



Department for
Business, Energy
& Industrial Strategy



Companies House

VALUING THE USER BENEFITS OF COMPANIES HOUSE DATA

Policy Summary

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1 Introduction

This policy summary has been prepared by ICF Consulting Services Limited (ICF) in collaboration with Economics for the Environment Consultancy (eftec). 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 policy summary report presents the results of the research and draws conclusions about the value of CH data to users. The key findings are:

- The annual benefit to direct users of CH data – in terms of their average willingness to pay (WTP) for company information – is estimated to be around £2,000 per user per year, with a range of between £1,500 and £2,600 based on a 95% confidence interval.
- In aggregate, the annual user benefits of CH data are estimated to be between £1 billion and £3 billion per year. This is likely to be an underestimate as it only includes benefits for Companies House Service (CHS) users¹.
- Direct users attributed the greatest value to the provision of financial information (55% of the total value) and attributed a further 41% of the value to basic company information. PSC information accounted for approximately 4% of the total value – although this increases to 13% for ‘high use’ users.
- Current Government policy is to generally not charge users for access to CH data. An illustrative policy application shows that the introduction of subscription charges would reduce economic welfare and that the reduction would be expected to increase with the size of the charge. For example, an annual subscription of £1,000 would be expected to lead to a welfare loss of around £410 million per year, which represents the value of transactions – mostly by small businesses – that would not take place because of the charge.
- The research identifies three groups of intermediaries that use CH data as an input into their own commercial products. Smaller intermediaries reported a similar WTP to the direct users. A group of mid-sized intermediaries attributed an average net

¹ The estimates capture the value to users who use multiple products and services (e.g. CHS and WebCheck), but do not include the value to users who use other CH data products but not CHS.

income of less than £5,000 per annum to CH data, while larger intermediaries attributed an average net income of £2.2 million per annum to CH data².

- More than half of the smaller intermediaries that access CH bulk data products have only been accessing these products since they became available free of charge. This suggests that access to free data has stimulated the development of new business opportunities. For mid-sized and larger intermediaries, the research found that the introduction of free data had a minimal impact on their levels of usage. However, these intermediaries also reported that they would experience lower product quality, higher costs or lower revenues in the absence of CH data.
- Interviews with providers of public goods (e.g. Government departments, law enforcement agencies and transparency groups) suggested that the use of CH data delivers significant public benefits, such as supporting policy making and action against corruption, fraud and money laundering. It also reduces public sector operating costs (e.g. the Office for National Statistics faces significant costs in administering its business surveys, which would increase in the absence of CH data).

This policy summary summarises the other reports in the series, which are described below:

- Report 1 sets out the methodological framework for the study.
- Report 2 presents estimates of the user benefits of CH data and provides a policy example of how this analysis can be used.
- Report 3 provides findings for a key subset of users: 'intermediaries' (defined as private sector businesses that use CH data as an input to their own commercial products and services).
- Report 4 presents findings for another subset of users: 'providers of public goods' (defined as the public sector and other organisations that use CH data to deliver public goods and public benefits).

1.2 Objectives of the study

It is well understood that requirements on companies to provide data to CH imposes costs on those companies. Less well understood is the extent to which the consolidation of CH data provides benefits for businesses, consumers and/or wider society. This study is intended to fill this evidence gap and has three inter-related aims:

² There is considerable variation around the average values for intermediaries' attribution of net income to CH data.

1. to estimate the value of CH data for different types of user, e.g. companies, public sector, creditors, consumers and individuals;
2. to assess changes in those values over time; and
3. to identify the specific pieces of CH data that generate the greatest user value.

1.3 Background and context

CH is the registrar of companies in the UK. It is responsible for incorporating UK limited companies under the Companies Act 2006. Once incorporated, a company must provide annual financial accounts and confirmation statements, and inform CH of other changes, including changes to their company and officer information. CH is an Executive Agency of BEIS and is, amongst other things, responsible for:

- incorporating and dissolving limited companies;
- examining and storing company information; and
- making information available to the public.³

There are 4.2 million UK companies currently registered with CH and more than 600,000 new companies are incorporated each year⁴. UK companies file more than ten million documents with CH every year⁵. This provides CH with a broad range of data, including:

- basic information on companies (including company type, status, registered office address, etc.);
- financial records and information; and
- information on directors/officers and People with Significant Control (PSC).

CH offers the following range of different products and services for accessing these data:

- Companies House Service (CHS) – a free service, available via the CH website and an application program interface (API), which can be used to search for and view a range of company information or receive email alerts.
- WebCheck – a free search facility, through which users can also purchase documents or record images.

³ <https://www.gov.uk/government/organisations/companies-house/about>

⁴ Companies House (2019) Companies register activities: 2018 to 2019. Available at: <https://www.gov.uk/government/statistics/companies-register-activities-statistical-release-2018-to-2019>

⁵ Companies House (2018) Companies House Management Information 2017/18. Available at: <https://www.gov.uk/government/statistical-data-sets/companies-house-management-information-tables-2017-18>

- Companies House Direct (CHD) – an account-based service that, for a nominal fee, provides access to every public record document held by CH.
- A mobile app – a free search facility that can be used to access basic company information on Android and iOS devices.
- Information centres (at Cardiff, Belfast, Edinburgh and London) – that provide public search rooms that can be used by the general public to use CH’s digital services. Access is free, although there are charges for additional services, such as printing.
- Contact centres – that receive telephone or email requests for information, which are sent out to users by post or email, or made available for collection at one of the information centres. Charges are incurred for these services.
- A DVD directory – produced monthly, providing details of all live companies and all companies that have become dissolved in the previous month. The DVDs can be purchased individually or via an annual subscription.
- Additional data products, including:
 - Company data product – a free monthly snapshot that can be used to obtain bulk downloads of basic company details.
 - Accounts data product – a free, downloadable zip-file, containing data files of company accounts filed at CH (available for individual days or months).
 - People with Significant Control (PSC) data product – a free, downloadable snapshot of all PSCs listed in CH data (updated daily).
 - Uniform resource identifiers (URI) – a free service providing URIs (unique web addresses) for each company listed with CH.
 - XML gateway search service – a computer-to-computer search service that allows users to search CH data from within their own software. Users pay a monthly subscription plus additional charges for some specific services.

