

The Gig Economy:
*Workers & Unions in the United
Kingdom*



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Abstract

The gig economy is a relatively new, but rapidly evolving, form of employment across the globe and especially amongst younger people in the United Kingdom. Characterised by flexible, individualised and platform-based work, it is fast becoming an attractive means of employment. It is valued for the freedom and adaptability that it provides to individuals, as well as companies who can easily take on these workers, unburdened by cumbersome and extensive employee-style contracts. However, despite the advantages it confers for some, it also poses systemic vulnerabilities for all workers who partake. The most immediate issues concern the lack of stable income, isolated nature of work, and job insecurity. And in the long-term a lack of pension, sick pay, and growth opportunities will all have large ramifications. The lack of provisions conferred to gig workers presents a considerable issue.

Currently, there is no protective legislation in place to resolve these issues, rather a fragile judicial framework enshrines appropriate rights on a case-by-case basis. Normally, workers would recourse to their union, however due to the atypical nature of the gig economy and the non-employee status of the workers, traditional unions are reticent to intervene. Smaller unions are currently addressing the shortfall but face issues in engagement due to the transient and underrepresented nature of gig work. This research looks to explore the relationship between vulnerabilities, social interaction, and trade union engagement as perceived by gig workers as to inform and improve trade union outreach in the gig economy.

Key words: Gig Economy, Gig Worker, Vulnerability, Social Interaction, Trade Union Engagement

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Introduction

“Convoluting, complex and artificial contractual arrangements, no doubt formulated by a battery of lawyers, unilaterally drawn up and dictated by Uber to tens of thousands of drivers and passengers, not one of whom is in a position to correct or otherwise resist the contractual language.” (Uber v. Aslam, 2018, p. 43)

This was the description of the working arrangement between the international, ride-hailing platform Uber and a number of drivers, according to the British Court of Appeal (Uber v. Aslam, 2018). They are one example of individuals engaged in so-called gig work which is broadly characterised by short-term, flexible, individual task-based work (Page-Tickell & Yerby, 2020). Within the UK, this accounts for around 1.4 million workers already. Furthermore, around 1 in 4 people aged 16-30 say that they would consider some form of gig work in the future. Taken together, this area is forecast to grow rapidly and so gig-work will become an increasingly regular structure of work (Balaram, Warden, & Wallace-Stephens, 2017), disrupting the traditional labour market.

Via a review of existing published literature, Van Doorn (2017) situates the development of the gig economy and digital platforms within the wider context of the prevailing neoliberal discourse in many Western countries over the last several decades combined with rapid technological advances. During this shift in economic policy, many Western countries experienced a repression of wages, manufacturing off-shoring, fiscal austerity and weakening of organised labour, particularly effecting the middle class. Due to these shifts, as well as advances in digital platform technology, the temporary staffing business model has grown and evolved into a “zero-liability peer-to-peer model that leverages software to optimize labor’s flexibility, scalability, tractability, and its fragmentation”, according to Van Doorn (2017, p. 901). Over time this has created what is now known as the gig economy. These digital platforms have disrupted the client-worker relationship, as a platform allows for certain roles to be outsourced to workers outside of a firm (Van Doorn, 2017). For example, self-employed workers can take on individual tasks via a platform’s app, such as food delivery, which would traditionally be performed in-house by firm employees.

This disruption to the traditional labour model has several ramifications which characterise the current gig economy and its relation to other actors, such as the government, judiciary and trade unions. Using a multi-year case study of digital workers in Sub-Saharan Africa and South-East Asia, Graham, Hjorth, & Lehdonvirta (2017) explore the benefits and drawbacks that gig workers experience. On one hand, the freedom, entrepreneurialism and flexibility offered by this role suits many who partake, especially students or those who want to supplement their income. This argument has been strongly supported by many gig workers and by companies who would otherwise be unable to employ so many workers whilst being unrestrained by cumbersome employer obligations. Indeed, the 2017 Taylor Review (Taylor,

Marsh, & Broadbent, 2017), commissioned by the British government, heavily emphasised the many benefits. Especially the opt-in, flexibility of gig work which has allowed greater access to the labour market for many individuals who would otherwise be unemployed. Thus, the advantages of gig work are an essential consideration when looking to this area of employment.

However, as Graham et al. (2017) also note, there are also inherent issues in this area due to a combination of uncertain income, lack of development opportunities and an imbalance in power between workers and companies. They find that a large pool of people willing to work for low wages enables a company to discriminate and terminate workers at will. These issues are prevalent for all workers in this economy regardless if an individual also enjoys the flexible, opt-in nature of the work (Graham, Hjorth, & Lehdonvirta, 2017). Graham et al.'s (2017) case study demonstrates that the benefits and issues that exist within the gig economy are nuanced and can vary between individuals, therefore it is important to understand the idiosyncratic nature of the gig economy and its workers.

To further elaborate on these issues, Bajwa, Gastaldo, Di Ruggerio, & Knorr (2018) explore and define specific vulnerabilities that gig workers may experience. Using peer review and government reports, they group vulnerability into three categories. The first are occupational vulnerabilities, which are specific concerns related to the nature of work performed, for example, car-related incidents for Uber drivers or cleaners entering unfamiliar home environments. The second is precarity, which pertains to the general nature of gig work in which the normal provisions afforded by a traditional employer, such as promotion, pensions, personal equipment etc., are not given. This has both immediate and long-term ramifications in that a worker may fall ill and no longer be able to earn an income, as well as not accruing a pension for retirement. Bajwa et al. (2018) identify platform-based vulnerabilities as the third category. This concerns how a worker's well-being is affected specifically by engaging in platform-based work. This includes issues such as worker misclassification concerning whether these workers are employees, contractors or self-employed and which rights they should be entitled to. As well as problems of social isolation due to the individualised, solitary nature of work and surveillance by the platform, e.g. performance tracking and customer ratings. Both of these factors can act as stressors on an individual.

These problems have resulted in the current ongoing debate concerning the rights of gig workers, the governing factor of which is their employment classification in law. As a result of several landmark cases there has been much upheaval in their classification, these include *Leyland v. Hermes Parcelnet Ltd* in 2018 and *Autoclenz v. Belcher* in 2011. In particular, *Uber v. Aslam* (2018) was fought between the ride-hailing platform and several Uber drivers, with the support of the GMB union, who believed that they were entitled to minimum wage and paid leave as per the Working Time Regulations act (1998) in English employment law. Uber contended that these workers were self-employed, as per the conditions of their contract, and therefore were under no obligation to provide these entitlements. The

court, however, found that the contractual stipulations did not reflect the true nature of the actual work and instead found that the plaintiffs should be classified as ‘workers’ (Uber v. Aslam, 2018). This new classification, whilst still limited, entitled them to the national minimum wage and coverage of working time regulations.

Whilst this has demonstrated a move towards greater rights for gig workers, Freedland & Prassl (2017, p. 1) believe this to be “a rather fragile conceptual structure”. They analysed the current employment structure of the UK, particularly with regards to tax and social security law and found that the traditional divide between employment and self-employment has become contested and not suited to the current realities as faced by atypical workers. For example, not only does the misclassification of workers pose issues in itself, but also the manipulation of self-employment tax law by platforms to serve their own benefit may amount to £430 million per year in avoided taxes. Furthermore, they find that the British government has promoted self-employment as a means to reduce the cost of social security provisions and to claim that employment numbers are reducing. Currently, only individual judicial precedents serve to enshrine some protections for the new category of ‘workers’. In terms of rights, ‘workers’ are between employed and self-employed, and thus not entitled to provisions such as pensions, which can have long term effects (Freedland & Prassl, 2017).

Faced with such systemic work issues, workers would traditionally recourse to their union for resolution. However, due to the non-traditional nature of the gig economy, this is not the case. Many British unions have, until recently, been reluctant to engage with the gig economy. This is because they traditionally do not support workers who are not ‘employees’ of a company/industry and the gig economy itself being relatively small and ill-defined due to the short-term, geographically displaced work (Page-Tickell & Yerby, 2020).

Despite these dissuading factors, several unions have started to begin more engages with the gig economy. Firstly, they have engaged in the aforementioned court cases to reclassify workers. Secondly, there has been the creation of newer unions such as the Independent Workers’ Union of Great Britain (IWGB) and United Voices of the World (UVW) which are often formed by individuals breaking away from larger, established unions due to dissatisfaction. These unions are more likely to engage in disruptive, high-publicity social movement actions, such as campaigns, strikes and public demonstrations, and try to do so by mobilising the gig-workers themselves (Johnston & Land-Kazlauskas, 2019). Overall, the situation with unions in this area is complex.

To address the vacuum left by unions, online communities have risen in prevalence with gig workers. According to Maffie (2020) in a mixed method case study on ride-hailing drivers (e.g. Uber-drivers) in the United States, online spaces such as Facebook have enabled gig workers to overcome geographical displacement and allow for a private forum in which individuals, grouped by this common purpose, can share their problems, advice and support. Here they are not refused, but united, by their non-employee

status, which gives a sense of collective identity. The result of this case study “found that more frequent social interaction in digital spaces was associated with more positive views on unions and an improved interest in joining a labor association”, according to Maffie (2020, p. 140).

This presents an area of interest for relevant unions to engage with the participants in this community to resolve issues of vulnerability. Gaining access to gig economy workers and understanding their motivations for engaging, or not engaging, with unions would inform and improve their ability to support gig economy workers in reducing issues of vulnerability.

Related to Maffie’s (2020) findings on gig workers in the USA, Gilboa, Shirom, Fried, & Cooper (2008) find that there is a positive relationship between job security and performance in English speaking countries. Meaning that in a job with lower security, job-performance decreases and stressors increase, leading to higher precarity. These types of jobs are common in the gig economy. Furthermore, they find this to be a specific Anglosphere phenomena when compared to non-English speaking European countries studied, due to greater social security provisions in the latter (Gilboa, Shirom, Fried, & Cooper, 2008). Based on this similarity between the USA and the UK in terms of the Anglosphere and precarity due to job insecurity, of which there are high levels in gig worker jobs, this may motivate workers to seek out similar online communities in the UK like in the case of Maffie (2020) for similar reasons. Therefore, there is a basis for the application of this case to the UK.

Taken together, it can be seen that the gig economy is becoming an increasingly regular form of employment in labour markets worldwide and has altered the nature of work in both positive and negative ways. The issues in the gig economy pose both short-term and long-term vulnerabilities for gig workers. Unions are looking to increase their presence in this area to mitigate harm effects, but are not yet fully engaged, which presents a problem. Meanwhile, workers exposed to vulnerability can interact with other workers in order to support each other, which in turn has been found to improve their perceptions of unions, as found in the USA (Maffie, 2020). Thus, this presented an opportunity to explore UK gig worker’s perceptions of vulnerability and social interaction and how these influence their perceptions of union engagement.

Theoretical Framework

Firstly, Maffie’s (2020) theoretical framework on the gig economy serves as the basis for my research, in which he found proof of a positive correlation between conflict, social connection scale and social media interaction (independent variables) and the dependent variables of union instrumentality and interest in a labour association. For further elucidation of certain variables, social connection scale refers to the frequency of interaction between drivers and union instrumentality concerns the usage of unions to create change for workers..

For my research, the two dependant variables (union instrumentality & interest in labour a association) are grouped together to form the concept of *Union Engagement*. This is for clarity, as Maffie (2020) referred to them collectively in his results as views on labour unions, due to similar results and mechanisms present. Furthermore, both of these serve as dimensions of *Union Engagement*.

