0	0%	1	6%
Administrative or secretarial	43	7%	2	2%	2	13%
Sales or customer services	13	2%	2	2%	0	0%
Other (please specify)	44	7%	4	5%	2	13%
Total	608	100%	85	100%	16	100%

Q5. Within your organisation are you the main user of the company search services - i.e. the person who uses the search services most often?

	All users	%	Intermediate users	%	Public good users	%
Yes	474	78%	64	75%	2	13%
No	85	14%	16	19%	8	50%
Don't know	49	8%	5	6%	6	38%
Total	608		85		16	

Q6. What is the job title or role of the main user of the company search services within your organisation?

	All users	%	Intermediate users	%	Public good users	%
Company director	12	14%	2	13%	0	0%
Manager	9	11%	1	6%	2	25%
Professional occupation (e.g. accountant, academic, research, public services)	39	46%	11	69%	2	25%
Technical occupation (e.g. science, engineering, technology, health services)	1	1%	0	0%	1	13%
Administrative or secretarial	12	14%	1	6%	1	13%
Sales or customer service	1	1%	0	0%	0	0%
Other (please specify)	10	12%	1	6%	2	25%
Total	84		16		8	

Q7. Where is your organisation located? If your organisation has more than one site in the UK, please answer for the site where you are based.

	All users	%	Intermediate users	%	Public good users	%
East Midlands	43	7%	3	4%	1	6%
East of England	39	6%	9	11%	0	0%
Greater London	129	21%	15	18%	2	13%
North East	18	3%	2	2%	1	6%
North West	55	9%	12	14%	1	6%
Northern Ireland	3	0%	1	1%	0	0%
Scotland	30	5%	4	5%	0	0%
South East	132	22%	17	20%	6	38%
South West	64	11%	14	16%	1	6%
Wales	20	3%	2	2%	2	13%
West Midlands	42	7%	5	6%	1	6%
Yorshire and the Humber	33	5%	1	1%	1	6%
Isle of Man and Channel Islands	0	0%	0	0%	0	0%
Total	608		85		16	

Q8. Which of the following best describes your organisation?

	All users	%	Intermediate users	%	Public good users	%
Limited company	435	72%	59	69%	0	0%
Partnership	51	8%	13	15%	0	0%
Sole trader	54	9%	11	13%	0	0%
Public corporation	18	3%	2	2%	0	0%
Central Government	5	1%	0	0%	5	31%
Local Authority	11	2%	0	0%	11	69%
Non-profit organisation or mutual (membership) organisation	34	6%	0	0%	0	0%
Total	608		85		16	

Q9. What is the main activity of your organisation?

	All users	%	Intermediate users	%	Public good users	%
Agriculture, forestry & fishing	9	1%	0	0%	0	0%
Manufacturing	22	4%	1	1%	0	0%
Construction	18	3%	0	0%	0	0%
Motor trades	5	1%	1	1%	0	0%
Wholesale	9	1%	1	1%	0	0%
Retail	11	2%	0	0%	0	0%
Transport & storage (warehousing)	6	1%	0	0%	0	0%
Accommodation & food services	5	1%	1	1%	0	0%
Information & communication	39	6%	9	11%	0	0%
Finance & insurance	119	20%	18	21%	1	6%
Property	36	6%	3	4%	1	6%
Professional, scientific & technical	157	26%	21	25%	1	6%
Business administration & support services	100	16%	27	32%	3	19%
Public administration & defence	15	2%	1	1%	10	63%
Education	15	2%	0	0%	0	0%
Health	11	2%	0	0%	0	0%
Arts, entertainment, recreation & other services	31	5%	2	2%	0	0%
Total	608		85		16	

Q10. How many people does your organisation employ?

	All users	%	Intermediate users	%	Public good users	%
0 - 4	262	43%	42	49%	0	0%
5 - 9	78	13%	9	11%	1	13%
10 - 19	56	9%	11	13%	0	9%
20 - 49	61	10%	8	9%	3	10%
50 - 99	30	5%	3	4%	0	5%
100 - 249	33	5%	3	4%	0	5%
250+	88	14%	9	11%	12	14%
Total	608		85		16	

Q11. What is your organisation's annual turnover?

	All users	%	Intermediate users	%	Public good users	%
Up to £49,999	123	20%	19	22%	1	6%
£50,000 - £99,999	79	13%	12	14%	0	0%
£100,000 - £249,999	70	12%	11	13%	0	0%
£250,000 - £499,999	44	7%	6	7%	0	0%
£500,000 - £999,999	39	6%	10	12%	0	0%
£1,000,000 - £1,999,999	49	8.1%	8	9%	1	6%
£2,000,000 - £4,999,999	46	7.6%	4	5%	2	13%
£5,000,000 - £9,999,999	26	4%	3	4%	0	0%
£10,000,000 - £49,999,999	47	8%	1	1%	1	6%
£50,000,000 or more	85	14%	11	13%	11	69%
Total	608		85		16	

SECTION B: USE OF COMPANY SEARCH SERVICES

Q12. Which of the following company search and data services has your organisation used in the past 12 months? Please select all that apply.

	All users	%	Intermediate users	%	Public good users	%
Search the Register / Companies House Service (Beta)	535	44%	76	44%	11	37%
Companies House API	66	5%	13	5%	2	7%
WebCHeck	337	28%	53	28%	9	30%
Companies House Direct	214	17%	38	17%	5	17%
Free Company Bulk Data Products	14	1%	6	1%	2	7%
XML Gateway	38	3%	11	3%	0	0%
Not used search and/or data services in the past 12 month	3	0%	1	0%	0	0%
Don't know	16	1%	1	1%	1	3%
Total	1223		199		30	

Q13. When was the last time your organisation used the company search and data services?

	All users	%	Intermediate users	%	Public good users	%
Between 1 - 2 years ago	2	67%	1	100%	0	0%
Between 2 - 3 years ago	0	0%	0	0%	0	0%
Between 3 - 4 years ago	0	0%	0	0%	0	0%
Between 4 - 5 years ago	0	0%	0	0%	0	0%
More than 5 years ago	0	0%	0	0%	0	0%
Don't know	1	33%	0	0%	0	0%
Total	3	0%	1	0%	0	0%

Q14. Which company search or data service does your organisation use most often?

	All users	%	Intermediate users	%	Public good users	%
Search the Register / Companies House Service (Beta)	425	70%	54	64%	9	56%
Companies House API	15	2%	3	4%	1	6%
WebCHeck	88	14%	16	19%	3	19%
Companies House Direct	50	8%	10	12%	0	0%
Free Company Bulk Data Products	2	0%	0	0%	1	6%
XML Gateway	4	1%	1	1%	0	0%
Don't know	24	4%	1	1%	2	13%
Total	608		85		16	

Q15. How often do you and your organisation access company information and data via our services?

	All users	%	Intermediate users	%	Public good users	%
Several times a day	128	21%	31	36%	8	50%
Every day	47	8%	6	7%	2	13%
Almost every day	77	13%	14	16%	2	13%
A couple of times a week	95	16%	11	13%	0	0%
About once a week	71	12%	6	7%	1	6%
A few times a month	87	14%	9	11%	1	6%
Once a month	28	5%	3	4%	0	0%
Less than once a month	65	11%	4	5%	0	0%
Not sure	10	2%	1	1%	2	13%
Total	608		85		16	

Q16. How much time - on average - is each use of the company search or data services by you / your organisation?

	All users	%	Intermediate users	%	Public good users	%
Less than a minute	10	2%	2	2%	0	0%
Between 1 to 2 minutes	92	15%	16	19%	3	19%
Between 2 to 5 minutes	204	34%	28	33%	5	31%
Between 5 to 10 minutes	194	32%	21	25%	1	6%
Between 10 to 20 minutes	79	13%	16	19%	6	38%
Between 20 to 30 minutes	27	4%	2	2%	1	6%
More than 30 minutes (Please specify time in minutes)	2	0%	0	0%	0	0%
Total	608		85		16	

Q17. And, each time your organisation accesses company information and data, is it...?

	All users	%	Intermediate users	%	Public good users	%
Usually to find information for a single company	324	53%	47	55%	324	53%
Usually to find information for several companies at the same time	46	8%	12	14%	46	8%
Sometimes to find information for a single company, sometimes for several companies	238	39%	26	31%	238	39%
Total	608		85		608	

Q18. In general, how important to your organisation are the different pieces of company information and data? (ALL USERS)

	Very important		Quite important		Not very important		Do not use		Don't know	
	All users	%	All users	%	All users	%	All users	%	All users	%
Basic information (registered address, company number, date of incorporation)	444	14%	134	7%	24	2%	2	0%	4	5%
Nature of business (SIC - standard industrial classification of economic activites)	143	4%	208	10%	200	20%	53	13%	4	5%
Date of last accounts/confirmation statement filed	311	10%	210	10%	61	6%	20	5%	6	8%
Date of next accounts/confirmation statement due	250	8%	184	9%	134	14%	33	8%	7	9%
Company filing documents (view/download accounts, annual return, etc.)	420	13%	145	7%	25	3%	12	3%	6	8%
Mortgage charge data	139	4%	193	10%	143	14%	122	30%	11	14%
Persons with significant control (control and ownership of a company)	333	10%	212	10%	47	5%	11	3%	5	6%
Current and resigned officers (company directors)	394	12%	172	8%	27	3%	10	2%	5	6%
Disquilified directors	240	8%	159	8%	119	12%	74	18%	16	20%
Previous company names	195	6%	238	12%	141	14%	26	6%	8	10%
Insolvency information	312	10%	175	9%	67	7%	46	11%	8	10%
Total	3181		2030		988		409		80	

Q18. In general, how important to your organisation are the different pieces of company information and data? (Intermediate users)

	Very important		Quite important		Not very important		Do not use		Don't know	
	Intermediate use	%	Intermediate users	%	Intermediate users	%	termediate use	%	termediate use	%
Basic information (registered address, company number, date of incorporation)	67	13%	17	7%	0	0%	1	2%	0	0%
Nature of business (SIC - standard industrial classification of economic activites)	24	5%	25	11%	27	20%	9	17%	0	0%
Date of last accounts/confirmation statement filed	54	11%	24	10%	6	4%	1	2%	0	0%
Date of next accounts/confirmation statement due	54	11%	14	6%	13	10%	3	6%	1	33%
Company filing documents (view/download accounts, annual return, etc.)	64	13%	17	7%	4	3%	0	0%	0	0%
Mortgage charge data	21	4%	28	12%	20	15%	15	29%	1	33%
Persons with significant control (control and ownership of a company)	50	10%	21	9%	11	8%	3	6%	0	0%
Current and resigned officers (company directors)	65	13%	14	6%	4	3%	2	4%	0	0%
Disquilified directors	38	7%	17	7%	19	14%	10	19%	1	33%
Previous company names	31	6%	34	14%	17	13%	3	6%	0	0%
Insolvency information	41	8%	25	11%	14	10%	5	10%	0	0%
Total	509		236		135		52		3	