CH therefore provides both free and paid access to its data and services, although the costs for accessing data have been decreasing over time. Before April 2011, CH charged customers for all data services. Between April 2011 and December 2012, a number of services became free of charge or saw their fees reduced. CHS was then launched in July 2015, which made access to all public data free of charge.

The introduction of CHS coincided with a significant increase in the total number of searches and requests for CH data from 300 million in 2014/15 to 2.2 billion in 2017/18⁶,

⁶ Please note that these figures are based on searches and requests made via CHS, CHD, XML, other web services, DVDs and contact centres. They exclude downloads of company information and data via API, which will be included in figures for subsequent years.

but a decline in the number and proportion of paid searches. Of the 2.2 billion searches undertaken on the CH website in 2017/2018, only 830,000 were paid for (0.04%). This represents a significant decline from the 6.3 million paid searches in 2014/2015⁷ (2.1% of all searches), before the introduction of the CHS.

1.4 User types

During the research, the study team identified three main user types⁸. These are:

- Direct users, such as companies, creditors, investors and researchers, that use CH data to access information about registered companies in the UK (e.g. to inform due diligence investigations, or provide inputs into their own research).
- Other users, described as 'intermediaries', who use CH data as an input to their own data products and services. This category includes credit reference agencies and other providers of financial data and information.
- Providers of public goods, such as government departments or law enforcement organisations, who use the information during the course of policy or investigative work.

Figure 1.1 provides outline value chains that summarise how the concepts and different value perspectives can be applied to the three main types of user. Analysis of the value chains suggested that a demand perspective was likely to provide the most consistent basis for estimating economic surplus across each of the user types. This required estimation of users' willingness to pay (WTP) for the provision of CH data, which provides a measure of the benefit (economic surplus) to their organisation from the use of CH data. For direct users and providers of public goods this is based on the assumption that user benefits would be driven by how CH data contributes to better decision making, and how its ready availability implies lower search and operating costs for organisations.

Conceptually, the value of CH data to intermediaries should reflect its importance as an input to the services and products that they provide. However, overall, a producer surplus or value added approach was considered less tractable across the three user types. For direct users and providers of public goods, CH data is likely to be incidental to their main productive activities, hence determining the contribution to economic profit or surplus would be challenging. Nevertheless, for intermediaries, a production-side analysis has been used to provide a useful 'sense-check' on surplus estimates derived via the demand-based approach.

⁷ Companies House (August 2018) Companies House management information 2017/18.

⁸ The research identified relatively few household users. A supplemental user profile survey was undertaken as part of this study, which found that the general public represented around 17% of all users, but they were relatively infrequent users and only represented around 4% of the total number of 'uses' of CH data (see Report 2). It was therefore decided not to include household users as a category in this research.

Figure 1.1: Outline value chains for the different types of user of CH data

Direct (mostly business) users of CH services

Company reporting and financial information	Final user
CH data 	Businesses and/or researchers 
Revenue to CH: none (zero price)	WTP for CH data Consumer surplus = max. WTP – price (over quantity purchased)
	Demand for CH data based on: <ul style="list-style-type: none"> - More informed decisions and better outcomes (e.g. higher revenue/utility) - Lower search effort (time/resource saving) - Lower business operating costs (vs. alternative sources)

Intermediaries

Company reporting and financial information	Intermediary	Final user
CH data 	Value added data services providers 	Business users and/or researchers 
Revenue to Companies House: <ul style="list-style-type: none"> - none (for zero price data) - price x quantity (for fee-charging products/services) 	= Cost of purchased input Revenue to intermediary: price x quantity Producer surplus = revenue – variable costs of production	WTP for data services products Consumer surplus = max. WTP – price (over quantity purchased)
	WTP for CH data Demand for CH data based on: <ul style="list-style-type: none"> - Contribution of data to value of data service products (marginal revenue product) - Lower business operating costs (vs. alternative sources) 	Demand for data services products based on: <ul style="list-style-type: none"> - Value added features (e.g. analytics) - More informed business decisions and better outcomes (e.g. higher revenue)

Providers of public goods

Company reporting and financial information	Final user
Companies House data 	Public sector bodies and other providers of public goods 
Revenue to Companies House: <ul style="list-style-type: none"> - none (for zero price data) - price x quantity (for fee-charging products/services) 	Benefit of Companies House data / demand: <ul style="list-style-type: none"> - Cost savings and efficiency - Better outcomes (public goods and services)

1.5 Methodology

The study primarily used a survey-based approach to establish user demand for CH data, applying a stated preference method, in the form of a discrete choice experiment (DCE), to estimate user WTP⁹. This involved a comprehensive and iterative design and testing process, to ensure respondent understanding of the survey content and the choice task format. Participants in the survey were assured that the Government had no plans to charge for the data provided by CH.

The survey, which was administered online, received a total of 608 responses across the pilot and main surveys¹⁰, including 85 responses from intermediaries¹¹ and 15 from public sector organisations. Respondents were recruited from panels of users of CH services and a varied profile of respondent organisations was achieved. While only partial comparators were available to assess the representativeness of the sample, it aligned well with a supplemental user profile survey that was undertaken to support the sampling approach¹².

For intermediaries and providers of public goods, the stated preference approach was supplemented by qualitative research that explored: their use of data sourced from CH and other sources; the costs and revenues attributed to the use of CH data; and the availability of substitute data sources. The qualitative research involved a separate sample of 15 intermediaries¹³ and nine providers of public goods. The samples were selected purposively, from regular users of CH bulk data products, in order to identify and provide coverage of the most frequent and intensive users of CH data.

