How can the scale and nature of labour market non-compliance in the UK best be assessed? Final report of a scoping study for the Director of Labour Market Enforcement

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Executive summary

- The Director of Labour Market Enforcement (DLME) commissioned this scoping study to explore what research could best be used to establish the scale and nature of labour market non-compliance in the UK.
- A multidisciplinary team of researchers from University College London, the University of Gloucestershire and the London School of Economics conducted the study. It draws on extensive desk research and the team's diverse methodological and thematic expertise.
- Labour market non-compliance covers a broad spectrum of activity from accidental and relatively minor infringements to serious and deliberate crimes (*e.g.* modern slavery offences). The DLME is required by law to report annually on their assessment of the scale and nature of non-compliance in the UK.
- The available evidence-base to inform this reporting is limited and fragmented, reflecting the complexities of non-compliance itself, the fractured enforcement landscape and skews in official datasets and existing research. Pronounced gaps are believed to exist between levels of actual and reported non-compliance. Relying on complaints data is problematic as workers often have clear reasons not to report and complaints do not accurately reflect underlying levels of violations.
- Building a stronger evidence base on labour market non-compliance is vital not just in supporting the DLME in their statutory duties to report but also in enabling more nuanced, targeted and evidence-informed policy and practice in this space.
- Against this backdrop, this scoping study was designed 1) to provide an inclusive, nuanced and rigorous assessment of different approaches to measuring non-compliance and 2) recommend which approach (or combination of approaches) to pursue in the UK
- We scoped five broad approaches to measuring the scale and nature of non-compliance:
  1. Review methods
  2. Analysis of existing administrative data
  3. Worker surveys
  4. Worker interviews
  5. Stakeholder interviews.
- Together, these five approaches cover qualitative and quantitative methods and primary and secondary sources. Considering a broad range of possible data and approaches is important since 'scale' and 'nature' are heterogeneous constructs and may need to be assessed differently. For example, scale is something normally measured quantitatively, whereas nature may be better explored through in-depth qualitative research.
- We examined each approach, considering how it had been used to assess various forms of non-compliance and might be applied to meet the DLME's aims. In our analyses (key findings summarised next), we included recent examples of relevant studies and sources. We assessed the key strengths, weaknesses and considerations of each approach.
- Review methods are a common way of examining the existing literature on a given topic. Most empirical research includes some form of integrated literature review in order to introduce, inform and contextualise a new study. Standalone reviews are also widely used: systematic reviews are particularly well-regarded as a way of synthesising the knowledge base and supporting evidence-informed policy and practice. If the DLME were to commission a review-based study, we would recommend a systematic review as it is the most rigorous, inclusive and transparent approach. Systematic reviews are, however, resource-intensive and heavily dependent on the availability and quality of previous research. The under-development of the literature on labour market non-compliance (especially across the full spectrum) could be a serious limitation here.
- Analysis of existing administrative data also has some promise and could be informative, especially if data were used innovatively (*e.g.* by combining different datasets or as a complement to other lines of enquiry). There are numerous different sources of existing data

on non-compliance in the UK but neither alone nor in combination do they cover the full spectrum under the DLME's remit. Access to datasets can be a challenge (although official buy-in and support would likely help) and data-holders themselves typically report on inputs and outputs than actual outcomes. Probably the biggest limitation is that administrative data are overwhelmingly generated reactively and are sensitive to fluctuations in, for example, funding and prioritisation. As demonstrated internationally, complaints data do not accurately reflect the underlying incidence of violations in different workplaces and among different groups. Administrative data are subject to numerous biases and findings cannot be generalised to the wider worker population. Missing data are also likely to be an issue, limiting what analyses are possible.

- Survey methods are widely used in applied social research in particular and are a good way of investigating attitudes, behaviours, experiences and characteristics, among other things. There are promising examples from the UK and abroad of how worker surveys could be used to assess labour market non-compliance. Surveys have particular value in terms of generating representative results and being readily replicated over time. For findings to be generalisable, however, a probabilistic sampling strategy is typically required. Identifying an appropriate sampling frame and recruiting participants can be challenging and resource-intensive, especially when dealing with hidden populations and sensitive topics. Certain groups of workers may be especially hard-to-reach. There are numerous large-scale and well-established population surveys in the UK, including one called Understanding Society. Administering an affiliate survey via Understanding Society would be a particularly promising way of generating representative results on labour market non-compliance in a relatively straightforward and cost-effective manner. Careful design of the survey instrument would still be important, including rigorous pre-testing. In the first instance, a cross-sectional survey would be the most sensible approach to pursue, although it could eventually coalesce into a continuous survey.

- Worker interviews are a valuable way of exploring in detail workers' perspectives and giving a voice to those who are otherwise rarely heard. In recent years, many interview-based studies in the UK have focused on migrant workers: a group widely believed to be particularly vulnerable to exploitation and workplace harm. Worker interviews are not designed to generate results representative of the wider population but rather to enable complex issues to be explored in a nuanced way, drawing on individuals' lived experiences. They could also be particularly helpful in identifying unforeseen and emergent issues related to non-compliance. Worker interviews might usefully focus either on a fairly narrowly-defined case study (*e.g.* a specific group, sector or region) or use strategic sampling informed by survey results (for example) as a way of capturing illustrative examples across a broad spectrum. There are various important practical and ethical considerations in worker-based research, especially when dealing with sensitive topics and marginalised groups. Such work would require adequate resources for preparation and recruitment, measures to uphold informed consent and other ethical safeguards (*e.g.* interviewing participants outside the workplace and remunerating them for their time).

- Stakeholder interviews share many of the same characteristics and challenges as worker interviews. While most interview-based research into non-compliance has focused on workers, stakeholders' perspectives can be used to explore complex issues and potential solutions. Recruitment is typically far less challenging for stakeholder interviews but disclosure can be an issue, with some participants sticking to the 'party line'. Unlike workers, stakeholders tend not to require payment for participation and are not generally seen as 'vulnerable' participants. Stakeholder interviews are often shorter, so the interview design might need to be more structured to cover sufficient terrain. Stakeholder interviews may also involve various challenges associated with so-called 'elite interviewing'. A key strength of stakeholder interviews is that they offer both breadth and depth of knowledge and valuable contextual insights into the landscape of policy and practice.

- Having analysed each approach in detail, we then assessed all five approaches against a standardised set of criteria, first descriptively and then scoring them. The criteria were informed by the questions posed by the DLME in the invitation to tender. They covered the extent to which each approach would likely:
    1. Get a good reach across the UK's four constituent nations
    2. Cover a range of worker demographics, sectors, employment types and urban/rural locations
    3. Cover the broad spectrum of non-compliance within the DLME's remit
    4. Provide breadth of insights
    5. Provide depth of insights
    6. Minimise bias through use of an appropriate research design
    7. Generate new knowledge
    8. Identify unforeseen or emergent issues
    9. Ensure high quality data
    10. Generate useful data (against the DLME's objectives)
    11. Present few challenges around access to knowledge/data/participants
    12. Incur modest costs relative to other approaches
    13. Be completed in a timely manner
    14. Present few ethical challenges
    15. Produce results that are generalisable to the wider population
    16. Have clear potential to be replicated over time
- Following careful discussion, we reached consensus as a research team around our preliminary scores for each approach. This initial scoring was unweighted, meaning each of the 16 criteria listed above counted for the same. Scores ranged from 0 (did not meet the criterion at all/criterion did not apply) to 3 (fully met the criterion). The approaches ranked as follows based on average score per criterion: worker survey (2.53); stakeholder interviews (2.07); worker interviews (2.07); analysis of existing administrative data (1.79); and a systematic review (1.71).
- All five approaches have unique strengths and weaknesses and, in many respects, the ideal approach would be to triangulate several different approaches to ensure a maximally nuanced, multi-faceted assessment of the scale and nature of non-compliance in the UK. We appreciate, however, that practical constraints may limit what is feasible.
- We presented our aims and approach, initial findings, preliminary scores and recommendations at a workshop with stakeholders. This consultation provided useful feedback and helped us understand their perspectives, experiences and priorities. We surveyed participants on which assessment criteria were particularly important to them.
- We subsequently up-weighted priority criteria for the final scoring exercise. The rank order of the five approaches was virtually unchanged, but the particular value of the worker survey (followed by the worker and stakeholder interviews) was even clearer. The weighted average score per criterion was as follows: worker survey (2.95); worker interviews (2.36); stakeholder interviews (2.35); analysis of existing administrative data (1.99); and a systematic review (1.95).
- In terms of final recommendations, **we strongly advise commissioning a worker survey**. This approach has particular promise overall, for reasons including its wide geographical reach, broad coverage, high potential to generate new knowledge, generalisability, replicability and outstanding overall usefulness against the DLME's objectives. Yet, by design it is limited in its ability to identify emergent issues and explore complex phenomena in depth. Consequently, **we recommend combining a worker survey with in-depth interviews and other consultation with both workers and stakeholders**. Doing so would add depth and texture, inform the survey design and help interpret findings and explore their implications.

Introduction

The Director of Labour Market Enforcement (DLME) is required by law to provide an annual assessment of the 'scale and nature of non-compliance in the labour market' (Immigration Act 2016). Yet, labour market non-compliance is a complex and wide-reaching phenomenon and the existing evidence base is limited and fragmented. It is challenging, therefore, to appraise accurately the 'scale' and 'nature' of this issue and more underlying research is clearly needed. Against this backdrop, the DLME issued a tender for a scoping study to inform decisions about what research might most usefully be commissioned. As such, this scoping study supports the DLME's efforts to improve the evidence base on labour market non-compliance in the UK. A stronger evidence base is vital in informing policy and practice and supporting prioritisation: one of the four key principles underpinning effective labour market enforcement (Weil, 2008).[5]

A multidisciplinary team of academics from University College London (UCL), University of Gloucestershire and the London School of Economics (LSE) was commissioned to conduct this scoping study. The remainder of this report is structured as follows. First, we provide a brief introductory context to labour market non-compliance and its enforcement in the UK. We then introduce the study's aims and methods. Next, we analyse in detail each of the five approaches scoped. We present the scores for each against a standardised assessed framework, reporting both the initial (unweighted) scores and the final (weighted) scores, which were informed by stakeholder consultation. We end with our final recommendations and a brief conclusion.

A brief overview of the UK context

This section contextualises the work through a brief introduction to relevant policy and regulatory frameworks and work and employment practices more generally.

Policy and regulatory frameworks

The UK has a fragmented system for tackling labour market non-compliance (Metcalf, 2018). Balch (2015, p. 94) has labelled the approach: 'byzantine...complex and inefficient' (see also FLEX, 2017). Compliance and enforcement responsibilities are currently divided between the following bodies: the GLAA (Gangmasters and Labour Abuse Authority, sponsored by the Home Office); EAS (Employment Agencies Standards Inspectorate, part of the Department for Business, Energy and Industrial Strategy (BEIS)); HSE (Health and Safety Executive, located within the Department for Work and Pensions (DWP)); NMW/NLW (National Minimum Wage/National Living Wage), enforced by Her Majesty's Revenue and Customs (HMRC) on behalf of BEIS; the police and National Crime Agency (NCA). There is neither a single labour inspectorate in the UK, nor a single Department responsible for non-compliance.

The international guidance, Article 4 of the ILO Labour Inspection Convention, No. 81, states that labour inspection shall be placed under the supervision and control of a central authority. In lieu of a single labour inspectorate, the Immigration Act 2016 introduced the DLME to help coordinate responses to labour market non-compliance in the UK. The DLME has three main statutory responsibilities: an annual labour market enforcement strategy that sets out priorities for HMRC NMW/NLW, EAS, and the GLAA; an annual report assessing performance against the previous year's priorities; and an 'Information Hub' to coordinate and share data between agencies and to produce strategic intelligence assessments. The annual strategy and report must be informed by an assessment of the scale and nature of non-compliance in the UK labour market. While the Information Hub contributes greatly to this assessment, other sources of information are also vital: not least because 'there remains a significant intelligence gap between the actual and observed scale of non-compliance' (UKSBS, 2018, p. 8). Consequently,

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[5] According to Weil (2008), the four principles of effective enforcement are prioritisation, deterrence, sustainability and systemic effects.

the DLME posed the following question for this scoping study: **'What research could improve the assessment of the scale and nature of non-compliance in the UK labour market under the Director of Labour Market Enforcement's remit?'** (UKSBS, 2018, p. 10).

In terms of defining 'non-compliance', it is now widely acknowledged that there is a complex continuum running from decent work through to severe and criminal forms of labour exploitation, such as trafficking and forced labour (see, *e.g.*, Andrees, 2008; Cockbain *et al.*, 2018; Jokinen *et al.*, 2013; Skrivankova, 2010). Non-compliance clearly covers severe labour exploitation but – crucially – also extends to other less extreme forms of exploitation. According to the Immigration Act 2016, non-compliance in the labour market encompasses five main areas: committing labour market offences; not paying NMW/NLW; failing to pay any penalty for underpayment of NMW/NLW; breaching a gangmasters licensing condition; and a broad catch all of 'failure to comply with any other requirement imposed by or under any enactment and which is prescribed by regulations made by the Secretary of State' (Section 3.1).[6]

Over recent years, the authorities have been active in seeking to criminalise the most extreme forms of labour exploitation. Most notably, three significant Acts of Parliament have been passed in a little over a decade. Examples of key offences under these Acts include:

- Section 4 of the UK Immigration and Asylum (Treatment of Claimants etc.) Act 2004, which created an offence of trafficking for labour exploitation;
- Section 71 of the 2009 Coroners and Justice Act, which created an offence of forced labour.[7]
- Section 1 (slavery, servitude and forced or compulsory labour) and Section 2 (human trafficking) of the 2015 Modern Slavery Act.[8]

The three Acts have visibly criminalised trafficking for labour exploitation, forced labour and modern slavery and no doubt helped raise the profile of these issues. Yet, they have collectively underpinned just 532 prosecutions over a seven-year period (2010-2017), or an annual average of just 76 (Scott, 2019). To a certain extent, UK policy appears to be moving towards increasing legal protections for workers but there are still many legislative gaps to be addressed (Craig, 2017; Crane *et al.*, 2017). Protections continue to focus on those workers at the extreme end of the labour exploitation continuum; while they are a key part of the DLME's remit, it also extends much more broadly to cover many other forms of non-compliance.

At the same time, tensions persist between the UK government's modern slavery agenda and its broader 'hostile environment' policies (Gadd & Broad, 2018; Lewis *et al.*, 2014). For example, the Immigration Act 2016 introduced a new criminal offence of 'illegal working' and strengthened provisions against those who employ workers with irregular status. These developments have been criticised for further marginalising irregular migrants and asylum seekers, increasing their risk of exploitation at work and deterring them from reporting labour rights abuses for fear of penalties (Åhlberg, 2018; Fudge, 2018).