Q18. In general, how important to your organisation are the different pieces of company information and data? (Public good users)

	Very important		Quite important		Not very important		Do not use		Don't know	
	Public good user	%	Public good users	%	Public good users	%	ublic good user	%	ublic good user	%
Basic information (registered address, company number, date of incorporation)	14	17%	2	4%	0	0%	0	0%	0	0%
Nature of business (SIC - standard industrial classification of economic activites)	5	6%	7	14%	2	11%	2	11%	0	0%
Date of last accounts/confirmation statement filed	4	5%	6	12%	2	11%	3	17%	1	14%
Date of next accounts/confirmation statement due	1	1%	5	10%	6	32%	3	17%	1	14%
Company filing documents (view/download accounts, annual return, etc.)	5	6%	7	14%	1	5%	3	17%	0	0%
Mortgage charge data	3	4%	4	8%	4	21%	4	22%	1	14%
Persons with significant control (control and ownership of a company)	10	12%	4	8%	1	5%	1	6%	0	0%
Current and resigned officers (company directors)	14	17%	2	4%	0	0%	0	0%	0	0%
Disquilified directors	8	10%	3	6%	2	11%	1	6%	2	29%
Previous company names	8	10%	5	10%	1	5%	1	6%	1	14%
Insolvency information	10	12%	5	10%	0	0%	0	0%	1	14%
Total	82		50		19		18		7	

Q19. How does your organisation use the company information and data? Please select all that apply.

	All users	%	Intermediate users	%	Public good users	%
To confirm basic information about a company	521	21%	69	22%	13	25%
Part of detailed research into a company (incl. directors and persons with significant control)	379	15%	52	16%	11	22%
To check information provided by a company is consistent with Companies House records	392	16%	60	19%	10	20%
Part of carrying out due diligence work about a company	431	17%	56	18%	5	10%
To inform law enforcement investigation	20	1%	2	1%	5	10%
To inform court proceedings (e.g. verification of details/evidence)	35	1%	7	2%	3	6%
To check risk/creditworthiness of a supplier	168	7%	14	4%	4	8%
To check risk/creditworthiness of a customer	230	9%	17	5%	0	0%
To find out information about competitor companies	147	6%	38	12%	0	0%
As part of the products/services we sell to our customers	89	4%	1	0%	0	0%
For marketing/sales purposes	35	1%	0	0%	0	0%
Other (please specify)	21	1%	0	0%	0	0%
Total	2468		316		51	

Q20. What is the main use of the company information and data?

	All users	%	Intermediate users	%	Public good users	%
To confirm basic information about a company	173	28%	22	26%	5	31%
Part of detailed research into a company (incl. directors and persons with significant control)	126	21%	21	25%	6	38%
To check information provided by a company is consistent with Companies House records	56	9%	12	14%	0	0%
Part of carrying out due diligence work about a company	133	22%	11	13%	2	13%
To inform law enforcement investigation	4	1%	0	0%	2	13%
To inform court proceedings (e.g. verification of details/evidence)	10	2%	0	0%	0	0%
To check risk/creditworthiness of a supplier	45	7%	1	1%	1	6%
To check risk/creditworthiness of a customer	18	3%	2	2%	0	0%
To find out information about competitor companies	23	4%	14	16%	0	0%
As part of the products/services we sell to our customers	11	2%	0	0%	0	0%
For marketing/sales purposes	8	1%	2	2%	0	0%
Other (please specify)	1	0%	0	0%	0	0%
Total	608		85		16	

Q21. How confident are you that the company information and data Companies House provides are accurate and reliable?

	All users	%	Intermediate users	%	Public good users	%
Not at all confident	3	0%	1	0%	0	0%
Not so confident	10	2%	2	2%	0	0%
Somewhat confident	80	13%	8	13%	3	19%
Very confident	334	55%	51	55%	9	56%
Extremely confident	181	30%	23	30%	4	25%
Total	608		85		16	

Q28. If the company search services provided by Companies House were not available, would your organisation do any of the following?

	All users	%	Intermediate users	%	Public good users	%
Purchase company information from a data services provider	178	12%	32	17%	4	10%
Use free of charge online resources to research companies (e.g. trade directories, review sites	379	26%	46	24%	10	26%
General internet search (e.g. Google)	414	28%	48	25%	11	28%
Obtain references and background information from partner and associate organisations	142	10%	14	7%	3	8%
Conduct own due diligence research	278	19%	39	20%	8	21%
Nothing	8	1%	2	1%	0	0%
Other (please specify)	22	2%	0	0%	1	3%
Don't know	38	3%	11	6%	2	5%
Total	1459		192		39	

Q29. And, in addition to using the company search services provided by Companies House, does your organisation currently do any of the following?

	All users	%	Intermediate users	%	Public good users	%
Purchase company information from a data services provider	107	9%	14	9%	2	6%
Use free of charge online resources to research companies (e.g. trade directories, review sites	252	20%	27	16%	8	24%
General internet search (e.g. Google)	434	35%	58	35%	8	24%
Obtain references and background information from partner and associate organisations	130	10%	13	8%	3	9%
Conduct own due diligence research	245	20%	41	25%	6	18%
Nothing	47	4%	0	0%	0	0%
Other (please specify)	19	2%	8	5%	2	6%
Don't know	22	2%	3	2%	4	12%
Total	1256		164		33	

Q30. Which data service(s) does your organisation purchase or subscribe to?

	All users	%	Intermediate users	%	Public good users	%
Callcredit	2	1%	0	0%	0	0%
CreditHQ	0	0%	0	0%	0	0%
Creditsafe	41	24%	6	24%	0	0%
Company Check	10	6%	2	8%	0	0%
DueDil	10	6%	0	0%	0	0%
Dun & Bradstreet	28	16%	3	12%	0	0%
Endole	2	1%	3	12%	1	33%
Equifax	8	5%	1	4%	0	0%
Experian	36	21%	1	4%	0	0%
FAME - Bureau van Dijk (BvD)	9	5%	4	16%	1	33%
First Report	2	1%	3	12%	1	33%
Gradon	1	1%	0	0%	0	0%
Jordans	9	5%	0	0%	0	0%
Other (please specify)	16	9%	2	8%	0	0%
Total	174		25		3	

Q31. How much - approximately - does your organisation spend on purchasing company information from other sources?

	All users	
	Average £ per month	Average £ per yyear
Callcredit	-	150
CreditHQ	-	-
Creditsafe	95	1378
Company Check	10	100
DueDil	19	640
Dun & Bradstreet	88	2475
Endole	15	-
Equifax	23	770
Experian	91	1038
FAME - Bureau van Dijk (BvD)	100	7429
First Report	54	300
Gradon	-	1000
Jordans	31	860
Total	53.00	1467.00

SECTION C: BENEFITS OF COMPANIES HOUSE DATA

Q32. Which option do you prefer? [CHOICE TASK]

SECTION D: FOLLOW-UP QUESTIONS

Q33. Considering the information and instructions provided, how easy or difficult was it to answer the choice questions?

	All users	%	Intermediate users	%	Public good users	%
Very easy	159	26%	27	32%	2	13%
Fairly easy	245	40%	37	44%	6	38%
Neither easy nor difficult	100	16%	9	11%	4	25%
Fairly difficult	89	15%	10	12%	3	19%
Very difficult	15	2%	2	2%	1	6%
Total	608		85		16	

Q34. Which of these statements best describes how you made your choices between the different options?

	All users	%	Intermediate users	%	Public good users	%
It was hard to decide which option your organisation would prefer	48	45%	7	58%	2	50%
Not information was provided about the alternative options to make a choice	18	17%	3	25%	1	25%
The instructions for the choice questions were not clear	19	18%	1	8%	1	25%
Other (please specify)	21	20%	1	8%	0	0%
Total	106		12		4	

Q35. In making your choices, what was...? (All users)

	Most important to your organisation		Second most important		Third most important		Least important to your organisation	
	All users	%	All users	%	All users	%	All users	%
Company information	308	51%	177	29%	69	11%	25	4%
Financial and credit information	116	19%	175	29%	138	23%	89	15%
Historic information	12	2%	110	18%	220	36%	123	20%
Cost	142	23%	102	17%	145	24%	117	19%
The provider	30	5%	44	7%	36	6%	254	42%
Total	608		608		608		608	

Q35. In making your choices, what was...? (Intermediate users)

	Most important to your organisation		Second most important		Third most important		Least important to your organisation	
	Intermediate use	%	Intermediate users	%	Intermediate users	%	termediate use	%
Company information	56	66%	14	16%	7	8%	3	4%
Financial and credit information	11	13%	30	35%	13	15%	16	19%
Historic information	3	4%	26	31%	28	33%	11	13%
Cost	15	18%	9	11%	27	32%	18	21%
The provider	0	0%	6	7%	10	12%	37	44%
Total	85		85		85		85	

Q35. In making your choices, what was...? (Public good users)

	Most important to your organisation		Second most important		Third most important		Least important to your organisation	
	Public good user	%	Public good users	%	Public good users	%	ublic good user	%
Company information	11	69%	3	19%	1	6%	1	6%
Financial and credit information	1	6%	4	25%	4	25%	2	13%
Historic information	2	13%	2	13%	5	31%	5	31%
Cost	1	6%	5	31%	4	25%	6	38%
The provider	1	6%	2	13%	2	13%	2	13%
Total	16		16		16		16	

Q36. Which of these statements best describes how you made your choices between the different options?

	All users	%	Intermediate users	%	Public good users	%
I chose options with the least cost to my organisation	91	15%	9	11%	3	19%
I chose options that offered the best value relative to cost	172	28%	25	29%	3	19%
I chose options based on the types of information and data provided irrespective of cost	43	7%	8	9%	2	13%
I chose options that provided the information and data my organisation needs	198	33%	32	38%	6	38%
I chose options that had an acceptable cost to my organisation	91	15%	11	13%	2	13%
Other (please specify)	13	2%	0	0%	0	0%
Total	608		85		16	

Q37. You selected the Companies House option (Option C) in most or all of your choices.
What was the main reason for this?