Secondly, as referenced above, conflict was another variable found in Maffie's (2020) case study. Maffie (2020) found that frequency of conflict with customers was associated with both higher rates of interaction with other workers and interest in unions, theorising that workers sought out others for support and advice, and in doing so this created positive perceptions of unions. Aside from the application of this conceptual framework in a new context, the UK, it may also be that conflict is not the sole motivator for gig workers seeking out others, rather it is but one example of a wider range of motivating issues.

My thesis introduces Bajwa et al.'s (2018) three categorisations of gig worker vulnerabilities. Conflict would belong to the 'Occupational Vulnerability' category. The other two categories are precarity and platform-based vulnerabilities. Furthermore, Bajwa et al.'s (2018) findings were based purely on secondary research, such as peer reviewed articles, therefore my own research also serves to test this via primary research. Thus, my research replaces Maffie's (2020) independent variable of conflict with *Vulnerability*. Within this, the three categories of vulnerability become dimensions (occupational vulnerabilities, precarity, & platform-based vulnerabilities).

Lastly, my research uses Maffie's (2020) independent variables of social interaction scale and social media frequency as referenced in the above mechanisms. Maffie (2020) stated that the social media interaction variable stems from the social connection scale, therefore, they are grouped for clarity and similar mechanisms to form the *Social Interaction* concept. Both are dimensions of *Social Interaction*.

Maffie (2020) found that there was a statistically significant interaction effect between the social interaction scale & social media frequency variables and the conflict scale independent variable with interest in a labour association & union instrumentation variables. The reasoning being that workers experienced collective identity by interacting with other workers who have experienced similar issues which can develop into collective action (Maffie, 2020). Thus, this interaction effect is incorporated as a consideration of the relationship by exploring the combined effects of *Social Interaction* and *Vulnerability* on *Union Engagement*.

As can be seen from the combination of the theoretical frameworks on the gig economy, Maffie (2020) and Bajwa et al. (2018), within the context of the British gig economy, new research can be produced. Together, these concepts serve as variables in a new conceptual framework in order to answer the following central research question and sub questions below.

Central Research Question

“What is the influence of vulnerability and social interaction on gig workers’ perceptions of union engagement in the United Kingdom?”

Sub Questions

1. ***What is the perceived relationship between vulnerability and union engagement for gig workers in the UK?***
2. ***What is the perceived relationship between social interaction and union engagement for gig workers in the UK?***
3. ***What is the perceived relationship between the combination of vulnerability and social interaction with union engagement for gig workers in the UK?***

Operationalisation

The following section addresses describes the operationalisation of the theoretical framework in order to answer the central research question. This is performed, firstly, via the illustration of the interaction between variables to answer each of the above sub questions. Secondly, through the demarcation of the scope of the research. And lastly, through the description of my research method.

Sub question 1 aims to explore the relationship between perceptions of *Vulnerability* and *Union Engagement*. The circles containing Precarity, Occupational vulnerabilities, and Platform-based vulnerabilities are dimensions of *Vulnerability* and the circles containing Union instrumentalisation & Interest in joining a labour organisation serve as dimensions of *Union Engagement*. The dimensions are also further translated into specific indicators (see *Instrumentalisation* below).

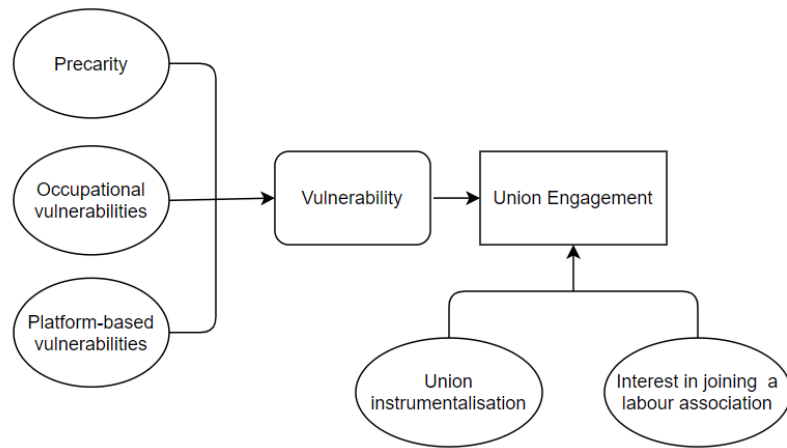


Figure 1: Sub question 1 - Relationship between Vulnerability and Union Engagement

Sub question 2 addresses the relationship between perceptions of *Social Interaction* and *Union Engagement*. The dimensions of *Social Interaction* are to be found in the circles containing Social Media Interaction and Social Interaction Scale. The dimensions for Union Engagement remained the same as in the previous figure.

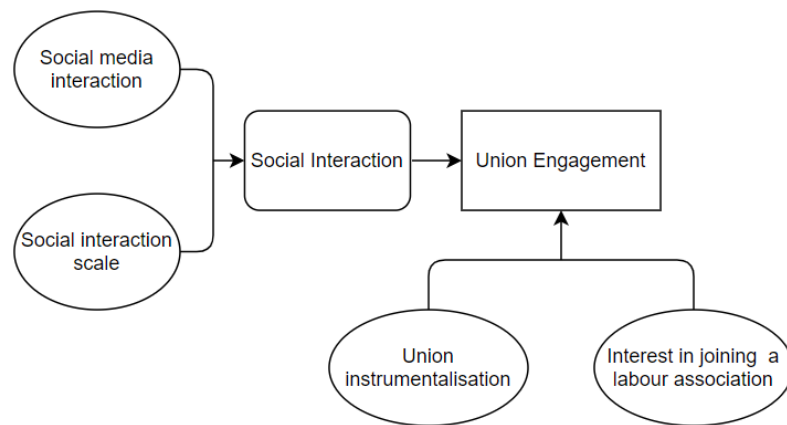


Figure 2: Sub question 2 - Relationship between Social Interaction and Union Engagement

Lastly, it may be the case that not only did the independent variables have a relationship with *Union Engagement* separately, but also in combination with each other via an interaction effect like in Maffie's (2020) own case study as explained in the *Theoretical Framework* section. Therefore, the potential effect of this combination this has been allowed for via sub question 3 and *Figure 3* below.

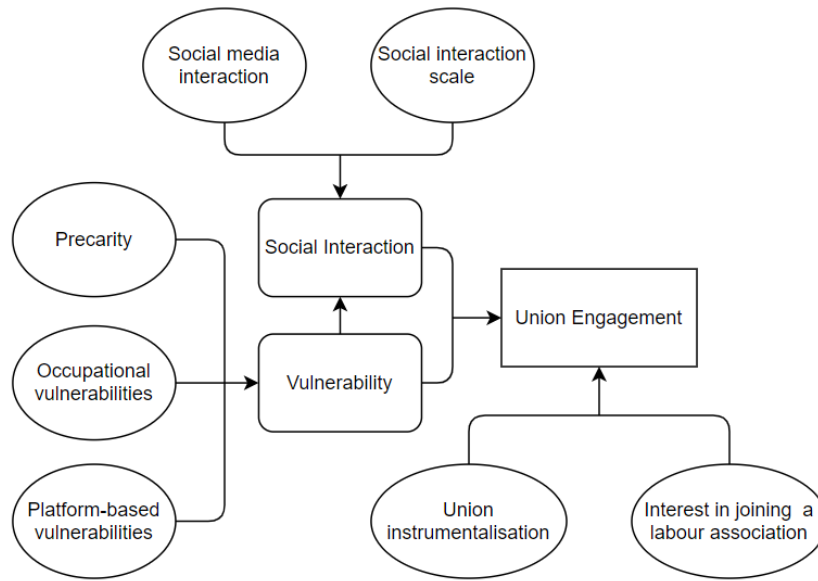


Figure 3: Sub question 3 - Relationship between the combination of Social Interaction and Vulnerability on Union Engagement with mediating effect

Following the results of the research in answering the sub questions, an answer to the central research question can be produced.

Research Scope

The geographic scope of this research is the United Kingdom and the current perceptions of gig workers with respect to labour unions. For the definition of a gig worker, Balaram, Warden, & Wallace-Stephens' (2017) labour-based gig worker definition is used which is characterised by flexible, individualised, app-based work (see *Instrumentation* below for further details). Specifically, their *own perceptions* on the variables are the subject of the research, meaning that gig workers are asked to what extent they *perceive*, for example, certain threats rather than attempting to *objectively measure* the level of those threats.

Demographically, the gig economy is male dominated. About 69% of gig workers are men. Furthermore, when compared with the general labour market, the gig economy is relatively young with 86% of workers under 55 years old. Over 60% of Deliveroo couriers are 25 years old or under, for example (Balaram, Warden, & Wallace-Stephens, 2017). However, it is important to note that due to the flexible, often short-lived nature of gig work, it is difficult to accurately described the true demographics of this economy (Page-Tickell & Yerby, 2020).

Research Objective

The primary goal of this research is to uncover the perceived relationships between vulnerability, social interaction, and union engagement amongst British gig workers. The findings from this research will be incorporated into a policy advice report for use by the Independent Workers of Great Britain (IWGB) trade union. Specifically, this research will provide contextual information on the gig economy, motivations of gig workers, and will include tailored recommendations for implementation by IWGB. Additionally, this research may be of use to other relevant organisations such as other unions like UVW and GMB, as well as worker advocacy groups.

Research Method

To produce findings to the above questions, a survey has been found to be the most suitable method for a variety of reasons. Firstly, in order to discern whether Maffie's (2020) findings could be applicable to the UK context, it is necessary to replicate the same instrumentation, otherwise this could harm the validity of the findings. Secondly, a survey allows for the collection of a large amount of data whilst using relatively few resources, in terms of cost and time. Having a larger sample size, as enabled by a survey, increased external validity. Thirdly, because the research assesses the relationship between the variables, a quantitative approach is more suitable rather than using interviews which would be more suitable for looking at mechanisms within the trends, for example. Lastly, a survey, being a form of primary research, is appropriate for the subject at hand which is individuals' *perceptions* of vulnerabilities, social interaction and so on. This is well suited to assessment by primary research rather than secondary data as answers to this specific problem do not exist in current literature and this method could explore a range of factors to a useful extent.

In order to collect a representative sample, an online survey has been implemented to overcome geographic disparity of the workers. The online survey was disseminated using convenience and snowball sampling amongst a collection of Facebook groups based around common gig economy employers/occupations, such as 'UK – Uber Drivers' and 'Just Eat Couriers UK'. The respondents were asked to share the survey amongst eligible fellow gig workers. Permission to post the survey was requested from group moderators beforehand. There are two reasons why this method was used to disseminate the survey. Firstly, as gig workers, by definition, are not based at a single, regular workplace this means that an online survey would better find the sample group than a physical survey. And secondly, Maffie's (2020) survey took place online and concerns interaction in online spaces, therefore

replicating this element of the instrumentation supported the validity of this survey. Thus, this method would most easily find the desired population with validity intact.

Instrumentalisation

After identifying the concepts & dimensions, and the mechanism through which they serve to answer the research questions, it is necessary to identify how the concepts and dimensions were translated into specific indicators. As well as how they were used in the survey to measure gig workers' perceptions of these concepts. As a survey was used as the research instrument, indicators took the form of questions. This began with formal testing/demographic questions and then dimension-based questions which were derived from established literature as to support the internal validity of the research.

Testing & Demographic Questions

In order to ensure that the survey sample only consisted of those individuals that could represent the wider population of gig workers, several testing questions determined if the respondent was suitable at the start of the survey. If they were not found to fit the categorisation of a gig worker based on the initial testing questions, then their results would not be included in the resulting analysis. This criteria was based on Balaram, Warden, & Wallace-Stephens' (2017) definition of gig work. Demographic questions of age and gender were also posed initially and a feedback/additional comments open field was included at the end.