Beyond the criminalisation of extreme labour exploitation, progress has been more limited (Scott, 2019). Balch (2012, p. 38) characterises the UK's regulatory system as 'business-friendly, rather than workers' rights-friendly, with a low-cost, low regulatory-burden

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[6] See: http://www.legislation.gov.uk/ukpga/2016/19/contents/enacted
[7] This law covers England, Wales and Northern Ireland. In Scotland the equivalent is the 'Criminal Justice and Licensing (Scotland) Act 2010'.
[8] This law covers England and Wales. In Scotland the equivalent is the 'Human Trafficking and Exploitation (Scotland) Act 2015'. In Northern Ireland the equivalent is the 'Human Trafficking and Exploitation (Criminal Justice and Support for Victims) Act (Northern Ireland) 2015' (for a review, see Anti-Trafficking Monitoring Group, 2016).

approach'. The UK's Migration Advisory Committee (2014, p. 4) has expressed concern around this regulatory paradigm, limited resourcing and lightweight penalties for non-compliance: 'on average, a firm can… expect to be prosecuted once in a million years'. Inspections by HMRC NMW/NLW can be expected just once every 500 years, meaning 'the likelihood of inspection is low enough to have only a weak deterrence effect' (Metcalf, 2018, p. 52). Similar issues have also been noted in the United States (US) (Weil, 2014). While the UK's approach to regulation is 'light touch' by international standards (Scott, 2017a), the resources directed at the GLAA, EAS, and NMW/NLW teams have been growing recently (Metcalf, 2018).

Work and employment

Work and employment across the developed world is inevitably dynamic. Crucially, however, many experts have associated this dynamism with rising levels of worker vulnerability and even exploitation (International Labour Organization, 2016; Scott, 2017a, 2017b; Stone & Arthurs, 2013; Weil, 2008, 2014). Weil (2014), for instance, talks of the far-reaching and influential 'fissuring' of the workplace, involving a complex network of contracting and sub-contracting, franchising and outsourcing. As a result of these changes, the employer-employee relationship and the protections available to workers appear to be weakening in some contexts. In addition, a more general shift towards non-standard employment practices has been observed – including temporary employment, part-time and on-call work and multi-party employment relationships (International Labour Organization, 2016; Stone & Arthurs, 2013). The most notorious example of non-standard employment is so-called 'zero-hours contracts', which have proliferated in recent years (Trades Union Congress, 2016). For those affected by fissuring and experiencing non-standard forms of employment, work has often become informalised. Researchers have highlighted 'a growing presence of increasingly unregulated labour markets and atypical forms of work' (Likic-Brboric *et al.*, 2015, p. 227; Slavnic, 2010) and a 'broader downgrading of employment conditions' (Scott, 2017b, p. 1). The situation for certain segments of the workforce in the Global North appears to be worsening. The decline in the welfare state (Hamnett, 2014; Stone & Arthurs, 2013) and the loss of union power and collective bargaining coverage (BEIS, 2018a; Scott, 2019) appear to play a part here, rendering workers more vulnerable to regressive forms of labour market restructuring. The decline of union power is consequential as workers are much more likely to exercise their rights when trade unions are strong and active (Weil, 2014).

Irrespective of whether one agrees with the thesis that many workers are becoming more vulnerable – and by extension more exploitable – it is clear that a significant proportion of UK workers are low-paid (Central Statistics Office, 2017; Lanning & Lawton, 2012; Schmuecker, 2014; Whittaker & Hurrell, 2013). In-work poverty is not evenly distributed but rather concentrates in particular demographic groups, geographical regions and industries/occupations (Central Statistics Office, 2017; MacInnes *et al.*, 2014; Werner & Lim, 2016). With many household incomes falling in real terms, the issue of in-work poverty has attracted substantial concern in recent years (MacInnes *et al.*, 2013; MacInnes *et al.*, 2014; Wills & Linneker, 2014). An estimated 5.75 million employees in the UK earned below the national living wage in 2018, an increase from 5.55 million in 2017 (HIS Markit, 2018). The workplace has also become notably more polarised since the mid 1970s, with rises in the share of both the highest and lowest earning occupations (Goos & Manning, 2007). Standing (2011, 2014) has argued that we are witnessing the emergence of a new class of worker: the 'precariat', who face intense and multi-faceted insecurities and deprivations.

Against this backdrop, concern is growing about potentially widespread exploitation and other work-based harm (Scott, 2017a). Like policy, much UK research into non-compliance has focused on the severe end of the exploitation continuum (*e.g.* Allamby *et al.*, 2011; Anderson & Rogaly, 2005; Cockbain & Bowers, 2019; Cockbain *et al.*, 2019; Cockbain & Brayley-Morris,

2017; Craig *et al.*, 2007; Geddes *et al.*, 2013). Far fewer studies have dealt with lower-level abuses (*e.g.* Clark & Colling, 2018; Davies, 2018; Potter & Hamilton, 2014; Scott, 2017a). In addition, most research in this space is qualitative, providing greater insight into the 'nature' than the 'scale' of non-compliance. The dearth of robust quantitative studies is especially well-documented in the trafficking literature (Cockbain *et al.*, 2018). There have been some high-profile attempts to estimate the scale of 'modern slavery' (*e.g.* Bales, 2012; Bales *et al.*, 2009; Silverman, 2014; The Global Slavery Index, 2018). Global estimates and indices have, in particular, attracted heavy criticisms for their methodological opacity, design weaknesses, dubious assumptions and overstated claims (Gallagher, 2017; Guth *et al.*, 2014; O'Connell Davidson, 2015).

Certain types of employment are thought to be associated with a higher risk of labour market exploitation and abuse, among them sub-contracting (Crane *et al.*, 2017; LeBaron, 2013; Weil, 2014; Wills, 2009), temporary and agency labour (Barrientos, 2008; Fudge & Strauss, 2013; Judge & Tomlinson, 2016) and self-employment (Behling & Harvey, 2015). Exploitative labour practices from across the spectrum of severity have been documented in UK-based studies covering particular sectors, including the food industry (Davies, 2018; Potter & Hamilton, 2014; Scott *et al.*, 2012), construction (Behling & Harvey, 2015; Cockbain & Brayley-Morris, 2017), car washes (Clark & Colling, 2018) and domestic work (Maroukis, 2017; Mullally, 2015). Other sectors have also been identified through the DLME's Information Hub as potentially high-risk, including hospitality, care and nail bars (Metcalf, 2018). Certain groups are generally seen as especially vulnerable to workplace insecurity and labour abuses, in particular low-paid, low-skilled workers (*e.g.* Schmuecker, 2014). Migrants – especially irregular migrants – are thought to face even higher risk of labour exploitation due to their limited rights, protections, options and recourses (Anderson, 2010; Dwyer *et al.*, 2011; Lewis *et al.*, 2014; Nobil Ahmad, 2008).

Aims and method

The scoping study has two main aims. First, to provide an inclusive, nuanced and rigorous assessment of different approaches to measuring non-compliance in the labour market. Second, to make recommendations as to which approach (or combination of approaches) would best be applied to the UK context and what the associated requirements and considerations would be. We focus our analyses on five broad approaches to measuring the scale and nature of non-compliance. This selection – while not exhaustive – covers tried and tested approaches that are likely well-suited to the task at hand and includes a range of possible participants, data and methods. The need to assess varied data sources, both existing and new, is rooted in the recognition that relying too heavily on complaint-driven data is problematic since 'the incidence of complaints is only imperfectly related to underlying workplace conditions' (Weil, 2008, p. 350). There are many reasons why violations of labour rights might be under-reported, including workers being isolated, unaware of their rights, considering the violations too trivial to report and/or being reluctant to complain for fear of recriminations from employers and/or the state (Cockbain *et al.*, 2019; Holgate *et al.*, 2011; Pollert, 2007, 2010). We also recognise that assessing the 'scale' and 'nature' of labour market non-compliance may require a differentiated approach, since certain methods may be better suited to one than the other. To illustrate, 'scale' would normally be measured quantitatively, whereas the more complex and heterogeneous construct of 'nature' could usefully be explored through mixed methods qualitative and quantitative research.

To meet the study's aims, we assessed each approach systematically, drawing on both an extensive review of the published literature and our team's own diverse research experience and expertise. We included for each approach relevant recent examples, which serve both to illustrate possible applications and to highlight some of the patterns and gaps in the knowledge base. We synthesised key methodological, ethical and logistical challenges and considerations and discussed the practicalities of their application to measuring the scale and nature of labour

market non-compliance. While our primary focus is on the UK context, we drew on the broader international evidence base as relevant. We considered carefully the relative strengths and weaknesses of the different approaches, assessing them against a standardised framework. Informed by the questions posed by the DLME in the invitation to tender, we evaluated each approach against its likely ability to:

1. Get a good reach across the UK's four constituent nations
2. Cover a range of worker demographics, sectors, employment types and urban/rural locations
3. Cover the broad spectrum of non-compliance within the DLME's remit
4. Provide breadth of insights
5. Provide depth of insights
6. Minimise bias through use of an appropriate research design
7. Generate new knowledge
8. Identify unforeseen or emergent issues
9. Ensure high quality data
10. Generate useful data (against the DLME's objectives)
11. Present few challenges around access to knowledge/data/participants
12. Incur modest costs relative to other approaches
13. Be completed in a timely manner
14. Present few ethical challenges
15. Produce results that are generalisable to the wider population
16. Have clear potential to be replicated over time

Having coded each approach descriptively against these criteria, we then worked as a team to reach consensus on (unweighted) initial scores. These numerical scores were designed to give a sense of the relative merits and suitability of the different methods specifically for the task at hand, based on the assumptions of having a well-designed and well-executed piece of research and facing real-world practical constraints. The scores should not be misinterpreted as a claim that some methods are inherently superior to others. We then held a workshop with key stakeholders in February 2019. We presented the aims, context and methods of the scoping study, our interim findings, preliminary scores and initial recommendations. Representatives of the following organisations participated: The Office of the DLME; EAS; GLAA; HMRC (NMW/NLW); Low Pay Commission; BEIS; and Home Office. The workshop gave us a valuable opportunity to discuss the work thus far, draw on stakeholders' perspectives and experiences and survey their views on which assessment criteria were most important to them. We then up-weighted the top-ranking criteria for the final scoring process.

While we did not specifically cover open-data approaches to measuring labour market non-compliance, they also have considerable and largely untapped potential for research and practice in this space. One example is the type of real-time data collected by the TISC Report: the world's largest open data register that focuses on promoting transparency and tackling exploitation in supply chains. Such data could be used to examine non-compliance in reporting around modern slavery, gender pay gaps and payment practices, both at business-level and across supply networks. At the time of writing, for example, TISC Report data showed that over one third (n=5,798) of UK registered companies required to submit Modern Slavery statements appeared to be non-compliant.[9] TISC Report non-compliance data is already being used to enforce regulations by Non Departmental Public Bodies. Another example could be automated ("human in the loop") screening of online job advertisements to identify apparent breaches around minimum wage, maximum working hours, illegal deductions and so forth (Volodko *et*

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[9] Figures correct as of 13/03/19. Source: www.tiscreport.org

al., forthcoming). With interest growing in how computational modelling can be applied to exploitation-related challenges, it is vital that any measures used are not just rigorous but also ethical and proportionate.

In-depth analyses of the five approaches

This section deals in turn with each of the five approaches scoped in this study: review methods; analysis of existing administrative data; worker surveys; worker interviews; and stakeholder interviews. In each analysis, we introduce the approach, provide examples of how it has been and could be used in this space and discuss its particular strengths, limitations and practical challenges and considerations. We also include a descriptive assessment of each approach against the criteria just specified. Table 1 gives a brief comparative overview of all five approaches, highlighting the basic characteristics expected of a study of each type that addressed labour market non-compliance.

Table 1: An overview of the key features expected in a study using each of the five approaches to assess labour market non-compliance

Key features	Review methods	Analysis of administrative data	Worker surveys	Worker interviews	Stakeholder interviews
Nature of data	Secondary	Secondary	Primary	Primary	Primary
Method of enquiry	Includes qualitative, quantitative and mixed-methods studies	Typically quantitative, although there is scope for qualitative	Quantitative, with qualitative elements (open-ended questions)	Qualitative	Qualitative
Unit of analysis	Individual study	Varies (*e.g.* worker, breach, company)	Individual worker	Text/testimony evidence from each participant	Text/testimony evidence from each participant
Sampling method	Systematic sampling	Systematic selection and review of available (and accessible) datasets	Probabilistic sampling (with possible addition of respondent-driven sampling)	Convenience sampling (*e.g.* snowball or purposive)	Purposive sampling
Necessary sample size	Thousands of records from across multiple sources likely to need screening for possible inclusion	Limited by the available data	≥1,000-1,200 respondents	≈30-45 participants	Likely ≥30 to cover all key stakeholder groups
Approach to analysis	Qualitative synthesis most likely (meta-analysis unlikely to be feasible)	Tailored analysis for (qualitative) case studies and methods ranging from small-sample techniques to multivariate analysis for larger (quantitative) datasets	Various descriptive and inferential statistical analyses. For open-ended questions, textual analysis (*e.g.* thematic analysis, structural topic modelling)	Coding of text/ testimony to identify key themes and framings. Topic modelling, software assisted text analysis and hybrid methods could also be used	Coding of text/ testimony to identify key themes and framings. Topic modelling, software assisted text analysis and hybrid methods could also be used

Reviews of existing research

Review methods are a common way of examining the existing literature on a given topic, synthesising key findings, teasing out points of consensus or dispute, highlighting gaps in coverage, identifying directions for further inquiry and informing policy and practice. Reviews are a form of 'desk research': secondary research designed to advance understanding through the analysis of previous publications. Their core value lies in consolidating existing knowledge, which may in itself be a means of generating new knowledge. Reviews are often, although not always, restricted to English-language literature: first, because English is the *lingua franca* of international scientific publishing; second, because reviewing publications in multiple languages carries additional costs and complexities. There are various ways in which the evidence-base on labour market non-compliance could be reviewed, either focusing on the UK alone or drawing also on international evidence: an integrated literature review; a standalone literature review; a systematic review; a rapid review; or a bibliometric analysis. Each is briefly discussed in turn, before reflecting on specific challenges for the task at hand.

The traditional 'literature review' is a mainstay of scientific research. In most empirical (data-driven) research, some form of integrated literature review introduces and contextualises a study, situating it against the relevant landscape, informing its research questions and highlighting its novel contribution to knowledge. Sometimes, entire publications or substantial components thereof are based on a review of prior literature. Such standalone literature reviews can offer an accessible and authoritative overview of an issue (*e.g.* Cockbain & Olver, 2019; Jones, 2008) or provide an analysis and critique of the state of the art in research in a field (*e.g.* Home Office, 2007; Zhang, 2009). While common, a key shortcoming of traditional literature reviews is that they are 'not... sufficiently rigorous in specifying or utilizing an explicit methodology' (Gough & Elbourne, 2002, p. 226; Jackson, 1980; Oliver *et al.*, 1999). Without a clear, rigorous and methodical approach, there is obvious potential for bias in how evidence is – or is not – identified, included and assessed. While selectivity is an issue for both integrated and standalone literature reviews, it is arguably more problematic for the latter because of the impression (or even claim) of providing comprehensive coverage.