	All users	%	Intermediate users	%	Public good users	%
Object to paying for company information and data	66	17%	9	20%	2	22%
The other options did not provide the information and data my organisation needs	13	3%	2	4%	0	0%
The other options were too expensive for my organisation	50	13%	3	7%	1	11%
The Companies House options provided everything my organisation needs	122	31%	16	36%	5	56%
The other options were not credible	3	1%	0	0%	0	0%
Do not trust commercial data providers	13	3%	2	4%	0	0%
Companies House is transparent and reliable	81	21%	7	16%	1	11%
Would only pay for data and information on case-by-case basis, not an annual subscription	29	7%	0	0%	0	0%
The information provided was not clear enough to make a different choice	4	1%	0	0%	0	0%
Other (please specify)	8	2%	6	13%	0	0%
Total	389		45		9	

Q38. Thinking about how you use the company information and data provided by Companies House, what is the value or benefit to your organisation? Please select all that apply.

	All users	%	Intermediate users	%	Public good users	%
Making better decisions about suppliers and/or customers	295	28%	25	14%	5	31%
Giving assurance about suppliers and/or customers (e.g. creditworthiness)	186	18%	14	8%	2	13%
Time savings to my organisation from the information being readily available	303	29%	38	21%	5	31%
Reduced operating cost to my organisation	126	12%	18	10%	1	6%
Information/data that we include in the products and services we sell to our customers	86	8%	85	47%	1	6%
Other (please specify)	52	5%	2	1%	2	13%
Total	1048		182		16	

Q39. What would you say is the main benefit or value to your organisation?

	All users	%	Intermediate users	%	Public good users	%
Making better decisions about suppliers and/or customers	210	35%	7	8%	210	35%
Giving assurance about creditworthiness of suppliers and/or customers	73	12%	2	2%	73	12%
Time savings to my organisation from the information being readily available	183	30%	19	22%	183	30%
Reduced operating cost to my organisation	41	7%	0	0%	41	7%
Information/data that we include in the products and services we sell to our customers	58	10%	57	67%	58	10%
Other (please specify)	43	7%	0	0%	43	7%
Total	608		85		608	

Q40. Overall, how satisfied are you with the company search services that Companies House provides?

	All users	%	Intermediate users	%	Public good users	%
Very dissatisfied	35	6%	5	6%	3	19%
Fairly dissatisfied	21	3%	5	6%	0	0%
Neither satisfied nor dissatisfied	13	2%	1	1%	1	6%
Fairly satisfied	126	21%	20	24%	1	6%
Very satisfied	410	67%	53	62%	11	69%
Don't know	3	0%	1	1%	0	0%
Total	608		85		16	

Q41. Finally, did you think this survey was...?

	All users	%	Intermediate users	%	Public good users	%
Interesting	298	42%	36	36%	8	35%
Too long	139	19%	20	20%	7	30%
Difficult to understand	64	9%	7	7%	3	13%
Educational	42	6%	10	10%	0	0%
Unrealistic / not credible	34	5%	6	6%	3	13%
Other (please specify)	68	10%	9	9%	0	0%
None of these	69	10%	12	12%	2	9%
Total	714		100		23	

Annex 6 Time savings calculator results

Valuing the User benefits of Companies House Data
Final Report
July 2019

ANNEX 6 - Time Calculator

Estimated time spent per week (hh:mm:ss)

	All users	Intermediate users
Mean	0:17:41	0:39:35
Median	0:12:16	0:17:16
Mode	0:15:01	0:35:02
Maximum	4:10:16	4:10:16
Minimum	0:00:05	0:00:12

Estimated time spent per month (hh:mm:ss)

	All users	Intermediate users
Mean	1:16:52	2:52:02
Median	0:53:17	1:15:00
Mode	1:05:15	2:32:15
Maximum	18:07:30	18:07:30
Minimum	0:00:23	0:00:53

Estimated time spent per year (hh:mm:ss)

	All users	Intermediate users
Mean	15:22:22	34:24:26
Median	10:39:27	15:00:00
Mode	13:03:00	30:27:00
Maximum	217:30:00	217:30:00
Minimum	0:04:30	0:10:30

Is this a reasonable estimate of the amount of time your organisation spends using the company search services?

	All users		Intermediate users	
	n	%	n	%
Yes	485	82%	65	77%
No	51	9%	10	12%
Not sure	53	9%	9	11%
Total	589	100%	84	100%

If the company search services were not available, how much additional time and effort do you think it would be to obtain the same information?

	All users		Intermediate users	
	n	%	n	%
No additional time or effort	78	13%	15	18%
Twice as much (x2)	162	28%	23	27%
Three times as much (x3)	153	26%	23	27%
Four times as much (x4)	80	14%	11	13%
Five times as much (x5)	58	10%	4	5%
Six times as much (x6)	14	2%	2	2%
Seven times as much (x7)	2	0%	0	0%
Eight times as much (x8)	4	1%	0	0%
Nine times as much (x9)	1	0%	0	0%
Ten times as much (x10)	24	4%	4	5%
More than eleven times as much	0	0%	0	0%
I don’t know	13	2%	2	2%
Total	589	100%	84	100%

Estimated time savings per week (hh:mm:ss)

	All users	Intermediate users
Mean	0:49:50	0:56:20
Median	0:15:01	0:21:02
Mode	0:00:00	0:00:00
Maximum	18:07:25	10:04:00
Minimum	0:00:00	0:00:00

Estimated time savings per month (hh:mm:ss)

	All users	Intermediate users
Mean	3:36:32	4:04:45
Median	1:05:15	1:31:21
Mode	0:00:00	0:00:00
Maximum	78:45:00	43:44:31
Minimum	0:00:00	0:00:00

Estimated time savings per year (hh:mm:ss)

	All users	Intermediate users
Mean	43:18:18	48:57:01
Median	13:03:00	18:16:12
Mode	0:00:00	0:00:00
Maximum	945:00:00	524:54:18
Minimum	0:00:00	0:00:00

Is this a reasonable estimate of the time savings to your organisation?

	All users		Intermediate users	
	n	%	n	%
Yes	512	87%	69	82%
No	13	2%	3	4%
Not sure	64	11%	12	14%
Total	589	100%	84	100%

How would the time saving be apportioned across the different roles?

	All users	Intermediate users
	Average (%)	Average (%)
Company director	36%	31%
Manager	10%	11%
Professional occupation	30%	37%
Technical occupation	2%	2%
Administrative or secretarial	14%	12%
Sales or customer service	2%	3%
Respondent-identified user	5%	4%
Total	100%	100%

How confident are you in the estimate of the time and effort saving to your organisation?

	All users		Intermediate users	
	n	%	n	%
Not at all confident	31	5%	8	10%
Not so confident	56	10%	5	6%
Somewhat confident	326	55%	46	55%
Very confident	145	25%	20	24%
Extremely confident	31	5%	5	6%
Total	589	100%	84	

Weighted calculations (all users)

Time savings	per week	per month	per year
Company director	0:18:02	1:18:26	15:41:18
Manager	0:05:14	0:22:44	4:32:52
Professional occupation	0:14:52	1:04:42	12:56:20
Technical occupation	0:00:54	0:03:53	0:46:36
Administrative or secretarial	0:06:51	0:29:46	5:57:09
Sales or customer service	0:01:12	0:05:15	1:03:02
Respondent-identified user	0:02:44	0:11:55	2:23:02

Time savings (monetised - median)	per week	per month	per year
Company director	£ 6.17	£ 26.85	£ 322.24
Manager	£ 1.79	£ 7.78	£ 93.41
Professional occupation	£ 4.96	£ 21.60	£ 259.17
Technical occupation	£ 0.23	£ 0.99	£ 11.92
Administrative or secretarial	£ 1.22	£ 5.32	£ 63.87
Sales or customer service	£ 0.17	£ 0.74	£ 8.89
Respondent-identified user	£ 0.69	£ 2.98	£ 35.81
Total			

Time savings (monetised - mean)	per week	per month	per year
Company director	£ 7.83	£ 34.06	£ 408.68
Manager	£ 2.27	£ 9.87	£ 118.47
Professional occupation	£ 5.52	£ 23.99	£ 287.89
Technical occupation	£ 0.27	£ 1.16	£ 13.89
Administrative or secretarial	£ 1.42	£ 6.17	£ 74.05
Sales or customer service	£ 0.20	£ 0.87	£ 10.44
Respondent-identified user	£ 0.81	£ 3.52	£ 42.22
Total			

Time savings (monetised - per week)	10	20	25	30	40	60	70	75	80	90
Company director	£ 2.88	£ 3.66	£ 4.04	£ 4.43	£ 5.23	£ 7.26	£ 8.70	£ 9.61	£ 10.76	£ 14.56
Manager	£ 0.83	£ 1.06	£ 1.17	£ 1.28	£ 1.52	£ 2.10	£ 2.52	£ 2.78	£ 3.12	£ 4.22
Professional occupation	£ 3.14	£ 3.67	£ 3.91	£ 4.13	£ 4.54	£ 5.44	£ 6.05	£ 6.39	£ 6.85	£ 8.35
Technical occupation	£ 0.15	£ 0.17	£ 0.18	£ 0.19	£ 0.21	£ 0.25	£ 0.28	£ 0.30	£ 0.32	£ 0.40
Administrative or secretarial	£ 0.90	£ 0.99	£ 1.03	£ 1.06	£ 1.14	£ 1.34	£ 1.48	£ 1.58	£ 1.69	£ 2.12
Sales or customer service	£ 0.15	£ 0.15	£ 0.15	£ 0.15	£ 0.16	£ 0.18	£ 0.20	£ 0.21	£ 0.22	£ 0.27
Respondent-identified user	£ 0.43	£ 0.50	£ 0.53	£ 0.56	£ 0.62	£ 0.77	£ 0.87	£ 0.93	£ 1.01	£ 1.29
Total	**£ 8.48**	**£ 10.20**	**£ 11.01**	**£ 11.81**	**£ 13.42**	**£ 17.34**	**£ 20.10**	**£ 21.79**	**£ 23.97**	**£ 31.21**

