National Centre for Social Research

Limb(b) Worker Status

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1. Methodology – Phase 1 Survey

1.1 Questionnaire development

The questionnaire design for this study is complex – it can be challenging and sensitive to answer questions about working practices, particularly for those in less traditional roles and when asked in the context of tax payment. However, this can be mitigated through good design, and the 2023 survey on worker status that NatCen delivered for HMRC provides a useful starting point. To develop a questionnaire that provides valid data that address DBT's needs and priorities questionnaire items will be designed by NatCen's survey research team in collaboration with DBT and with the assistance of NatCen's specialist Questionnaire Design and Testing (QDT) team. Regular interaction with DBT will ensure that the data collected meet research requirements. The process will start with a questionnaire review meeting to ensure the NatCen team understand the research objectives/analysis requirements, before following an iterative design process. NatCen will review the existing questions and proposed amendments from DBT, contributing technical questionnaire design expertise to ensure the questionnaire collects valid data and provide drafts for DBT to review and, eventually, sign off. Alongside this expert review, NatCen will conduct cognitive testing to ensure that members of the public understand questions consistently and as intended, and are willing and able to provide valid answers.

Our proposed approach to questionnaire development and testing is set out below.

Questionnaire structure & content

As outlined in the specification, we expect the questionnaire to follow the same structure and cover similar content as the 2023 survey:

- An initial set of two screening questions will identify all people in any kind of paid work.
- A longer screening questionnaire will then ask those in any paid work about up to three 'jobs'/different streams of income[1] to identify people whose employment status for rights is easily identifiable.
- Those whose employment status for rights is *not* easily identifiable will then be screened into the 'full survey', where they will be asked additional questions to identify whether or not they are limb(b) workers or 'low autonomy self-employed contractors'. It will also ask questions to understand the characteristics of limb(b) workers, their work and their experiences of and attitudes towards limb(b) status.
- Standard demographic questions (e.g. sex, age, ethnicity, education) - to be updated if not done in the last six months.

For the purposes of this proposal we have assumed that the initial screening questions will last c. 30 seconds, the longer screening questionnaire will last an average of 2 minutes, and that the 'full survey' will last 12 ½ minutes. The actual length will vary as the questionnaire is heavily routed: some individuals will experience a much longer screening questionnaire, for example if they have multiple 'jobs' and go through three loops. Keeping the questionnaire to this length will have methodological benefits – longer questionnaires risk participants disengaging and putting less effort into their answers, or may put them off participating/increase the risk of drop-out. Some increase would likely be reasonable, balancing this risk against the benefits of having more data. However, there would be cost implications of such an increase in length as we may need to increase incentives, and would

[1] We will check that the existing definition of a 'job' used in the 2023 HMRC study for looping purposes is also appropriate for this study.

potentially result in more questionnaire development, programming and testing working, and potentially analysis.

We note that keeping the questionnaire to this length will be a challenge. Any group for whom we wish to provide a prevalence estimate for Limb(b) workers will either need to be covered by our ‘standard’ demographic questions, or have that question asked within the screeners, where there is little space to expand. While the ‘main’ survey has more space, trade-offs will need to be made between asking more questions to accurately triangulate the participant’s employment status, for profiling people with Limb(b) status, and addressing research questions related to their experiences. We will work with DBT to ensure the prioritized questionnaire content matches your research priorities.

Questionnaire mode

To optimise fieldwork efficiency and enable the use of a high-quality probability-based sample within the required budget and timeframe we propose a sequential mixed-mode (web/telephone) fieldwork design (described in more detail in Section 1.3). By offering an online-first option we can conduct fieldwork relatively quickly and cost-effectively, while the use of an ‘offline’ mode (telephone) increases the accessibility of the study and ensures that a greater range of people (in particular the digitally excluded) have the opportunity to take part. This is important both from a quality perspective (excluding this population may bias results if their views are systematically different from those with greater digital skills) but also an ethical one (making sure that populations that are typically relatively disadvantaged and likely to be affected by any related policies/changes are given the opportunity to express their opinions).

Questionnaire design

For the design of the questionnaire, we will follow an established approach to collaborative development, working closely with DBT to develop a questionnaire that provides valid and relevant data. We will follow an iterative process, beginning with an inception meeting between NatCen and DBT researchers to discuss the existing questionnaire and required employment status features, and ensure a common understanding of the research objectives and scope of the questionnaire. As this is building on the 2023 study, we recommend that this focuses on feedback on the ‘existing’ questionnaire (i.e. the questionnaire used in 2023), including any questions/topics of particular concern (e.g. due to a changing legal/policy environment), and adaptions that need to be made for the new target population.

Based on this initial steer, NatCen will review and update the draft questionnaire. We will apply our expertise on how to ask questions in a manner that enables participants to give valid answers and check the ‘technical’ aspects of the questionnaire (e.g. ensuring all routing is present and correct). We will also double check that all questions are suitable for both online (including smartphone) and telephone modes of administration. As we review the questions, we will make suggestions for changes on this basis, but in the context of the broader research objectives/data needs. Once this review is complete, we will share our recommendations with the DBT team for review. We recommend at this point holding a ‘Questionnaire workshop’ to discuss these suggestions, enabling a clearer back-and-forth than would be possible via document sharing/email exchange. From here we would then follow an iterative process, with NatCen providing updated drafts and receiving comments from DBT until a draft questionnaire specification has been agreed.