1.6 Structure of this report

The remainder of this report is structured as follows:

- Section 2 summarises the user benefits of CH data for 'direct users'.
- Section 3 describes the research findings for a key subset of users: 'intermediaries'.
- Section 4 presents findings for another subset of users: 'providers of public goods'.

⁹ A stated preference approach offered considerable flexibility compared to alternative methods and was not reliant on third party data. All data requirements could therefore be met through the design of the survey and product information provided by CH.

¹⁰ The pilot and main survey data were pooled because there were minimal changes to the survey between the pilot and main survey phases.

¹¹ Intermediaries were identified in the WTP survey as businesses who stated that one of the main benefits of CH data for their organisation was *“information/data that we include in the products and services we sell to our customers”*.

¹² The supplemental user profile survey received a total of 7,763 unique responses and was administered via pop-up links on the CHS / 'Search the Register', CHD, and WebCheck websites over a 12-week period from December 2018.

¹³ The 15 responses from intermediaries included eleven qualitative telephone interviews and an online survey of intermediaries, which received six responses, although two of the intermediaries participated in both the online survey and a telephone interview.

2 Direct users of CH data

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

2.1 Use of CH data

The findings of the survey of direct users presented a consistent view of the importance of company information and data. Most respondents had a positive view of 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.

The main service for direct users was the CHS / 'search the register', with around 7 in 10 survey respondents stating it is the CH service used most often by their organisation. Other commonly used services included the WebCheck and Companies House Direct (CHD) services. Most direct users reported supplementing CH data with 'free' information obtained from other sources such as internet searches and other online resources, although only around one in six reported purchasing company information from a data services provider.

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, while the purpose of each use was typically to find information for a specific company.

2.2 User benefits (willingness to pay)

The survey of direct users provided estimates of their willingness to pay (WTP) for the provision of company information and data from CH. These values represent the annual user benefits of CH data, most of which is available free of charge.

The annual benefit to direct users – in terms of average WTP for company information and data – is estimated to be around £2,000 per user per year (Table 2.1). The lower and upper bounds are approximately £1,500 – £2,600 based on a 95% confidence interval. The user benefits are also disaggregated across each type of information provided under the current CH service offering, with most weight placed on the provision of financial information (annual reports and financial statements), followed by basic company information.

Table 2.1: 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. Lower/upper bounds are estimated using a 95% confidence interval.

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 and upper bound of approximately £9 – £13).

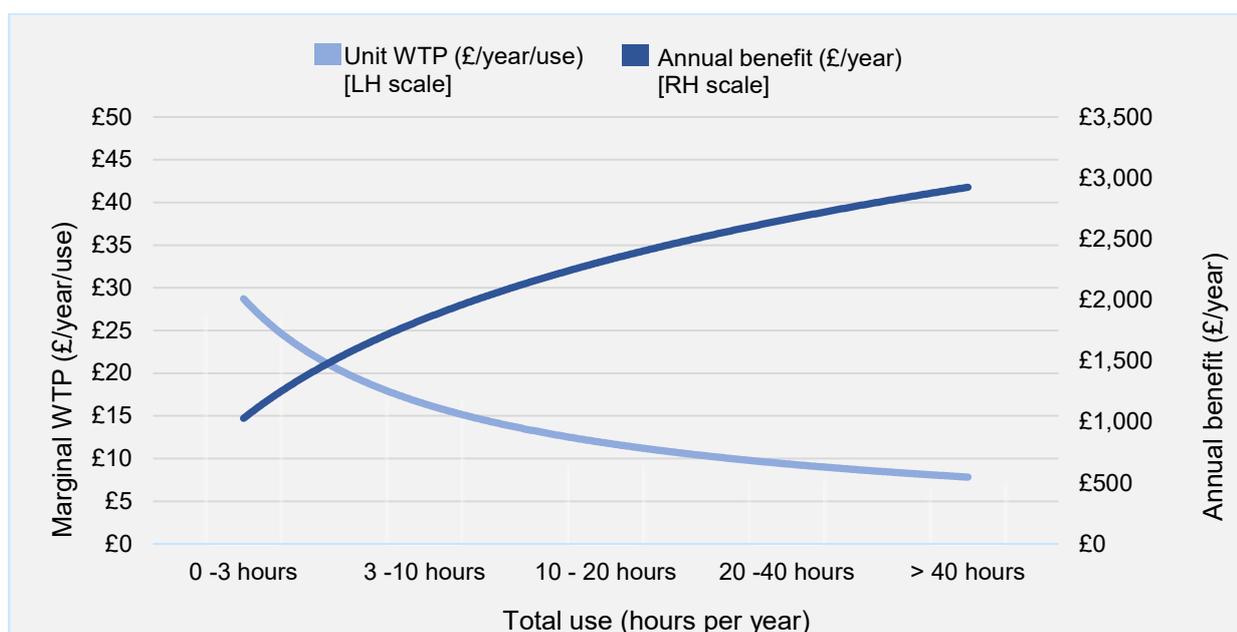
The above figures are central estimates for the overall sample of respondents. Alternative figures of annual user benefits by 'total use' have also been estimated using results for different user segments, based on their level of use of CH data (Table 2.2). For 'higher use' users (i.e. those with a 'total 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. The equivalent values per individual use show 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. 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 'total use' segment.

Table 2.2: 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.

The segmented WTP results are also illustrated in Figure 2.1, 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). This illustrates the 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 2.1: Total WTP per year vs. marginal WTP per use by segment

Note: The marginal WTP curve uses the data points reported in Table 2.2 (WTP/uses).