Table 1: Survey testing questions

Question	Options	Reasoning
Do you use an app/online platform in order to perform your work?	Yes/No (closed)	Labour-based online platforms are a central element of gig work and act as the facilitating party in engagement between gig workers and customers. They provide this facility primarily through applications that workers download.
Can you choose your own working hours?	Yes/No (closed)	The ability to opt-in to work of one's own choice is a defining characteristic of gig work and separates it from traditional, fixed work patterns.

Does your work involve carrying out individual tasks?	Yes/No (closed)	This questions refers to the individualised, micro-task nature of the work that gig workers perform. For example, delivery or couriers services.
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If the respondent answered “Yes” to all three of these mandatory questions, then their scores would be eligible for analysis. The answers were closed and did not contribute to any further scoring.

Union Engagement

As previously discussed, the variable of *Union Engagement* consisted of two dimensions: *Union Instrumentality* and *Interest in Labour Association*. The indicators for these were adopted from Maffie (2020) in order to maintain internal validity concerning respondents perceptions of union engagement. He used a series of statements to which respondents could provide answers on a five point scale ranging from ‘Strong agree’ (5) to ‘Strong disagree’ (1).

The question “I believe that a drivers’ union would harm my work as a rideshare” was been changed to “I believe that a union would harm my line of work” in order to make the question applicable to other types of gig work. This question was also reverse coded so that an answer of ‘Strong agree’ scored (1) rather than (5), as strongly agreeing with the statement would represent negative views on *Union Instrumentalisation*. Similarly, the question “I would consider joining a rideshare drivers’ association” was modified to “I would consider joining a worker’s association” as to suit a wider range of work.

In order to form a respondent’s *Union Engagement* score, the mean average score of the four questions was calculated.

Table 2: Concept of Union Engagement and dimensions

Key Concept	Dimension
Union Engagement	Union Instrumentalisation
	Interest in joining a labour association

Table 3: Union Engagement dimensions and indicators

Dimension	Question/Indicator	Answer options
Union instrumentalisation	Unions make sure that workers are fairly treated by supervisors	Strong agree (5) Agree (4) Neither agree nor disagree (3) Disagree (2) Strong disagree (1)
	Unions help working men and women to get better wages	Strong agree (5) Agree (4) Neither agree nor disagree (3) Disagree (2) Strong disagree (1)
	I believe that a union would harm my line of work	Strong agree (1) Agree (2) Neither agree nor disagree (3) Disagree (4) Strong disagree (5)
Interest in joining a labour association	I would consider joining a worker's association	Strong agree (5) Agree (4) Neither agree nor disagree (3) Disagree (2) Strong disagree (1)

Vulnerability

As there are no specific indicators found in Bajwa et al.'s (2018) three categorisations of vulnerability, the indicators were created based on Bajwa et al.'s (2018) literature on each and examples they proposed. Such as, Bajwa et al.'s (2018, p. 2) statement: "occupational health risks like an increased risk of traffic accidents for Uber drivers", which is an example of an occupational vulnerability. Therefore, the indicators were derived from such statements.

These questions were based on two scales, firstly, frequency of occurrence with a five point scale ranging from: Very frequently (5) to Never (1). The precise definition of frequency was intentionally

not elaborated upon as to leave interpretation free to the respondent as this research concerned workers' *own perceptions* on vulnerability, i.e. if they feel the issue frequently occurs, then this was important to be able to reflect in the survey results. Secondly, a five point scale was also used where suitable with answers ranging from: Strong agree (5) to Strong disagree (1). Additionally, the dimension of Precarity was reverse coded: Strong disagree (5) to Strong agree (1).

A respondent's score for *Vulnerability* was calculated by taking a mean average of their score of the nine questions across the three dimensions.

Table 4: Concept of Vulnerability and dimensions

Key Concept	Dimension
Vulnerability	Occupational vulnerabilities
	Precarity
	Platform-based vulnerabilities

Table 5: Vulnerability dimensions and indicators

Dimension	Question/Indicator	Answer options
Occupational vulnerabilities	I enter environments where I feel unsafe.	Very frequently (5) Often (4) Sometimes (3) Rarely (2) Never (1)
	I experience situations where I feel my health is at risk. For example, car or bike traffic accidents.	Very frequently (5) Often (4) Sometimes (3) Rarely (2) Never (1)
	I think that current health & safety regulations in my line of work aren't effective.	Very frequently (5) Often (4) Sometimes (3) Rarely (2) Never (1)

Precarity	I feel that I have the ability to develop myself professionally in my line of work. For example, promotion opportunities or additional training.	Strong agree (1) Agree (2) Neither agree nor disagree (3) Disagree (4) Strong disagree (5)
	I am satisfied with the wage that I am paid for the hours that I spend in my line of work.	Strong agree (1) Agree (2) Neither agree nor disagree (3) Disagree (4) Strong disagree (5)
	I feel the equipment/tools that my employer(s) provide is satisfactory to do my job.	Strong agree (1) Agree (2) Neither agree nor disagree (3) Disagree (4) Strong disagree (5)
Platform-based vulnerabilities	I feel that my line of work is socially isolating.	Strong agree (5) Agree (4) Neither agree nor disagree (3) Disagree (2) Strong disagree (1)
	I feel that I should be entitled to benefits that employees of companies usually receive, such as pension and sick pay.	Strong agree (5) Agree (4) Neither agree nor disagree (3) Disagree (2) Strong disagree (1)
	I feel disproportionate pressure from my employer(s) to perform my work-tasks.	Strong agree (5) Agree (4) Neither agree nor disagree (3) Disagree (2) Strong disagree (1)

Social Interaction

Similar to the concept of *Union Engagement*, Maffie (2020) provided indicators for this concept that were also used in this survey in order to maintain internal validity. They were based on his variables: Social interaction scale and Social media interaction, which have been employed as dimensions of Social Interaction in this survey. Above, this research used a five point frequency scale of: Very frequently (5) to Never (1).

Several changes were made due to context. Firstly, “I communicate with other drivers over text messages” was changed to include WhatsApp as this is a popular messenger app that serves the same purpose as texting, and “driver” was replaced with “worker” to include a wider range of gig professions. Secondly, due to the COVID-19 restrictions currently in place in the UK, “I meet up with other drivers socially” was changed to “In normal circumstances (before/after COVID-19 restrictions), I would meet up with other drivers socially”.

To form a respondent’s score for *Social Interaction*, the mean average was taken of the three questions in this section of the survey.

Table 6: Concept of Social Interaction and dimensions

Key Concept	Dimension
Social Interaction	Social interaction scale
	Social media interaction

Table 7: Social interaction dimensions and indicators

Dimension	Question/Indicator	Answer options
Social interaction scale	I communicate with other workers over text/WhatsApp	Very frequently (5) Often (4) Sometimes (3) Rarely (2) Never (1)
	In normal circumstances (before/after COVID-19 restrictions), I would meet up with other drivers socially	Very frequently (5) Often (4) Sometimes (3) Rarely (2)

		Never (1)
Social media interaction	I interact with other drivers over social media (e.g., Facebook, Twitter, etc.)	Very frequently (5) Often (4) Sometimes (3) Rarely (2) Never (1)

The online survey collected the respondents scores in Google Forms, which was then analysed via SPSS. The influence of *Vulnerability* and *Social Interaction* on *Union Engagement* were assessed according to *Figures 1, 2, & 3* as above. Based on this, the central research question was able to be more clearly answered.

Limitations of Research

There are several limitations associated with the selection of elements within the operationalisation. It is important to consider these for transparency and validity.

Firstly, whilst the presence of confounding variables has been reduced by assessing a wide range of literature, the risk of confounders is still present, especially if a confounder exists that has not yet been identified by current literature on the subject (Gerring, 2017). Therefore, to accommodate this consideration, this research acknowledges that confounders may exist and so further research is required into the gig economy to attempt to identify any that potentially exist.

Secondly, the gig economy is, due to its flexible, opt-in nature, a fragmented, geographically disparate and short-lived style of work. Therefore, it is challenging to accurately assess the scope of the gig economy in terms of population and demographics (Page-Tickell & Yerby, 2020). Whilst this is a core consideration, this research is still beneficial for several reasons. The gig economy is forecast to grow rapidly, particularly amongst younger people, so this research will only become more relevant on a societal level, and furthermore, greater research on this area could improve clarity on this area's demographics (Balaram, Warden, & Wallace-Stephens, 2017).

The selection of a quantitative survey as a research tool allows for the collection of large amounts of data in order to be able to produce and discern trends, but unlike qualitative methods, such as interviews, cannot go into deeper explorations of mechanisms behind trends (Gerring, 2017). Therefore, whilst mechanisms behind the trends can be proposed based on this research and relevant literature, they cannot be fully explored. This may provide a suitable opportunity for future research on the subject.

Privacy concerns are a key consideration when interacting with individuals and their perceptions, especially in an area where negative views could result in a worker losing their job. Thus, a few features were included in the survey to assuage this concern. The data collection featured minimal personal information questions beyond their age and gender. Additionally, respondents had the voluntary option to provide their email so that they could win a gift card of £30 as a means to increase the number of respondents. Furthermore, the data was only used for the purposes of the thesis and would be disposed of afterwards. The survey itself would be prefaced with a text explicitly explaining the purpose of the research, its anonymous nature, and that by completing the form, the respondent gave permission for the usage of their data for these research purposes.

Lastly, this survey was only available to users of the aforementioned Facebook groups and so other gig workers who did not frequent these specific groups were not included. This risked potentially skewing the sample to a certain extent. To counter this, a wide selection of relevant online groups were included and the snowballing method of asking respondents to share the survey allowed for even greater penetration.

Overall, these limitations pose challenges which have been considered and countered as to mitigate risks. The quality of the research should have been improved by making well-reasoned choices in how to best go about research, as well as understanding that choices inherently carry advantages and disadvantages. Thus, if this is done satisfactorily then implications of the research are more clear, fruitful and can lead to further future exploration of the subject.

Research Implications

Through the implementation of a survey amongst British gig workers, this research aims to produce several outcomes. Firstly, this research looks to apply Maffie's (2020) theoretical framework to the UK context to ascertain whether similar motivations are present amongst gig workers. And secondly, the modification of his conflict variable has been expanded to incorporate Bajwa et al.'s (2018) framework to see if a range of vulnerabilities influence gig workers.

These objectives could improve the conditions for gig workers in two ways. As referenced in the previous *Research Objective* section, this information can be used to inform and improve trade union engagement and activity with gig workers. This would be particularly relevant to smaller, gig worker-oriented unions such as IWGB and UVW (Johnston & Land-Kazlauskas, 2019). Additionally this research could add to the weight of existing literature on the numerous issues faced by gig workers.

Contributions in this area could support the push for a suitable and effective legislative framework for gig workers greater than that afforded currently.

Results

The survey was answered by a total of 367 respondents, of which 135 were dropped from the analysis as they did not pass all three of the testing questions, which resulted in a sample of 232 eligible results. Male respondents accounted for 54.8% of respondents, 44.1% for female and 1.1% preferred not to say. This fits roughly with the gender breakdown in the wider population of gig workers and so can be seen to be fairly representative in this aspect. The average age of the respondents was 30.91 years old, which also fits with the younger-leaning wider population (Balaram, Warden, & Wallace-Stephens, 2017). Thus, it can be seen that the sample demographics largely fit within the demographics of the wider gig economy in the UK.

What is the perceived relationship between vulnerability and union engagement for gig workers in the UK?