Cognitive testing

Once the draft questionnaire specification has been agreed, we recommend it goes through cognitive testing to refine the design and ensure that members of the public understand the questions consistently and as intended, and are willing and able to provide valid answers. To work efficiently, we recommend that the testing focuses on the ‘new’ questions and those which the desk review identified as likely to be more problematic.

During interviews we will use a mixture of observations, think aloud and probing techniques. Interviewers will observe participants responding to the questions, collect ‘think aloud’ data where the respondent talks through their thought process whilst answering, and ask probes to collect further detail on how the participant found answering the question. Using this technique, we can explore ease of answering, understanding of terminology, recall and check that the response options are appropriate. A cognitive testing protocol would be designed to assess the new questions and DBT would have the opportunity to review this before interviews start.

We suggest 12 cognitive interviews are carried out for this project. These would be remote interviews carried out via Zoom or telephone (depending on the participant’s preference and accessibility) and will be recorded with the participant’s consent. Quotas for the sample would be agreed in advance of recruitment starting. For example, we would aim to recruit people based on a mix of gender, age and education, as well as whether or not people had less-traditional working practices. These will be agreed and signed off by DBT. If we believe we can easily find people within the population who meet these criteria, then recruitment would be carried out via Propeller Field recruitment agency. We regularly work with Propeller to recruit participants with certain characteristics to take part in cognitive interviews. Participants who take part in an interview will be offered a £30 Love2Shop voucher as a thank you for their time.

Once the interviews have been completed researchers will listen back to the sound files and write up summary notes into Excel charts. A debrief meeting with everyone who carried out interviews and the research team would be held to discuss the initial findings on the questions. DBT would be invited to attend this meeting to hear the initial feedback on the questions. After the meeting a full analysis of the charts (tables based on ‘Framework’ coding approach for qual analysis) will be carried out. A marked-up version of the questionnaire showing suggested amendments will be provided as the output from cognitive testing.

Questionnaire programming & checking

Once the cognitive testing is complete, and changes/the final questionnaire specification have been signed off by DBT, we will develop a questionnaire program. This will be developed by our specialist programmers using Unicom Intelligence (UI), an industry standard questionnaire design program. NatCen has developed a high-quality web survey template informed by methodological literature that ensures that the way questions are displayed facilitates accurate responses. These templates have been thoroughly tested across a range of devices, browsers, and operating systems and are used regularly for NatCen web and telephone surveys.

The questionnaire will be tested by the research team to ensure that it matches the specification. We can also provide DBT with a version of the program to check if required. NatCen has stringent quality procedures for checking questionnaires. Testing involves going through the questionnaire program systematically, checking that each variable, question, interviewer instruction, answer option, text-fill and routing instruction is operating as detailed in the specification. A written record of each check is maintained, ensuring that every element of the program can be shown to have been checked. Any revisions are individually logged and re-checked and signed off once corrected. Once the questionnaire has been fully checked and all issues signed off, the questionnaire will be passed to the project lead for final sign-off.

1.2 Sampling

To deliver a sample that allows for robust estimates of the proportion of the UK and sub-groups who are Limb(b) workers or 'low autonomy self-employed contractors', and to measure the characteristics of those workers, we will draw sample from the NatCen Panel. The NatCen Panel is the UK's longest-running probability-based panel, and currently has over 30,000 active members. For this study we will issue sufficient sample to achieve c.8,000 interviews, assuming a c.55% response rate. Our proposed approach to sampling is set out below.

Sample design for this study

The NatCen Panel is recruited through studies for which participants are selected at random from the general population using the Postcode Address File (PAF) as sample frame, meaning that vast majority of the UK population will be covered. For this study we will use NatCen Panel sample recruited from the British Social Attitudes survey (BSA), covering Great Britain.

The target population for this study is people aged 16-64 and living in the UK. For this study, a random sub-sample of all active panel members from the target population will be sampled and invited to take part. This sustains the principle that the population has a known and non-zero chance of being selected and thus the random probability design.

Despite our high-quality recruitment design our overall Panel sample includes some biases due to uneven odds of selection, ageing, and differential recruitment/attrition rates. To address this, at the sampling stage, we will model the extent to which panel members are over- or under- represented in the full panel sample and adjust their odds of selection accordingly. However, as our issued sample size for this study is quite large, this limits our ability to do this.

Sample size, response rates, and Margin of Error

For this study we expect to issue a sample of c.14,500 Panel members in order to achieve a minimum of 8,000 complete and valid interviews (a 55% response rate). Response rates vary from wave to wave of a study. Although we can be relatively confident of our response rates as we can draw on experience from many previous studies[2], specific survey characteristics (such as length, topic relevance/sensitivity, or funder) may result in participants being more or less willing to participate. We do not expect this to be an issue given the fieldwork design we outline in Section 1.3, but to mitigate the risk we will also draw a 'reserve' sample to be issued during fieldwork should early response rates look like they are falling short of target.

Based on data from the 2023 HMRC research, we expect 22% (1,760) to be identified as having 'less traditional working practices' and screened in to the 'full survey', and based on the figures provided in the specification, 2.75% (220) to be identified as Limb(b) workers. We discuss options should incidence rates be lower than expected in Section 3.