Time savings (monetised - per month)	10	20	25	30	40	60	70	75	80	90
Company director	£ 12.52	£ 15.92	£ 17.56	£ 19.27	£ 22.76	£ 31.59	£ 37.83	£ 41.78	£ 46.79	£ 63.34
Manager	£ 3.63	£ 4.62	£ 5.09	£ 5.59	£ 6.60	£ 9.16	£ 10.97	£ 12.11	£ 13.56	£ 18.36
Professional occupation	£ 13.64	£ 15.98	£ 17.03	£ 17.97	£ 19.76	£ 23.66	£ 26.33	£ 27.81	£ 29.81	£ 36.33
Technical occupation	£ 0.63	£ 0.74	£ 0.78	£ 0.82	£ 0.90	£ 1.10	£ 1.22	£ 1.30	£ 1.38	£ 1.73
Administrative or secretarial	£ 3.93	£ 4.30	£ 4.49	£ 4.63	£ 4.96	£ 5.82	£ 6.44	£ 6.86	£ 7.37	£ 9.21
Sales or customer service	£ 0.65	£ 0.66	£ 0.67	£ 0.67	£ 0.70	£ 0.78	£ 0.85	£ 0.89	£ 0.96	£ 1.18
Respondent-identified user	£ 1.88	£ 2.17	£ 2.30	£ 2.43	£ 2.69	£ 3.33	£ 3.77	£ 4.05	£ 4.40	£ 5.60
Total	**£ 36.89**	**£ 44.38**	**£ 47.91**	**£ 51.38**	**£ 58.38**	**£ 75.44**	**£ 87.43**	**£ 94.80**	**£ 104.27**	**£ 135.75**

Time savings (monetised - per year)	10	20	25	30	40	60	70	75	80	90
Company director	£ 150.29	£ 191.08	£ 210.69	£ 231.25	£ 273.13	£ 379.03	£ 454.02	£ 501.40	£ 561.48	£ 760.10
Manager	£ 43.57	£ 55.39	£ 61.08	£ 67.03	£ 79.18	£ 109.88	£ 131.61	£ 145.35	£ 162.77	£ 220.34
Professional occupation	£ 163.68	£ 191.75	£ 204.31	£ 215.69	£ 237.17	£ 283.88	£ 315.97	£ 333.69	£ 357.76	£ 435.91
Technical occupation	£ 7.57	£ 8.83	£ 9.36	£ 9.86	£ 10.85	£ 13.21	£ 14.70	£ 15.55	£ 16.60	£ 20.76
Administrative or secretarial	£ 47.14	£ 51.61	£ 53.87	£ 55.54	£ 59.52	£ 69.88	£ 77.32	£ 82.32	£ 88.39	£ 110.54
Sales or customer service	£ 7.85	£ 7.88	£ 8.01	£ 8.09	£ 8.40	£ 9.41	£ 10.21	£ 10.74	£ 11.51	£ 14.14
Respondent-identified user	£ 22.59	£ 26.00	£ 27.62	£ 29.15	£ 32.28	£ 39.96	£ 45.29	£ 48.55	£ 52.74	£ 67.18
Total	**£ 442.69**	**£ 532.55**	**£ 574.94**	**£ 616.60**	**£ 700.54**	**£ 905.25**	**£ 1,049.12**	**£ 1,137.60**	**£ 1,251.26**	**£ 1,628.97**

Weighted calculations (Intermediate users)

Time savings	per week	per month	per year
Company director	0:13:20	0:47:58	9:35:32
Manager	0:04:50	0:17:23	3:28:41
Professional occupation	0:15:48	0:56:50	11:22:04
Technical occupation	0:00:44	0:02:39	0:31:51
Administrative or secretarial	0:05:15	0:18:51	3:46:15
Sales or customer service	0:01:16	0:04:35	0:54:55
Respondent-identified user	0:01:33	0:05:33	1:06:38

Time savings (monetised - median)	per week	per month	per year
Company director	£ 4.57	£ 16.42	£ 197.02
Manager	£ 1.66	£ 5.95	£ 71.44
Professional occupation	£ 5.28	£ 18.97	£ 227.70
Technical occupation	£ 0.19	£ 0.68	£ 8.14
Administrative or secretarial	£ 0.94	£ 3.37	£ 40.46
Sales or customer service	£ 0.18	£ 0.65	£ 7.74
Respondent-identified user	£ 0.22	£ 0.78	£ 9.40
Total			

Time savings (monetised - mean)	per week	per month	per year
Company director	£ 5.79	£ 20.82	£ 249.87
Manager	£ 2.10	£ 7.55	£ 90.60
Professional occupation	£ 5.86	£ 21.08	£ 252.93
Technical occupation	£ 0.22	£ 0.79	£ 9.49
Administrative or secretarial	£ 1.09	£ 3.91	£ 46.91
Sales or customer service	£ 0.21	£ 0.76	£ 9.10
Respondent-identified user	£ 0.26	£ 0.92	£ 11.04
Total			

Time savings (monetised - per week)	10	20	25	30	40	60	70	75	80	90
Company director	£ 2.13	£ 2.71	£ 2.98	£ 3.28	£ 3.87	£ 5.37	£ 6.43	£ 7.10	£ 7.95	£ 10.77
Manager	£ 0.77	£ 0.98	£ 1.08	£ 1.19	£ 1.40	£ 1.95	£ 2.33	£ 2.58	£ 2.88	£ 3.90
Professional occupation	£ 5.28	£ 5.86	£ 3.33	£ 3.90	£ 4.16	£ 4.39	£ 4.83	£ 5.78	£ 6.43	£ 6.79
Technical occupation	£ 0.19	£ 0.22	£ 0.12	£ 0.14	£ 0.15	£ 0.16	£ 0.17	£ 0.21	£ 0.23	£ 0.25
Administrative or secretarial	£ 0.69	£ 0.76	£ 0.79	£ 0.82	£ 0.87	£ 1.03	£ 1.14	£ 1.21	£ 1.30	£ 1.62
Sales or customer service	£ 0.18	£ 0.21	£ 0.16	£ 0.16	£ 0.16	£ 0.16	£ 0.17	£ 0.19	£ 0.21	£ 0.22
Respondent-identified user	£ 0.22	£ 0.26	£ 0.19	£ 0.19	£ 0.20	£ 0.20	£ 0.21	£ 0.23	£ 0.25	£ 0.26
Total	**£ 9.45**	**£ 10.99**	**£ 8.66**	**£ 9.67**	**£ 10.81**	**£ 13.25**	**£ 15.27**	**£ 17.30**	**£ 19.26**	**£ 23.81**

Time savings (monetised - per month)	10	20	25	30	40	60	70	75	80	90
Company director	£ 7.66	£ 9.74	£ 10.74	£ 11.78	£ 13.92	£ 19.31	£ 23.13	£ 25.55	£ 28.61	£ 38.73
Manager	£ 2.78	£ 3.53	£ 3.89	£ 4.27	£ 5.05	£ 7.00	£ 8.39	£ 9.26	£ 10.37	£ 14.04
Professional occupation	£ 11.98	£ 14.04	£ 14.96	£ 15.79	£ 17.36	£ 20.78	£ 23.13	£ 24.43	£ 26.19	£ 31.91
Technical occupation	£ 0.43	£ 0.50	£ 0.53	£ 0.56	£ 0.62	£ 0.75	£ 0.84	£ 0.89	£ 0.95	£ 1.18
Administrative or secretarial	£ 2.49	£ 2.72	£ 2.84	£ 2.93	£ 3.14	£ 3.69	£ 4.08	£ 4.35	£ 4.67	£ 5.84
Sales or customer service	£ 0.57	£ 0.57	£ 0.58	£ 0.59	£ 0.61	£ 0.68	£ 0.74	£ 0.78	£ 0.84	£ 1.03
Respondent-identified user	£ 0.69	£ 0.69	£ 0.71	£ 0.71	£ 0.74	£ 0.83	£ 0.90	£ 0.95	£ 1.01	£ 1.25
Total	**£ 26.60**	**£ 31.80**	**£ 34.25**	**£ 36.64**	**£ 41.44**	**£ 53.05**	**£ 61.21**	**£ 66.20**	**£ 72.64**	**£ 93.98**

Time savings (monetised - per year)	10	20	25	30	40	60	70	75	80	90
Company director	£ 91.89	£ 116.83	£ 128.82	£ 141.39	£ 167.00	£ 231.74	£ 277.60	£ 306.56	£ 343.30	£ 464.74
Manager	£ 33.32	£ 42.36	£ 46.71	£ 51.27	£ 60.55	£ 84.03	£ 100.65	£ 111.16	£ 124.48	£ 168.51
Professional occupation	£ 143.80	£ 168.47	£ 179.50	£ 189.50	£ 208.37	£ 249.41	£ 277.60	£ 293.17	£ 314.32	£ 382.98
Technical occupation	£ 5.18	£ 6.04	£ 6.40	£ 6.74	£ 7.42	£ 9.03	£ 10.04	£ 10.63	£ 11.34	£ 14.19
Administrative or secretarial	£ 29.87	£ 32.69	£ 34.13	£ 35.18	£ 37.71	£ 44.27	£ 48.98	£ 52.15	£ 56.00	£ 70.03
Sales or customer service	£ 6.84	£ 6.86	£ 6.97	£ 7.05	£ 7.32	£ 8.20	£ 8.90	£ 9.35	£ 10.03	£ 12.32
Respondent-identified user	£ 8.30	£ 8.33	£ 8.46	£ 8.55	£ 8.88	£ 9.95	£ 10.79	£ 11.35	£ 12.17	£ 14.95
Total	**£ 319.19**	**£ 381.59**	**£ 410.99**	**£ 439.67**	**£ 497.25**	**£ 636.63**	**£ 734.57**	**£ 794.38**	**£ 871.64**	**£ 1,127.71**

Annex 7 Choice Model Analysis

1. Stated preference methods

1.1 Consumer demand theory

The application of choice experiments is based on consumer demand theory which assumes that the benefit (utility) derived from the provision of a good that has many different characteristics (or attributes) is linked to these attributes of the good. In this study the 'good' is the CH service(s) experienced by users. Hence, the utility derived by each customer is linked to the characteristics of this bundle of services.

A (stated) choice experiment presents options for the provision of a good differentiated by the different quantities (or 'levels') of each attribute. The levels and combinations are designed using statistical experimental design techniques. Respondents are given a series of such options to choose their most / least preferred option(s). When one of these characteristics is the cost and customers choose one option over others, they implicitly reveal their trade-off between their money income and each of the attributes included in each bundle in their choice set. This allows estimation of the individuals' marginal WTP for a change in an attribute of the bundled good.