To answer this first sub question, a scatterplot graph has been produced using the respondents scores for *Union Engagement* on the vertical axis and *Vulnerability* on the horizontal axis. When plotting the results, it can be seen that there is a very weak negative relationship between the two variables (R^2 Linear = 0.018). This means that only 1.8% of the scores on *Union Engagement* can be explained by peoples' scores on *Vulnerability*. Thus, not many clear conclusions are able to be drawn between these results (see *Figure 4* below). The results were clustered around the upper centre of the scatterplot but in a very loose pattern. This demonstrates that regardless of the level of *Vulnerability*, there is a high rate of positive perceptions towards unions present amongst the respondents; A vast majority of scores were above 3 on the vertical axis which means that they agreed or strongly agreed with positive statements concerning unions.

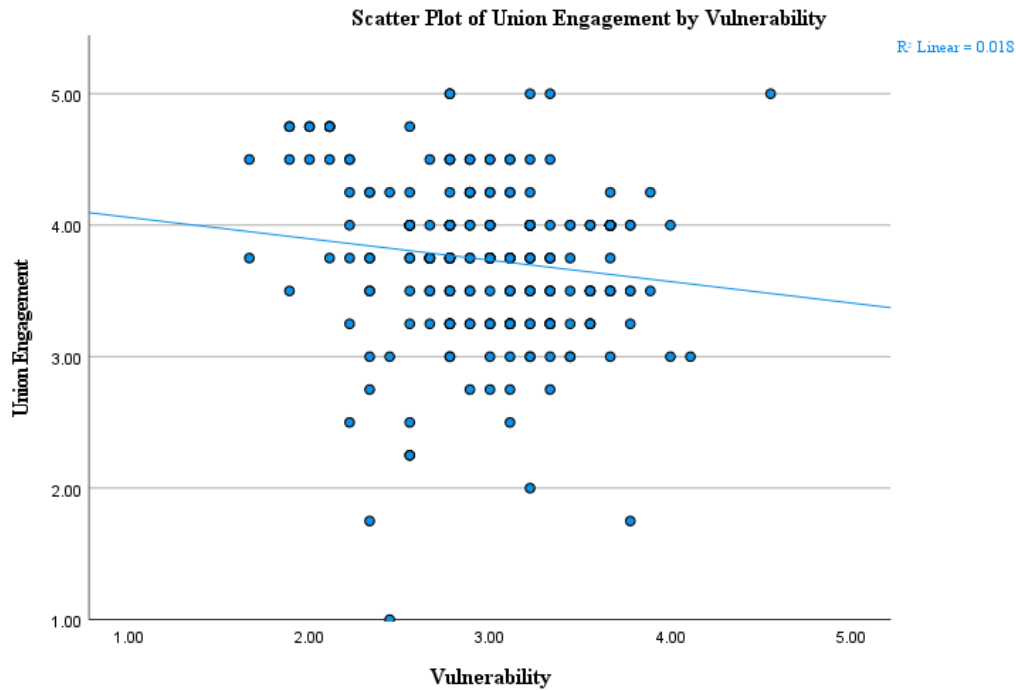


Figure 4: Scatterplot graph of Union Engagement and Vulnerability

A lack of a relationship between the two variables may be attributable to the fact that different respondents experienced varying levels of occupational vulnerability, precarity, and platform-based vulnerabilities. Thus, by combining all of these dimensions in one graph, this may have obfuscated any potential nuanced findings. Therefore, each dimension has been analysed separately in relation to *Union Engagement* and are furthered categorised into low, medium, and high levels of each dimension based on respondents' scores: low = 1 (minimum score) to 2.34, medium = 2.34 to 3.67, high = 3.67 to 5 (maximum score). The reasoning for categorising them into low/medium/high is to separate the lower scores from the medium/higher scores as to ascertain not only the level of vulnerability experienced in reference to *Union Engagement* but, furthermore to discover whether gig workers experience vulnerabilities at all and how that effects *Union Engagement*. One can reason that it is not the *level* of *Vulnerability* that effects *Union Engagement* but merely fact of whether someone feels vulnerable at all. In short, more vulnerability might not mean more positive attitudes towards unions. This possibility will be explored in the following sections.

Occupational vulnerabilities

Occupational vulnerabilities are concerned with issues that gig workers believe they experience as part of carrying out their job in a practical sense. When looking at the responses by the gig workers, there are several key findings. Firstly, when asked how often they enter environments where they feel unsafe,

34.3% of respondents answered either “very frequently” or “often”, and a further 40.3% replied “sometimes”. Similarly, when asked how often they experienced situations where their health was at risk, 30.7% replied “very frequently” or “often”. Lastly, 33% of respondents said that they “very frequently” or “often” felt that the current health & safety regulations in their line of work were not effective. These results show that a large portion of the sample felt that occupational vulnerabilities are highly prevalent in their job which concurs with much of the established literature of the particular perils that gig workers are subjected to (see *Appendix 1* for full results).

When the results of the occupational vulnerabilities were plotted on a scatterplot with Union Engagement, it can be seen that a weak negative relationship between the two exists (R^2 Linear = 0.017). However, unlike the *Figure 4*, this one shows the respondents scores are more widely dispersed along the X-axis. Despite this, a correlation cannot be said to exist based on this.

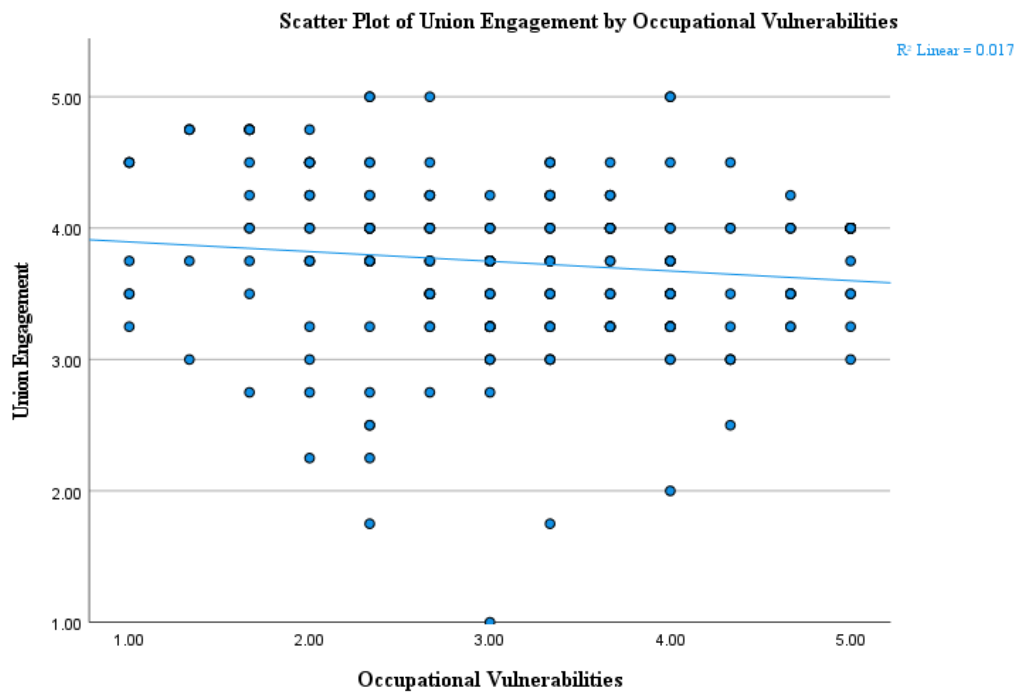


Figure 5: Scatterplot of Union Engagement and Occupational Vulnerability

Unusually, when grouping the respondents’ scores based on low (1 to 2.3), medium (2.34 to 3.67), and high = (3.67 to 5) levels of occupational vulnerability, *Figure 6* shows that levels of *Union Engagement* are actually higher amongst those who experience lower levels of such issues. This demonstrates an finding opposite to that of Maffie (2020).

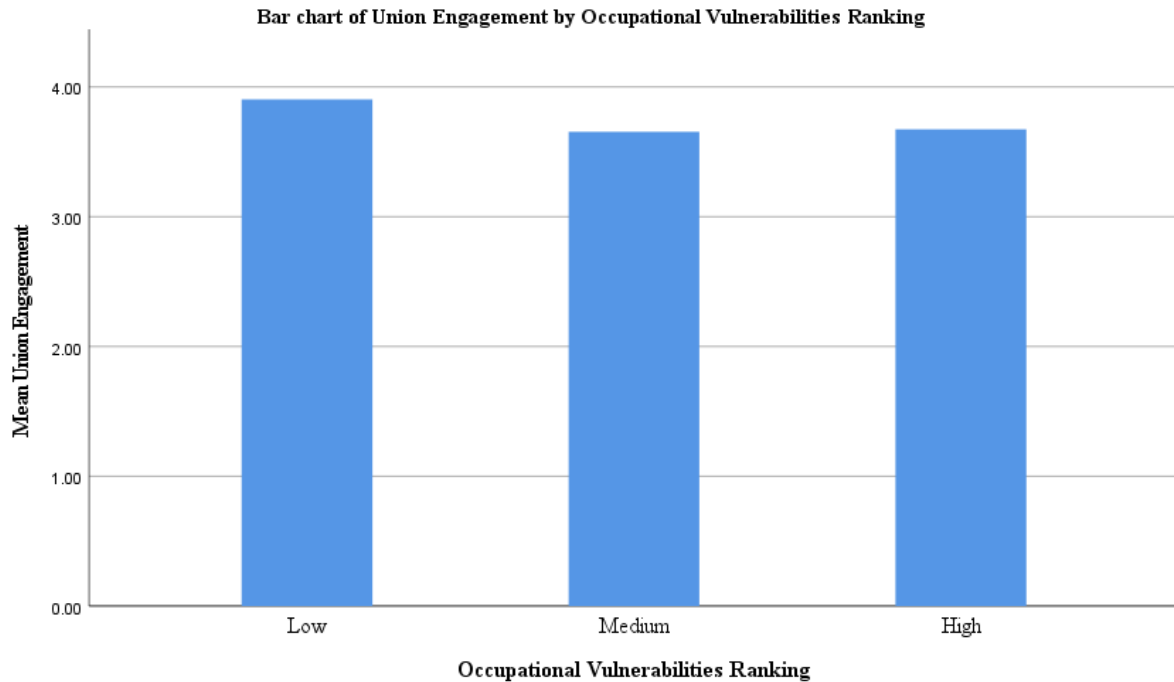


Figure 6: Bar chart of Union Engagement and Low, Medium, & High Occupational Vulnerabilities

Overall, the results of the survey in itself produces strong findings that gig workers feel that they experience high levels of occupational vulnerabilities. However, the relationship between occupational vulnerabilities and *Union Engagement* is found to be a very weak negative one.

Precarity

When looking at the results of the precarity dimension, which concerns the general nature of gig work, the results are contrary to those found in existing literature. Firstly, when asked if workers agreed/disagreed with the statement that they had the ability to develop themselves professionally (promotion opportunities, additional training, etc.), almost three quarters of respondents either agreed or strongly agreed. Next, when asked if they felt satisfied with the wage that they earn for the hours that they work, around a two thirds agreed or strongly agreed. Lastly, another two thirds felt that the tools/equipment that they employer provides were satisfactory to do perform their job. These results demonstrate that, despite concerns across the gig economy about inconsistency and uncertainty of income and development opportunities, these are not problematic according to the respondents (see *Appendix 2* for full results).