The Margin of Error (MoE) for estimates varies with sample size and also depend on the design effects (DEFF) for that (sub-)sample and the size of the estimate itself. To estimate the sample size requirements for prevalence estimates of Limb(b) workers, assuming a DEFF of 1.4, and an estimate of 5%, we would have a MoE of 4% for a sample size as small as 160. With a total sample size of 8,000 and a DEFF of 1.4, an estimate of 2.75% would have a MoE of 0.4pp.

[2] The previous study conducted for HMRC achieved a response rate of c.65%.

For estimates of the profile/experiences of Limb(b) workers, assuming 220 are identified in the survey and a DEFF of 1.4, the MoE would be as follows for different estimates:

Population estimate	Margin of Error
10% or 90%[3]	4.7pp
20% or 80%	6.3pp
30% or 70%	7.2pp
40% or 60%	7.7pp
50%	7.8pp

We note that it is unlikely to be feasible to produce precise estimates for any subgroup within Limb(b) workers – for example we would not be able to provide robust estimates for the percentage of Limb(b) workers living in Wales who are aged 18-24.

1.3 Fieldwork design

One-month, sequential mixed-mode design

Building on the high-quality sampling and recruitment approach, our fieldwork design will put extensive effort into maximising response rates and ensuring all types of people can take part. We propose that fieldwork is conducted both online and over the phone over a one-month period.

The use of online fieldwork initially increases speed and reduces costs as the majority of interviews can be completed simultaneously without the need for interviewers. After approximately two weeks, the use of telephone fieldwork then enhances the sample quality by boosting response rates and enabling those who are unwilling or unable to take part online to participate, minimising the risk of bias/non-coverage. It is still possible for Panel members to complete online during this period, and the telephone interviewers will improve response rates by reminding people to complete online or answering their questions (e.g. data concerns or technical issues) as well as directly completing telephone interviews.

Overall, using a one-month fieldwork period will allow everyone, even those who might not be 'readily available' (for example because they are busy with work or family commitments), to take part. It provides time for as many people as possible to complete online initially, and for our telephone interviewers to make multiple attempts to contact participants by phone.

Telephone fieldwork

The telephone fieldwork will be conducted by NatCen's specialist Telephone Unit (TU) who will receive a project-specific briefing led by the NatCen Research team. All participants who have not participated online or withdrawn, and for whom we hold a phone number, will be issued to our TU. Willingness and ability to take part online is not necessarily a static status, and telephone chasing can also address low willingness to take part for reasons beyond digital skills (e.g. having an interviewer address privacy concerns), and so may have a positive impact on sample quality for all groups.

By default, the TU will make up to six attempts to contact each panel member at each of their available phone numbers before 'closing' a case, contacting at a mixture of times of the day and days of the week to maximise the chance of contact. Where appropriate,

[3] For example, if we estimated that 90% of Limb(b) workers were aged 18-24, the MoE would be 4.7pp.

interviewers will also arrange appointments to call back at specific times, trace new contact details, etc.

Although using telephone fieldwork should reduce bias in the sample, there is a risk that it introduces 'mode effects' – where participants answer the same questions differently (not necessarily 'better' or 'worse' online or over the phone. As this questionnaire focuses on behaviour, and the proportion of interviews conducted on the phone is likely to be low, we believe the impact of this will be small. Nonetheless, we mitigate the potential effects by implementing a 'unimodal' design – designing questions to operate similarly in both modes. We will also implement strategies such as randomizing the order of answer options where appropriate, to reduce any primacy or recency effects (tendency to select the first or last answer option) which can be different in different modes.

Communications strategy

Using a one-month fieldwork period also allows us to make multiple attempts to reach panellists by post, email, text message and phone to encourage participation. The table below summarises our core communications strategy, which emphasises encouraging people to take part online before telephone fieldwork starts:

'Core' communications strategy

Item	Timing (dispatch)	Population
Invitation letter	FW start - 1	All cases with a postal address
Invitation email	FW start + 0	All cases with an email address
Reminder email 1	FW start + 4	All unproductive cases with an email address who have not withdrawn
Reminder text message 1	FW start + 4	All unproductive cases with a mobile phone number who have not withdrawn
Reminder letter 1	FW start + 8	All unproductive cases with a postal address who have not withdrawn
Reminder email 2	FW start + 9	All unproductive cases with an email address who have not withdrawn
Reminder text message 2	FW start + 9	All unproductive cases with a mobile phone number who have not withdrawn
Telephone chasing starts	FW start + 14	All unproductive cases with a phone number who have not withdrawn

Using multiple modes of contact, at different times, increases the chances of contacting more, and different types of, people and therefore maximising response rates and sample coverage. While we prioritise digital communications, mixing modes of communication for all participants improves sample quality, mitigating against risks of, for example, email addresses being changed or people moving house. Our communication strategies are based on the 'Tailored Design Method'[4]. This means that multiple contact attempts are made, different motivators are used at each mailing, and mailings are personalised as much as is possible. Our communications will aim to maximise informed consent/participation, including information such as the topic of the study and its purpose, information on how to take part,

[4] Dillman, DA. Smyth, JD. Christian, LM. Internet, Phone, Mail and Mixed-Mode Surveys: The Tailored Design Method (2014). Wiley.

what taking part will involve, what they will receive for taking part, who is funding the research, data security information, and motivational messaging.

Incentives

NatCen Panel members are typically offered a £5 shopping voucher (either digital or physical to ensure the digitally excluded can use them) when completing a 15-minute survey as a thank you for their time. For this study, to keep costs down, we will offer this to all participants who complete either the ‘full survey’ or more than two loops of the screener survey. Participants who are screened out after one loop, or screened out after the ‘initial screener’ but we want to update their demographic information will be offered £1 as a donation to charity, and participants screened out immediately and for whom we do not need updated demographic information will not receive any incentive.