1.2 Choice model

The cornerstone of any stated preference method is one simple assumption: individuals know their own preferences and, whatever choice is encountered, they know what is best for them. In formal terms, an individual (*i*) is assumed to choose alternative *j* over alternative *k* if the utility derived from *j* is greater than the utility derived from *k*; i.e. if $U_{ij}>U_{ik}$, where U_{ij} is the total utility associated with alternative *j* and U_{ik} is the total utility associated with alternative *k*. The utility function for respondent *i* related to alternative *j* is specified as:

$$Uij = Vjj + \varepsilon ij$$

where V_{ij} is the systematic (non-stochastic) utility function observed by the analyst because it is linkable to the attribute levels of each alternative (e.g. water service attributes, etc.) and ε_{ij} is a random component, which is known to the individual, but remains unobserved to the analyst. This random component (ε_{ij}) arises either because of randomness in the preferences of the individual or the fact that the analyst does not have the complete set of information available to the individual.

Multinomial logit model (MNL)

The multinomial logit (MNL) model represents the basic DCE model. It is derived by placing some practical, yet restrictive assumptions on the random component of utility. Each ε_{ij} is assumed to be an independently and identically distributed (iid) Type 1 extreme value (Gumbel), with the cumulative distribution function:

$$\exp(-\exp(-\varepsilon ij))$$

If the assumptions implicit in the MNL model do not hold, then MNL model results might be biased. However, it is not possible to specify *a priori*, in a study or survey of customers, whether the assumptions of the MNL model will hold.

Mixed logit models (MXL)

Given the limitations of the MNL, it is appropriate to conduct more sophisticated econometric analysis and test less restrictive model specifications that relax some of the assumptions of the MNL model. For example, by allowing for:

- Variations in tastes by customers or decision-makers in relation to the observed characteristics;
- Correlation (non-independence) of unobserved factors in repeated choices by respondents; and/or
- Different variances across alternatives (or bundles of characteristics).

These are represented in the analysis by the Random Parameter Logit (RPL) model; the RPL-correlated model; and the error-component (EC) model respectively. Collectively all these belong to the family of mixed logit (MXL) models.

The utility structure for the RPL model is designed to allow for randomness in the taste across respondents. It is denoted as:

$$Uij = \mathbf{x}ij'\tilde{\boldsymbol{\beta}}_i + \varepsilon ij$$

where $\boldsymbol{x_{ij}}$ are observed variables that relate to the alternative (the attributes of the alternative and the levels of those attributes), $\tilde{\boldsymbol{\beta}}_i$ is a vector of utility coefficients of these variables describing the weight each one carries in determining the utility of the alternative (hence representing the respondent's tastes), and ε_{ij} is a random error term that is iid extreme value. This specification is the same as the MNL except that $\tilde{\boldsymbol{\beta}}_i$ is now random and varies across individuals instead of being fixed at the same level for all respondents. Thus, the RPL model allows coefficients to vary over respondents according to some distribution reflecting their tastes.

The basic RPL model assumes that random parameters are uncorrelated. Thus, it treats two responses by the same individual in the same way as it treats two responses from different individuals. The RPL-correlated model relaxes this assumption and allows for the likelihood that choices by the same individual are likely to be linked to each other (i.e. there is correlation among parameters). This therefore acknowledges that the data has a panel structure and that preferences are consistent in all choices made by the same respondent, changing only when another respondent's choice is evaluated. The RPL-panel model thus accounts for any bias arising from correlation in the error term in choices by the same respondent.

The error-component model can be used to account for correlations amongst utility for different alternatives. In a choice between alternatives that are in-part hypothetical (e.g. improved levels of service not previously experienced) and in-part experienced (the current level of service) it can be wrong to assume that utility of the respondent is affected the same way in both alternatives. It can be argued that since respondents could have different interpretations of 'non-experienced' options, these are subject to higher variance than the experienced once. One device to allow for a larger variance is by means of the introduction of additional error components, which also allow correlations amongst utilities for different alternatives. In these models, utility is defined as:

$$Uij \;=\; \beta' xij \;+\; \mu' i\, zij \;+\; \varepsilon ij$$

where $\boldsymbol{x}_{ij}$ and z_{ij} are vectors of observable variables relating to alternative j, β is a vector of fixed coefficients, μ is a vector of random terms with zero mean, and $\varepsilon_{ij}$is an iid extreme value. The terms z_{ij} are error components, and along with ε_{ij}, represent the stochastic portion of utility. The unobserved random portion of utility, $\eta_{ij} = \mu'_i z_{ij} + \varepsilon_{ij}$, can be correlated over the alternatives. Failure to account for correlation and variance in unobserved factors between alternatives leads to coefficient bias in the MNL model.

1.3 Validity testing

The results of stated preference studies are subject to considerable scrutiny. However, this often focuses on relatively superficial comparisons of WTP estimates - without necessarily appreciating the validity in survey design and analysis. The validity testing is a set of established steps that relate to questionnaire design, fieldwork and data analysis[34].

The main components of validity testing are:

- Content validity: testing how the stated preference questionnaire was developed and takes into account fundamental issues such as respondent understanding of the survey

[34] See, for example, Johnston et al. (2017) 'Contemporary Guidance for Stated Preference Studies', Journal of the Association of Environmental and Resource Economists, Vol. 4, No. 2, June 2017; and Bateman et al. (2002). Economic Valuation with Stated Preference Techniques: A Manual. Cheltenham. UK and Northampton, MA, USA: Edward Elgar.

and choice tasks, the perceived credibility of the hypothetical scenarios presented, and the cognitive burden imposed on respondents in the choice tasks.

- Construct validity: testing the analysis and econometric estimation, in terms of how well estimated models fit data (i.e. how well do they explain the choices and preferences of customers) and the extent to which results conform to prior expectations, based on theoretical considerations and empirical results from similar studies.

In general, stated preference studies which cannot demonstrate an appropriate level of content validity and/or that perform poorly in terms of construct validity should therefore be regarded as less reliable, particularly in relation to the robustness of results such as customer WTP values.

2. Experimental design

The combinations of service levels presented to respondents in each choice task is created by an 'experimental design', which optimises the amount of customer preference information that is generated from the choice task given the sample size of the survey.

The DCE experiment design for each block of service attributes features 30 choice cards in total, split into 6 sets of 5 cards. Table 10.1 shows all the attributes used.

Table 10.1: Attribute description

Method	Description	Information Required
Company information	Information about a company, its ownership, and structure, including:	• Basic details • Persons of significant control • Shareholders • Corporate structure
Financial and credit information	Information about a company's financial performance, including:	• Annual reports and financial statements • Credit limits and scores • Financial strength indicators • Credit assessments and benchmarking
Historic information	Number of years of archived information that is available:	From 1 year (current) to 5+ years
Cost	Annual cost (£) for accessing the company information	From free to £4,000

For all choice task components, a conventional balanced D-error minimising design was specified. Table 10.2 reported the experimental design.

Table 10.2: Experimental design

Choice card block	Choice card ID	Option A				Option A				Option A			
		ATT1	ATT2	ATT3	ATT4	ATT1	ATT2	ATT3	ATT4	ATT1	ATT2	ATT3	ATT4
		CI	FC	HI	PR	CI	FC	HI	PR	CI	FC	HI	PR
1	1	4	4	2	6	3	3	2	5	2	1	2	1
	2	2	3	1	2	1	2	3	8	2	2	3	1
	3	1	2	2	3	3	1	1	9	2	2	3	1
	4	4	4	2	6	3	3	3	4	2	1	1	1
	5	4	1	2	7	3	4	3	3	3	2	1	1
	6	1	2	3	3	4	3	2	5	1	2	1	1
2	7	2	3	3	8	1	2	1	3	3	1	1	1
	8	2	3	1	9	1	2	3	2	3	1	2	1
	9	3	1	1	2	1	3	1	8	2	2	3	1
	10	1	2	3	8	4	1	2	5	2	2	1	1
	11	4	1	1	4	4	2	2	7	3	2	3	1
	12	1	2	2	6	2	1	2	4	2	1	2	1
3	13	1	3	3	2	3	1	1	9	3	1	2	1
	14	2	4	2	5	1	2	1	7	3	1	3	1
	15	2	4	2	5	1	3	1	7	1	2	3	1
	16	2	2	3	8	3	3	1	2	2	2	2	1
	17	4	1	1	7	2	4	1	3	3	2	3	1
	18	1	4	2	5	3	2	3	8	1	2	1	1
4	19	1	3	1	9	2	2	3	2	3	1	2	1
	20	3	1	3	9	2	1	1	2	1	2	2	1
	21	4	1	3	3	1	4	3	7	3	2	1	1
	22	3	1	3	3	2	2	2	6	2	1	1	1
	23	3	4	1	7	4	3	3	3	3	2	2	1
	24	3	1	1	4	4	4	2	6	2	1	3	1
5	25	1	3	2	5	2	1	1	4	2	1	3	1
	26	3	4	3	4	4	1	3	4	1	2	1	1
	27	2	2	3	7	4	4	2	6	2	2	1	1
	28	4	3	2	4	2	4	2	6	3	2	2	1
	29	2	2	1	6	1	4	2	5	1	2	3	1
	30	3	2	1	2	2	1	3	9	3	1	2	1

3. Estimation strategy and expectations

3.1 Expectations of results

The approach to the choice model estimation for the DCE choice tasks tested the standard multinomial logit model (MNL) with fixed parameters as well as mixed logit models (MXL) that relax the restrictive assumptions of the MNL model.

Theoretical considerations and prior empirical results give rise to certain expectations for the estimates in choice models. In particular, these relate to the 'sign' of coefficient estimates (positive or negative), which inform on the nature of the relationship between a service attribute (parameter) and customer preferences, i.e. how the preferences change when the attribute level changes:

- Linear models – the coefficient for each attribute shows how customer preferences change if that attribute changes by one unit of measure. All coefficients for service attributes are expected to be positive as this means an improvement of the service increases (has a positive effect on) customer utility.

- Non-linear models with dummy-coded parameters – a statistically significant coefficient estimate for a dummy variable indicates that the segment has a higher (positive coefficient) or lower (negative coefficient) level of preference compared to the base case.

Note that in all model specifications, the expected sign for the bill coefficient is negative. This indicates that an increase in water bill (a loss or a cost) reduces customer utility.