When this dimension is compared with *Union Engagement* on a scatterplot (see *Figure 7*) it can be seen that a weak, negative relationship is displayed (R^2 Linear = 0.075). Results are widely dispersed in general but two findings are apparent. On the Y-axis (*Union Engagement*), respondents mostly score

between 2/5 and 5/5 so their views on such are generally quite high. Additionally, very few respondents scored higher than 3.5/5 on the X-axis (precarity). This is telling about the nature of *Union Engagement* and precarity. Overall, however, much like the *Figure 5*, this result runs contrary to the findings of Maffie (2020).

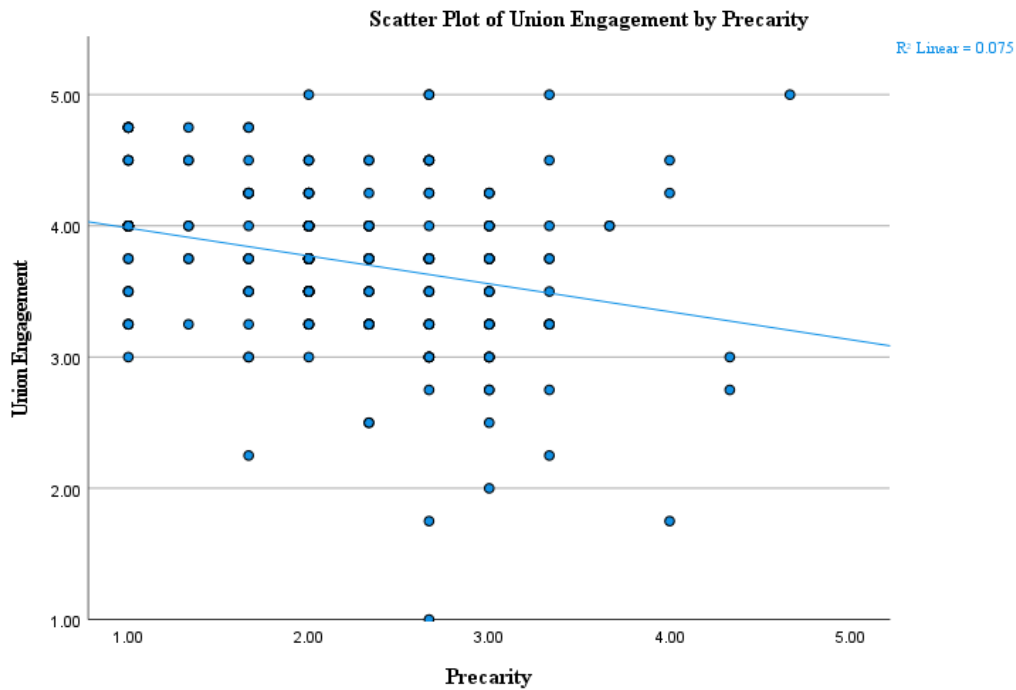


Figure 7: Scatterplot of Union Engagement and Precarity

Much like *Figure 6*, when respondents are grouped by their level of precarity, they demonstrate decreasing levels of *Union Engagement* when the level of precarity increases. Interestingly, when grouped in a bar chart according to *Figure 8* below, this imbalance is understandable as *Union Engagement* scores are generally quite high when compared with precarity. Additionally, when looking at group sizes in the bar chart, it is important to note the distribution of respondents: low: 153, medium: 73, & high: 6. This coincides with the generally low survey scores for precarity but also raises concerns that the six individuals of the high group are disproportionately influential in comparison to the other the medium and low groups.

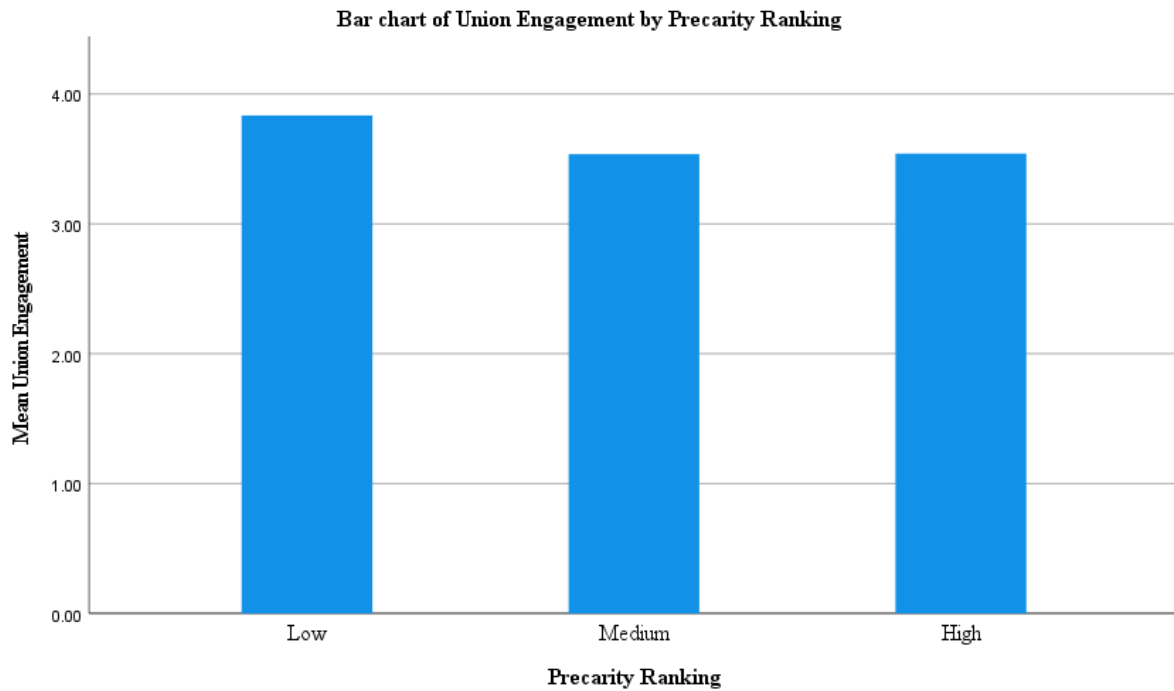


Figure 8: Bar chart of Union Engagement and Low, Medium, & High Precarity

Again, similar to the results of occupational vulnerability, the relationship between precarity and *Union Engagement* is weak and negative. Furthermore, issues of precarity are not especially prevalent amongst the responding gig workers which in itself is informative of the risks that gig workers *do*, but also *do not*, experience. Additionally, it can be seen that despite lower levels of precarity, levels of *Union Engagement* are still very high which is useful for trade unions to be aware of.

Platform-based vulnerabilities

Platform-based vulnerabilities are the last dimension of *Vulnerability* and these concern issues related to the high prevalence of platforms which facilitate the work of gig workers for customers. The results of the survey produced several strong findings. The first question looked at whether respondents agreed/disagreed that their line of work was socially isolating and found that almost two thirds agreed or strongly agreed. Following this, almost 80% of respondents either agreed or strongly agreed that they should be entitled to similar benefits as those provided to employees of companies, such as pension and sick pay. Lastly, almost half of gig workers agreed or strongly agreed that they felt disproportionate pressure from their employer(s) to perform their work-tasks. These results provide a very clear picture of this dimension in that gig workers perceive issues of platform-based vulnerabilities to a severe degree (see *Appendix 3* for full results).

When placed on a scatterplot with respondents' scores on *Union Engagement* (see Figure 9), unlike the Figures 5 & 7, there is a weak positive relationship (R^2 Linear = 0.039). Respondents' scores are concentrated on, or above, 3.00 on *Union Engagement* (vertical axis) and above 2.00 on platform-based vulnerabilities (horizontal axis).

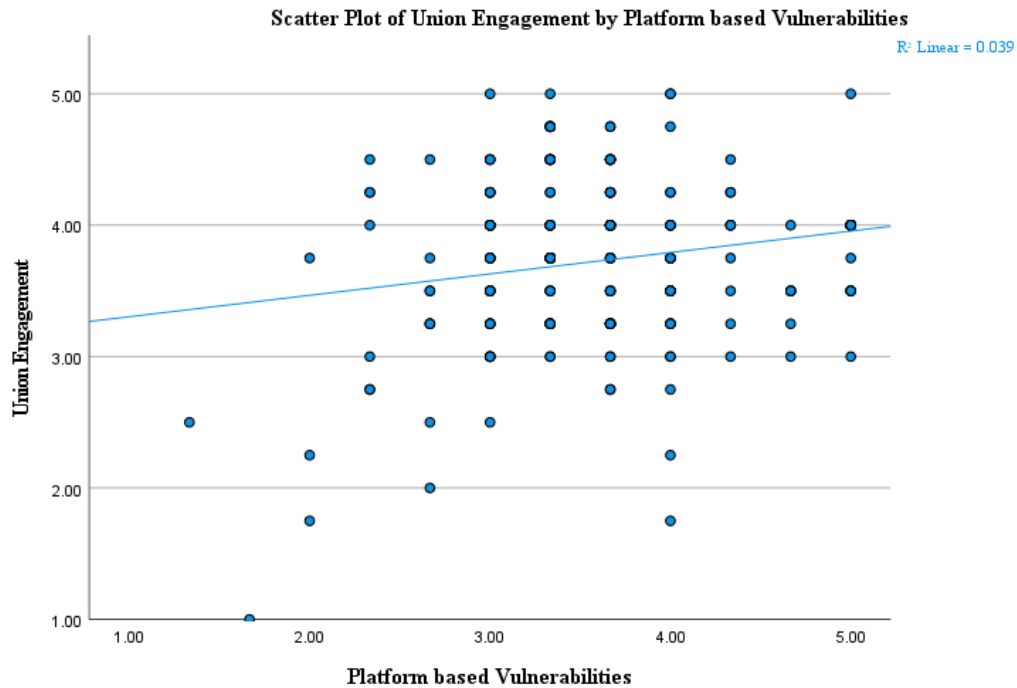


Figure 9: Scatterplot of Union Engagement and Platform-based Vulnerabilities

When displayed in a bar chart, a similar pattern is evident in that those with medium and high levels of platform-based vulnerability are associated with higher levels of *Union Engagement*. This correlation is to such an extent that both the medium and high groups both almost score 4.00 (out of a total of 5.00) on *Union Engagement* with the low group at just over 3.00. Unlike the previous two dimensions, this dimension does concur with Maffie's (2020) findings. It is interesting to note that the low group is constituted of only 12 respondents whereas the medium group consists of 141, and the high group of 79. Thus, the smaller low group respondents have disproportionate influence compared to the other two groups and may explain such a disparity between levels of *Union Engagement*.