Targeted fieldwork protocols

The above sections outline our ‘core’ fieldwork design. However, the NatCen Panel also employs a ‘targeted design’ approach, where fieldwork protocols are varied depending on the participant’s characteristics. The first two elements are relatively straightforward: participants who have previously only taken part on the phone (and we therefore expect to be ‘digitally excluded’) are issued to our TU one week earlier, to give them more time to take part in the appropriate mode. Also, participants for whom we do not hold a phone number (and will therefore not be contacted during the telephone fieldwork phase) are sent an extra reminder letter and/or email during this time.

The second element focuses on allocating resources more efficiently in terms of maximising sample representativeness. Using a regression model, panellists with characteristics that tend to be under-represented in the sample, but who also have not taken part in all waves they have been invited to, are targeted with higher levels of effort (for example extra reminders, more telephone calls, or a higher incentive) to increase the likelihood of them taking part and therefore increasing sample quality. The costs of this are off-set by reducing the amount of effort for those Panel members who have characteristics that are over-represented and have participated in all the waves they are invited to. This approach is only applied to panel members who have been invited to take part in at least six waves.

1.4 Data processing and weighting

Data processing and checking

A key output for this study is an analysis-ready dataset – it is important that the dataset includes all required variables and is clean, structured and clearly labelled to enable ease of use. The use of computer-assisted interviewing will ensure data are already relatively clean and well-structured. However, further processing, checking and cleaning will be conducted by NatCen’s specialist data management team, with the process beginning on early data available during fieldwork to reduce delivery times. We will use NatCen’s bespoke ‘DataHub’ system which will write and document systematic checks on the data using SPSS syntax to ensure they are fully cleaned, structured, and quality assured before use in analysis. This will also include the computation of any derived variables required for analysis. All data files will be manually reviewed and signed off by the research team, including reviewing the data for any disclosure risk.

Quality checks

The nature of our Panel means that fraud is less likely relative to, for example, commercial panels which use convenience sampling – its ‘recruited’ nature means that people cannot sign-up en-masse using ‘bots’, and any attempt to force past our password system would become apparent as real people would then not be able to take part and would contact the office. Nonetheless, we implement a number of quality checks to minimise the risk of fraud/low-quality answers. Firstly, we review the length of time taken by participants to complete the survey, where faster completion times may indicate inattentiveness, although we also have within-survey checks which trigger error messages for participants if it detects them moving through the questionnaire too quickly. Other checks are more subjective – contact details and demographic information provided by the participant is checked against previously held information for impossible or unlikely changes. The research team will also review open-text answers to ensure that participants are giving valid answers, although these checks are limited to those who were asked open questions.

Weighting

Although our sampling and fieldwork design helps to ensure a representative sample, as with all quantitative surveys, the risk of bias is never fully eliminated. If patterns of non-response are associated with the outcomes of interest, estimates can be biased. To mitigate this, our survey statisticians will produce weights to be applied to the data during analysis to ensure a representative sample.

Non-response can occur at three stages: refusal to take part in the recruitment survey, refusal to join the Panel (plus subsequent attrition), and refusal to take part in this specific survey. Using the extensive information from Panel member's recruitment survey and previous Panel survey waves, we can effectively model (and therefore adjust for through weights) much of this non-response. Variables typically used in the modelling include age and sex groups, region, household type, household income, education level, ethnicity, tenure, social class group, economic activity, political party identification, and interest in politics.

The weight will also account for design features such as uneven selection probabilities within the recruitment and panel survey. Finally, weighted estimates will be reviewed by our statisticians, and further calibration to national benchmarks (e.g. census data or Labour Force survey) applied if deemed appropriate.

1.5 Data outputs

Dataset

As noted above, a key output for this study is an analysis-ready dataset, which will form the basis for subsequent analysis and reporting. By default, we will deliver a data file in SPSS (.sav) format (although other formats can also be provided on request). The dataset will include data for all specified questions as well as sampling and weighting variables, fieldwork paradata, and demographic information. The datasets will be clearly labelled and documented. NatCen will provide a specification of the data output for DBT to sign-off ahead of delivery to ensure it meets requirements.

Tables

Data tables will be provided alongside the other outputs in an Excel format to enable exploration of the data for those who are unable to access/analyse the individual-level data. The specific content of the tables will be agreed with DBT during the analysis planning stage. However, we expect the tables to include all substantive questions asked in the survey (or derived variables summarising them), and for them to be crossed by key (up to eight) groups of interest – for example different age or other socio-demographic groups.

Tables will include weighted estimates, appropriate metadata such as base sample sizes and variable/value labels, and statistical tests. We will agree the specifics of the testing with DBT but would expect it to be based on a 95% confidence level using Student's t-tests for independent samples (independent t-test).

We will also follow best practice for safe outputs and suppress or combine cells as required to address risk of data disclosure and/or reporting estimates based on very small sample sizes, and will be produced to a publishable standard. All tables will be reviewed by the research team and signed off by the project lead.

Technical report
We recognise the importance of ensuring that the data is accurate and user-friendly, and the dataset will be clearly labelled and documented. Alongside the dataset and tables, we will deliver a ‘technical report’ which will document key elements of the methodology such as the fieldwork design (e.g. fieldwork dates, interview mode, communications and incentive strategy), questionnaire documentation, response rates, sampling and weighting approach, and dataset content.