The validity of the annual user benefit values has been assessed through two supplemental analyses:

- (i) A comparative assessment using an alternative WTP estimation approach¹⁴. The main result is an estimate for direct user WTP of approximately £2,100 per user per year, compared to approximately £2,000 per user per year for the results shown in Table 2.1. This suggests there is consistency in the two estimation approaches and it is not possible to conclude the valuations are significantly different from each other.
- (ii) A comparison to results from the time saving cost calculator, which was also estimated using survey responses on time savings (of approximately 43 hours per year). Based on average wage rates¹⁵, 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. These provide a lower-bound cost-based comparator or benchmark for the value of company information and data to users¹⁶ and suggest a reasonable degree of consistency with the user WTP estimates.

2.3 Aggregation

This section presents estimates of annual aggregate user benefits for CH search services. The estimates are reported for 2018 and for use of the CHS service, based on user data provided by CH. A total of almost 148,000 individual uses/visits were included in the data sample from CH, provided as 84 separate extracts from the CHS website database (across seven randomly selected days in 2018), with each extract covering an approximate 20-minute time slot¹⁷.

¹⁴ The alternative approach uses a 'WTP-space' estimation procedure to directly estimate user WTP via the model parameters; i.e. the coefficient estimates. The conventional 'utility-space' model specification (Table 2.1) 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. 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 benefit estimates.

¹⁵ Based on gross hourly pay for different job titles/roles from ONS Annual Survey of Hours and Earnings

¹⁶ 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.

¹⁷ 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 annual aggregate user benefits have been calculated by applying estimates of user WTP to the estimates of usage of the CHS service. 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; and
2. Aggregation based on the estimated use of CHS by direct users.

The two alternative aggregation approaches were 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. 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.

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

Table 2.3 presents annual user benefits for Approach 1, which has applied estimates of annual user WTP to the estimated number of direct user organisations for CHS (i.e. approximately 1.4 million). 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 2018¹⁸. However, accounting for the observed diminishing marginal WTP across the 'total use' segments, results in a lower annual user benefit estimate of £2,256 million¹⁹.

Table 2.3: 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% conf. interval]	£2,876m [£2,088m – £3,663m]	£2,256m [£637m – £3,878m]				

Note: estimated annual use benefits 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.

¹⁸ The lower/upper bounds are £2,088 million/£3,663 million based on a 95% confidence interval for the WTP estimate.

¹⁹ The lower/upper bounds are £637 million/£3,878 million. The wider 95% confidence interval for the segmented results stems from the smaller sample sizes used to estimate WTP for each segment.

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. The results in Table 2.4 show that the use of a constant unit WTP value (of approximately £11 per use) gives an annual user benefit estimate of £808 million for CHS in 2018²⁰. Applying unit values for each user segment results in an annual user benefit estimate of approximately £1,694 million²¹. Overall, the aggregate benefit estimates for Approach 2 are estimated to be around 30-75% of the calculated values for Approach 1.

Table 2.4: 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% conf. interval]	£808m [£587m – £1,029m]	£1,694m [£447m –£2,938m]				

The aggregate benefit of CHS for UK users in 2018 is therefore estimated to be within the approximate range of £1 billion to £3 billion, based on these two alternative approaches. This is likely to be an underestimate of the value of CH company search services as it only aggregates benefits for users of CHS. Hence Approach 1 captures the value to users who use multiple products and services (e.g. CHS along with WebCheck and CHD), but does not include the value to users who use other products but not CHS.

CH data that generate the greatest user value

Direct users attributed the greatest value to the provision of financial information (e.g. annual reports and financial statements). This represents approximately 55% of the total aggregate benefit (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 4% of the annual aggregate benefit (i.e. approximately £40 million to £120 million per year).

²⁰ The lower/upper bounds are £587 million/£1,029 million.

²¹ The lower/upper bounds are £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 for each segment.

Changes in value over time

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 characteristics of 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 research 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). 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.

2.4 Illustrative policy application

This section provides an illustrative policy application, which is intended to demonstrate how the research results can be used to assess the impact of introducing an annual user charge for the company information and data search services.

The example (i.e. the policy application) is purely hypothetical. 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 scenarios are considered with different annual user subscriptions for accessing company information and data:

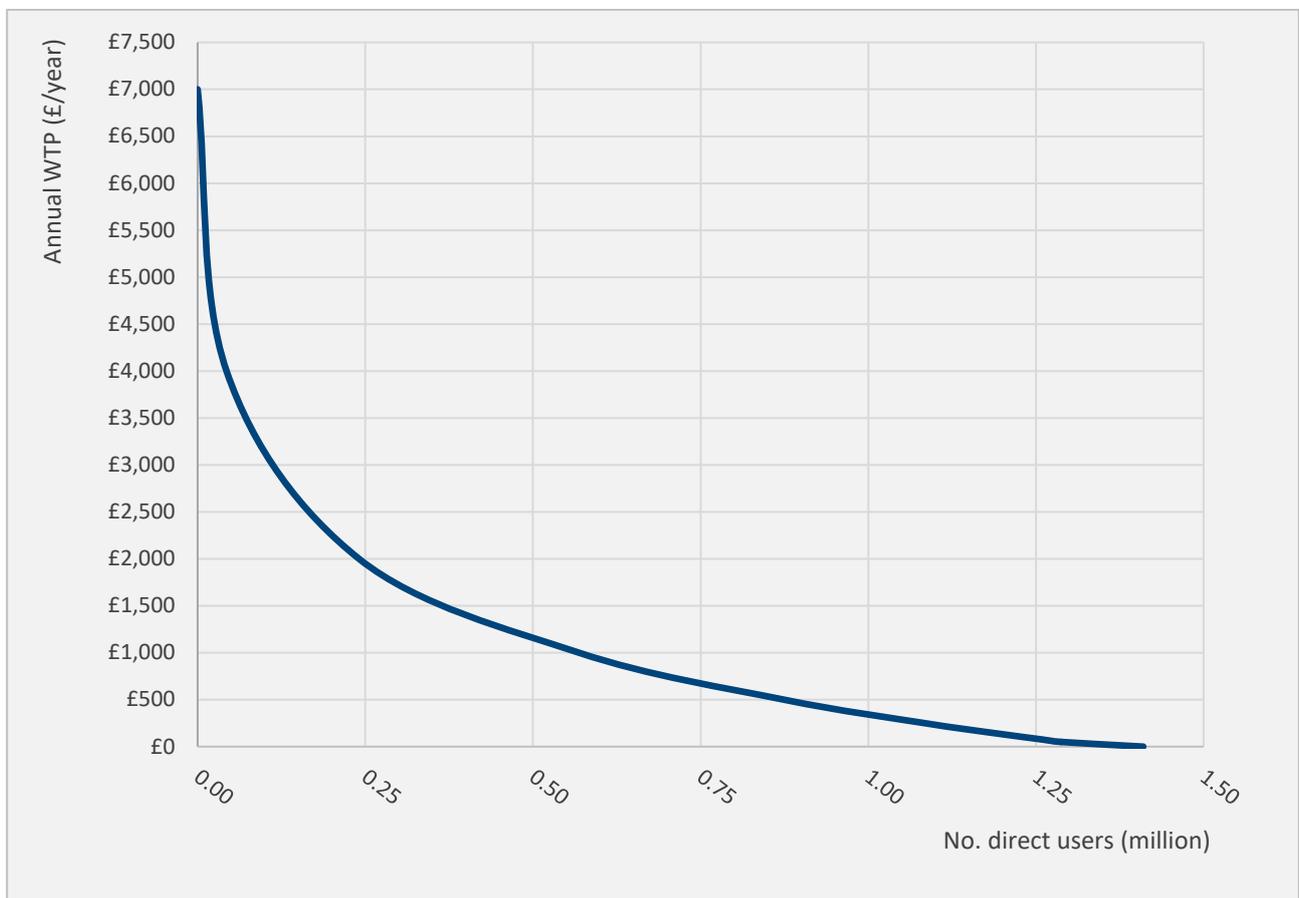
- A £50 per year subscription; and
- A £1,000 per year subscription.

The analysis uses the choice model results from the WTP survey to predict the proportion of current users that would participate in the ‘market’ for CH data and information within each scenario.

Estimated demand for CHS information and data

Figure 2.2 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 2.5 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 2.2: Estimated demand for CHS company data and information



Note: The function is smoothed between price points for illustrative purposes (see Table 2.3).

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 2.5 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 2.5: 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 charges for direct users – changes in welfare

The associated changes in economic welfare for the two pricing scenarios are presented in Table 2.6, relative to the current ‘free of charge’ baseline.

Table 2.6: 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 2.2 and Table 2.5.

An illustrative annual user benefit of approximately £2,000 million (i.e. an approximate midpoint for the range of WTP estimates set out above) has been assumed as the sum of consumer surplus in the base case (i.e. with free access to CHS data). This suggests that:

- the **introduction of a £50 annual subscription per user** would raise revenue for the Exchequer of £77 million per annum. This is a transfer from consumers to the Exchequer, which when combined with a reduction in demand means that consumers would be worse off by £81 million per annum. The difference between the Exchequer gain and the consumer losses (- £4 million²²) represents a loss of economic welfare (i.e. the value of transactions that would not take place because of the subscription).
- the **introduction of a £1,000 annual subscription per user** would lead to much more substantial welfare losses. The Exchequer gain would be significant at £684 million per annum and is again a direct transfer from consumers. However, demand would be expected to fall by more than 20%, giving a welfare loss of £410 million per annum, which again represents the value of transactions that would not take place because of the subscription.

These scenarios illustrate a well established principle of economic theory that where there is zero additional cost of giving more users access to a good (i.e. CH data), the economically efficient, welfare maximising, price to charge for that good is also zero.

Distribution effects

The distributional effects of introducing user charges for CH information and data are likely to be disproportionate across current users. For example, it is estimated that a £50 per year user charge would exclude around 1 in 10 current users from the market. The demand analysis suggests that the reduction in users would be focused on the low intensity users (i.e. those using CH data for 0-3 hours per year). A user charge of £1,000 per year would also be expected to have greatest effect on low intensity users, with around 4 in 5 (of the 0-3 hour 'total use' segment) dropping-out of 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 (see Report 2). 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 reported cost savings.

²² Value of transactions would fall by 0.2% from £2,000m to £1,9996m.

3 Intermediaries

This section summarises the key findings of the research regarding the value of CH data to intermediaries that use CH data as an input to their own commercial products and services.

3.1 Estimating the value of CH data for intermediaries

Intermediaries are private sector businesses that use CH data as an input to their own commercial products and services, thereby adding value to CH data and selling it on to end-users of the data. The research has found that this sub-group of users of CH data includes some very large businesses, such as credit reference agencies, but also includes much smaller organisations that are using CH data as an input to their own products or developing software and other tools to provide access to CH data.

It is difficult to estimate the total number of intermediaries in the UK, given the limited information with which to profile the overall population of users of CH data. The study therefore adopted two approaches to understanding the potential benefits of CH data for intermediaries:

- The WTP survey identified 85 businesses that reported including CH data in the products and services that they sell to their customers. These users represented 14% of the total number of survey responses, however, it is not possible to extrapolate to estimate the wider population of intermediaries due to the potential sample bias in the WTP survey²³.
- An alternative approach identified the private sector businesses that access CH's 'bulk' data products. These products provide large quantities of CH data and users are likely to include the most significant intermediaries (i.e. those using very large quantities of CH data as inputs to their own products and services). CH identified 132 private sector businesses who are users of bulk data (i.e. intermediaries). There was no overlap between the largest intermediary users of bulk data (that participated in the qualitative research) and the 85 responses to the WTP survey.