In contrast, 'systematic reviews' follow a clear and explicit method for how relevant evidence is identified and assessed. They are an increasingly well-regarded method for synthesising knowledge in a more structured and transparent fashion than the traditional literature review (Gough, 2007; Gough & Elbourne, 2002; Gough *et al.*, 2012b). The development of systematic review methods has been driven primarily by the public health field and the movement towards evidence-based medicine (Thomas & Harden, 2008; Thomas *et al.*, 2013). As interest in evidence-informed policy and practice grows elsewhere, systematic reviews are increasingly gaining traction in other fields, for example crime prevention (Bowers *et al.*, 2014; Johnson *et al.*, 2015). Systematic reviews are generally seen as the 'gold standard' in evidence synthesis, designed to provide a balanced, integrated assessment of existing evidence that takes into account 'the reliability of the primary studies on which they are based and any contextual variations between studies' (Bowers *et al.*, 2014, p. 460). A good systematic review requires an extensive search strategy. At a minimum, numerous relevant databases are searched and these will often be supplemented with further sources, such as bibliographies, citation tracking, reference screening, hand searches of additional journals not indexed in the databases, targeted searches of the grey literature[10], expert recommendations and so forth (Brunton *et al.*, 2012). Compared to traditional literature reviews, systematic reviews offer greater accountability, reduce bias in how studies are selected and appraised, are more easily updated/replicated and better equip consumers to understand the reliability, strengths and limitations of the results (Gough & Elbourne, 2002; Gough *et al.*, 2012a; Thomas & Harden, 2008). Meta-analysis and meta-synthesis are both well-established methods, used respectively to assess a body of quantitative and qualitative evidence.

On the spectrum between traditional literature reviews and systematic reviews, there are also truncated ('brief' or 'rapid') reviews, often known as 'rapid evidence assessments'. Rapid review methods have emerged as a potential alternative to full systematic reviews where resources are limited and/or evidence is required more urgently (*e.g.* to inform time-sensitive policy decisions) (Ganann *et al.*, 2010; Gough, 2007; Watt *et al.*, 2008). There is limited agreement and guidance on how best to expedite the review process while maintaining rigour, transparency and quality (Khangura *et al.*, 2012). Some common strategies including limiting search strategies or narrowing the breadth and/or depth of inquiry (Burton *et al.*, 2007; Gough, 2007). For example, 'exhaustive database searching, electronic searching of journals and textbooks and searching of 'grey' literature are not immediately undertaken' in rapid reviews

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[10] 'Grey literature' is information not published in academic outlets, *e.g.* reports from government agencies or industry bodies. Grey literature may be excluded from reviews wholesale or treated as a less reliable source, largely because it has not typically undergone the scrutiny of peer-review.

(Burton *et al.*, 2007, p. 2). Early empirical studies into rapid review methods have shown that approaches vary greatly and there is often a lack of methodological transparency (Ganann *et al.*, 2010; Khangura *et al.*, 2012; Watt *et al.*, 2008).

Finally, bibliometric analysis is a lesser-known method that shares common ground with systematic reviews methodologically but differs in its focus: its primary function is to shed light not on research findings but on research activity (see, *e.g.*, Sweileh, 2018). Of course, systematic reviews may also offer insights into research activity (*e.g.* by mapping the number of publications over time or across disciplines) but it is rarely their sole aim.

In summary, there are various different approaches to reviews, each with strengths and limitations. Any primary or secondary research commissioned on labour market non-compliance ought to include some form of review to situate and contextualise the new work against the existing evidence. If the DLME were to commission specific review-based research, we would advise a systematic review due to its greater rigour, reach and, ultimately, validity. There are several further points to consider that affect how useful review-based research is likely to be in meeting the DLME's objectives.

First and most importantly, the breadth, depth and value of insights obtainable through reviews are contingent on the quantity and quality of existing evidence. As discussed, labour market non-compliance spans a continuum from decent work to severe exploitation. Most research has focused on the more serious end of the spectrum, leaving lower-level, more routine abuses relatively neglected (see, *e.g.*, Davies, 2018; Scott, 2017a). Yet, even the literature around labour trafficking, for example, is limited, fragmented and often low quality (Cockbain *et al.*, 2018). A review-based study into labour market non-compliance would likely underscore the scarcity of research across this spectrum and help identify empirical and theoretical gaps, rather than bringing together extensive research insights. In systematic reviews of crime-related issues it is common to screen hundreds and indeed thousands of publications, only to identify a small number that fit the inclusion criteria. We suspect similar would happen here.

Second, while a review of the literature on labour market non-compliance would of course offer some new insights, it seems unlikely to ensure substantial advances over what might be learnt from reading other recent reviews (two particularly relevant examples are Cockbain *et al.*, 2018 and Geddes *et al.*, 2013). Table 2 provides an overview of some key reviews (systematic or otherwise) conducted in related domains over the past decade. Although not comprehensive, it gives a sense of where relevant review activity has focused thematically, geographically and temporally. These reviews have tended to deal with various forms of human trafficking and/or forced labour: the areas where primary research activity concentrates. There would likely be limited additional gains from a new review that covered the full spectrum of non-compliance.

Table 2: Recent studies using review methods to address labour market non-compliance

Study	Title	Approach	Geographic scope	Further details on scope	Number of publications featured	Issue addressed
Bales *et al.* (2018)	Modern Slavery Research: The UK Picture. A research report from the Office of the Independent Anti-Slavery Commissioner and the University of Nottingham's Rights Lab	Literature review	UK	Recent or on-going research conducted about the UK and/or by UK researchers	Review based on 59 submissions in response to a call for evidence in April 2017 (many submissions covered multiple projects and/or publications)	Modern slavery, including its definition, nature, impacts, measurement and responses to it.
Cockbain *et al.* (2018)	Human trafficking for labour exploitation: the results of a two-phase systematic review mapping the European evidence base and synthesising key scientific research evidence	Systematic review	Europe	01.01.00– 13.07.15. Grey & peer-reviewed literature. English language empirical research only	6,106 records screened, basics of 152 publications mapped and eight synthesised in detail	The scale, nature and impacts of trafficking for labour exploitation
Sweileh (2018)	Research trends on human trafficking: a bibliometric analysis using Scopus database	Bibliometric analysis	Worldwide	2000-2017. Peer reviewed journal articles indexed in one major database	2,044 publications retrieved (none appear to have been screened out)	The extent of research activity around human trafficking
Ottisova *et al.* (2016)	Prevalence and risk of violence and the mental, physical and sexual health problems associated with human trafficking: an updated systematic review	Systematic review	Worldwide	01.1.11-17.4.15. Peer reviewed quantitative research only	1,767 records screened, 37 papers included (that together reported on 31 studies)	The prevalence of health risks and health problems among trafficked people and associated risk factors for health problems. *NB*: Review builds on Oram *et al.* (2012)
Geddes *et al.* (2013)	Forced labour in the UK	Literature review	UK	No specific inclusion parameters mentioned. Some general international context but focus on UK	Unclear how many were considered. Detailed discussion of around two dozen publications	Forced and/or precarious labour in the UK (part of a broader study that also included a legal and case review, information on data sources and frontline perspectives
Macy and Graham (2012)	Identifying Domestic and International Sex-Trafficking Victims During Human Service Provision	Systematic review	United States	No date parameters specified. Academic and grey literatures	Not stated how many records retrieved, 145 publications considered, 20 synthesised	Recommendations for service-providers around identification of sex trafficking victims and interactions with them.
Van Der Laan *et al.* (2011)	Cross-Border Trafficking in Human Beings: Prevention and Intervention Strategies for Reducing Sexual Exploitation	Systematic review	Worldwide	Jan 2000-Jun 2009. Only evaluations of interventions. Nine languages used in review	Over 19,000 records screened, 20 studies included, though none met the study criteria of involving a quasi-experimental design or stronger	Evaluation evidence of 'what works' to combat international sex trafficking

Third, the likely costs and benefits of commissioning a new review should be weighed. From an analytical perspective, the optimum approach for evidence-informed decision-making is a systematic review. Yet, systematic reviews are expensive and time-consuming, typically taking a team of researchers a minimum of six months (Ganann *et al.*, 2010; Khangura *et al.*, 2012). In fact, a review of labour market non-compliance would likely be even more resource-intensive because of the breadth and diversity of issues encompassed. Including publications from beyond the UK would expand the pool of research to draw upon and could help tease out similarities and differences in non-compliance internationally. Yet, lessons from elsewhere may not be transferable to the UK context and there would be obvious extra costs in terms of time, effort and other logistics (especially if non-English/grey literature were included). Even if the scope were restricted to the UK, search terms would still need to be broad and varied to capture

the full range of non-compliance. From a practical perspective, using broad and numerous search terms not only extends the searches but adds to the screening stage as numerous false positives would need to be manually excluded. Reviews in the social sciences are already notoriously more challenging and resource-intensive than those in the medical sciences (Thomas *et al.*, 2013), for reasons including the existence of more databases with lower standards of indexing and the greater role played by publications in non-indexed locations, such as the grey literature[11] (Brunton *et al.*, 2012). From past experience (Cockbain *et al.*, 2018), reviewing the grey literature is very demanding as relevant publications are harder to locate, rarely have an abstract (precluding initial screening on title and abstract), can be very lengthy (hundreds of pages) and often lack structured and adequate information on methods. Table 3 gives an overview of how a systematic review of labour market non-compliance would be expected to perform against our assessment criteria.

Table 3: Assessment of a systematic review against the agreed criteria

Criteria	Assessment
Gives a good reach across the UK's four constituent nations	Possible but depends on availability of published evidence
Covers range of worker demographics, sectors, employment types and urban/rural locations	In theory, the coverage could be wide. In practice, it is likely to be restricted by the limited amount of relevant prior research and its focus on particular industries (*e.g.* food production)
Covers the broad spectrum of non-compliance within the DLME's remit	Likely to be very restricted as much available literature has focused on the sharp end of the spectrum of non-compliance or on NMW/NLW underpayment. Other areas far less researched
Ensures breadth of insights	Very broad in theory but probably quite limited in practice.
Ensures depth of insights	Relatively deep but again heavily dependent on the scope of prior research
Potential biases can be minimised using appropriate research design	Difficult design out many of the biases involved, for example publication bias and various biases in the original studies (*e.g.* institutional bias, self report bias, self selection bias)
Has the potential to generate new knowledge	Limited potential as meta-analysis unlikely to be possible so would be largely synthesising existing knowledge
Has the ability to identify unforeseen or emergent issues	Low potential as relies on already published evidence (and that itself would have had a time lag from enquiry to publication)
Is likely to ensure high quality data	Quality of review data heavily dependent on original research and its data, which are likely to be of varied standards
Is likely to generate useful data (against the DLME's objectives)	Moderately useful but similar could probably be achieved at lower cost through careful reading of relevant prior reviews & analysis of existing statistical data
Presents few challenges around access to knowledge/ data/participants	Reviews are very straightforward in this respect as rely on readily available material
Carries modest costs relative to other approaches	Costs likely to be moderate if reviewing English language literature only (and lower if grey literature excluded). Additional costs and complexities associated with reviewing publications in other languages, especially those from the grey literature.
Can be completed in a timely manner	A minimum of twelve months for a team of researchers
Presents few ethical challenges	Few if any ethical issues
Produces results that are generalisable to the wider population	Highly unlikely
Has clear potential to be replicated over time	If review data were handled properly, a review could be updated after say five years at relatively low cost

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[11] More generally, qualitative research is less likely than quantitative research to be published in an indexed location (Thomas *et al.*, 2013).

Analysis of existing administrative data

There are various sources of secondary data relevant to labour market non-compliance, including worker complaints and grievances, compliance action (*e.g.* licensing), intelligence gathering and enforcement such as investigations and prosecutions. With some exceptions, administrative data tend to be generated reactively. The specific remits of different agencies affect the type of data they gather and issues they focus on and barriers to data sharing can lead to information silos. The DLME's Information Hub, for example, was introduced to help build a more coherent picture of labour market non-compliance (Metcalf, 2018).

Perhaps unsurprisingly given the complex legal, regulatory and practical landscape around labour market non-compliance, there are also 'significant gaps in enforcement' (Metcalf, 2018, p. 20). A key example is unpaid holiday entitlements, thought to account for over half the estimated £3.1 billion wage theft in Britain in 2016 but not subject to central state enforcement (Clark & Herman, 2017). There are numerous sources of relevant administrative data, including the three bodies under the DLME's oversight: HMRC NMW/NLW Enforcement, the GLAA and the EAS. Other official bodies with an overlapping mandate – and thus potentially relevant data – include the Advisory, Conciliation and Arbitration (Acas) helpline, police forces, the National Crime Agency (NCA), Home Office, Her Majesty's Courts and Tribunals Service (HMCTS), Crown Prosecution Service (CPS) and Health and Safety Executive (HSE). Additionally, non-state stakeholders such as unions, industry standards boards[12] and non-governmental organisations (NGOs) can and do hold their own administrative datasets that could shed light on various aspects to the scale and nature of non-compliance. It is important to recognise, however, that many infringements of labour rights go unreported and even those that come to officials' attention are not necessarily recorded and pursued as such (Cockbain *et al.*, 2019; Scott, 2017a; Weil & Pyles, 2005).

Table 4 provides an illustrative overview of selected stakeholders and the scale and scope of their relevant administrative datasets. Although far from exhaustive, the table demonstrates both that extensive datasets exist and that they vary greatly in their thematic and geographical coverage. Some deal only with the 'sharp end' of the non-compliance spectrum (*e.g.* 'modern slavery') whereas others concentrate at the more routine end. Some have very large samples, others tiny ones (*e.g.* criminal prosecutions). As is common with enforcement (see, *e.g.*, Morantz, 2014), official bodies tend to report primarily on outputs (*e.g.* number of cases) rather than outcomes (*e.g.* how their activity affected day-to-day working lives). As a rule, administrative datasets tend to have far more coverage of the formal economy than the informal economy [13] (BEIS, 2017; Croucher & White, 2007). Yet, the rate of labour market violations is likely to be higher in the informal economy for reasons including comparatively greater precarity and the disproportionate concentration of certain groups of workers, such as ethnic minorities or those with irregular status (see, *e.g.*, BEIS, 2017; Croucher & White, 2007; Noack *et al.*, 2015). Far more extensive data exist on certain areas of non-compliance – for example NMW/NLW violations – than others, which can contribute to imbalances in research activity and knowledge gaps around less well-documented forms of non-compliance. Importantly, none of these datasets encompass the full spectrum of labour market non-compliance under the DLME's remit. Even in combination, they do not capture the full picture.