2. Analysis & Reporting – Phase 1 Survey

2.1 Analysis planning

Analysis (and reporting) planning should begin at the start of the project during the questionnaire design stage to ensure the questionnaire collects the data required to address the study’s research objectives. It will then be refined with a focus on outputs once fieldwork is underway before analysis commences. NatCen will work closely with DBT to develop an analysis plan to ensure that the research aims and objectives are fully addressed in the resulting outputs. It will set out how key research questions (e.g. ‘What are the demographics of people with ‘’Limb(b) worker’ status?’) will be analysed (e.g.: a cross-tabulation of worker status by income, industry, region, etc.)[5], including the statistical tests that will be applied. This systematic approach will help to ensure scientific rigour (the testing of a-priori hypotheses, rather than searching for statistically significant results), that research questions are addressed, and provides a clear and common understanding of the study scope, minimising the need for revisions.

A key part of the analysis planning will be agreeing the definitions of workers – how participants’ answers to categorisation questions should be combined in order to identify them as limb(b) workers (or low autonomy self-employed contractors). We have assumed that this will be done in advance, adjusting the ‘feature analysis’ approach used in the 2023 HMRC study. This will help to ensure that results are more timely, and that definitions are independent/based on policy, theory and practice rather than led by data. However, alternative approaches may be appropriate and we would be happy to discuss these at the planning stage.

2.2 Analysis

The analysis will focus on providing robust, transparent, figures to ensure that findings are clear and accessible, enabling actionable insights. The analysis process will begin with descriptive analysis which show the distribution of responses to all questions, i.e. the ‘topline results’. The aim of this part of the data analysis is to ensure a high level of transparency and that the responses are well documented. This will include analysis of the general population to provide estimates of the prevalence of people in the UK with ‘Limb(b) worker’ status and people in the UK who are identified as ‘low autonomy self-employed’, which will in itself rely on more detailed analysis of the working practices of people with less traditional working practices.

[5] Specific break variables will depend on the research priorities of DBT and will be limited by what questions are included in the questionnaire. However, NatCen hold the following pieces of demographic information for the majority of panel members: Sex (or gender), Age category. Highest educational qualification achieved. Ethnicity. Whether born in the UK; Whether English is first language; Sexuality; Region; Urbanity; IMD; Household structure; Number of people in household; Whether respondent has any children in the household; Relationship status; Tenure; Main economic activity; NS-SEC analytic class; Class identity; Household income; Equivalised household income; Self-reported financial circumstances; Whether has a long-term health condition/disability that affects day-to-day life; Internet use; Political party supported; General Election voting behaviour

The second stage will be to conduct bi-variate analysis (analysing one variable i.e. a survey question by another e.g. a demographic question). We will run cross-tabulations of the survey data to answer research questions identified in the analysis plan. All relationships reported on will be tested for statistical significance, taking into account the complex sample design to ensure any differences identified are 'real', although we will also report on findings where no differences are found ('null findings') where relevant. Where appropriate (typically only for key population estimates to maintain accessibility and clarity in reporting) we can also include confidence intervals around estimates.

We would be happy to discuss additional analysis options not outlined in the specification with DBT. For example, conducting multi-variate to statistically validate the approach to allocating people as being Limb(b) workers.

2.3 Reporting

Written report

NatCen will produce a descriptive report to summarise the survey findings. The content and structure of the report will reflect the analysis plan, DBT's requirements and the results of analysis, but we provisionally propose the following structure:

- **Executive summary (2-4 pages)** providing just enough background on the aims and the methods, alongside clear and direct answers to the research questions.
- **Background & methods (2-4 pages)** explaining the background to the study and set out the aims of the research, including the research questions, as well as a summary of the methods used in the study.
- **A series of chapters containing main substantive findings (20-30 pages)**, based around the research questions, for example:
  - **How many Limb(b)/Low autonomy self-employed workers are there?** This chapter would produce estimates for the proportion of people aged 16-64 who are Limb(b) workers, and explore how prevalence varies by the participant's characteristics (for example the sector they work in, age, or where they live)
  - **What are the characteristics of Limb(b)/Low autonomy self-employed workers?** This would look at the profile of Limb(b) workers, for example what is their income, do they have any other jobs, are they looking for other work, hours worked, level of seniority, etc.
  - **How is employment status experienced by Limb(b)/Low autonomy self-employed workers?** This could look at the rights that Limb(b) workers report as having and what options have been provided to them.

We note that some of the research questions outlined in the specification were originally expected to be addressed by qualitative research – it may not be possible to cover all of these within the questionnaire or report with its length as it is. We will work with DBT at the planning stage to identify priority questions or expand the report scope as necessary. By providing the raw data there will also be opportunity for DBT to conduct further analysis as required.

Where appropriate, appendices will be used to include additional information that would be too detailed for the non-specialist reader, for example, tables for figures referenced but not presented in full, more detailed information on study methodology, and a more detailed description of how data were combined to identify Limb(b) workers/low autonomy self-employed individuals.

Results will be presented in a range of formats, including graphs, tables and text, with 'plain English' used to ensure that the findings are communicated clearly, and using DBT report templates. As well as working from a DBT analysis and reporting plan, we will produce up to three draft versions of reports to DBT to help ensure that the report meets requirements and quality standards. Reports will be proof-read, with figures quality-assured before delivery, and the final report will be reviewed by the study's quality director.