²³ The sampling approach for the direct user survey is described in Section 4.3 of Report 2. It was based around the 'total use' of CHS (frequency and duration) and did not attempt to control for user type (e.g. direct users, intermediaries, providers of public goods). Hence it is difficult to conclude that the observed incidence of intermediaries in the survey (14% of the sample) is a reliable result, and therefore we would not recommend aggregating results on this basis.

The analysis of the research findings suggests that there are three broad, and potentially overlapping, categories of intermediary:

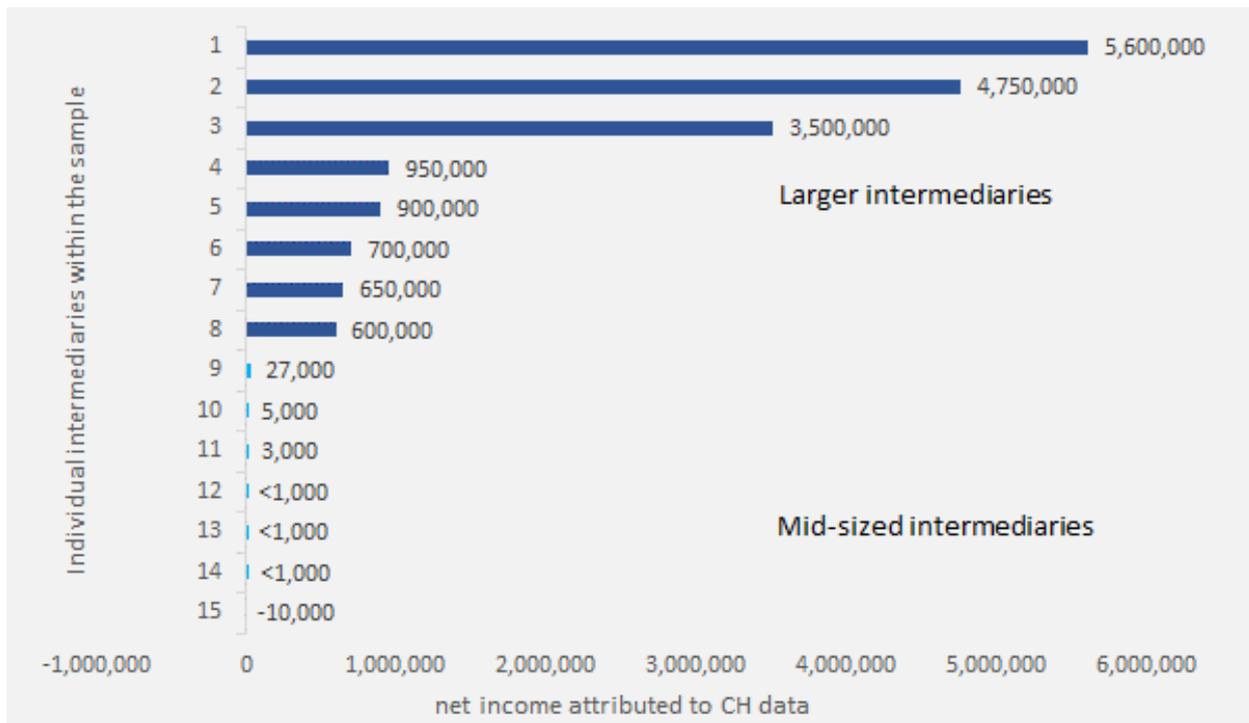
- A group identified through the WTP survey of typically 'smaller' intermediaries²⁴ whose willingness to pay is similar to the direct users of CH data. The responses to the WTP survey suggested that the average annual benefit to these beneficiaries is approximately £2,000 per user per year, and an average benefit of approximately £8 per individual 'use' of CH data. These figures are consistent with the overall estimates for all direct users, presented in Section 2.
- A group of 'mid-sized' intermediaries, which in our research sample, have an average turnover of just over £1 million each and where, on average, 60% of their turnover depends on products and services that use CH data. In the research sample, the seven 'mid-sized' intermediaries attributed £1.4 million of their revenues to the use of CH data.
- A group of 'larger' intermediaries which, in our research sample, have an average turnover of over £100 million each. This group includes the main credit reference agencies. These are large multi-product businesses, for which sales generated by products and services that use CH data are on average 15% of their total turnover. In our sample, the eight 'larger' intermediaries attributed £21.5 million of their revenues to the use of CH data (i.e. representing 94% of the total 'mid-sized' and 'larger' intermediary revenues attributed to the use of CH data).

Collectively the research sample of 15 'mid-sized' and 'larger' intermediaries directly attributed £23 million of their revenues to the use of CH data and £5 million of their costs to accessing and processing CH data (i.e. contributing net income of around £18 million²⁵). However, the variation in estimates between individual businesses was very large, as illustrated in Figure 3.1 which shows the distribution of net income from CH data for the sample. It shows that net income estimates ranged from -£10,000 (in the case of a new business that is currently developing software to explore the CH datasets, and expects future revenues to increase significantly) to £5.6 million in the case of one of the largest intermediaries. There was also a significant difference between the two sub-samples:

- The 'mid-sized' intermediaries attributed an average net income of less than £5,000 to the use of CH data, with estimates ranging from -£10,000 to £27,000 per year.
- The 'larger' intermediaries attributed an average net income of £2.2 million to the use of CH data, with estimates ranging from £0.6 million to £5.6 million.

²⁴ Approximately half of the smaller intermediaries reported an annual turnover of less than £250,000 and/or between 0-4 employees.

²⁵ However, the net income figure is unlikely to provide an accurate estimate of the change in producer surplus (as described in Report 1), as it is unlikely that all intermediaries in the sample have consistently and appropriately attributed their revenues and costs to the use of CH data.