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[12] *E.g.*, data from the independent Scottish Agricultural Wages Board's control inspections (see Metcalf, 2018).

[13] The definition of the informal economy is contested. Some define it as including all unregistered economic activity (including illicit goods/services), whereas others limit it to otherwise legal goods and services that are produced or sold out of the state's oversight (for further discussion, see BEIS, 2017).

Table 4: A selection of relevant data holders and example datasets

Organisation	Relevant remit	National coverage	Example data	Indicative scale/scope
Acas	Helpline provides employers and employees free impartial advice, routes complaints to relevant bodies and offers conciliation service (mandatory in employment tribunal claims)	England, Scotland, Wales	Data on nature and outcomes of helpline calls/online queries, including geographical location where landline used.	In 2017/18, received over 1.25 million calls and online queries and over 109,000 early conciliation notification forms (Acas, 2018).
Citizens Advice	Network of over 280 independent, local Citizens Advice charities across 2,400 locations. Free advice provided face-to-face, by phone, email or webchat. Broad remit that covers work, debt, benefits, pensions, housing and more	England and Wales (there is also a Citizens Advice Scotland)	Single record (kept updated) for every person assisted, containing personal information on client (*e.g.* age, gender, ethnicity, disability, occupation) and geographical information (local council and ward). Records structured by broad problem category, detailed information on issues and advice.	1.4 million clients assisted year to end Nov 2018. Of them, 10.7% (n=151,469) recorded under the category 'employment'. Top three issues for this group were pay and entitlements, dismissal and terms and conditions of employment (Citizens Advice, 2018).
EAS	Monitors employment agencies	England, Scotland and Wales	Information on targeted inspections, complaints, breaches, warning letters, arrears identified, labour market enforcement orders (LMEOs) and undertakings (LMEUs), prohibitions from running employment agencies.	In 2017/18, 145 targeted inspections, 636 infringements identified and 1,261 complaints received (up 50% on 2016/17) and 1,267 complaints cleared. Dues of ≈£150,000 identified for recovery. Four LMEUs issued. 11 potential prosecution/prohibition cases against 14 people investigated (BEIS, 2018b).
GLAA	Licenses labour providers (gangmasters) in agriculture, horticulture, shellfish gathering, food processing and packaging. Powers to enforce certain labour market offences across all sectors	England, Scotland, Wales (by order in Northern Ireland)	Intelligence reports, licensing activity (*e.g.* stock of licenses, number granted/revoked, inspections, breaches identified), enforcement activity (*e.g.* cases opened/closed, investigations, arrests, outcomes,) identification/support of suspected victims (including NRM referrals), ad hoc problem profiles	In 2016/17, 248 allegations of breaches of licensing standards, 72 compliance inspections, 1,004 licences issued/renewed, 59 applications cancelled, 16 refused, 18 revoked. Led or supported 57 joint operations with law enforcement, shared over 1,500 intelligence reports (GLA, 2018).
HMRC NMW/NLW	Enforces under-payment of NMW/NLW. Refers non-compliant employers to BEIS for the naming scheme.	Whole of UK	Contacts and complaints, investigations (opened, closed, outcomes), targeted enforcement activity (cases open, closed, outcomes), arrears identified, penalties, onward referrals, prosecutions. Companies passed to BEIS for naming scheme. Audit data from investigations in some cases.	In 2017/18, approximately 9,150 complaints around NMW/NLW received by Acas or HMRC (up 71% on previous year). 1,600 targeted enforcement cases opened. Total of £15.6 million of minimum wage arrears identified, affecting over 200,000 workers. Running total of employers named since naming scheme began reached almost 2,000 (BEIS, 2018c)
HMCTS	Employment Tribunals and any criminal prosecutions for labour-related offences (*e.g.* under the National Minimum Wage Act 1998 or the Modern Slavery Act 2015)	Case data for England and Wales. Tribunal decisions available for Scotland too.	Procedural data on cases, such as dates, charges/claims, length of case, outcomes, appeals etc. For Employment Tribunals, also have information on whether it was an individual or multiple claim, the awards made and full judgements on individual cases from February 2017 are available online.	In 2017/18, 109,685 employment tribunal applications received (HMCTS, 2018). In contrast, very small numbers of criminal prosecutions - for example the GLAA is involved in around 5 prosecutions a year and there have been only 14 prosecutions under the National Minimum Wage Act since its enactment (Metcalf, 2018).
Home Office	Police recorded crime data for modern slavery offences	England and Wales	Data on police recorded modern slavery offences. Data should contain geographic, demographic and offence-related information.	In 2017/18, 3,773 police recorded offences of modern slavery (up 53% on 2016/17) (ONS, 2018a). Unclear what proportion involved forms of modern slavery (*e.g.* sexual exploitation) that are outside DLME's remit.
Modern Slavery Helpline	24/7 helpline for victims, professionals and members of the public (established October 2016).	Whole of UK	The database contains structured data (*e.g.* locations, nature of concerns, demographics of potential victims) and unstructured data (call handlers' notes).	In 2017, the helpline received almost 4,500 calls and web-forms (≈10% from victims). Contacts indicated almost 5,000 suspected victims - 72% linked to labour exploitation (Unseen, 2018).
NCA	Manages the National Referral Mechanism (NRM) process (established April 2009). Collects and analyses intelligence on modern slavery. Supports (occasionally leads) investigations.	Whole of UK	Structured topline data on all referrals to the NRM held centrally and detailed case files for suspected victims from within the European Economic Area (other suspected victims' case files held by UK Visas and Immigration). Intelligence reports and other data.	In 2017, 5,145 individuals (adults and children) referred to the NRM as potential victims of modern slavery (National Crime Agency, 2018). Main category of suspected exploitation recorded as labour exploitation for 45.7% (n=2,352) and domestic servitude for 9.5% (n=488).

Administrative data also have some fundamental limitations that make responsible interpretation of the data crucial if using them in research (Metcalf, 2018). The majority of people who experience labour market violations do not make official complaints[14] and are therefore absent from complaint-based datasets (Noack *et al.*, 2015; Weil & Pyles, 2005). Under-reporting is a well-known problem for criminal offences too, with attrition rates varying by offence type (Tarling & Morris, 2010). For people to report abuses or lodge complaints they must be sufficiently aware of their rights, know who to turn to, be comfortable doing so and perceive the benefits of reporting as outweighing the costs. Similar preconditions may also apply to contacting helplines, although the barriers to engagement are likely lower if helplines are perceived as independent sources of advice rather than agents of the state. A clear example of how perceived/actual costs associated with reporting can influence decisions is the sharp drop in the number of claims brought to Employment Tribunals after a fee was introduced (Scott, 2017a) – and the steady rise in claims once it was abolished (Ministry of Justice, 2018).

Across the spectrum of non-compliance, there are many reasons why workers might not report violations, including: being geographically, socially or linguistically isolated; being non-unionised; not knowing rights and where to seek redress (the complexity of the landscape is unlikely to help); considering the violations too trivial to report; working somewhere where violations are normalised; and/or being reluctant to complain for fear of recriminations from their employers and/or the state (Cockbain *et al.*, 2019; Croucher & White, 2007; Holgate *et al.*, 2011; Metcalf, 2018; Pollert, 2007, 2010; Vosko *et al.*, 2017). Those in the most precarious situations (*e.g.* the very poor, irregular migrants or those whose visa is tied to a particular employer) may be especially unlikely to complain (Morantz, 2014; Vosko *et al.*, 2017).

Relying on complaints data as a measure of the *scale* of labour market non-compliance therefore grossly underestimates the true prevalence of violations. The resultant picture of the *nature* of non-compliance may also be skewed if there are systematic differences in the type of workers, industries and violations that do or do not generate complaints. Qualitative research in the UK suggests women are less likely than men to make labour market complaints (Low Pay Commission, 2017) – although the reverse is true for reporting crime in general (Tarling & Morris, 2010) – and quantitative research in Canada shows most people wait until after leaving a job to complain (Vosko *et al.*, 2017). Research in the US demonstrates an imperfect relationship between the rate of complaints in various industries and the rate of likely underlying violations, meaning that 'silence should not be confused with compliance' (Weil & Pyles, 2005, p. 91). Overall, great care should be taken not to generalise beyond administrative datasets (Vosko *et al.*, 2017). Nevertheless, such data can offer useful insights into the scale and nature of *reported* violations and (certain) characteristics of complainants and complaints.

While most labour market enforcement in the UK – as in many other countries worldwide – is reactive and complaints-driven (Metcalf, 2018), administrative data are also generated through proactive enforcement. Such data are also liable to administrative biases. For example, enforcement around human trafficking/modern slavery is thought to be notoriously sensitive to shifts in prioritisation, awareness and resourcing (Cockbain *et al.*, 2019). Law enforcement officers exercise considerable discretionary power (Bjelland & Dahl, 2017), which can affect whether and how cases are recorded and pursued. Where the boundaries of various forms of non-compliance are particularly complex, unclear or contested, such biases may be heightened. For example, the parameters of what constitutes 'modern slavery' are notoriously vague (O'Connell Davidson, 2015), which leaves considerable scope for inconsistency in how the term is interpreted and applied in practice (Cockbain & Bowers, 2019; Cockbain & Olver, 2019).

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[14] In the United States, for example, Weil & Pyles (2005) conservatively estimate that one complaint is made for every 130 violations of labour standards.

Political, economic and social factors affect how enforcement activity is targeted, which in turn influences the volume and nature of data generated through official investigations. For example, EAS had only nine inspectors in 2017/18 – despite covering 18,000 employment agencies that together employed around 1.1 million workers (Metcalf, 2018). The International Labour Organization (2006, p. 4) observes that labour inspectorates around the world 'are often understaffed, underequipped, under-trained and underpaid'. Such factors can of course affect both the quantity and quality of inspections and administrative data. With absolute numbers of enforcement staff already often low, they face an increasing complex task given changing conditions such as decreased union membership and collective bargaining, the fissuring of the workplace and the spread of new information technologies (Weil, 2008).

Morantz (2014, p. 688) suggests that randomised inspections could be used in future not only to uncover non-compliance but also to generate the raw data needed to inform 'statistically valid estimates of regulatory compliance within a given group of regulated entities'. From the perspectives of the DLME's long-term goals to measure the scale and nature of non-compliance, randomised inspections merit further consideration as a potential future source of research data. Among the necessary preconditions for their success would be political will and sufficient budget to generate an adequate sample size. Obvious challenges include the opportunity costs of where inspections might otherwise have been targeted, any negative unintended consequences (*e.g.* to vulnerable worker populations) and the fact that no single agency has an enforcement mandate covering the full-spectrum of non-compliance. Moreover, such an approach would necessarily be limited to the formal economy and rests on the assumption that relevant violations will be detected sufficiently often at inspection.

A particular challenge in using administrative data for research purposes is that they can suffer from missing, inaccurate and inconsistent data: these issues are 'virtually inevitable in any enterprise database that relies on many individuals to input data on an ongoing basis yet lacks robust mechanisms for error checking and data cleaning' (Morantz, 2014, p. 680). They can affect the type of analyses possible (*e.g.* large volumes of missing data may preclude regression analysis) and the validity of results. Researchers are further constrained by the specific variables and categories covered in the original dataset, which can lack fundamental information like workers' ethnicity, gender or English language proficiency (Croucher & White, 2007; Morantz, 2014) Using unstructured data, as has been done with in-depth case files of labour trafficking victims, can provide insights into issues beyond those covered in fixed-format quantitative datasets but carries much higher costs in terms of data-processing – and missing data remains a challenge (Cockbain *et al.*, 2019). The extent to which researchers are able to get hold of administrative microdata varies. Securing access can be challenging, time-consuming and contingent on organisational buy-in and security vetting (see, *e.g.*, Cockbain *et al.*, 2019; Morantz, 2014). The DLME's support would likely help in any such research, especially if dealing with agencies under his oversight, but access is not guaranteed. If seeking particularly sensitive data, the use of a secure data lab might be helpful or even necessary.[15]

Table 5: Recent studies using administrative data to address labour market non-compliance

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[15] For example HMRC has a data lab in which researchers can access their data (with permission) and the JDI Research Laboratory at UCL is the UK's first secure data lab in a university setting, open to academics and others.

Study	Title	Approach	Geographic scope	Further details on scope	Size of dataset	Issue addressed
Clark and Herman (2017)	Unpaid Britain: wage default in the British labour market	Analysis of diverse primary and secondary data, some from administrative sources. Estimates of total scale of wage default.	Britain, but particular focus on London	Administrative data sources included HMCTS (employment tribunal claims), Insolvency Service, BEIS (naming lists of NMW offenders), Citizens Advice and Acas. Project as a whole also used primary in-depth interviews and survey data from the Labour Force Survey, Family Resources Survey and 2013 Survey of Employment Tribunal Applications.	Various, depending on source.	Extent of, mechanisms behind and reasons for non-payment of wages
Vosko et al. (2017)	The compliance model of employment standards enforcement: an evidence-based assessment of its efficacy in instances of wage theft	Case study-based statistical analysis of 'wage theft'.	Ontario, Canada	Data from the Ministry of Labour's Employment Standards Information System, which covered: complaints; violations detected; inspections; outcomes of cases; settlements; wage recovery; and more. Most of the data used came from 2014/15.	Over 100,000 complaints.	Empirically informed critical assessment of the theoretical framework of the compliance model of labour market enforcement
Silverman (2014)	Modern Slavery: an application of Multiple Systems Estimation	Multiple systems estimation (a method popular in ecology for estimating hidden populations)	UK	Based on analysis of overlaps between which authorities held records on each suspected victim of human trafficking identified via the NCA's 2013 Strategic Assessment	2,744 potential victims.	Estimation of the 'dark figure' of modern slavery victims in the UK
Geddes et al. (2013)	Forced Labour in the UK	Report reviews secondary data sources relevant to understanding forced labour in the UK	UK	Focuses on data from NRM; non-compliance against GLA's Licensing Standards HMRC NMW; EAS; HSE; Home Office immigration offences; PWR Helpline; Employment Tribunals; Citizens' Advice Bureau; and NGOs Migrant Help and Kalayaan.	Various, depending on source	Drawing together and analysing diverse UK labour market data
Croucher and White (2007)	Enforcing a national minimum wage: The British case	Interview-based study, for which admin. records used as gateway for recruitment	UK	Researchers relied on HMRC to select sample and send out invitations to participate (and pass on responses). 1,163 letters of invitation sent out to people who'd been through the NMW enforcement process (8.6% response rate and 6.0% eventually interviewed).	70 interview participants, of whom 43 were employers and 27 workers.	Employers' and workers' experiences of the effectiveness of HMRC National Minimum Wage enforcement
Weil and Pyles (2005)	Why Complain? Complaints, Compliance and the Problem of Enforcement in the U.S. Workforce	Descriptive statistics and regression analysis.	United States	Focus on violations 2001 to 2004 under Fair Labor Standards Act (minimum wage, overtime compensation, child labour standards etc) and Occupational Health and Safety Act. Data on underlying workplace compliance derived from Bureau of Labor Statistics data, incl. records of injuries/illnesses and survey data on overtime violations.	Almost 200,000 complaint cases.	Examination of the relationship between worker complaints and underlying workplace conditions

As the examples in Table 5 show, administrative data may be used alone or in conjunction with other datasets for a range of research related to labour market non-compliance. Some of these approaches might be adapted or developed to answer specific questions around the scale and nature of labour market non-compliance. For example, survey data from the Annual Survey of Hours and Earnings or the Labour Force Survey might be used in conjunction with data from Acas, Citizens Advice or HMRC to explore the relationship between industries where pay is low and those in which concerns/complaints concentrate, akin to the approach taken by Weil and Pyles (2005). Administrative data may be useful as a gateway into other research, for example to identify focal sectors (*e.g.* Ipsos MORI, 2012) or potential participants for surveys or interviews (*e.g.* Croucher & White, 2007). Although it would be challenging, entries on official datasets (*e.g.* police, GLAA, HMRC, EAS, HMCTS, HSE) could perhaps be cross-matched to build a more nuanced picture of non-compliance at the level of the individual offender, company or sector. An issue here is that existing datasets vary in the extent to which they contain sector-specific information, either at all or in a readily available format (Scott, 2017a). Over time, with

improved bottom-up research into various under-researched areas, existing administrative data might also be used more effectively in modelling and estimation of the scale and nature of non-compliance (for further discussion of modelling specifically in the NMW context, see BEIS, 2017). Table 6 gives an overview of how research into labour market non-compliance that used administrative data would be expected to perform against our assessment criteria.