Slide pack & presentation to stakeholders
Alongside the written report we will produce a present a slide pack to DBT and stakeholders. This will last c.50 slides and summarise the study background, methodology, and key findings. While the content would be agreed with DBT, we would expect that this would cover similar content as included in the executive summary.

3. Options in case of low incidence rates

Should incidence rates of limb(b) or low-autonomy self-employed in our sample be lower-than-expected (i.e. less than 2.75%[6]), this may impact our ability to answer some research questions.

Firstly, a lower-than-expected incidence rate will not affect our ability to estimate the proportion of any given target population that are Limb(b) or low-autonomy self-employed workers, which is dependent on the sample size of the target population.

However, with a smaller sample size of worker groups, we will be less able to understand the characteristics and experiences of that population. The limitations will depend on the order of magnitude of the difference – for example, we would still be able to provide estimates for a population with a sample size of 100 (albeit with a relatively large MoE). Where data are available for all participants, we may be able to mitigate this by 'reversing' the analysis. For example, rather than analysing whether Limb(b) workers are more likely to be younger/older, we can analyse whether younger people are more/less likely to be Limb(b) workers than older people.

Should additional work be required, we would recommend considering what research questions remain unaddressed, and what would be the most suitable approach to addressing them, given any time and budget constraints. As the 'overall prevalence' question will have been addressed, many of the remaining research questions – exploring the experiences of workers - may be better addressed thorough qualitative research. If quantification is needed, we could consider additional survey fieldwork. However, additional probability-based fieldwork is likely to be expensive, and even non-probability panel options may not be feasible for an incidence rate lower than 2.75%. True convenience sampling may enable a larger sample size to be recruited, but we would not be able to make inferences to the target population. Alternative approaches such as respondent-driven sampling can approximate probability samples and would be worth considering. However, these are currently still be developed as an approach, would need careful consideration of the potential network clusters, and may be relatively expensive.

Finally, we would emphasise the value of minimising the risk of low incidence. In the 2023 HMRC study, many participants remained uncategorized. Alternative approaches to the categorization questions or to their analysis may be more effective at identifying workers than methods used in the past, increasing the sample size for analysis.

[6] We note that this risk is particularly high for the low-autonomy self-employed group, where we have no pre-existing population estimate to work based on.

NatCen, will, therefore, commit to working with DBT to adapt the 2023 HMRC study in a manner that aligns with the specific objectives of this study (robustly estimating the size, and characteristics of limb(b) workers and low autonomy self-employed individuals). This would include, but not be limited to, suggesting changes to the questionnaire design and categorisation approach for limb(b) workers and low autonomy self-employed individuals.

4. Project management

4.1 Working with DBT

In order to deliver this complex project to time, budget, and quality standards, we anticipate working closely and collaboratively with DBT. Our communication strategy will ensure shared clarity about objectives and outputs, up-to-date knowledge of progress, and timely and effective response to challenges and changes. We will achieve this through planned meetings, scheduled updates, and ongoing dialogue:

- Set-up meeting with the DBT team to agree details around the fieldwork approach, timetable, deliverables, and management.
- Clear project roles mapped across organisations to enable effective and direct communication.
- A project plan detailing milestones and actions for NatCen/DBT.
- Meetings to discuss the content of key inputs/outputs (e.g. questionnaire specification, sample design, final dataset and analysis/reporting plan).
- Weekly email updates outlining project progress (including fieldwork progress), key upcoming/outstanding actions and responsibilities and changes to project risks, accompanied by weekly online meetings (when needed).
- Engaging with a wider steering group periodically (this will include HMRC and HMT, and potentially some external organisations for example the CIPD and Unions)

Throughout the project we will work closely with DBT in the development of study inputs and outputs to ensure they meet requirements and quality standards. This may include, where appropriate, research/data collection plans and project schedules/timelines, as well specifications for questionnaires, sampling, etc. Where appropriate the DBT team will be provided with drafts to review, provide feedback on, and sign off.

4.2 Project timeline

The table below provides an approximate timetable for delivering the project based on the requirements outlined in the specification - in particular, fieldwork starting in March 2025 and final reporting completed in June 2025. We are happy to work collaboratively and flexibly to ensure the best outcomes for the project given time constraints – for example if the project is not able to start promptly in 2025.

Summary project timeline

Task	Start date	End date	Responsibility
Set-up meeting	10-Jan	10-Jan	NatCen/DBT
Questionnaire development			