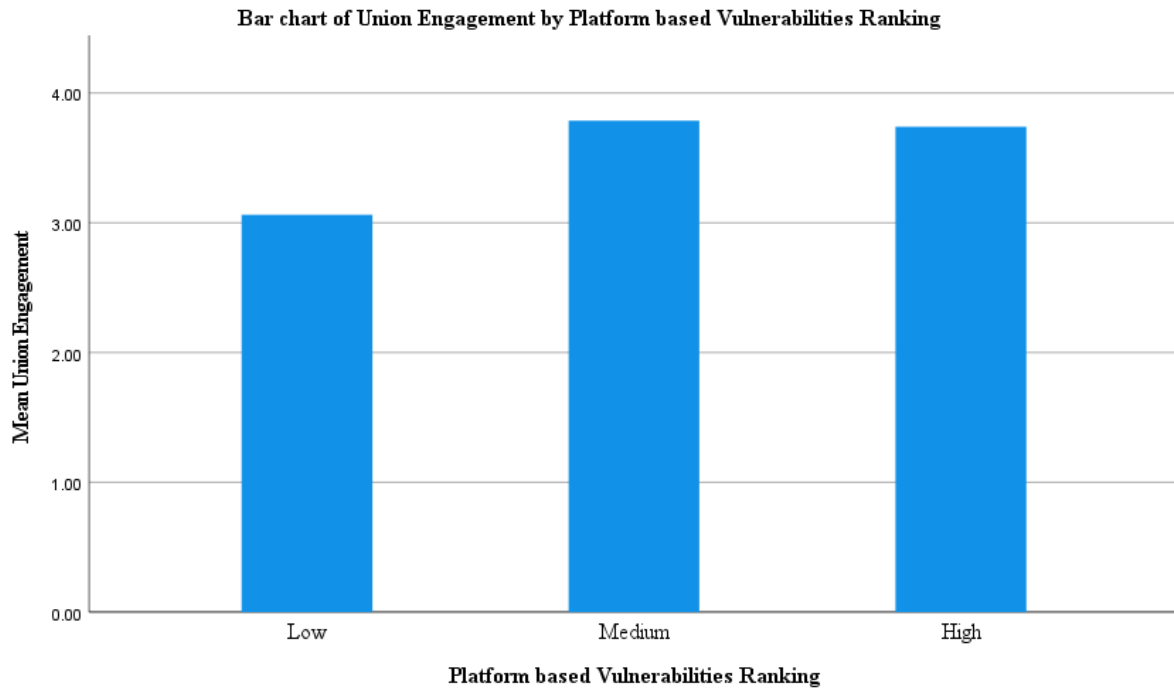


Figure 10: Bar chart of Union Engagement and Low, Medium, & High Platform-based Vulnerabilities

This dimension produces results unlike those of the previous two in that a weak, but positive, relationship can be said to exist between platform-based vulnerabilities and *Union Engagement*. Furthermore, the scores from the survey showed that platform-based vulnerabilities are highly prevalent and of great concern to gig workers. This could be a great area of focus for trade unions when looking to address specific concerns that gig workers have, especially due to the fact that this is complimented by positive attitudes towards unions concerning this dimension.

When looking to answer the sub question about the perceived relationship between *Vulnerability* and *Union Engagement* for gig workers, it can be seen that the conclusion is mixed for several reasons. Firstly, all three dimensions provided weak relationships regardless of if they were positive or negative, therefore definitive answers cannot be provided based on this. Secondly, the dimensions of occupational vulnerability and precarity produced negative relationships whereas platform-based vulnerability showed a positive relationship. Thus, it can be speculated that differing mechanisms are present for gig worker with regards to Maffie's (2020) findings and that of established literature. Thirdly, despite these differing results, perceptions of *Union Engagement* remained consistently high among each dimension which adds further intrigue to any possible mechanisms at play.

Overall, the use of Bajwa et al.'s (2018), three categorisations of worker vulnerability instead of Maffie's (2020) conflict variable was highly useful as it allowed for a more comprehensive and insightful view gig worker issues. Via the respondents' answers in the survey, it can be seen that issues of precarity are not present to a large extent, whereas occupational vulnerabilities are frequently encountered and platform-based vulnerabilities are highly prevalent. It may be that the reason why

lower levels of occupational vulnerability and precarity are associated with higher levels of *Union Engagement* is because those who experience these issues the most become quickly disenfranchised and leave the gig economy. The remaining gig workers may not see inconsistent wage, for example, as an issue because they may be a student or using gig work to simply supplement their income. Whereas platform-based vulnerabilities are systemic issues for most gig workers and they then see trade unions as an appropriate means to tackle them, based on the generally positive views on unions. Thus, despite there being a non-definitive answer to the sub question, there is much useful information for trade unions looking to improve and increase engagement with gig workers by being able to better understand what issues are, and are not, prevalent amongst gig workers.

What is the perceived relationship between social interaction and union engagement for gig workers in the UK?

The Social Interaction variable was measured using three questions in the survey and looked at the nature of interaction between gig workers as in Maffie (2020). The results of the three questions are as follows. Firstly, around half of gig workers very frequently” or “often” communicate with other workers over text/WhatsApp and a further 29.4% do so “sometimes”. Secondly, pre/post COVID-19 restrictions, 46.9% of workers would “very frequently” or “often” meet with other workers of the same employer socially and 31.3% would do so “sometimes”. And lastly, over half of respondents interact with others in a similar type of work over social media “very frequently” or “often”. This shows that the responding gig workers have high degrees of social interaction with other gig workers across a variety of mediums (see *Appendix 4* for full results).

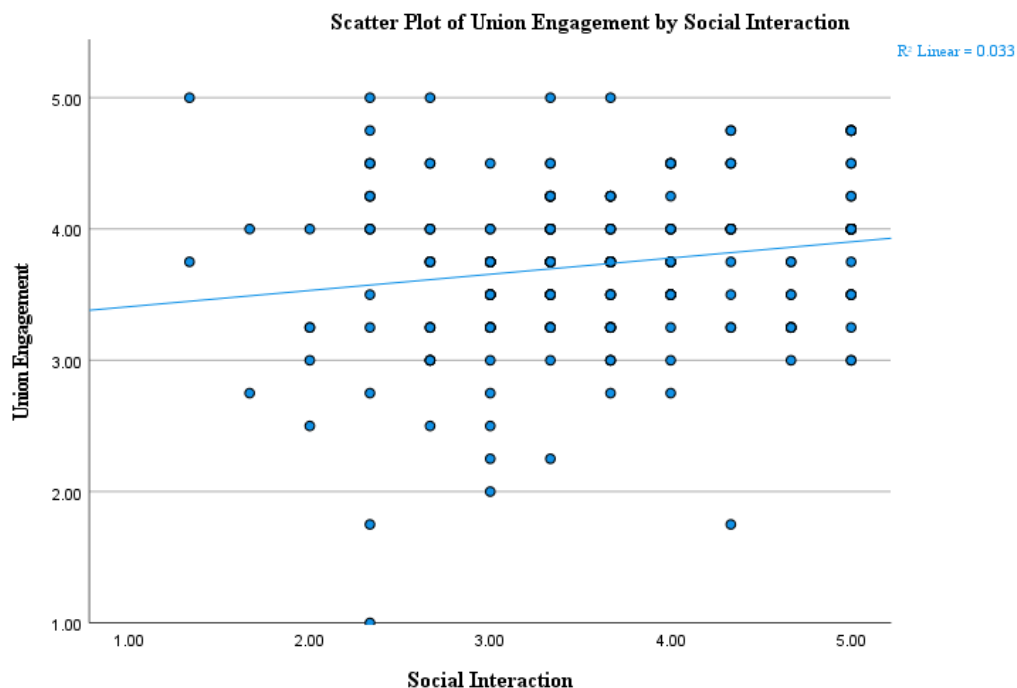


Figure 11: Scatterplot of Union Engagement and Social Interaction

When the results of the survey for *Social Interaction* and *Union Engagement* are plotted on a scatterplot, there is a weak, positive correlation (R^2 Linear = 0.033). Respondents scores are grouped to the centre right of the graph however it is in a loose concentration therefore it is difficult to draw conclusions solely from this alone.

When looking at the results via a bar chart in a similar manner to the previous *Vulnerability* dimensions, it can be seen that they comply with Maffie's (2020) research in that a greater amount of *Social Interaction* can be associated with a greater amount of *Union Engagement* to a certain extent. Overall, however, the groupings are actually very close together in terms of *Union Engagement*. Additionally, the low group consisted of only 25 individuals compared to 116 for medium and 91 for high, which again, may effect the influence of the results of the bar chart.

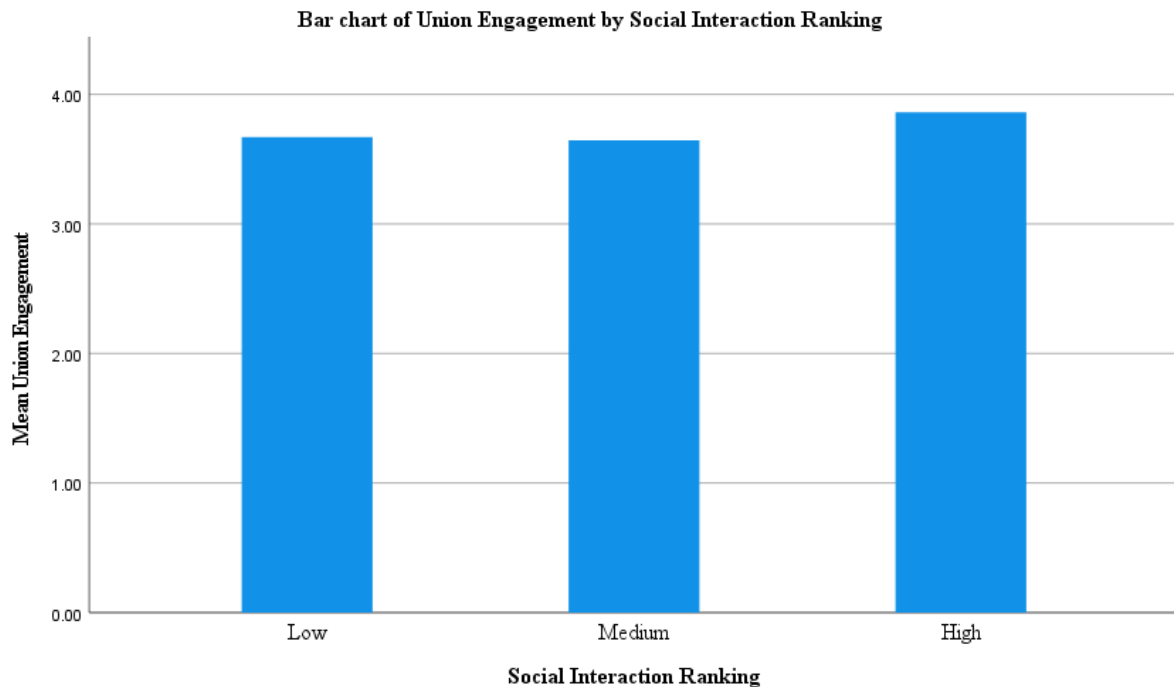


Figure 12: Bar chart of Union Engagement and Low, Medium, & High Social Interaction

Despite literature emphasising the geographically disparate and individualised nature of the gig economy, the survey finds these gig workers to be highly and frequently social amongst themselves via many means. This is somewhat reinforced by the weak, positive relationship found between *Union Engagement* and *Social Interaction*. It could be that the mechanisms as identified by Maffie (2020) whereby gig workers, lacking traditional work-issue resolution mechanisms, seek out other workers for support and assistance is similarly true of these UK-based gig workers. Further to this point, it may be that this process of assistance-seeking from a group with similar issues and interests reflects the

characteristics of union action and so this may explain the high levels of *Union Engagement* across all three groups as found in *Figure 12*.

With regards to the sub question concerning the perceived relationship between *Union Engagement* and *Social Interaction*, based on these results there is evidence to suggest that a positive relationship exists. However, it is not definitively strong enough as to be able to conclusively answer the sub question. On the other hand, potential mechanisms, backed by Maffie (2020), could be present based on findings in this highly social group.

What is the perceived relationship between the combination of vulnerability and social interaction with union engagement for gig workers in the UK?

The last section of the survey concerned four questions that served as indicators for the two dimensions within *Union Engagement*. The survey results for these dimensions were largely positive towards unions. Firstly, concerning the statement: "Unions make sure that workers are fairly treated by supervisors", 51.5% agrees, 26.7% strongly agrees and only 3% disagreed and strongly disagreed. Secondly, when asked their opinion on "Unions help working men and women to get better wages", 46.3% agree and 26.4% strongly agreed. Concerning whether respondents believed that a union would harm their line of work 40.6% disagreed and strongly disagreed, 28.3% neither agreed/nor disagreed and 31.2% agreed/strongly agreed. Lastly, when asked: "I would consider joining a worker's association/union", 76% agreed or strongly agreed and only 7.9% disagreed and strongly disagreed. These answers show that there are high levels of Union Engagement within the gig worker sample group (see *Appendix 5* for full results).