3.2 Estimation results

Choice model results are reported as follows:

Table no.	Model
Linear models	
10.3	MXL linear main sample (User Panel + C&SS panel)
10.4	MXL linear pilot sample (User Panel + C&SS panel)
10.5	MNL linear pooled (User panel + C&SS panel)
10.5a	MNL linear User panel + MNL linear C&SS panel
Non-linear models	
10.6	MNL linear pilot sample (User Panel + C&SS panel)
10.7	MNL linear main sample (User Panel + C&SS panel)
10.8	MNL linear User panel + MNL linear C&SS panel
Validity testing - protest response models	
10.10	MXL linear pooled sample (User Panel + C&SS panel)
10.11	MNL linear pooled sample (User Panel + C&SS panel)
10.12	MNL non- linear pooled (User panel + C&SS panel)
Validity testing - WTP space model	
10.13	MXL non-linear pooled (User panel + C&SS panel)
Sub-sample models - intermediate users	
10.14	MNL linear pooled (User panel + C&SS panel)
10.15	MXL WTP-space (User panel + C&SS panel)

3.3 Linear models

MXL linear main sample (User Panel + C&SS panel)

- All coefficient estimates have the expected sign and are statistically significant.
- Results indicate a significant degree of preference heterogeneity (DCE).

Table 10.3: MXL linear main sample (User Panel + C&SS panel)

Parameter	Coefficient	Std. Error Coeff.
Mean values		
Company information	0.215***	0.048
Financial information	0.501***	0.046
Historical information	0.398***	0.042
Annual cost	-0.001***	0.000
Alternative specific constant for CH option	2.503***	0.152
Standard deviation parameters		
s.d Company information	0.525***	0.068
s.d Financial information	0.296***	0.100
s.d Historical information	-0.079	0.197
s.d Alternative specific constant for CH option	2.272***	0.152
Model summary statistics		
Log likelihood	-1919.26	
Pseudo R^2	0.44	
Observations	9,360	

Notes: * denotes statistically significant at the 10% level; ** denotes statistically significant at the 5% level; *** denotes statistically significant at the 1% level.

MXL linear pilot sample (User Panel + C&SS panel)

- All coefficient estimates have the expected sign and are statistically significant.
- Results indicate a significant degree of preference heterogeneity (DCE).

Table 10.4: MXL linear pilot sample (User Panel + C&SS panel)

Parameter	Coefficient	Std. Error Coeff.
Mean values		
Company information	0.219**	0.102
Financial information	0.258**	0.107
Historical information	0.121	0.100
Annual cost	-0.001***	0.000
Alternative specific constant for CH option	1.935***	0.308
Standard deviation parameters		
s.d Company information	-0.509**	0.068
s.d Financial information	-0.277	0.100
s.d Historical information	0.005	0.197
s.d Alternative specific constant for CH option	-1.054	0.152
Model summary statistics		
Log likelihood	-359.52	
Pseudo R^2	0.41	
Observations	1,602	

Notes: * denotes statistically significant at the 10% level; ** denotes statistically significant at the 5% level; *** denotes statistically significant at the 1% level.

MLN linear pooled sample (User Panel + C&SS panel)

- All coefficient estimates have the expected sign and are statistically significant.

Table 10.5: MLN linear pooled sample (User Panel + C&SS panel)

Parameter	Coefficient	Std. Error Coeff.
Company information	0.146***	0.027
Financial information	0.401***	0.030
Historical information	0.195***	0.027
Annual cost	-0.001***	0.000
Alternative specific constant for CH option	1.612***	0.060
Model summary statistics		
Log likelihood	-2619.488	
Pseudo R^2	0.35	
Observations	10,962	

MLN linear User panel+ C&SS panel

- All coefficient estimates have the expected sign and are statistically significant.

Table 10.5.a: MLN linear pooled sample (User Panel + C&SS panel)

	User panel		C&SS panel	
Parameter	Coefficient	Std. Error Coeff.	Coefficient	Std. Error Coeff.
Company information	0.183***	0.044	0.139***	0.034
Financial information	0.349***	0.049	0.445***	0.039
Historical information	0.139***	0.043	0.235***	0.035
Annual cost	-0.001***	0.000	-0.001***	0.000
Alternative specific constant for CH option	1.820***	0.098	1.471***	0.077
Model summary statistics				
Log likelihood	-1038.06		-2239.170	
Pseudo R^2	0.41		0.31	
Observations	4,824		6,120	

3.4 Non-linear models

MNL non-linear main sample

- All coefficient estimates have the expected sign and are statistically significant.
- The coefficient estimates are accompanied by the calculated odds ratio for each attribute level relative to the base case. They are a measure of the relative strength of preferences that users assign to each attribute level.

Table 10.6: MNL non-linear pooled sample (User Panel + C&SS panel)

Explanatory variable	Coefficient	Std. Error Coeff.	Odds
None			1.00
Basic details	0.787***	0.087	2.20
Basic details + Person of significant control	0.813***	0.088	2.25
Basic details + Person of significant control + Shareholders	0.784***	0.121	2.19
None			1.00
Annual reports & financial statement	1.002***	0.077	2.72
Annual reports & financial statement + Credit limits and scores	1.495***	0.110	4.46
Annual reports & financial statement + Credit limits and scores + Financial strength indicators	1.288***	0.117	3.62
1 year			1.00
3 years	0.286***	0.078	1.33
5 years	0.465***	0.062	1.59
Annual cost	-0.001***	0.000	
Alternative specific constant for CH option	1.534***	0.074	
Model summary statistics			
Log likelihood	-2174.57		
Pseudo R2	0.366		
Observations	9,360		

MNL non-linear pilot sample

- All coefficient estimates have the expected sign and are statistically significant, except for historical information.
- The coefficient estimates are accompanied by the calculated odds ratio for each attribute level relative to the base case. They are a measure of the relative strength of preferences that users assign to each attribute level.

Table 10.7: MLN non-linear pilot sample

Explanatory variable	Coefficient	Std. Error Coeff.	Odds
None			1.00
Basic details	0.617***	0.216	1.85
Basic details + Person of significant control	0.874***	0.256	2.40
Basic details + Person of significant control + Shareholders	1.081***	0.282	2.95
None			1.00
Annual reports & financial statement	1.001***	0.200	2.72
Annual reports & financial statement + Credit limits and scores	0.475*	0.270	1.61
Annual reports & financial statement + Credit limits and scores + Financial strength indicators	0.903***	0.282	2.47
1 year			1.00
3 years	0.248	0.218	1.28
5 years	0.110	0.151	1.12
Annual cost	-0.001***	0.000	
Alternative specific constant for CH option	1.482***	0.199	
Model summary statistics			
Log likelihood	-359.929		
Pseudo R2	0.387		
Observations	1,602		

MLN non-linear User panel + C&SS sample

- All coefficient estimates have the expected sign and are statistically significant.
- The coefficient estimates are accompanied by the calculated odds ratio for each attribute level relative to the base case. They are a measure of the relative strength of preferences that users assign to each attribute level.

Table 10.8: MLN non-linear User Panel + C&SS panel

	User panel		C&SS panel	
Explanatory variable	**Coefficient**	**Odds**	Coefficient	Odds
None		1.00		1.00
Basic details	0.898***	2.45	0.696***	2.01
Basic details + Person of significant control	0.892***	2.44	0.848***	2.34
Basic details + Person of significant control + Shareholders	1.121***	3.07	0.715***	2.04
None		1.00		1.00
Annual reports & financial statement	1.046***	2.85	1.020***	2.77
Annual reports & financial statement + Credit limits and scores	1.243***	3.47	1.458***	4.30
Annual reports & financial statement + Credit limits and scores + Financial strength indicators	1.120***	3.06	1.365***	3.92
1 year		1.00		1.00
3 years	0.213*	1.24	0.309***	1.36
5 years	0.307***	1.36	0.478***	1.61
Annual cost	-0.001***	-	-0.001***	
Alternative specific constant for CH option	1.782***	-	1.366***	
Model summary statistics				
Log likelihood	-1006.90		-1509.228	
Pseudo R2	0.43		0.33	
Observations	4,824		6,120	

3.5 Validity testing - protest responses models

Table 10.9: Protest responses

Q37. You selected the Companies House option (Option C) in most or all of your choices. What was the main reason for this?	Main survey	Pilot survey
1 Object to paying for company information and data	55	11
2 The other options did not provide the information and data my organisation needs	-	-
3 The other options were too expensive for my organisation	-	-
4 The Companies House options provided everything my organisation needs	-	-
5 The other options were not credible	-	-
6 Do not trust commercial data providers	-	-
7 Companies House is transparent and reliable	-	-
8 Would only pay for data and information on case-by-case basis, not an annual subscription	-	-
9 The information provided was not clear enough to make a different choice	4	-
10 Other (please specify)	6	1
Q41. Finally, did you think this survey was…?	**Main survey**	**Pilot survey**
1 Interesting	-	-
2 Too long	-	-
3 Difficult to understand	-	-
4 Educational	-	-
5 Unrealistic / not credible	27	7
6 Other (please specify)	30	5
7 None of these	-	-

MXL linear main sample (User Panel + C&SS panel)

- All coefficient estimates have the expected sign and are statistically significant.
- Results indicate a significant degree of preference heterogeneity (DCE).

Table 10.10: MXL linear User Panel + C&SS panel

Parameter	Coefficient	Std. Error Coeff.
Mean values		
Company information	0.246***	0.049
Financial information	0.520***	0.047
Historical information	0.364***	0.042
Annual cost	-0.001***	0.000
Alternative specific constant for CH option	2.266***	0.148
Standard deviation parameters		
s.d Company information	-0.546***	0.068
s.d Financial information	0.330***	0.094
s.d Historical information	0.019	0.294
s.d Alternative specific constant for CH option	-2.133***	0.147
Model summary statistics		
Log likelihood	-1860.377	
Pseudo R^2	0.40	
Observations	8,514	

Notes: * denotes statistically significant at the 10% level; ** denotes statistically significant at the 5% level; *** denotes statistically significant at the 1% level.

MNL linear main sample (User Panel + C&SS panel)

- All coefficient estimates have the expected sign and are statistically significant.