Table 6: Assessment of research using existing administrative data against the agreed criteria

Criteria	Assessment
Gives a good reach across the UK's four constituent nations	Dependent on coverage of existing data but overall reach likely to be broad (although probably more limited for Northern Ireland)
Covers range of worker demographics, sectors, employment types and urban/rural locations	Likely to be quite fragmented and certain groups (*e.g.* workers in informal economy) unlikely to be captured. Coverage influenced, among other things, by sectors where complaints more likely and/or enforcement activity has concentrated
Covers the broad spectrum of non-compliance within the DLME's remit	Coverage limited and patchy: certain areas very well covered, others far less so, if at all
Ensures breadth of insights	Medium breadth possible
Ensures depth of insights	Fairly low depth possible
Potential biases can be minimised using appropriate research design	Very little can be done to compensate for various biases inherent in the data, such as sampling bias (including self-selection bias), self-report bias, administrative bias and missing data bias. Since administrative data are susceptible to fluctuations in funding, prioritisation, policies etc, it is critical to interpret the data responsibly
Has the potential to generate new knowledge	Medium, if used innovatively. Otherwise relatively low
Has the ability to identify unforeseen or emergent issues	Low ability to identify new issues
Is likely to ensure high quality data	Overall data quality not likely to be especially strong: large datasets but subject to various biases. Missing data on variables of research interest and patchy coverage are issues
Is likely to generate useful data (against the DLME's objectives)	Fairly useful - although would need to be innovative in approach to improve on what could be obtained via standard reporting by agencies themselves
Presents few challenges around access to knowledge/ data/participants	Data access should be relatively straightforward if the study had the DLME's support and buy-in from relevant agencies
Carries modest costs relative to other approaches	Costs fairly low if using structured data but far higher if using unstructured data at scale or seeking to cross-match sources
Can be completed in a timely manner	Dependent on availability and structure of data and intended analyses. Bottom end of the scale would be about 9 months-1 year
Presents few ethical challenges	Perhaps biggest issue is that cannot get informed consent from participants (individuals from whom original data derive. Cross-matching different data sources or using unstructured qualitative data might require access to personal/identifying data
Produces results that are generalisable to the wider population	Not generalisable
Has clear potential to be replicated over time	High potential to be replicated with later data from same source but need to be sensitive to changes in context (*e.g.* resourcing/remit) that may affect administrative data as much if not more than changes in actual non-compliance.

Worker surveys

Survey methods are widely used in applied social research in particular and provide a standardised way to ask questions of people. They can, among other things, help investigate attitudes, experiences, behaviours and attributes, identify correlates and predictors of relevant variables and generate diverse insights to inform policy and practice (Groves *et al.*, 2009; Heeringa *et al.*, 2017). In many areas of public policy, surveys are a valuable complement to other

statistics and records. For example, comparing self-reported victimisation measured through the British Crime Survey with official police recorded crime data sheds light on the extent, nature and correlates of under-reporting of crimes (ONS, 2018b; Tarling & Morris, 2010).

Surveys can be completed orally and/or in writing/using an electronic device such as a tablet and can be conducted via several modes, including face-to-face, by post, by telephone and online. Respondents may answer as individuals and/or as representatives of larger units (*e.g.* household, family or company). Some surveys are cross-sectional, meaning a new set of respondents is selected each time. Others are longitudinal, meaning the same panel is surveyed repeatedly over time. Others fall somewhere between the two, for example participants in the Labour Force Survey stay in the sample for five consecutive waves, meaning each sample has around 80% overlap with the previous one. This overlapping design enables greater precision in estimating change over time. In standard longitudinal surveys, new respondents may be also added to offset the effects of attrition.

Linked to their ubiquity, there is an expansive body of research on survey methods. For example, much has been written about survey instruments, modes, sampling strategies and interaction effects between those administering and responding to surveys (Berinsky, 2017; Beullens *et al.*, 2018; West & Blom, 2017). Generally speaking, probability samples are preferable so that findings can be generalised to the wider population. In case of hard-to-reach populations, booster samples can be included to enhance the representativeness of a survey for certain sub-populations and enable further analyses. Sometimes, probabilistic sampling is not feasible – for example because of barriers like time, budgetary constraints or difficulties identifying suitable participants.[16] Although there are ways to gain generalisable information from non-probability samples, the required methods often rely on other high-quality surveys and/or administrative data and the results are less likely to be reliable (Buchanan *et al.*, 2018; Mercer *et al.*, 2017).

Survey researchers who aspire to produce findings representative of a wider population must first identify an appropriate 'sampling frame': a list of all the units in the population from which the survey sample can be selected. In the UK, which has no central population database, generating even 'general population' samples can be difficult. The most commonly used sampling frame is the postcode address file (PAF), which lists all private residential addresses. But an individual-based sample drawn from the PAF still needs a way of selecting individuals from those living at a particular address (which may include multiple households at the same address). Second, and much more importantly, it excludes individuals not living at private addresses, such as students in university accommodation, members of the armed forces, prison inmates and those in long-term medical care. The difficulties associated with achieving a representative sample are multiplied when, as here, the population of interest is 'hard to reach', for example due to insecure housing tenure, peripatetic lifestyles, and so forth.

Precarious workers, who are likely at particular risk of labour abuses, may belong to 'hidden populations': groups for whom no sampling frame exists (meaning that their size, characteristics and boundaries are unknown) and membership involves stigmatised and/or illegal behaviour (Heckathorn, 2002).[17] Traditional random sampling methods used in surveys are far less reliable, effective and informative when dealing with hidden populations (Heckathorn, 2002). Aside from the problems linked to the absence of a sampling frame, hidden populations are typically small – meaning random samples would need to be prohibitively large in order to

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[16] For example, public health researchers have used survey-based methods to investigate the health issues associated with human trafficking among convenience samples of victims accessing post-trafficking support services (*e.g.* Oram *et al.*, 2016; Zimmerman *et al.*, 2006).
[17] The hidden population problem has also been highlighted specifically in relation to trafficking (see, *e.g.,* Cockbain *et al.*, 2018; Cockbain *et al.*, 2019; Silverman, 2014; Tyldum & Brunovskis, 2005).

capture adequate participants. The primary reason, for example, that the Crime Survey of England and Wales has a sample size (currently) in excess of 35,000 is that many of the crimes it seeks to map are, thankfully, very rare. Alternatives like snowball sampling, however, introduce well-documented biases that undermine the generalisability of results. Recent years have seen growing interest in alternative approaches, such as respondent driven sampling (RDS) (Heckathorn, 2002) – an innovative chain referral sampling method developed specifically for the study of hidden populations – and related methods (*e.g.* link tracing).

There are numerous large-scale and long-established population surveys in the UK. Many include questions related to work, for example around employment status, industry and occupation, earnings, unpaid overtime or union membership. Notable examples include the Labour Force Survey (1973-), Family Resources Survey (2010-), British Social Attitudes Survey (1983-), Annual Population Survey (2004-), Understanding Society (2009-, previously British Household Panel Survey (1991-2008)) and, of course, the Census (1801-). Nevertheless, there have been few worker surveys either in the UK or internationally that have addressed in a more comprehensive and detailed manner to what extent and in what ways employment laws and standards have been violated, evaded or eroded (Noack *et al.*, 2015). The exceptions are typically surveys by academics rather than governments, although government agencies have sometimes been partners or commissioners/funders (Noack *et al.*, 2015). Table 7 gives an overview of key recent studies using worker surveys to assess forms of labour market non-compliance.

One particularly influential example is the 2008 Unregulated Work Survey in the US (Bernhardt *et al.*, 2009; see also Bernhardt *et al.*, 2013a; Bernhardt *et al.*, 2013b; Petrescu-Prahova & Spiller, 2016). It was a cross-sectional survey of 4,387 frontline workers in low-wage sectors across the country's three largest cities (New York, Chicago and Los Angeles).[18] It used respondent driven sampling in an attempt 'to obtain accurate and statistically representative estimates of the prevalence of workplace violations' (Bernhardt *et al.*, 2009, p. 2). The results showed a high prevalence of violations, including severe ones. The prevalence rates varied substantially between specific violations and depending on the characteristic of jobs, employers and workers. The study is important in demonstrating that it is indeed viable to gather 'reliable data on employment and labour law violations from workers' (Spiller *et al.*, 2010, p. 4).

Surveys offer the opportunity to investigate not only the prevalence of non-compliance in its various forms (its 'scale') but its characteristics, associated variables and predictors (its 'nature'). Robust survey research in this field could generate targeted insights to inform policy and practice, as well as helping build the broader empirical and theoretical evidence base on labour market non-compliance, risk and resilience. A survey of this type would generate extensive data that could be analysed in numerous different ways, thus supporting multiple studies. While small-scale, non-representative surveys might yield interesting and novel results, the DLME's statutory responsibilities to report on scale and nature would likely be better served by a large-scale representative survey. Such a survey could establish a baseline for non-compliance and the standardised instrument could be re-used to track changes over time. Here, it might be useful to look at changes following specific interventions to tackle non-compliance, the effects of shifts in the socio-political/socio-economic environment at large (see, *e.g.*, Noack *et al.*, 2015) or changes linked to workers' understandings of their employment rights, their ability to secure these rights, and their awareness of what help is available.

Table 7: Recent studies using survey methods to address labour market non-compliance

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[18] The final results were adjusted to be representative of frontline workers in low-wage industries in these three cities: a combined population of 1.64 million workers (15% of the total labour force).

Study	Title	Approach	Sampling method	Geographic scope	Further details on scope	Number of participants	Issues addressed
Clark and Herman (2017)	Unpaid Britain: wage default in the British labour market	Analysis of secondary survey data	Various	Britain, but particular focus on London	Analysis of secondary data from surveys including the Labour Force Survey, Family Resources Survey and 2013 Survey of Employment Tribunal Applications. Part of broader project that included other sources too (*e.g.* in-depth interviews and complaints data)	Various, depending on source.	Extent of, mechanisms behind and reasons for non-payment of wages
Noack *et al.* (2015)	Measuring Employment Standards Violations, Evasion and Erosion	Cross-sectional telephone survey	Random digit dial	Ontario, Canada	Two pilot surveys administered as part of broader project on employment standards. Screener questions to get to non-unionised workers earning low wages (<$16/hour).	20 (first pilot); 229 (second pilot)	Prevalence of employment standards violations and patterns of their evasion and erosion among low-wage workers.
Noack and Vosko (2011)	Precarious jobs in Ontario: Mapping dimensions of labour market insecurity by workers' social location and context	Analysis of secondary data from a longitudinal survey using computer-assisted telephone interviewing	Random general population survey	Ontario, Canada	Analysis of relevant data from Statistics Canada's Survey of Labour and Income Dynamics over the period 1999-2009	Two panels, each of roughly 30,000 adults in 15,000 households	Prevalence of precarious jobs in Ontario and characteristics of those working in such jobs.
Workers' Action Centre (2011)	Unpaid Wages, Unprotected Workers: A Survey of Employment Standards Violations	Cross-sectional survey (mode of data collection unclear)	Snowball sampling, via community agencies working with target group	Toronto, the Greater Toronto area and Windsor, Ontario, Canada	Survey of low-wage workers, with sampling targeted at reaching recent immigrants, minority ethnicities, women and non-status workers (*e.g.* irregular migrants).	520	Extent of employment standards violations in the low-wage/precarious labour market and their impacts on workers.
Bernhardt *et al.* (2009)	Broken Laws, Unprotected Workers	Cross-sectional face-to-face survey	Respondent driven sampling	New York, Chicago and Los Angeles, US	Survey of frontline workers in low-wage industries in each city.	4,387	Violations of labour market laws
Casebourne *et al.* (2006)	Employment Rights at Work: Survey of Employees 2005	Cross-sectional face-to-face survey, using computer-assisted personal interviewing (CAPI)	Random general population survey	UK	Second of two surveys (the first benchmark survey was in 2001) of employees. Random sample of working-age men (16-64) and women (16-59) who had worked as employees in Great Britain in previous two years.	1,038	Awareness and knowledge of employment rights, scale and nature of workplace problems and sources of information/advice that were known/sought.
Pollert and IFF (2005)	The Unorganised Worker: Problems at Work, Routes to Support and Views on Representation …	Cross-sectional telephone survey	Computer generated random sample	UK	Survey of low-paid workers without union representation in the UK about experiences over previous three years.	501	Problems experienced at work by vulnerable workers

In any worker survey there will inevitably be trade-offs between sample size, survey complexity, and costs (both to researchers and respondents). Surveying a wide range of workers would be useful to understand how labour market non-compliance varies across worker characteristics (age, gender, ethnicity, migration status *etc.*), levels of pay, industries, occupations and types of employment (*e.g.* permanent employees, agency workers, workers on zero hours contracts). Yet, there are obvious cost implications of a representative sample, which would require at least 1,000-1,200 participants – and certain minority groups would likely need a targeted booster sample. A cheaper but less comprehensive alternative would be to target a survey strategically at those groups of workers believed to be most affected by non-compliance, such as low-wage workers or those in the most precarious forms of employment.