To assess the interaction of *Vulnerability*, *Social Interaction*, and *Union Engagement*, they are plotted on a clustered bar chart. This clustered bar chart (see *Figure 13*) groups the two independent variables with low *Vulnerability* & low *Social interaction* on the furthest left side and high *Vulnerability*, high *Social Interaction* on the furthest right. An initially striking result is that across all groups regardless of their level of *Vulnerability* or *Social Interaction*, all display high levels of *Union Engagement* (vertical axis) with none falling below 3.00.

When looking at the clusters, the first one shows that amongst those with lower *Vulnerability*, there is a positive relationship between *Social Interaction* and *Union Engagement*. This could suggest that interaction between gig workers is more important than general issues that they face in looking positively towards unions. A possible explanation for this is that positive opinions, stories, or experiences are easily shared amongst a well connected group. Additionally, across the clusters it can

be seen that amongst the highly social groups, as *Vulnerability* increases, *Union Engagement* actually decreases. This could be because those who engage with other workers more frequently about their issues may find that they do not need a union as they can already problem-solve amongst themselves.

Aside from this, when comparing the clusters, they all display a different relationship to each other and so no clear or overarching relationship can be said to exist. This may be attributable to the fact that, much like in previous bar charts, there is an imbalance between group sizes. The scores are distributed in a bell curve, as the medium *Vulnerability*, medium *Social Interaction* group is made up of 100 scores, whereas the furthest left and right groups have 6 and 5 scores respectively. This central grouping is corroborated by the scatterplot in *Figure 4*.

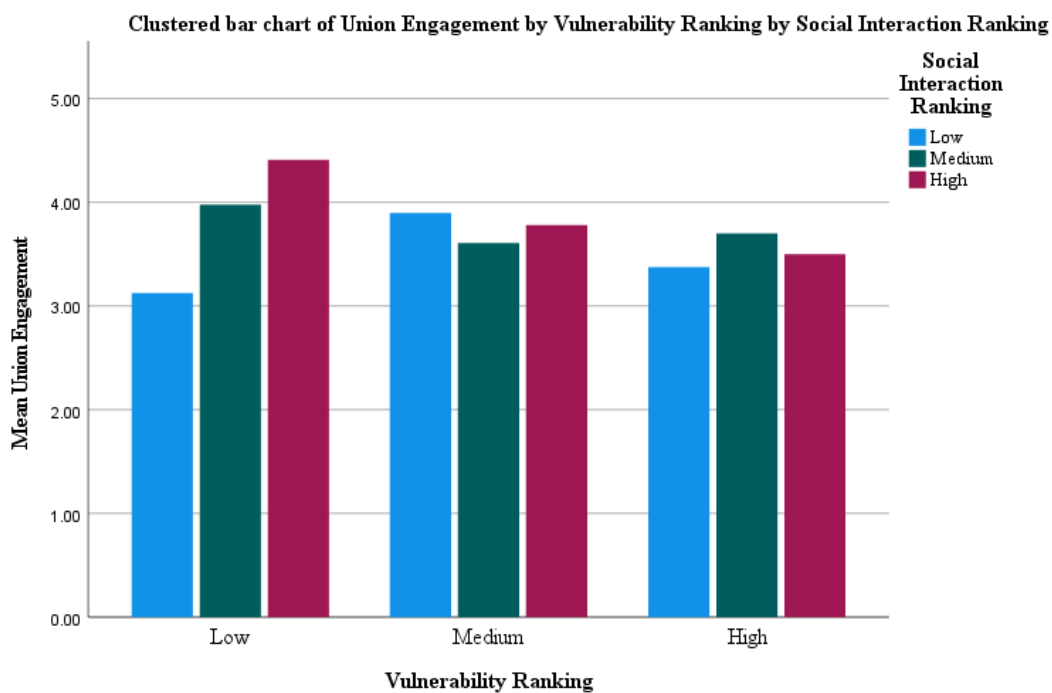


Figure 13: Bar chart of Union Engagement, Vulnerability ranking, & Social Interaction ranking

Based on the analysis of the variables above, it is difficult to conclusively ascertain a combined effect on *Union Engagement*. This does not mean that there is not a combined effect of both but rather the unequal distribution of scores hinder this. Despite this, almost half of the 232 respondents perceived that they experience a medium level of both *Vulnerability* and *Social Interaction*, as well as generally positive levels of *Union Engagement* across all groups. This suggests that there may be mechanisms present as to explain this strong grouping but this research cannot explain such. Regardless of such suppositions, it can be seen that gig workers have very positive feelings towards trade unions, possibly motivated by medium levels of *Vulnerability* and *Social Interaction*, that can serve as encouragement to trade unions that their support is required and welcomed.

Conclusion

This research aimed to answer the central research question of “What is the influence of vulnerability and social interaction on gig workers’ perceptions of union engagement in the United Kingdom?” via the three sub questions above. When looking at each, there is not enough determinative evidence provided by any of the three to establish an influence of either of the independent variables on *Union Engagement* and so, based on this, an influence cannot be said to exist. It is important to note that the results were inconclusive but do not necessarily rule out such a relationship, were issues of validity addressed and resolved.

When assessing the validity of the results, the high number of respondents, combined with a represent demographic aided the external validity of the research. Furthermore, the use of a wide range of relevant Facebook groups and snowball sampling contributed to this to a great extent. Similarly, the indicators being grounded in established literature via the theoretical framework, as well as the use of testing questions, strengthened the internal validity of the survey.

Conversely, this methodology also presented issues for the external validity specifically. This is most clear when looking at the distribution of respondents across the low, medium, and high bar groupings, for example *Figures 10* and *12*. The range of answers was not great enough to prevent unrepresentative imbalance and so comparisons cannot be said to be externally valid. This may be attributable to the selection of only Facebook groups as a means of distributing the survey. This especially relevant for the scores on *Social Interaction* whereby the users of these groups may be particularly socially inclined more so than others in the gig economy by their usage of social media. The snowball sampling method may have countered this to a certain extent but overall the external validity is not without flaws. Conversely the internal valid has not been compromised as the indicators and analysis have functioned as required, and no issues have presented themselves in this regard. The replicability of the survey has been similarly strong as the survey questions and method are available and implementable via the methods described in this research.

Another consideration for the inconclusiveness of the result is that the presumptions of the theoretical framework are not accurate. There may be several reasons for this. Firstly, Gilboa et al.’s (2008) findings concerning similar job stressors within the Anglosphere may not be accurate when comparing the USA with the UK or when looking specifically at the gig economy. Secondly, Maffie’s (2020) USA-based theoretical framework may not apply to the UK in that there may be different factors at play between the two countries. And lastly, as previously acknowledged, unknown confounding factors might be present beyond the scope of variables covered in this research (Gerring, 2017). These elements could play a part in explaining the results produced by the survey.

Nonetheless, there were a great number of results from the research that would be useful for trade unions in being able to better engage with, and support, gig workers. The most clear example of this is that *Union Engagement* remained consistently high across all analysis, based on the highly positive attitudes of the respondents (see *Appendix 5*). This shows that regardless of the levels of interaction and issues that gig workers face, they are willing to engage with unions. Additionally, the application of Bajwa et al.'s (2018) three categories of *Vulnerability* as dimensions have been highly informative as it can be seen that precarity is not an issue for most gig workers whereas occupational and platform-based vulnerabilities are highly problematic. Trade unions can use this information to inform how they engage with gig workers in knowing which are the greatest problems to focus on. This is reinforced by the finding that, despite issues of imbalance, almost half of the 232 respondents perceive medium levels of *Vulnerability* and *Social Interaction*. Therefore, there is a strong basis for tackling such issues. Additionally, there is a considerable level of communication and collectiveness between gig workers. This connectivity may be able to overcome the geographically disparate and isolated nature of gig work so that gig workers can form a collective identity which can be harnessed by receptive trade unions.

Based on these findings, there are a number of steps that could be taken in this area to further reduce the knowledge gap concerning this fledgling field of employment. The first would be to gather a greater sample size to improve the strength and clarity of results. Again a survey would be most suited to this, but rather than only gathering responses from Facebook groups, the net should be cast wider. For example, the survey could also be disseminated by an employer of gig workers, a news publisher, or a relevant advocacy group. This could mitigate the issue around the generally high number of more socially active respondents from this survey as the scope is wider than a specific social media platform. Another suggestion would be to further explore the three dimensions of *Vulnerability* to discern why they are, or are not, an issue for gig workers. For example, why are gig workers concerned about the isolated nature of their work but are not concerned with the inconsistent wage? Taking into account wider contextual factors such as if they have another job, are a student, or if they are new to this economy may be useful in exploring this in greater depth.

Overall, whilst it cannot be said that a relationship exists between *Vulnerability*, *Social Interaction*, and *Union Engagement*, this research has uncovered important characteristics of gig workers that are useful in themselves. Knowing that they frequently encounter a number of hardships unique to their profession is an important issue to solve, especially as this problem may grow as the gig economy itself does. Furthermore, this strongly connected group is highly receptive to union action and membership, and so this presents a window of opportunity for trade unions to seize.

Recommendations

Based on the findings above, a number of recommendations can be made for relevant organisations, in this case, trade unions.

1. Greater inter-union collaboration

The landscape of union representation in the gig economy is highly fractious with no single union representing it entirely (Page-Tickell & Yerby, 2020). Furthermore, many of the unions in this area are small and poorly funded thus their resources are limited. If they work together to a greater extent by pooling their resources, sharing best practices, and cooperating on joint events, they can more efficiently and effectively maximise their output to resolve gig worker vulnerabilities.

2. Highlight gig worker misclassification

Gig worker misclassification is one of the central issues of the gig economy whereby workers are provided with less rights and entitlements than they should be provided with based on the actual nature of their work (Freedland & Prassl, 2017). Trade unions should be advocating for a new and appropriate legislative framework from the British government to resolve this issue by the use of media campaigns and events. This is supported by the positive views that gig workers have of trade unions to assist with their issues.

3. Education for gig workers

Gig workers may not be aware of the provisions and entitlements that they are due to receive by law. Creating workshops and public information campaigns in which they can better understand and clear up any misconceptions can be of great use. As the survey has demonstrated, gig workers are highly social and so this information can more easily reach gig workers via interaction between each other.