Table 10.11: MLN linear User Panel + C&SS panel

Parameter	Coefficient	Std. Error Coeff.
Company information	0.161***	0.030
Financial information	0.430***	0.033
Historical information	0.207***	0.030
Annual cost	-0.001***	0.000
Alternative specific constant for CH option	1.490***	0.066
Model summary statistics		
Log likelihood	-2144.86	
Pseudo R^2	0.31	
Observations	10,962	

MLN non-linear User panel + C&SS sample

- All coefficient estimates have the expected sign and are statistically significant.
- The coefficient estimates are accompanied by the calculated odds ratio for each attribute level relative to the base case. They are a measure of the relative strength of preferences that users assign to each attribute level.

Table 10.12: MLN non-linear User Panel + C&SS panel

Explanatory variable	Coefficient	Odds
None		1.00
Basic details	0.758***	2.13
Basic details + Person of significant control	0.874***	2.40
Basic details + Person of significant control + Shareholders	0.908***	2.48
None		1.00
Annual reports & financial statement	1.101***	3.01
Annual reports & financial statement + Credit limits and scores	1.481***	4.40
Annual reports & financial statement + Credit limits and scores + Financial strength indicators	1.349***	3.85
1 year		1.00
3 years	0.289***	1.34
5 years	0.435***	1.54
Annual cost	-0.001***	-
Alternative specific constant for CH option	1.417***	-
Model summary statistics		
Log likelihood	-2079.51	
Pseudo R^2	0.33	
Observations	8,514	

3.6 WTP-space model

MXL WTP-space

- All coefficient estimates have the expected sign and are statistically significant.

Table 10.13: MXL WTP-space

Explanatory variable	Coefficient	Std. Error Coeff.
Basic details	768.12***	85.62
Basic details + Person of significant control	999.73***	115.07
Basic details + Person of significant control + Shareholders	1103.82***	121.58
Annual reports & financial statement	1089.71***	113.82
Annual reports & financial statement + Credit limits and scores	1262.39***	143.83
Annual reports & financial statement + Credit limits and scores + Financial strength indicators	1072.27***	126.07
3 years	430.34***	72.76
5 years	620.47***	63.93
Mprice	-6.19***	0.12
Alternative specific constant for CH option	1620.66***	184.37
Model summary statistics		
Log likelihood	-2110.38	
Pseudo R^2	0.48	
Observations	10,962	

3.7 Sub-sample model - intermediate users

MLN non-linear User panel + C&SS sample

- All coefficient estimates have the expected sign and are statistically significant.
- The coefficient estimates are accompanied by the calculated odds ratio for each attribute level relative to the base case. They are a measure of the relative strength of preferences that users assign to each attribute level.

Table 10.14: MLN non-linear User Panel + C&SS panel

Explanatory variable	Coefficient	Odds
None		1.00
Basic details	1.103***	3.01
Basic details + Person of significant control	1.048***	2.85
Basic details + Person of significant control + Shareholders	1.224***	3.40
None		1.00
Annual reports & financial statement	1.224***	3.40
Annual reports & financial statement + Credit limits and scores	1.253***	3.50
Annual reports & financial statement + Credit limits and scores + Financial strength indicators	1.203***	3.33
1 year		1.00
3 years	0.266***	1.30
5 years	0.408***	1.50
Annual cost	-0.001***	-
Alternative specific constant for CH option	1.535***	-
Model summary statistics		
Log likelihood	-374.234	
Pseudo R^2	0.33	
Observations	1,530	

MXL WTP-space

- All coefficient estimates have the expected sign and are statistically significant.

Table 10.15: MXL WTP-space

Explanatory variable	Coefficient	Std. Error Coeff.
Basic details	803.68***	176.04
Basic details + Person of significant control	849.86***	234.83
Basic details + Person of significant control + Shareholders	1103.01***	278.82
Annual reports & financial statement	949.18***	181.87
Annual reports & financial statement + Credit limits and scores	746.80***	228.43
Annual reports & financial statement + Credit limits and scores + Financial strength indicators	653.71***	237.11
3 years	504.18***	111.90
5 years	627.8***	119.49
Mprice	-5.84***	0.28
Alternative specific constant for CH option	841.45***	285.97
Model summary statistics		
Log likelihood	-296.717	
Pseudo R^2	0.42	
Observations	1,530	

Annex 8 Peer Review

Valuing the user benefits of Companies House data

Survey design (November 2018)

Comment by
Ken Willis
Newcastle University

The specification of the attributes reflects company data available in Companies House (CH) data base. This gives rise to a "labelled" choice set, since the status quo position is the CH data; and the alternative is a commercial provider (also a "label").

The number of attributes (6: company information; ownership and control; finance and credit; coverage; historic information; and cost) is about the maximum respondents will be able to weigh up and trade-off against each other in a choice experiment (CE), without employing some simplifying heuristic which could lead to attribute non-attendance (ANA) and possibly biased coefficients.

The number of levels in each of the attributes may require a larger than average number of choice alternatives, although this depends on the precise experimental design adopted. Currently 4 attributes (company information; ownership and control; coverage; and historic information) have 3 levels; and 2 attributes (finance and credit; and cost) have 5 levels. The levels for cost and coverage need to be carefully and realistically determined prior qualitative focus group or cognitive interviews with respondents.

The CE with each choice card having 3 alternatives (CH; and two hypothetical alternatives) is typically the format adopted in CE studies.

The choice experiment (CE) is a labelled design. This will affect the experimental design; and it could have implications for IIA. The CE data should also be analysed to take account of any effect due to "labelling".

Generally the questionnaire is well constructed. But I have a few concerns about the wording of the questionnaire in places. The questionnaire appears to have been written as if it was being administered by CH. For example: "We are carrying out a survey to understand how the information we make available about registered companies in England and Wales, Scotland, and Northern Ireland is used. Your responses will help us make improvements to the services that we provide."

The ICF / eftec study purports to be an independent study. This I suggest the above is changed to
"We are carrying out a survey to understand how the information CH make available about registered companies in England and Wales, Scotland, and Northern Ireland is used. Your responses will help CH make improvements to the services that they provide."
The first "we" now refers to ICF/eftec.

Similarly in Q1

"Our company search services include:"
Should be
"CH search services include "

And "Other services we provide are Companies House WebFiling "
Should be
"Other services CH provide are Companies House WebFiling "

This confusion between CH and ICF/eftec continues in later sections of the questionnaire e.g.
Q13 via "our"
Q17 "we provide"
Etc..

Q20 seems to lack clarity. What is the exact purpose of Q20? given that it follows on from a similar question – Q19. If the data is to be used to make a decision within a company about a supplier or a customer – the decision may be quick, but the consequences much more valuable than the time spent.

In Section C the text stresses that
"The company data and information CH currently make available will continue to be provided free of charge".
To what extent may this expression "free of charge" bias downwards the value of CH data; and make it more difficult to impute a value for CH information from the choice between the CH scenario and the two "commercial provider" alternatives on the choice card? The experimental design needs to ensure that the value of the different segments of CH information can be derived in the CE.

Valuing the benefits of Companies House data
Review of and comments on pilot results

by
Ken Willis
Newcastle University
15th January 2019

Survey instruments

The survey instruments follow good practice for a choice experiment (CE). The questionnaire elicits information about the respondents and company/organisation, before enquiring about the use of company search services and the importance of these services to the respondent's company/organisation. This provides context before presenting choice experiment cards to determine respondent's preferences and value of the different information elements in the Companies House (CH) data set. The CE section was followed by questions to ascertain the reasons for the respondent's choices. Other questions to ascertain time spends on using CH services should provide some triangulation to the willingness-to-pay (WTP) results from the CE.

There are 4 attributes (data elements) including cost [company information; ownership and control; financial and credit information; historic information; and cost]. Four attributes allows respondents to trade-off each attribute against each other and cost. The attributes and attribute levels were clearly presented on the choice cards. The experimental design adopted ensures that each attribute can be valued independently and is not confounded or aliased with other attributes. The experimental design rightly restricted the cost attribute to be zero for all CH choice card options, and positive for all commercial choice card options.

The survey instruments developed by eftec and ICF to value the user benefits of CH data have been meticulously and skilfully developed.

Pilot survey results

The results of the pilot survey appear promising, given that the pilot analysis to date only has 45 respondents. The coefficients have the right signs, and some are statistically significant.

The Company Information (CI), and the Financial and Credit Information (FI), attributes are both ordinal attributes, whilst the Historic Information (HI) and Cost (COST) attributes are interval attributes in linear models. So the initial conditional logit (CL) models, where all attributes are treated as interval, should be viewed as indicative only.

The mixed logit model clearly reveals heterogeneity in preferences, which is to be expected.

The Dummy CL model is more pertinent in terms of interpreting the data. The Dummy CL model fits the data reasonably well in terms of R^2 value. The coefficients for CI and FI all have the right signs, but not all are statistically significant, which is to be expected at this stage with only a small number of observations.

The coefficient size also increases monotonically with the CI attribute level, as economic theory would predict.

However, a problem with these types of spline model is that, for whatever reason (e.g. small sample size, etc.), the coefficient size may not always increase monotonically. This occurs in the case of FI. It might be expected that in the main survey that there would be a monotonic change across the dummy variables representing the levels of the FI attribute.

In the case of HI, while 3 years of information (which I assume is HI2) is more valuable than 1 year of information (the base case), HI3 (which I take to be 5 years of information) has a negative sign. Obviously old information is less valuable than new information. But whether it should be negative is a moot point. Old information might indeed be irrelevant, or the negative sign might simply be the result of the small sample size.

On the issues of:

Low WTP for the persons of significant control register. The coefficient for CI3 is not much larger than that for CI2, indicating users have a low preference for the additional information on persons of significant control in the company. This might indeed reflect the fact that users simply do not place much importance on this information. However, the sample size is small and the size of the CI3 coefficient, relative to that of CI2, could increase with a larger sample size. Currently the CI3 dummy is not quite statistically significant at the 10% level. So the WTP value for persons of significant control in the company could increase once the main survey has been completed.

CH option label. The utility of this is captured in the ASC_CH dummy, the coefficient of which is positive and highly statistically significant. This reflects the 78% of respondents chose Option 3 (the CH option) more than 50% of the time across their choice card sets; and 56% chose the CH option across all their choice card sets.