Such targeting could be challenging, however, as little is known about precarious workers and they are particularly 'hard to reach'. Focusing on a sub-set of the UK labour market would not generate results representative of the full workforce. Nevertheless, considering the limited literature of labour market non-compliance and the particular challenges faced by certain worker groups, it would probably be a good place to start and could prove an essential springboard for further research.

A key lesson from previous worker surveys is that survey instruments should be designed carefully to avoid relying on participants' pre-existing knowledge of the often complex legal landscape around non-compliance (see, *e.g.* Bernhardt *et al.*, 2009; Noack *et al.*, 2015). Involving various different stakeholders in the survey design (including workers themselves) could help ensure the questionnaire is not only scientifically robust but also viable and reflects the concerns of those affected. An additional challenge is that participants may not recognise labour market violations as such, in part because of the extent to which work-based harm and exploitation have been normalised (Noack *et al.*, 2015). They may also be reticent to disclose their experiences for fear of repercussions from their employers or the state. To this end, the actual and perceived independence of a survey and its administrators is likely to be important. It would be important to ensure that the surveys were conducted outside of the workplace and that the initial contact/recruitment did not go through employers. There is always a balance to be struck between covering relevant topics adequately and not fielding a survey so long that participants decline to participate or lose interest. In addition to standard closed survey questions, open questions are valuable in ensuring more in-depth, participant-led insights and helping identify emergent or unanticipated issues. By nature, however, open-ended questions can be more time-consuming to answer and resource-intensive to process as data (although, some promising alternatives have been proposed recently – see, *e.g.*, Roberts *et al.*, 2014). Another challenge here is that participants may answer open questions with concerns that are salient to them but only tangential to the study's aims or remit.[19] It is crucial for each question to go through rigorous pre-testing, especially cognitive interviews and online probing with members of the target population (Meitinger & Behr, 2016). The questionnaire would also need to be designed carefully to accommodate differences in devolved legislation across the UK.

It is vital to recognise that surveys can be expensive, especially when trying to reach hard-to-access populations. It would be difficult to give even a rough estimate of the cost of fielding a new survey in this space, as there are so many variables to consider (*e.g.* sample size, mode of data collection, survey development and administration *etc)*. Gaining access to relevant participants can be difficult and time-consuming and response rates may be low, especially when dealing with marginalised or stigmatised groups (Heckathorn & Cameron, 2017). Although applying statistical weights can conceivably compensate for low enrolment rates, having a limited number of participants often makes any further inference for the given sub-population unreliable and imprecise.

While sampling methods specifically designed for hidden populations (*e.g.* respondent driven sampling) seem promising, it is usually difficult to get representative findings. Those in precarious work – arguably at the highest risk of non-compliance – may be hard to find and difficult to engage, for example because they may not self-identify as belonging to a particular group, congregate with one another or be particularly clustered geographically or socially. Involving community groups, either as collaborators or co-researchers (*i.e.* as 'gatekeepers'), can help in accessing hard-to-reach groups and encouraging participation (see, *e.g.*, Noack *et al.*, 2015; Vincent *et al.*, 2019). Any survey research into labour market non-compliance is likely

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[19] As part of the scoping study, we spoke to Canadian academics specialising in the labour market (Leah Vosko, Andrea Noack, Heather Steel and Eric Tucker). They reported finding this issue a challenge in their pilot telephone surveys with low-wage workers in Ontario.

to require robust ethical review and clearance because of the sensitivities of the topic and potential vulnerabilities of participants. A viable plan would need to be in place to signpost participants where needed to services or advice. There are also both ethical and practical issues affecting the decision whether and how much to pay participants. Some form of payment is often helpful, especially if asking participants to make onward referrals: for example, participants in the 2008 Unregulated Work Survey received $30-50 (Bernhardt *et al.*, 2009).

Given the dearth of prior research and challenges associated with hard-to-reach populations, a longitudinal survey would probably be overly ambitious – at least to start. A survey need not, however, be longitudinal in order to track trends; a continuous cross-sectional approach (like that used in the Crime Survey for England and Wales) would give flexibility to refine the sampling and approach without 'locking in' a certain set of participants. Given the feasibility concerns around worker surveys (including attrition and its effects), it would seem sensible to begin with a cross-sectional survey. A series of cross-sectional surveys could eventually coalesce into a continuous survey, possibly with a longitudinal element. For an initial cross-sectional survey the aim would be to recruit at least 1,000-1,200 participants across the UK, making most multivariate statistical analyses feasible. From a practical perspective, one of the most viable and cost-effective approaches would be to work with the participant pool of an existing survey, using screening questions to identify members of the relevant target population (*e.g.* screening on wage or other measures of precarity). Relevant participants could then act as 'seeds' for additional respondent driven sampling, ensuring a larger sample and providing further insights into the scale and nature of labour market non-compliance.

A particularly promising choice in this context would be Understanding Society (2009-), which features around 40,000 households (approximately 80,000 people). It is the largest household panel survey in the world. Cohort members are followed up biennially, in person or online, even if they move residence. The survey also has a big minority booster sample. Working with an existing survey would ensure access to established infrastructure and potential participants on a large scale and at comparatively low cost. Participants' previous answers in the main survey could be used to identify likely candidates to be surveyed on labour market non-compliance. Table 8 gives an overview of how a worker survey delivers against the assessment criteria.

Table 8: Assessment of a worker survey against the agreed criteria

Criteria	Assessment
Gives a good reach across the UK's four constituent nations	If survey administered via an existing survey, then reach likely to be very broad. In contrast, starting from scratch with a new survey then costs would likely restrict number of possible sites (though could still have one in each nation)
Covers range of worker demographics, sectors, employment types and urban/rural locations	If done via existing survey, then very high. If a new survey needed, then costs will restrict coverage
Covers the broad spectrum of non-compliance within the DLME's remit	High since can design survey questions to cover broad spectrum of issues of interest
Ensures breadth of insights	High (see above)
Ensures depth of insights	Medium
Potential biases can be minimised using appropriate research design	Some biases can be reduced by good design/execution. For example, using weighting to minimise effects of non-response bias and under-/over-coverage. Self-selection bias remains an issue. Interviewer bias can be minimised via good training. Instrument needs careful design and thorough question testing (*i.e.* online probing, cognitive interviews) to avoid bias (*e.g.* self-report bias, leading questions, priming)
Has the potential to generate new knowledge	High potential
Has the ability to identify unforeseen or emergent issues	Relatively high potential (within the predetermined survey instrument)
Is likely to ensure high quality data	High potential
Is likely to generate useful data (against the DLME's objectives)	High potential: generalisable results from a broad population covering wide range of issues
Presents few challenges around access to knowledge/ data/participants	Access should be relatively straightforward if using an existing survey framework (and participants agree to take part), although will be reliant on their infrastructure and agreement. Far more challenging if starting from scratch.
Carries modest costs relative to other approaches	Should be very cost-effective low if can administer through an existing survey. Administering survey in various languages adds costs/ complexities. If starting from scratch with a new large-scale representative survey, costs would be high
Can be completed in a timely manner	Estimated timescale of around 18-24 months
Presents few ethical challenges	Asking sensitive questions of potentially vulnerable participants. Some questions may be better self-completed (*e.g.* Computer Assisted Personal Interviewing). May need to signpost further support available.
Produces results that are generalisable to the wider population	Yes (if probabilistic sampling used)
Has clear potential to be replicated over time	Yes

Worker interviews

Primary qualitative research on workers/workplaces has tended to use in-depth interviews rather than focus groups or ethnographic enquiry (two of the other main qualitative research tools). Interviews focused on non-compliance have typically been carried out with workers, although there is also a much more limited set of research with employers and broader stakeholders (discussed in the next section). Over recent years, there has been a notable tendency to focus on non-compliance as it affects migrant workers, with the underpinning view that low-wage migrants are most at risk of work-based exploitation and harm (see Table 9 for a review of recent UK research in this space).

Table 9: Examples of studies using in-depth interviews with migrant workers in the UK to address labour market non-compliance

Study	Title	Number of workers interviewed	Sectors	Issues addressed
Clark and Colling (2018)	Work in Britain's Informal Economy: Learning from Road-Side Hand Car Washes	24	Car washes	Undocumented work and exploitation
Davies (2018)	From severe to routine labour exploitation: The case of migrant workers in the UK food industry	14	Food industry	Exploitation
Vershinina *et al*. (2018)	False self-employment: the case of Ukrainian migrants in London's construction sector	20	Construction	Undocumented work and exploitation
De Angelis (2014)	'I thought I am modern slavery': giving a voice to trafficked women	7	Various	Trafficking
Lewis *et al*. (2014)	Precarious lives: forced labour, exploitation and asylum	30	Various	Forced labour
Potter and Hamilton (2014)	Picking on vulnerable migrants: precarity and the mushroom industry in Northern Ireland	17	Mushroom industry	Exploitation
Bloch (2013)	The labour market experiences and strategies of young undocumented migrants	75	Various	Undocumented work and exploitation
Scott *et al*. (2012)	The Experience of Forced Labour in the UK Food Industry: Final Report.	62	Food industry	Forced labour
Allamby *et al*. (2011)	Forced labour in Northern Ireland	Unspecified	Mushroom industry, fishing & hospitality	Forced labour
Kagan *et al*. (2011)	Experiences of forced labour amongst Chinese migrant workers	32	Catering & hospitality	Forced labour
Burnett and Whyte (2010)	The wages of fear: risk, safety and undocumented work	14	Various	Undocumented work and exploitation
Ruhs and Anderson (2010)	Semi-compliance and illegality in migrant labour markets: an analysis of migrants, employers and the state in the UK	93	Agriculture, hospitality, construction & au pair work	Exploitation
McDowell *et al*. (2009)	Precarious work and economic migration: emerging immigrant divisions of labour in Greater London's service sector	118	Hotel work and cleaning	Exploitation
Wills *et al*. (2009)	Global cities at work: New migrant divisions of labour	103	Cleaning, care, construction, food processing & hospitality	Exploitation
Nobil Ahmad (2008)	Dead men working: time and space in London's ('illegal') migrant economy	21	Various	Undocumented work and exploitation
Anderson and Rogaly (2005)	Forced Labour and Migration to the UK	33	Various	Forced labour

Interview-based qualitative research varies in nature. Most obviously, there is the level of structure and standardisation. Some researchers approach interviewing with a standardised pro-forma, others with a looser guide and some with little or no structure. Most in-depth interview studies, however, take a semi-structured approach. This approach involves some standard questions (at a minimum usually recording age, place of birth, nationality, gender, job, location, wage, legal status, non-compliance experienced) alongside a series of themes/prompts to guide the conversation, but not in a prescriptive or restrictive way. Unfortunately, very few studies publish the actual interview guide used. Alongside the level of structure/standardisation, in-depth interviews vary in terms of whether they occur face-to-face or at distance (telephone, Skype, *etc.*) and whether they are recorded or notes are taken. The norm is to interview face-to-face and to record the interview so verbatim testimony can be obtained. Time is also a consideration. The convention for an in-depth interview is a 60-90

minute single encounter, although some worker studies use repeat interviews with the same individual (*e.g.* Alberti, 2014; Anderson *et al.*, 2006) and a few are even set up as a qualitative panel study (*e.g.* Krings *et al.*, 2011).

For workers who have experienced non-compliance, interviews should ideally be carried out outside of the workplace in a neutral and non-threatening environment. It is also the case that access to workers can often be problematic with researcher 'cold calling' and/or contact via employers not usually suitable. Existing research points towards three main approaches for negotiating access to workers for interview: 1) Initial intense ethnographic research with voluntary and community organisations to facilitate access (Lewis, 2016); 2) Initial survey research opening up opportunities for follow-up interviewing (Wills *et al.*, 2009); 3) Recruitment of peer/community researchers who are relative 'insiders' with respect to the worker community being investigated (FLEX, 2017). The peer/community research option adds an intermediate layer between academic researcher and researched that can also bring particular challenges (Edwards & Alexander, 2011; Goodson & Phillimore, 2012; Ryan *et al.*, 2011; Scott & Geddes, 2016).[20] Importantly, all three approaches can be resource intensive in terms of both time and cost.

Once initial participants are identified, the norm when studying vulnerable and/or hidden populations and sensitive topics is then to use snowball sampling. Doing so involves the development of referral chains from initial entry points into a target population so that recruitment gains momentum. Thus, from a handful of primary contacts a much larger number of interviewees will materialise, who will in turn refer the researcher on to a third level of participants and so the snowball will continue to roll. A number of worker interview studies have adopted a snowball sampling approach (*e.g.* Bloch, 2013; Clark & Colling, 2018; Vershinina *et al.*, 2018). There are, however, times when momentum does not build for various reasons (Waters, 2015) and when the sampling net may need to be cast much wider and shallower to meet the recruitment target (Geddes *et al.*, 2018). In addition, problems of access may cause a targeted and narrow purposive sampling frame to expand in a more opportunistic manner in order to meet the sample size by virtue of who is available (*i.e.* convenience sampling).

The questions of where to target worker interviews (*e.g.* which groups, sectors, issues or regions) and how many interviews to carry out are not easily answered. Our own review of recent research found that scholars have tended to focus on exploitation and harm experienced by migrant workers and in certain low-wage sectors (see Table 9). Thus, there has been an awareness of the importance of targeting qualitative research around illustrative and in-depth case-studies (a purposive sample) rather than seeking to make claims that apply across the workforce at large (for recent examples, see: Clark and Colling, 2018 on hand car washes in the East Midlands; and Davies, 2018 on the food industry in the West Midlands). Among the studies reviewed in Table 9, the number of participants ranged from seven to 118, with an average of 44; Saunders & Townsend (2016) found an average number of interviewees of 33 across worker/workplace studies more generally.[21] The gold standard is to interview until a 'saturation point' has been reached, *i.e.* until the issues raised consistently recur. That said, funding can often limit sample size, as can the fact the target population is hidden/vulnerable and/or sensitive issues are being discussed (Anderson *et al.*, 2012; Scott & Geddes, 2016).

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[20] These challenges can relate to the academic being distanced from the research participants and the everyday ebb and flow of the research. They can also relate to the (sometimes) more limited research skills and experience of peer/community researchers, who may be recruited primarily because of the access they provide to a given population. Finally, there is sometimes a tendency to assume that peer/community researchers' insider status is a panacea, when in fact insider status is complex and multi-dimensional in terms of the opportunities it affords.
[21] Saunders and Townsend (2016) analysed 798 articles in the period 2003-2013 and identified 248 studies using at least one type of qualitative interview.

In the case of worker interviews, most researchers advocate payment to participants for their travel costs and time, although some ethical issues exist here too (Hammett & Sporton, 2012; Head, 2009). Other additional costs include the use of interpreters, who also bring a range of considerations to the table because of the extra layer between the researcher and participant (Murray & Wynne, 2001; Temple, 2002; Temple & Young, 2004). It is also standard practice to pay for transcription and, if needed, translation (which involves considerable extra cost).