Figure 3.1: Net income attributed to CH data

Source: ICF analysis of qualitative research with 15 intermediaries that use bulk data products.

The above estimates provide average figures for net income that are significantly larger than the £2,000 per user that was identified in the WTP survey for 'smaller' intermediaries. This also suggests that the benefits for intermediaries that use other 'non-bulk' products and services are likely to be much lower in value than the benefits for the intermediaries that use bulk data products.

The qualitative research also identified additional benefits of CH data in terms of:

- being able to use company numbers in the CH data as a means of linking CH data with other sources of data (and in many cases allowing intermediaries to develop systems to automate this matching process); and
- the credibility and legitimacy provided by CH data, which is widely regarded as the definitive source of company information in the UK and enhances customer perceptions and the reputation of intermediaries' own products and services that use CH data.

The intermediaries also reported a lack of viable substitutes for CH data. In the absence of CH data, most of the intermediaries suggested that they would either have to remove certain data and functionality from their products and services, or develop their own systems for collecting data directly from businesses. While the intermediaries were unable to quantify or monetise these impacts, they reported that the absence of CH data would be expected to reduce the quality of their products and services, increase their costs and/or reduce their revenues.

3.2 Changes in benefit values over time

More than half of the intermediaries that access CH bulk data products have only been accessing these products since they became available free of charge. This suggests that most intermediaries are relatively new users of these products.

However, this was in contrast to the qualitative research sample, which included the largest intermediaries, who tended to be longer-term users of CH data. Most of these intermediaries suggested that their usage of CH data had remained constant over time and the introduction of free data had only had a minimal impact on their levels of usage. For most of these customers, the introduction of free data had provided cost savings, but was unlikely to have affected their levels of use. However, the large numbers of new users among the wider population of bulk data users suggests that the introduction of free data may have had a greater impact for these other 'mid-sized' intermediaries.

The qualitative research also identified some negative impacts for intermediaries from the introduction of free data in terms of providing a new source of competition for some of their lower value-added products and services, which customers can access for free themselves, directly from CH. This has reduced the value of some of these more basic products and services for intermediaries.

Overall, the qualitative research found that 'mid-sized' and 'larger' intermediaries were accessing more CH data over time, but this was generally due to the additional of new datasets, and the expansion and increased frequency of existing datasets, rather than the introduction of free data. The introduction of PSC data has been a particularly significant addition, enabling some intermediaries to improve existing products and develop new products and services.

3.3 CH data that generates the greatest user value

The sample of intermediaries reported using a broad range of different CH products and services. The most commonly used and most valued pieces of CH data among the sample of key intermediaries (who use bulk data products) were:

- the CHS-API, for the ability to gain direct access to CH data and systems;
- bulk data, due to the breadth of data available and the ability to run searches; and
- PSC data, for providing access to company owners that tends to be difficult to access from other sources.

In contrast, the intermediaries identified in the WTP survey were more likely to use the CHS, WebCheck and CHD services.

It was also suggested that CH data could be further improved to add even greater value by:

- improving data transparency – for example, by ensuring companies are required to provide a full list of shareholders, increasing the consistency of reporting requirements across all types of entity, and continuing to increase the overall provision of data and services from CH and other government departments (such as HMRC).
- making further improvements to data quality – for example, through additional data checking and quality assurance to identify errors and duplication.
- improving the functionality of CH data – for example, by providing a faster-streaming API service, providing access to raw data (rather than pdf / image files), and undertaking more frequent reviews of data specifications and lookups within datasets.
- increasing communications – for example, by providing sufficient notice of changes to datasets and formats, and informing users of likely delays in the delivery of datasets, to help intermediaries plan and allocate resources more effectively.
- increasing consultation with intermediaries – for example, to support CH in the development of new data products and services to ensure they meet the needs of users, and to help inform policy decisions regarding data transparency and the provision of public data.

On 5 May 2019, the Government published a consultation on corporate transparency and register reform.²⁶ This consultation is currently seeking views on a wide range of aspects of the company transparency and registration framework. It proposes a number of reforms designed to deliver improvements to the Company Register, including some of the suggestions described above.

²⁶ <https://www.gov.uk/government/consultations/corporate-transparency-and-register-reform>

4 Providers of public goods

This section summarises the key findings of the research regarding the value of CH data to providers of public goods.

4.1 Estimating the value of CH data for providers of public goods

It has been difficult to estimate the value of CH data for providers of public goods due to a lack of information about the overall size and profile of the user population. The research findings are based on information collected from a relatively small number of qualitative interviews with key users and should therefore be treated as indicative.

However, the research findings suggest that the use of CH data is likely to deliver significant public goods and benefits, particularly in terms of social benefits. The main social benefits identified in this research include the use of CH data to:

- provide contextual information to help inform and support good policy decisions;
- support activities to address criminal behaviour including corruption, fraud and money laundering, thereby reducing risk and uncertainty and helping to support a trusted environment for businesses and consumers; and
- help demonstrate the value of open data in the UK and internationally and maintain the UK's position as a global leader in driving transparency of public data.

Some illustrative examples of social benefits are provided in the boxes below.

Government department: benefits of CH data

One of the government departments interviewed in this study reported using CH data to support policy making for at least 50 years. They stated that they use CH data several times a week, for two main purposes:

- CH data provides important contextual information on the number of companies, directors, shareholders, etc. that meet certain criteria, or are likely to be affected by a change in policy. This information is essential for understanding the potential scale of impacts of policy changes and is used to inform impact assessments as well as providing statistics and figures for ministerial briefings, press releases, strategies and reports.
- CH data is also used to investigate individual companies, usually in response to a specific complaint or query from the public. It provides the user with an understanding of the company and its activities and is a key source used to inform government responses to these queries.

Law enforcement agency: benefits of CH data

CH data plays a key role in supporting law enforcement. One of the agencies interviewed in this study reported using CH data on a daily basis as part of their work to investigate fraud.