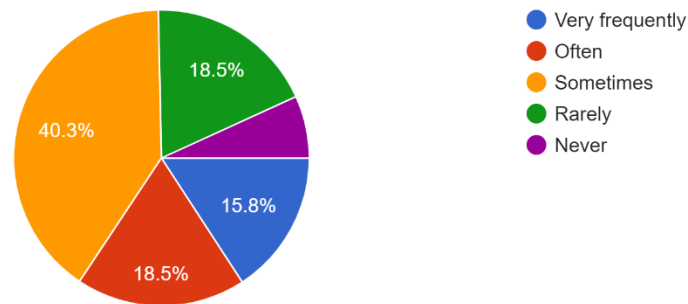
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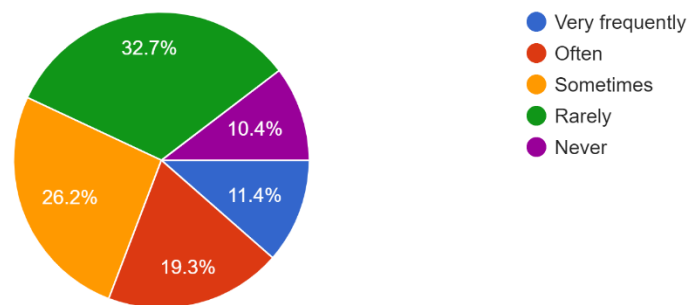
Appendix

1. Occupational vulnerability survey results

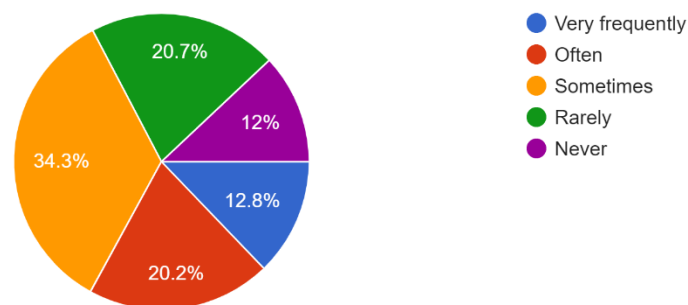
Please indicate how frequently the following statements apply to you while working: "I enter environments where I feel unsafe"



"I experience situations where I feel my health is at risk". For example, car or bike traffic accidents

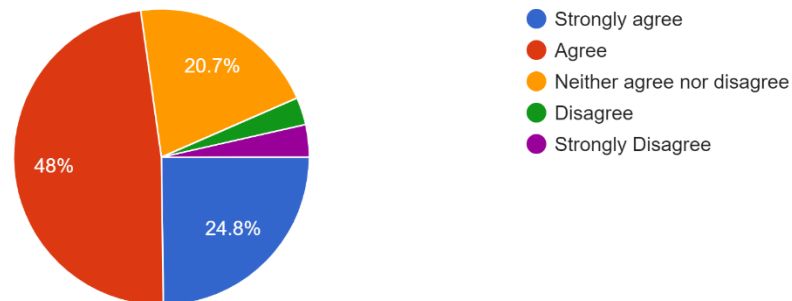


"I think that current health & safety regulations in my line of work are not effective"

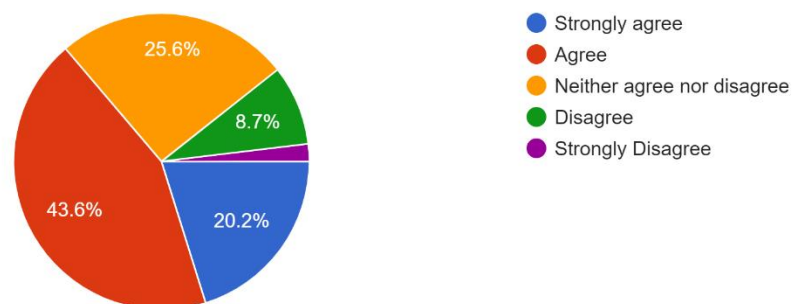


2. Precarity survey results

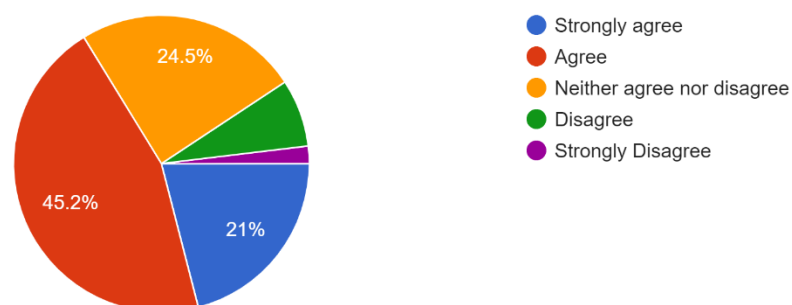
Please indicate your response to the following statements: "I feel that I have the ability to develop myself professionally in my line of work" For example, promotion opportunities or additional training



"I am satisfied with the wage that I am paid for the hours that I spend working."

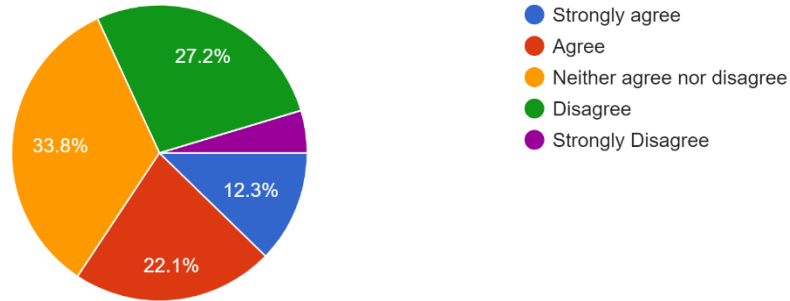


"I feel the equipment/tools that my employer(s) provide is satisfactory to do my job"

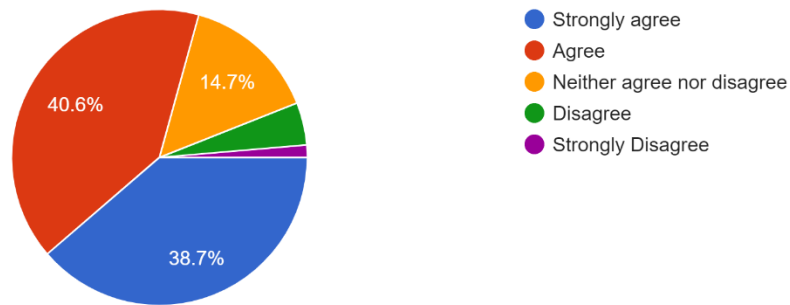


3. Platform-based vulnerability survey results

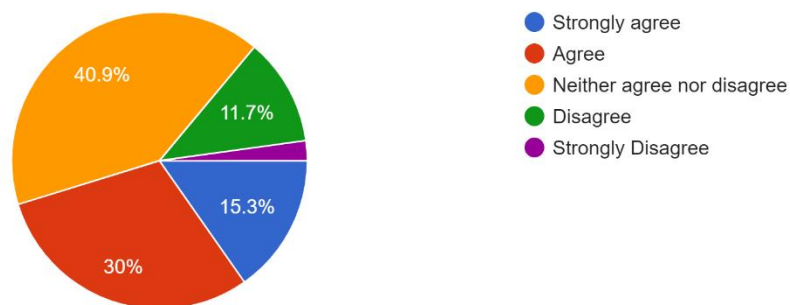
"I feel that my line of work is socially isolating"



"I feel that I should be entitled to benefits that employees of companies usually receive, such as a pension and sick pay"

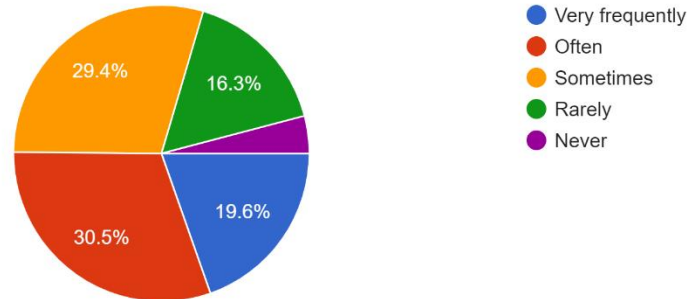


"I feel disproportionate pressure from my employer(s) to perform my work-tasks"

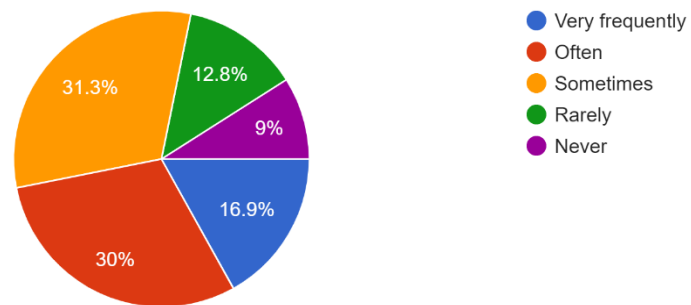


4. Social Interaction survey results

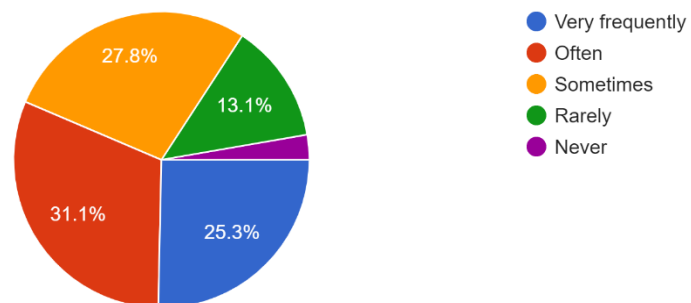
"I communicate with other workers over text/WhatsApp"



"In normal circumstances (before/after COVID-19 restrictions), I would meet up with other workers from the same employer socially"

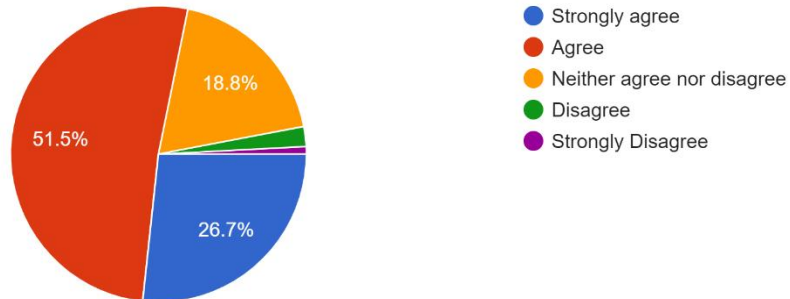


"I interact with other workers in a similar type of work over social media (e.g., Facebook, Twitter, etc.)"

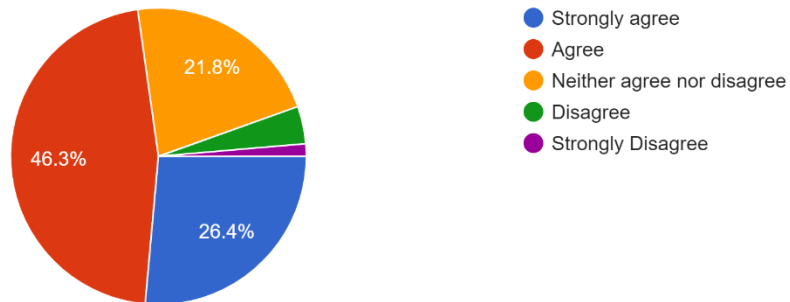


5. Union Engagement survey results

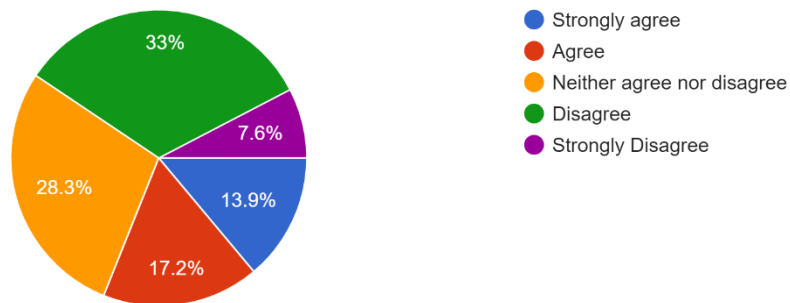
Please indicate your response to the following statements: "Unions make sure that workers are fairly treated by supervisors"



"Unions help working men and women to get better wages"



"I believe that a union would harm my line of work"



"I would consider joining a worker's association/union"