If worker interviews were to be used to explore non-compliance, it would also be feasible to use them in a selective manner. Initial research (for example worker surveys or ethnographic work) could be used to provide insight into different types of non-compliance in advance of in-depth interviews. It would then be possible to select participants so as to capture illustrative examples of different forms of non-compliance or types of workers. Selective in-depth interviewing might be used in this way to explore experiences across a continuum of exploitation. Alternatively, one might want to focus on a specific type or form of non-compliance (*e.g.* more extreme exploitation). In-depth interviews, if used in this way, would not simply follow a snowball or convenience pattern of sampling (where all those who have experienced non-compliance would be potential interviewees). Instead, they would be embedded within an 'extensive-intensive' research frame: whereby the extensive phase (e.g. ethnographic or survey research) would be used to identify a more focused sampling strategy and establish the parameters for the intensive (in-depth interview) phase.

When discussing worker-based research, it is vital to consider ethical issues too. The leading principle adopted by academics is usually the avoidance of harm, although ideally research should actually benefit participants (Surtees & Brunovskis, 2016). Thus, when talking about problematic working conditions it is important both to be armed with information to pass on to participants to help them get support and to be prepared personally to adopt a support and advocacy role. In this sense, qualitative research with vulnerable populations and on sensitive topics can be 'emotion work' (Dickson-Swift *et al*., 2009). Another important ethical consideration is the way in which information generated may be used against workers: something that is a particular issue for exploited irregular migrants who are vulnerable to increased enforcement activity by the state (Düvell *et al*., 2010). In addition, workers' beliefs that research will directly influence policy and practice can lead to a willingness to cooperate, when in fact their expectations may be unrealistic (Scott & Geddes, 2016). It is also conventional for in-depth interviewing to provide respondents with a written and verbal summary of the research ahead of an interview and to obtain informed consent (via a signed pro-forma). Finally, depending upon the target population and the issues covered, formal ethical clearance may well be required via a research ethics committee and adequate time should be scheduled for this.

Sometimes qualitative research may appear less powerful at a policy level than quantitative data. We would argue, however, that different types of data can achieve different objectives. In-depth testimony from workers can certainly be powerful and can be extremely important in assessing the *nature* of labour market non-compliance. Moreover, interview testimony is valuable both as a targeted case-study of specific groups, sectors, issues or regions or as a way of providing illustrative examples to complement quantitative research. Table 10 provides an overview of how in-depth worker interviews would be expected to perform against the assessment criteria.

Table 10: Assessment of worker interviews against the agreed criteria

Criteria	Assessment
Gives a good reach across the UK's four constituent nations	Good geographic reach should be possible (but bear in mind that recruiting in multiple areas adds time/costs)
Covers range of worker demographics, sectors, employment types and urban/rural locations	Would make sense to focus on a sector/ group/ issue/ area as a case study, meaning that the aim is depth rather than breadth
Covers the broad spectrum of non-compliance within the DLME's remit	Individual interviews could cover a range of different types of non-compliance
Ensures breadth of insights	Medium breadth of insights likely: interviews can cover a wide range of issues but each participant draws only on direct experience
Ensures depth of insights	Depth of insights likely to be extensive - can explore individuals' lived experiences in detail
Potential biases can be minimised using appropriate research design	Sampling method (see above) may lead to bias
Has the potential to generate new knowledge	High potential
Has the ability to identify unforeseen or emergent issues	High potential
Is likely to ensure high quality data	Overall data quality high if trust and rapport are established and participants feel comfortable speaking frankly. The location of the interview (*i.e* away from the workplace) and the way the interviewee is approached (*i.e* not via the employer) can be important in this respect. Quality is also improved by recording the interview to allow verbatim testimony to be obtained
Is likely to generate useful data (against the DLME's objectives)	Likely to be very useful if in a targeted way (*e.g*. focusing on a particular group/ sector/ issue/ area). Particular strength is the ability to identify new/emergent issues
Presents few challenges around access to knowledge/ data/participants	Substantial (but not insurmountable) challenges involved - in particular around access and recruitment
Carries modest costs relative to other approaches	Costs likely to be high (especially if translation is required)
Can be completed in a timely manner	Getting access and arranging interviews can time-consuming. Study likely to require around 18-24 months.
Presents few ethical challenges	Ethical challenges are significant but not insurmountable. Study likely to involve vulnerable groups and researchers must be alert to potential risks and harms to participants and take steps to mitigate them
Produces results that are generalisable to the wider population	No and not designed to be generalisable
Has clear potential to be replicated over time	Low potential to replicate. In theory, it is possible to repeat interviews with same people but attrition and research fatigue may make this difficult. Could repeat with new sample, but so many variables at play that unlikely to be directly comparable. Nature of qualitative approach means subsequent interviews are unlikely to be directly comparable to previous ones

Stakeholder interviews

Whilst most interview-based research on non-compliance in the workplace has involved talking to workers, some studies have focused on the views of expert stakeholders and the organisations they represent. Work and employment stakeholders include: employers or employment agencies; employer representatives; labour representatives (especially trade unions); NGOs; policy and legal representatives; international governance representatives; and independent experts (see Table 11 for UK examples).

Table 11: Examples of work and employment stakeholders in the UK

Type of stakeholder	Examples
Employer or employment agency	Various
Employer representative	Confederation of British Industry (CBI), British Chamber of Commerce (BCC), various trade/ sector representatives
Labour representative	International Trade Union Confederation (ITUC), Trades Union Congress (TUC), Unite, GMB, Independent Workers Union of Great Britain (IWGB)
NGO	Citizens Advice and local Citizens Advice Bureaus (CAB), Institute for Public Policy research (IPPR), Resolution Foundation, Joseph Rowntree Foundation (JRF), Focus on Labour Exploitation (FLEX), Anti-Slavery International (ASI), Migrants Rights Network (MRN), Futures of Work, Migrant Help UK.
Policy and legal representative	Director of Labour Market Enforcement (DLME), Home Office, Gangmasters and Labour Abuse Authority (GLAA), HMRC National Minimum Wage/National Living Wage unit, Employment Agencies Standards Inspectorate (EAS), Health and Safety Executive (HSE), Advisory Conciliation and Arbitration Service (ACAS), Low Pay Commission, Police, National Crime Agency (NCA)
International governance representative	International Labour Organisation (ILO)
Independent expert	Various

There are some important UK studies of labour market non-compliance that used stakeholder interviews (Anderson & Rogaly, 2005; Clark & Colling, 2018; Clark & Herman, 2017; Geddes *et al.*, 2013; Hussein, 2017; Wills *et al.*, 2009), which are summarised in Table 12. In addition, there is a body of international research that has focused on corporate social responsibility (CSR) in supply chains, which also draws heavily on stakeholders' perspectives (*e.g.* Belal & Roberts, 2010; Claasen & Roloff, 2012; Mzembe & Meaton, 2014; Shea *et al.*, 2010; Tsoi, 2010).

Table 12: Recent studies using stakeholder interviews to address labour market non-compliance

Study	Title	Number of participants	Sectors covered	Issues addressed
Clark and Colling (2018)	Work in Britain's Informal Economy: Learning from Road-Side Hand Car Washes	9 stakeholders	Hand car washes	Informal employment
Clark and Herman (2017)	Unpaid Britain: wage default in the British labour market	15 stakeholders	Various	Wage default
Hussein (2017)	"We don't do it for the money"… The scale and reasons of poverty-pay among frontline long-term care workers in England	121 employers/ managers	Care	Low pay and wage default
Geddes *et al.* (2013)	Forced labour in the UK	44 stakeholder focus group participants; 31 stakeholder interviews	Various	Forced labour
Wills *et al.* (2009)	Global cities at work: New migrant divisions of labour	28 stakeholders	Cleaning, care, construction, food processing & hospitality	Exploitation
Anderson and Rogaly (2005)	Forced labour and migration to the UK	26 stakeholders	Care, construction, agriculture & contract cleaning	Migrants experiencing forced labour

Stakeholder interviews share some of the same characteristics and issues as the worker interviews discussed in the previous section. Most obviously, they are also usually semi-structured (following an interview guide), ideally recorded and then transcribed verbatim, best conducted face-to-face and often come up against barriers around access and recruitment. It is, however, rare to see much methodological reflection on the use of this particular research tool within a work and employment context. An interesting exception is Scott's (2013) reflection on employer interviewing. He notes three interrelated methodological issues in particular: 1) disclosure can often be limited due to the need to guard against negative reactions from others; 2) the stakeholders that one is able to speak to may err towards a 'corporate front' rather than

always 'telling it like it is'; and 3) employers are likely to hide or minimise instances of non-compliance.

The issue of selective disclosure is not unique to employers. For all qualitative interviewing, although especially research with stakeholders, there is the question of whether the participant is talking from a personal or organisational standpoint (or both) and what this means for drawing inferences and conclusions and making recommendations from the testimony gained. Additionally, the methodological literature on 'elite' interviewing emphasises that stakeholders in elevated positions in terms of status, power and income/wealth may be more calculated and guarded in what they say, so as to not jeopardise their position. The level and nature of disclosure in elite interviews is an issue that has received some attention (Petkov & Kaoullas, 2016), although generally not from scholars researching labour market non-compliance.

It is impossible to fully appreciate the difference between what one could have been told and what one was actually told and gauging non- or partial disclosure is extremely difficult. Sampling is one safeguard: stakeholder research should ideally draw on a range of relevant actors, if not the full target population. Although stakeholders often bring very different perspectives to the table, a wide-ranging sample gives some opportunity to triangulate between sources and identify inconsistencies, omissions, consensus and disagreements. In research into non-compliance in the UK labour market, one would ideally draw on the full range of stakeholders identified in Table 11, perhaps even sampling multiple people from a particular organisation. The exact mix of participants would, however, be contingent upon the specific research questions and being able to negotiate access. Access can often involve the use of gatekeepers, both to identify suitable participants and to help persuade these often very busy people to cooperate. In this respect, letters of introduction from intermediaries, formal sponsorship of the research by reputable organisations and clarity about the purpose of the research and the dissemination strategy can all be useful.

An important safeguard in stakeholder interviewing is to reflect – and act – on researcher-participant positionality.[22] Most obviously, there is the challenge of the researcher operating at the same socio-professional level as the stakeholder: in some cases, the stakeholder may be in a position of authority and possess considerable status. It can be important to establish rapport by finding common ground with the participant or demonstrating knowledge that underscores genuine interest and competence. In addition, something as simple as dressing in an appropriately formal manner and communicating in advance of the interview in a suitably professional way can help establish rapport. Negotiating positionality can also involve quite complex identity performances, something McDowell (1998), for example, highlights in her reflection on the role of class, age and gender in the interview dynamic.

When stakeholder interviews involve those with power, authority and status (referred to as 'elites') there can be additional considerations (for general discussion of elite interviews, see Harvey, 2010; Richards, 1996). Most obviously, elites can sometimes dominate the conversation and channel it into the areas with which they are comfortable. Similarly, they may dislike or avoid targeted and closed questioning (Harvey, 2011). Elites can sometimes exert control over the post-interview process: redacting elements of the transcript and/ or insisting on a particular way of disseminating the data (Smith, 2006). Such considerations notwithstanding, a clear initial project briefing and an 'informed consent' policy that

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[22] Positionality refers to the identity characteristics of the researcher vis-à-vis that of the participant and how they may impact upon the research dynamic and the interview data generated. Differences in class position, age, ethnicity, nationality, gender *etc.* can all shape the stakeholder interview.

stakeholders sign up to from the outset (both are standard ethics requirements) helps ensure that there are no misunderstandings with respect to what occurs post-interview.

Stakeholder interviews differ from conventional interviews because they are often shorter than the 60 to 90 minute norm, due to the time constraints that many stakeholders face in their day-to-day work. The shorter length can mean that an interview must be more structured and focused to cover all the required ground in the time available. In addition, stakeholders tend not to need, or request, payment for their time and the interview is usually carried out in the participant's workplace rather than in a neutral setting. Furthermore, in some stakeholder research, anonymity is simply not possible in that naming an organisation will likely identify the interviewee. In such circumstances, a decision will need to be made as to whether a quotation is attributed to a named organisation and by extension potential to a specific individual. Even if the quotation is fully anonymised and the organisation not named, the context and contents may identify an organisation/individual. Whatever the strategy, planning around anonymity and confidentiality is required from the very outset of stakeholder research.

Aside from the issues and challenges identified above, stakeholder interviewing also has a unique set of positive qualities. Simply put, stakeholder insights can be used to obtain both depth and breadth of knowledge – knowledge that is also often intimately linked to policy and real-world impact. Non-compliance in the labour market may well be uncovered by worker surveys and/or worker interviews, for instance, but this individual-level evidence belongs within a broader contextual and policy landscape. Stakeholder research can illuminate this landscape and point towards where change can have most impact. Moreover, stakeholders are likely to have encountered numerous cases of non-compliance and can therefore make assessments and judgements based on this breadth of experience.

Used in the right way, despite its limitations and complexities, the stakeholder interview generates an equally valid type of testimony data to the worker interview. Some might argue, however, that workers' voices are less commonly heard and stakeholders already have various forums and platforms to speak out and exert influence. There is certainly some validity to this argument and it seems more pressing to give voice to workers than to stakeholders. Nevertheless, stakeholders bring a breadth of knowledge and insight that complements the depth of the worker interview and helps position the worker interview within an all-important policy landscape. It is also worth noting that stakeholder interviews can be used as the basis for other forms of analysis and assessment: for example, Transparency International create their annual Corruption Perceptions Index on the basis of expert testimony.[23]

To gather stakeholder perspectives on non-compliance, it would be advisable to reflect on the examples in Table 11 and revise and develop them to establish the ultimate target population. The task then (subject to resource, time and access constraints) would be to gather perspectives from the main types/organisations identified. Securing participation could be achieved through a combination of approaches:

1. An invitation to submit evidence in writing (which would also help identify relevant contacts within stakeholder organisations for interview);
2. In-depth interviews with as many stakeholders as feasible;
3. Focus groups where the pool of stakeholders is large (*e.g.* to gather the perspectives of employers or independent experts);
4. Multiple interviews or an organisational focus group where one actor per organisation is insufficient (*e.g.* for an organisation that is regionally devolved).

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[23] See https://www.transparency.org/news/feature/corruption_perceptions_index_2017

Complete stakeholder coverage via the above strategy would be ideal but some prioritisation may be necessary. Prioritisation should be sensitive to, among other things, the fact that different stakeholders will have expertise around different forms of non-compliance and/or cover different geographical areas. Table 13 provides an overview of how in-depth stakeholder interviews perform against the assessment criteria.