The agency considers CH data to be an essential resource for investigating companies suspected of being involved in fraudulent activity. It is considered a 'go to' resource and a useful starting point for investigations because it provides comprehensive coverage of UK companies and is free to use. While CH data cannot be guaranteed to provide an accurate picture of fraudulent companies, as it is only based on the information that has been filed by the company, it does provide a key source of information for investigations. Furthermore, the requirement for all companies to register with CH means that even fraudulent companies are listed in CH data, while the absence of companies from the register also provides evidence of suspicious activities.

The agency was using CH data to collect information relating to particular companies including addresses, financial information and the key individuals associated with that company. The introduction of PSC data has also significantly enhanced the value of CH data for their investigations and for identifying links between companies for certain individuals. CH data helps to build a picture of particular companies and individuals and also helps to identify issues or concerns that can justify further enquiries or actions, such as obtaining search warrants. It is also used to provide evidence for cases that go to court.

By supporting law enforcement agencies, CH data delivers significant social benefits. These include providing protection to the public, reducing criminal activities and the harm that they can cause, providing justice and helping victims of fraud to regain losses. While the agency was unable to attribute specific benefits to CH data, it confirmed that CH data is a significant source of information that supports investigations, helps to generate leads and reduces the time and cost of cases.

Transparency group: benefits of CH data

CH data provides a key source of information for transparency groups. One of the groups interviewed in this study stated that the primary objectives of their organisation are to reduce levels of corruption, create a more difficult environment for corruption to take place, and push for the benefits from national resources to be distributed more fairly.

The group works on investigations of corruption and money laundering and has been using CH data since the organisation was established. They analyse CH data from a corruption perspective and use the data to undertake research and obtain information about companies, shareholders, addresses, etc. to understand who is involved in specific companies and make connections between individuals.

The increased quantity and quality of CH data (and particularly the introduction of PSC data) has enhanced their analysis, which has developed from basic lookups and investigative journalism, to the creation of large datasets and the development of tools for visualising and exploring the data. This is used to produce research reports as well as social media outputs in order to raise awareness of issues and conflict and use this to deliver change. CH data therefore provides a key tool through which they undertake research and use the information to affect change.

The organisation reported that CH data has also been used more recently to demonstrate the value of open ownership registers and is helping to influence the international debate on this issue.

CH data also delivers benefits for the operation of public sector organisations in delivering these social benefits, by reducing their operating costs and increasing productivity relative to the use of alternative data sources. In some cases, they also generate revenues from the use of CH data as inputs to products and services, similar to the benefits described in Section 3 for intermediaries.

It has not been possible to quantify and monetise the benefits associated with providers of public goods due to: the lack of information on the size of the total population; the fact that benefits tend to be specific and unique to the individual user; and the difficulty of attributing these benefits to the use of CH data. The sample of public sector organisations participating in the WTP survey was also insufficient to calculate robust estimates of their WTP for CH data. However, the qualitative interviews have provided some specific examples of the benefits of using CH data. The research findings also suggest that the benefits of CH data are likely to be significant for providers of public goods because:

- They tend to be relatively large organisations and intensive users of CH data in terms of their frequency and duration of access.

- They reported a lack of viable substitutes for CH data. In most cases, the only alternative would be for users to collect data themselves, either directly from companies or via internet searches. However, this would have significant impacts for these users and the public goods they provide in terms of: reduced data coverage; reduced data quality; and increased costs of identifying and collecting the required information, which were projected to increase costs of data collection and analysis by between two and ten times.

Perceptions of CH data were also found to be strong among most providers of public goods, in terms of accuracy and reliability. Any data quality issues were typically perceived to be due to poor information provided by the companies themselves, rather than an issue with the processing or presentation of the data by CH. The research also identified high levels of satisfaction with CH data among providers of public goods, with some international transparency groups suggesting that the UK has the best company register in the world in terms of the breadth and depth of data available. The openness of the UK register and data was also considered a real strength and something that other countries should seek to adopt themselves.

4.2 Changes in benefit values over time

The research indicated that providers of public goods were typically long-term users of CH data. For example, all nine of the interviewees were found to have been using CH data since before it was made freely available. However, despite being long-term users, their reported use of CH data had increased significantly over time in eight out of the nine cases, due to:

- the increased breadth of data available, including the addition of PSC data;
- changes to the format and structure of datasets to make it easier for users to access, search and interrogate the data; and
- the introduction of free data, which has provided cost savings and enabled use of the data to increase during a period when many public sector budgets have been reduced.

The research also suggested that CH data has become increasingly valuable over time for providers of public goods as a result of these improvements. The introduction of PSC data was found to be of particular value for all providers of public goods by providing increased transparency and understanding of corporate structures and company ownership in the UK. For example, transparency groups and law enforcement agencies are now better able to identify the individuals who own and control companies, which is invaluable for their investigations, and for the provision of statistics, articles and reports on the ownership of UK companies.

4.3 CH data that generates the greatest user value

PSC data and the CHS service were the most commonly used and most valued pieces of CH data among providers of public goods. These were used by nearly all of the sample and reflect the focus of these users on using CH data to search for basic information on individual companies and PSCs, identify companies and individuals meeting certain criteria, and undertake data analysis and produce summary statistics. It was also suggested that CH data could be improved to add even greater value by:

- enhancing the quality of the data through increased checks to reduce duplication and provide greater consistency in the filing of company addresses;
- improving the functionality of CH data by: providing access to raw data (rather than pdf / image files); improving the effectiveness of company searches by address; and allowing users to request notification alerts of changes to particular variables or companies; and
- adding unique identifiers to the PSC data to improve the ability to search for individuals and identify links across different organisations.

As noted previously, the Government launched a consultation on corporate transparency and register reform on 5th May 2019. Some of the improvements listed above are also included within the proposed reforms described in this consultation.

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