Questionnaire draft shared	10-Jan	15-Jan	DBT
Initial questionnaire review	16-Jan	21-Jan	NatCen
Questionnaire workshop	21-Jan	22-Jan	NatCen/DBT
Draft questionnaire specification finalised & approved	23-Jan	05-Feb	NatCen/DBT
Recruitment for cognitive testing	06-Feb	21-Feb	NatCen
Draft questionnaire programmed & checked	06-Feb	14-Feb	NatCen
Probes for cognitive testing developed & approved	06-Feb	14-Feb	NatCen/DBT
Cognitive testing fieldwork	17-Feb	28-Feb	NatCen
Cognitive testing analysis & debrief	03-Mar	07-Mar	NatCen
Updates to questionnaire agreed	10-Mar	14-Mar	NatCen/DBT
Questionnaire script updated & checked	17-Mar	21-Mar	NatCen
Fieldwork set-up			
Sampling	10-Mar	21-Mar	NatCen
Set up fieldwork management systems	10-Mar	21-Mar	NatCen
Set up participant communications	10-Mar	21-Mar	NatCen
Fieldwork			
Web fieldwork	27-Mar	27-Apr	NatCen
Telephone fieldwork	10-Apr	27-Apr	NatCen
Data processing & outputs			
Data tables specified & agreed	31-Mar	11-Apr	NatCen/DBT
Data cleaning & checking	31-Mar	09-May	NatCen
Data weighting	07-Apr	02-May	NatCen
Technical note developed & delivered	07-Apr	09-May	NatCen/DBT
Unweighted tables run & checked	14-Apr	25-Apr	NatCen
Weighted tables run, checked & delivered	05-May	09-May	NatCen
Final data delivered	09-May	09-May	NatCen
Analysis & reporting			
Analysis plan developed & agreed	07-Apr	25-Apr	NatCen/DBT
Initial analysis	12-May	23-May	NatCen
Report draft 1	26-May	06-Jun	NatCen
Feedback on report draft 1	09-Jun	13-Jun	DBT

Report draft 2	16-Jun	27-Jun	NatCen
Feeback on report draft 2	30-Jun	04-Jul	DBT
Presentation of findings	30-Jun	04-Jul	NatCen
Final version of report	07-Jul	11-Jul	NatCen

5. Phase 1 – Costs [PROVISIONAL]

Overall, we expect the total costs for the provision of Phase 1 of this project to be [redacted] + VAT. We propose the following invoicing schedule, but are happy to be flexible on timings/the precise breakdown:

Payment Activities		Value	Date
1	Initial scoping, questionnaire development, cognitive testing	[redacted]	07-Mar
2	Sampling, fieldwork design, set-up & launch	[redacted]	28-Mar
3	50% of surveys complete	[redacted]	31-Mar
4	Fieldwork completion & data processing/weighting	[redacted]	09-May
5	Analysis of survey data, reporting, presentation	[redacted]	11-Jul

Pricing Schedule

Grade	Day rate	FTE days**	Cost
Project setup [redacted]*			
Group Head	[redacted]	[redacted]	[redacted]
Research Director	[redacted]	[redacted]	[redacted]
Senior Researcher	[redacted]	[redacted]	[redacted]
Researcher	[redacted]	[redacted]	[redacted]
Assistant Researcher	[redacted]	[redacted]	[redacted]
Other Expenses			[redacted]
Total			[redacted]
Questionnaire development [redacted]*			

Research Director	[redacted]	[redacted]	[redacted]
Senior Researcher	[redacted]	[redacted]	[redacted]
Researcher	[redacted]	[redacted]	[redacted]
Assistant Researcher	[redacted]	[redacted]	[redacted]
Incentives			[redacted]
Other Expenses			[redacted]
Total			[redacted]
Fieldwork set-up [redacted] *			
Research Director	[redacted]	[redacted]	[redacted]
Senior Researcher	[redacted]	[redacted]	[redacted]
Researcher	[redacted]	[redacted]	[redacted]
Assistant Researcher	[redacted]	[redacted]	[redacted]
Senior Statistician	[redacted]	[redacted]	[redacted]
Statistician	[redacted]	[redacted]	[redacted]
Project Computing - Senior programmer			[redacted]
Other Expenses			[redacted]
Total			[redacted]
Fieldwork [redacted] *			
Research Director	[redacted]	[redacted]	[redacted]
Senior Researcher	[redacted]	[redacted]	[redacted]
Researcher	[redacted]	[redacted]	[redacted]
Assistant Researcher	[redacted]	[redacted]	[redacted]
Survey / Field			[redacted]

Survey Logistics			[redacted]
Incentives			[redacted]
Printing			[redacted]
Postage			[redacted]
Other Expenses			[redacted]
Total			[redacted]
Data processing & outputs ([redacted]*			
Research Director	[redacted]	[redacted]	[redacted]
Senior Researcher	[redacted]	[redacted]	[redacted]
Researcher	[redacted]	[redacted]	[redacted]
Assistant Researcher	[redacted]	[redacted]	[redacted]
Senior Statistician	[redacted]	[redacted]	[redacted]
Statistician	[redacted]	[redacted]	[redacted]
Senior Data Manager	[redacted]	[redacted]	[redacted]
Data Manager	[redacted]	[redacted]	[redacted]
Total			[redacted]
Analysis & reporting [redacted]*			
Group Head	[redacted]	[redacted]	[redacted]
Research Director	[redacted]	[redacted]	[redacted]
Senior Researcher	[redacted]	[redacted]	[redacted]
Researcher	[redacted]	[redacted]	[redacted]
Assistant Researcher	[redacted]	[redacted]	[redacted]
Senior Data Manager	[redacted]	[redacted]	[redacted]

Data Manager	[redacted]	[redacted]	[redacted]
Subcontractors			[redacted]
Total			[redacted]
TOTAL			[redacted]

Template: Anticipated Supplier time breakdown (subject to change)

*Percentage of total project budget

**Full time equivalent, rounded to 2 decimal places

6. Phase 2 – Qualitative research

The qualitative phase of the research will add depth and richness to the findings of the survey. Through 25 depth interviews, the qualitative phase will particularly seek to address the research questions 2 and 3, helping to contextualize survey findings about workers' experiences, their understanding of those experiences, the barriers to accessing rights and how they may react to potential changes to their status.