Table 13: Assessment of stakeholder interviews against the agreed criteria

Criteria	Assessment
Gives a good reach across the UK's four constituent nations	Reach likely to be broad, can involve stakeholders from all four nations
Covers range of worker demographics, sectors, employment types and urban/rural locations	Should give good coverage
Covers the broad spectrum of non-compliance within the DLME's remit	Should give a broad reach, though dependent in stakeholder activity across the spectrum of labour market non-compliance
Ensures breadth of insights	This approach is strong on breadth
Ensures depth of insights	Likely to be moderate to good on depth (stakeholder interviews generally shorter and more focused and some may adopt 'party line'
Potential biases can be minimised using appropriate research design	Bias reduced if all main stakeholder groups consulted. Potential for bias around disclosure remains (*e.g.* due to 'elite' position and potential vested interests), though steps to ensure anonymity and confidentiality assist. Potential researcher bias in terms of which interview extracts are used, although can be reduced through hybrid methods of analysis (combining quantitative and qualitative features
Has the potential to generate new knowledge	Medium potential
Has the ability to identify unforeseen or emergent issues	Medium potential
Is likely to ensure high quality data	Medium overall quality, though dependent on agreement to participate and openness in discussions. Quality improved by recording the interview to obtain verbatim testimony
Is likely to generate useful data (against the DLME's objectives)	Likely to be useful if different stakeholder groups participate
Presents few challenges around access to knowledge/ data/participants	Main challenges are around access to participants and disclosure
Carries modest costs relative to other approaches	Moderate costs - needs adequate budget for travel and transcription
Can be completed in a timely manner	Relatively timely. Allow for around 12 months minimum.
Presents few ethical challenges	Few challenges. Stakeholders not considered vulnerable participants and likely to be used to publicly representing their organisation. Standard ethics procedures will apply
Produces results that are generalisable to the wider population	Results unlikely to be generalisable.
Has clear potential to be replicated over time	Low potential to replicate. In theory, it is possible to repeat interviews with same organisations but there is a risk of disengagement if they feel over-researched and staff turnover may affect ability to re-interview same people. Nature of qualitative approach means subsequent interviews are unlikely to be directly comparable to previous ones.

Comparative assessment and scoring of the approaches

Initial scoring

Having closely reviewed each of the five approaches against the 16 agreed criteria (see Tables 3, 6, 8, 10 and 13), we came together as a team to discuss how they performed. We came to a

consensus on which numerical scores should be allocated (see Table 14). These initial scores were un-weighted. In calculating the scores we took a pragmatic approach, considering what would realistically be possible but also working from the assumption that an eventual study would be both designed and executed to a high standard. For each criteria, we scored as follows: 0 = criterion does not apply or is not met at all; 1= criterion is not really met; 2= criterion is partially met; 3= criterion is fully met. It is worth emphasising that the scoring was based on comparative assessment (*i.e.* how the approaches perform relative to one another).

Table 14: Initial (unweighted) scores for five approaches across the assessment criteria

Criteria	Systematic review	Existing admin. data	Worker survey	Worker interviews	Stakeholder interviews
1. Gives a good reach across the UK's four constituent nations	2	3	3	3	3
2. Covers range of worker demographics, sectors, employment types and urban/ rural locations	1	1	3	1	2
3. Covers the broad spectrum of non-compliance within the DLME's remit	2	1	3	2	2
4. Ensures breadth of insights	1	2	3	2	3
5. Ensures depth of insights	1	1	2	3	2
6. Potential biases can be minimised using appropriate research design	2	1	2	3	2
7. Has the potential to generate new knowledge	1	2	3	3	2
8. Has the ability to identify unforeseen or emergent issues	0	1	2	3	2
9. Is likely to ensure high quality data	2	1	3	3	2
10. Is likely to generate useful data (against the DLME's objectives)	1	2	3	2	2
11. Presents few challenges around access to knowledge/ data/participants	3	2	2	1	2
12. Carries modest costs relative to other approaches	2	2	1	1	2
13. Can be completed in a timely manner	2	2	1	1	2
14. Presents few ethical challenges	3	3	2	1	3
15. Produces results that are generalisable to the wider population	1	0	3	0	1
16. Has clear potential to be replicated over time	2	3	3	1	1
Total unweighted score (/ 48)	**26**	**27**	**39**	**30**	**33**
Average unweighted score per criterion	**1.71**	**1.99**	**2.53**	**2.07**	**2.07**

Stakeholder consultation and final scoring of the approaches

At the stakeholder workshop, we began by introducing the project, its context, aims and the assessment criteria. Before discussing the strengths and weaknesses of the five approaches scoped, we gave participants a brief survey and asked them (anonymously) to mark the three criteria that were the most important to them. By the DLME's request, we excluded the monetary aspect ('Carries modest costs relative to other approaches') from the list of options to prioritise. Based on the votes of the people present, 'Covers range of worker demographics,

sectors, employment types and urban/rural locations' emerged as the most important criterion (selected by two thirds of those present). The second and third most frequently prioritised criteria were 'Covers the broad spectrum of non-compliance within the DLME's remit' and 'Produces results that are generalisable to the wider population', each chosen by four of the nine voters. The full results of the consultation on criteria are shown in Table 15.

Table 15: Participants' (n=9) selection of the three most important criteria to prioritise in determining the approach to take

Criteria	Rank	Vote share
Covers range of worker demographics, sectors, employment types and urban/rural locations	1	66%
Covers the broad spectrum of non-compliance within the DLME's remit; Produces results that are generalisable to the wider population	2=	44%
Potential biases can be minimised using appropriate research design; Has the ability to identify unforeseen or emergent issues; Is likely to ensure high quality data; Is likely to generate useful data (against the DLME's objectives); Has clear potential to be replicated over time;	4=	22%
Gives a good reach across the UK's four constituent nations; Ensures depth of insights; Presents few challenges around access to knowledge/ data/participants	8=	11%
Ensures breadth of insights; Has the potential to generate new knowledge; Presents few ethical challenges	11=	0%
Carries modest costs relative to other approaches	n/a	n/a

Based on the results, we added weights to the criteria. The criteria selected by the most participants got a weight of 1.4, the second most participants 1.3, the third most 1.2 and the fourth most 1.1. Those criteria that did not receive any votes retained a weight of 1, as did the cost-related criterion that was excluded from the survey but was reintroduced for the final scoring. Figure 1 depicts the average scores per criterion that the different approaches received initially (unweighted) and after the weighting.[24] Such a procedure shows that worker surveys benefited the most from the weighting with a 16% increase in the score, followed by an approximately 14% increase for worker interviews, 13% increase for systematic reviews, and stakeholder interviews, while the analysis of existing admin data only saw an 11% increase. Although the relative order of the different approaches did not change after the weighting, the changes in scores emphasise the augmented strengths of some approaches over the others. Overall, and based on the weighted scores, worker surveys score approximately one-fifth higher than the alternatives with the closest scores.

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[24] Comparing the averages this way is more accurate than comparing total scores.
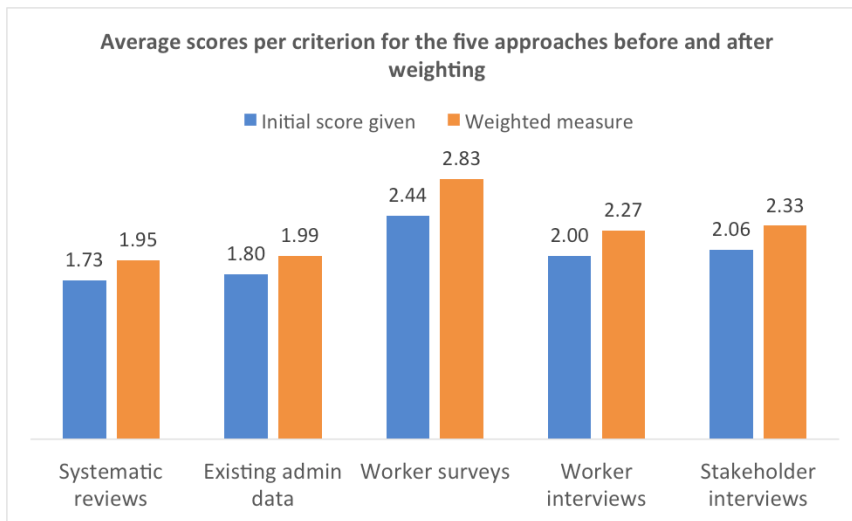
Figure 1: Average scores per criterion for the five approaches before and after weighting

Recommendations

From this scoping study, it is clear that the various possible approaches to assessing the scale and nature of labour market non-compliance all have their own strengths and limitations. In many ways, the ideal approach would triangulate several if not all of these approaches to provide a robust, nuanced and multi-faceted assessment of the phenomenon. For practical reasons, we appreciate that doing so may not be feasible. Of all the individual approaches, **the worker survey stands out as particularly promising and we strongly recommend commissioning such a survey**. Its notable strengths include a wide geographical reach, broad coverage, high potential to generate new knowledge, generalisability to the wider population and outstanding overall usefulness against the DLME's objectives. Yet, by design a survey performs less well against the ability to explore issues in-depth and identify unforeseen or emergent considerations. Accordingly, **we recommend that a worker survey be accompanied by in-depth interviews and focus group type engagement**. Using these more qualitative approaches to engage with workers and stakeholders would **strengthen the design of the survey and help with the interpretation and application of its findings**.

To give a sense of how this combined approach might work in practice, one could begin with preliminary analysis of existing surveys and questionnaires and an initial consultation with workers and stakeholders (most likely via a workshop or a focus group). Doing so would inform the lines of enquiry and survey design, also highlighting areas for further exploration in in-depth interviews with workers. The results of the worker survey could then be used to devise a sampling frame for these interviews, which might focus on a specific sector, type of employment or worker demographic in order to provide an in-depth case study of a particularly risky area. Alternatively, more selective sampling might be used to help ensure experiences across the spectrum of non-compliance were covered in the interviews, resulting in a set of illustrative examples. Either way, the in-depth interview format would be useful in building trust and exploring sensitive issues with workers in a nuanced fashion. Meanwhile, stakeholder interviews (or, failing that, workshops or focus groups) could be used to explore their perspectives on the survey's findings and the implications for policy and practice. A workshop or focus group with workers might also be useful at this stage.

While it would certainly be useful to have a UK-wide survey on non-compliance that was representative of all workers, it would be expensive and no doubt require booster samples to get an adequate coverage of minority or hard-to-reach groups. Moreover, at this initial stage the priority ought to be those in most need of improved workplace protections. **Since there is already evidence to suggest that some workers are more at risk of exploitation than**

others, we suggest going from the outset for a survey that focuses specifically on precarious workers.

Developing new high-quality random probability surveys from the bottom-up is extremely expensive and time-consuming, as they require the design of an effective sampling framework and finding and instructing a company which can be trusted to carry out the fieldwork with appropriate care and attention. The utility and feasibility of similar approaches are curtailed even further when the focus of the research project is a specific hard-to-reach sub-population, such as precarious workers. Under these circumstances, there is a promising and cost-effective alternative to creating a completely new survey that we strongly recommend: namely, using an existing survey and simple screening questions to identify members of the target sub-population from the pool of potential participants.

As mentioned previously, the Understanding Society survey is probably the best-suited existing survey for the current purposes. Participants are already asked a wide range of questions about their employment, work conditions and household finances. Based on the existing literature, several factors could help identify precarious workers: 1) the amount of money earned; 2) the presence/absence of a trade union or staff association at the workplace; 3) whether the person is enrolled in an employer-provided pension scheme; and 4) the size of the workplace (Noack & Vosko, 2011). Low-income individuals who do not have access to workplace representation and are not signed up for employer-provided pension schemes are more likely to be in a vulnerable position. The size of the workplace has also proven to be a good proxy, as smaller companies are less likely to be mandated to provide the same employee protections as large ones (Noack & Vosko, 2011). Table 16 shows the existing variables in the Understanding Society Survey that could be used to pre-select individuals who meet more than one of these criteria. Depending on how many of the four factors were selected as defining features of precarity, very rough preliminary analysis indicates that approximately 6-17% of the overall Understanding Society sample would be eligible for inclusion into a targeted worker survey on labour market non-compliance.

Table 16: Variables in Understanding Society that could be used as inclusion criteria

Variable name	Content
Prearn	Total earnings
Payu	Usual pay
Tujbpl	Union or staff association at workplace
Jbpen	Pension: Employer runs a pension scheme
Jbsize	Number employed at workplace: current job
Jlsize	Number employed at workplace: last job

An affiliate survey through Understanding Society could be conducted on-line, by telephone or face-to-face, using computer assisted personal interviewing (CAPI). Our recommendation would be face-to-face interviewing because it generates the highest quality data of the three modes. It is also the most expensive, however. A web survey is the cheapest but also generates less high quality data. A standard affiliate survey would be expected to last thirty minutes, which would allow for 75-90 questions (via the web) or 70-80 questions (by telephone survey

or face-to-face).[25] Although there would probably need to be some degree of prioritisation of which areas of labour market non-compliance to explore and in how much detail, this set up should allow for good coverage of experiences of various different forms of non-compliance across the spectrum of severity as well as sufficient insights into participants' sociodemographic characteristics and questions that confirm that they still meet the selection criteria. There is also the potential of working with participants from Understanding Society as seeds to develop an additional respondent-driven sample. We would recommend doing so, if possible, as it would: be methodologically innovative; allow particular sub-groups (*e.g.* by industry or area) to be examined with higher precision; provide some indication as to whether traditional surveys paint a reliable picture; and allow for alternative (network-based) inferences.

Conclusion

Labour market non-compliance is a complex and far-reaching phenomenon that spans a broad spectrum of activity from relatively minor and accidental infringements to serious and deliberate crimes. Non-compliance can undermine the social, economic, physical and psychological welfare of individual workers across the UK, as well as negatively affecting communities, disadvantaging legitimate businesses and depriving society of tax and related revenue. The evidence base on labour market non-compliance is fragmented and under-developed and certain aspects are particularly poorly covered. If the DLME is to deliver on their statutory duty of reporting annually on the scale and nature of non-compliance in the UK, additional research is clearly needed. In this scoping study, we examined five main approaches to assessing the scale and nature of non-compliance: reviews; analysis of existing administrative data; worker surveys; worker interviews; and stakeholder interviews. Our analyses demonstrated how these approaches have been and could be used and assessed their relative strengths and weaknesses. While all have potential utility, a worker survey stood out as particularly promising for the task at hand. Its key strengths include the breadth and diversity of coverage possible, the ability to generate representative results and the potential to be replicated over time. A worker survey would offer unparalleled insights into how common the various forms of non-compliance are, who they affect and how they concentrate in particular locations, types of employment, industries and occupations. Nevertheless, a survey is necessarily limited in its ability to identify unforeseen or emergent issues and to explore complex issues in detail. In this respect, in-depth interviews with workers and stakeholders would be a valuable complement, offering nuance and texture, informing the survey design and assisting with the interpretation and application of results. Investing in such research is a crucial step towards reducing reliance on (notoriously skewed) complaints data and reactive enforcement, advancing policy and practice and deploying limited resources most effectively.

Acknowledgments

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[25] The assumption behind this estimate is that most of the questions would be closed but some (unspecified number) would be open-ended.

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