Sequential choice of the status quo option (i.e. CH option) may reflect

- Strategic behaviour in the part of respondents: so that although they value the information, respondents state it has little or no value so that they will continue to access it free of charge.
- Respondents' low preference for the information in question, or limited company finance to acquire the information - they cannot really afford to pay. [as exemplified by the large number of small companies in the sample: 57% of responses were from sole traders, or organisations that employed 0 to 4 people].
- Bid prices might be too high (i.e. for 56% of the sample) for the two alternatives presented; so respondents tend to choose the status quo (CH option). Reducing the bid or cost levels may encourage more trade-offs and less sequential choice of the CH option. Further restricting the information provided in the CH option could have the same effect; but restricting the CH information further risks making available future CH information appear trivial.
- The fact that respondents are not engaging in trade-offs in the CEs: either because they did not fully understand or have the time to consider the choice the task; or because they could not be bothered to answer; or objected to paying in principle. These would be justifications for omitting such responses. Q36: reveals 20% objected to paying for company information; whilst 31% said CH provided everything my organisation needed. The latter would be a valid response if CH is going to continue to provide the basic data for free as shown on the CH option choice cards.

- Respondents may feel that the CH option meets their requirements, even at lower levels of service currently offered; and because they have been used to a free service in the past object to paying for this information in the future.
- The fact that the CH option is an easy one to tick: it has zero cost, and provides much of the information respondents currently require.

Some more diagnostic questions after the CE may tease out which of these factors is generating sequential or serial choice of the CH option.

Interpretation of the ASC_CH coefficient in terms of WTP. This might be interpreted in a number of ways, but all reflecting the value to users of the CH service as currently experienced. It reflects the value of the status quo (SQ): respondents like and are happy with what is familiar and satisfies their existing needs. Also the inertia cost of moving to another provider. It might also reflect the 'public good' nature of CH data which has been provided free of charge for a considerable length of time, and which customers have become accustomed to obtaining for free. In that sense it is the welfare loss to customers of being forced to switch to another provider.

The WTP value attached to the ASC coefficient from the spline model (approx. £2818) appears to be less than that from the linear model (approx. £3960)

A final minor issue is the absence of responses to question Q13. Could Q13 be omitted?

VALUING THE USER BENEFITS OF COMPANIES HOUSE DATA

Report 2: Direct Users of Companies House Data

June 2019

Review and comments

by
Ken Willis
Newcastle University
3rd July 2019

Introduction

The study, "Valuing the User Benefits of Companies House Data", by ICF and eftec, is an excellent application of stated preference (SP) methodology. The research follows good practice in the use of SP to value the user benefits of Companies House (CH) data, by specifying the attributes of CH open access data, designing a discrete choice experiment (DCE) to estimate user benefits from these attributes (data), surveying a sample of users, assessing the validity and robustness of the results, and estimating annual aggregate benefits of CH data.

SP DCEs were originally mainly developed to estimate the value of marketed services, such as transport (time, frequency of service, cleanliness, safety, and other attribute improvements) in relation to fare increases. So SP DCEs are eminently suitable to use to estimate the value of products and services, with producer property rights, such as CH data.

The approach to valuing the user benefits of CH data is innovative, by designing a DCE where CH information provided free of charge varies, but users can opt to purchase information from a commercial provider at a cost. This allows the value to users of the current situation, or *status quo* position, with respect to CH data, to be estimated.

Stated Preference methods

The report outlines (Table 2.1) the range of DCEs methods available, and identifies which are suitable for the current study. The report also appropriately stresses the need for validity testing in terms of content validity (do respondents understand the survey, are the hypothetical alternatives credible, have potential biases been minimised), and construct validity (are the models and results consistent with economic theory, are values comparable to those derived by other methods). What is perhaps lacking in this section of the report are the basic econometric assumptions underlying the models used (multinomial logit (MNL), and the mixed logit (MXL)). However, these assumptions are outlined in reasonable detail in Annex 7.

Survey design

The survey design follows good practice, and recent advice from a panel of international experts (Johnston et al, 2017) on contemporary guidance for undertaking stated preference studies. The survey instrument was designed with the aid of cognitive interviews to ensure respondents fully understood the survey material. The use of cognitive interviews is now standard practice in DCE survey design.

The questionnaire was appropriately structured with initial screening questions, followed by questions on CH data use, frequency of use, and importance of different types of information; and the use of alternative information sources and costs. This provides an admirable context for respondents think about which factors or attributes on each choice alternative is most appropriate or important to them, in each of the choice card tasks. The questionnaire correctly concluded with questions to assess the validity of responses (easy / difficulty of choice tasks, attribute importance, and reasons for choice task responses).

The DCE minimised any potential bias due to complexity, by restricting the choice task to four attributes (company information, financial and credit information, periods of historic information, and cost). The service levels were restricted to four or less for each attribute (except price or cost which had nine levels (from zero to £4,000 / year)). Restricting the number of attributes and attribute levels minimised complexity in the choice tasks.

The CE was a labelled experiment: each alternative option was either a commercial provider or CH. Labelled DCEs raise the issue of independence of irrelevant alternatives (IIA). This is an important issue for MNL models.

The experimental design included constraints to ensure the CH alternative always provided some information, that the commercial provider alternative always included a cost, and that CH service levels were at the current level or a lower level. This ensured a trade-off between CH and commercial alternatives. The experimental design is critical to the success of DCEs, not only in optimising the amount of information about preferences, and efficiently estimating preferences (which the Report mentions), but also to ensure that attribute effects are not confounded. This later aspect also needs to be stressed in the Report. A D-efficient experimental design was used. Again this is an appropriate type of experimental design to generate choice alternatives, and it is a type of design that is frequently applied in DCEs studies of this type.

DCE analysis

The analysis is based on linear and non-linear or dummy coded model MNL and mixed logit (MXL) models. The analysis investigates first order effects only. Can anything be said about the relevance of second order effects in CH data values?

The attribute levels for company information (4 levels: none; basic details; persons of significant control; and shareholders) and for financial and credit information (4 levels: none; annual reports and financial statements; credit limits and scores; and financial strength indicators) are not on cardinal scales, unlike historic information (3 levels: 1, 3, and 5 years) and cost (9 levels: none to £4,000 per year). Thus the results of the linear model, which assume cardinal measurement of factors, are fairly meaningless, except to suggest that users of CH data have a positive preference for company information, and financial and credit information, as the Report points out. The very high ASC coefficient for the CH option, in the linear model, suggests that something else is affecting choice other than that explained by the choice attributes presented. The Report rightly speculates on page 59 possible reasons for the high ASC CH coefficient.

Perhaps less emphasis should be placed on the linear model, given that a very good non-linear MXL model is estimated, which gives meaningful, credible, and coherent results.

The crucial results are from the non-linear model where the company information and financial and credit information levels are coded so that users' preferences for each non-cardinal level can be estimated. The overall goodness-of-fit of this model (pseudo R^2 =0.36) to the data is high: higher than many MXL models fitted in environmental economics.

The non-linear coefficients are consistent with economic theory for company information: utility increases monotonically with increasing information provided. However, this monotonic increase in utility does not hold for financial information. The coefficient for "Annual reports & financial statements + Credit limits and scores" is greater than that for "Annual reports & financial statements + Credit limits and scores + Financial strength indicators". Whether it is appropriate to state, as the Report does, that "the addition of financial strength indicators does not offer any additional value to users" is open to debate. The standard errors for these two coefficients indicate that there is a possibility that the financial strength component may offer additional utility.

It not unusual for monotonically increasing utility in a variable to break down as the number of levels increases: as more variables and variable levels are included in the analysis, the greater the statistical chance of an anomalous result occurring.

The content validity of the DCE, in terms of motivations for responses, and easy of understanding the questions, was thoroughly tested; and comparable to tests of content validity in other DCEs.

The fact that estimation in WTP-space gave very similar results to those in preference space adds confidence to the results. Triangulation, and convergent validity, was further tested by the inclusion of time savings calculator results. Time savings estimates are based on the gross hourly pay and time incurred by users to obtain equivalent information from an alternative source. The time saving cost estimate is approximately half the DCE WTP (preference and WTP-space estimates) values.

However, whilst time saving benefits (avoided costs) values were approximately half of the preference-space WTP and the WTP-space values, these time saving costs under-estimate the true cost. Other costs to the employer (pension, National Insurance, Human Resources, and other costs) are not included. The inclusion of these would suggest a closer convergence of time savings values to the SP DCE WTP values.

Aggregation

The research uses two approaches to aggregation. First, aggregation based on the estimated number of direct users for CH data. The Report rightly points out that this may over-estimate the aggregate benefits, by double-counting the user benefits for an individual organisation. But if an organisation has two users, who used CH data independently on two separate projects, then it would be legitimate to count this as two separate sets of benefits, so no double counting would occur in such a case. Second, aggregation is based on estimated use of CH data by direct users. This latter approach applies estimates of the value of CH data for each individual use of the service. This is arguably a more accurate approach. The estimation of the number of users and uses by IFC and eftec seem logical.

The Report presents estimated user benefits in terms of constant marginal WTP; and diminishing marginal WTP, which is theoretically more logical, and provides a more conservative estimate of consumer surplus.

The research justifiably and rightly calculates the predicted number of users of CH data if a price was charged; with revenue and consumer surplus for prospective annual subscription prices. Two illustrative examples are provided: a £50 and a £1000 annual subscription fee. If a policy option is to charge for CH data, then the Report could have extended the demand analysis, in Section 7.5 of the Report, to estimate a revenue maximising price for CH data.

Conclusions

The research *Valuing the User Benefits of Companies House Data,* undertaken by ICF and eftec has been expertly undertaken. The methodology, and questionnaire, worked well. CH data users could clearly understand the tasks required, and gave valid responses to questions asked. The survey was as representative of users as could be expected, given the complexity of the sample, and the number of criteria considered. The data analysis was skilfully implemented and produced statistically significant estimates of users' preferences for the different types of data. The WTP results appear to be accurate, reliable, and to be intuitively reasonable.

The research study *Valuing the User Benefits of Companies House Data* by ICF and eftec is an excellent piece of research, and the Department for Business, Energy and Industrial Strategy can have confidence in the results.

References

Robert J. Johnston, Kevin J. Boyle, Wiktor (Vic) Adamowicz, Jeff Bennett, Roy Brouwer, Trudy Ann Cameron, W. Michael Hanemann, Nick Hanley, Mandy Ryan, Riccardo Scarpa, Roger Tourangeau, Christian A. Vossler (2017). Contemporary Guidance for Stated Preference Studies. *Journal of the Association of Environmental and Resource Economists* 4(2): 319-405.

This publication is available from: www.gov.uk/beis

If you need a version of this document in a more accessible format, please email enquiries@beis.gov.uk. Please tell us what format you need. It will help us if you say what assistive technology you use.