Going ahead with Phase 2 is subject to potential changing ministerial steers and a rapidly changing government landscape. If DBT decides to proceed with Phase 2, the exact number of interviews has the potential to increase depending on DBT budget. NatCen would work with DBT to ensure that the final design is appropriate to contemporary research objectives, budget, and timeframe. The following proposal therefore outlines an indicative approach for this phase to achieve sufficient breadth of worker experiences and depth of understanding.

6.1 Recruitment and sampling

Following early analysis of the survey findings, we will work with you to develop a detailed sampling plan for the qualitative phase. We will use a purposive sampling approach whereby participants are select based on key criteria that we expect to shape views and experiences. We anticipate setting quotas on age and sector but could also consider quotas on other key elements of people's experiences such as for instance payment through an app in order to ensure we are addressing the research questions. However, we would recommend setting no more than four primary quotas (which would be agreed with DBT depending on the specific study requirements), as this could slow recruitment. In addition to primary criteria, we would monitor any secondary criteria of interest such as overall income level to ensure we were achieving range and diversity across the sample.

Recruitment for the qualitative phase will be conducted by our in-house Telephone Unit (TU). As we will have contact details, socio-demographic information as well as information about people's roles from the survey, our TU will target recruitment calls to meet quotas. Recruitment calls will provide information about the qualitative phase of the study, gain consent to participate and book people into interviews. Recruiters will make calls at different times of the day, including evenings and weekends to achieve best response rate and will make up to five attempts before considering a case exhausted.

We feel relatively confident that we will be able to recruit from the survey, given that NatCen Panel participants are generally keen to opt into further qualitative research if the incidence rate be around 2.75%. However, should this prove difficult, we would work with our trusted recruitment partner Criteria who are experienced at recruiting a range of audiences including harder-to-reach groups.

6.2 Conduct of fieldwork

We will conduct 25 depth interviews lasting between 45 and 60 minutes. We will offer interviews at different times of the day, including evenings and weekends to facilitate participation. All fieldwork will be conducted via online video call or via telephone (depending on participant preference) and participants will also be asked whether they require any support to participate (e.g. breaks for those with health conditions). We recommend offering a £40 incentive in the form of shopping voucher as a thank you for participants' time.

All interviews will be conducted using a detailed topic guide to guide the conversation. These will be used flexibly by researchers, allowing the interviews to be participant-led. A high-level indicative topic guide for the interviews is outlined in the table below but we would work closely with you to develop this based on the findings from the survey. We will also ensure researchers familiarize themselves with participants' survey responses prior to conducting the interview.

Topic guide section	Topics to be covered
Background to participant and their working arrangements (5-10 mins)	• Background to participant (household composition, overview of working history) • Number and type of job(s) & how long in those job(s) • Who employed by • What a typical working week looks like
Views of their employment situation (10 mins)	• How this job came about and reasons for doing this type of work • Views on benefits and disadvantages of this type of work • Level of control over work, integration and ability to subcontract
Experience of accessing rights (15 mins)	• Their current employment rights, terms and conditions & understanding of this (minimum wage, holiday pay, sick pay, protection from discrimination, pension entitlement) • Whether used rights and barriers to accessing them
Exploring vignettes (10-15 mins)	• Hypothetical decisions participant would make in relation to work based on the vignettes
Final thoughts (5 mins)	• Closing thoughts

We recommend using vignettes or hypothetical scenarios to elicit attitudes and views to on potential changes to employment status. We would work closely with you to design these based on priority areas of interest, but we anticipate these could be framed in terms of the trade-offs that might be involved in any change to status (e.g. more security but less pay; or greater control but managing own taxes). This would then help elicit the factors that would shape decision-making. We would suggest designing 4-6 of these tailored to different circumstances but only discussing two which are most relevant with each participant.

6.3 Analysis and reporting

With participant consent all interviews will be audio recorded and transcribed verbatim. The Framework approach will be used to manage and analyse the qualitative data from the project to ensure consistency, comprehensiveness and transparency in our analysis. This is an iterative and flexible approach which creates a bespoke thematic analytical framework for each study based on the research objectives and key topics emerging from the data. Each column within the framework represents key themes, with rows individual 'cases' or participants. Data from each interview is summarized according to key themes in the appropriate cell ensuring the data are ordered systematically and grounded in participants' accounts. The Framework method is embedded in NVivo 12 software which enables the summarised data to be linked to the verbatim transcript for fully transparency about how qualitative insights have been derived.

We have costed for a short report (25 - 30 pages) summarizing the key findings from the qualitative phase with two rounds of feedback but can work with you to agree the outputs which would work best for you. Although the exact structure of the report will come out of the data, we envisage that the report would benefit from a thematic structure. The report outline would be agreed with you before reporting begins.

NatCen has extensive experience in producing qualitative reports that synthesise data thematically in a coherent way that corresponds with the objectives of the research. We regularly use quotes, case illustrations and graphics to illustrate the findings. The report will be clear, concise, and engaging and grounded in the relevant research evidence. All reports use Plain English wherever possible.

6.4 Indicative costs

We have set out indicative costs for Phase 2 below.

Activity	
Staff costs	
Set up and project management	[redacted]
Recruitment, fieldwork & data management	[redacted]
Analysis and reporting	[redacted]
Non staff costs	
Recruitment, incentives, transcription	[redacted]
Total	[redacted]