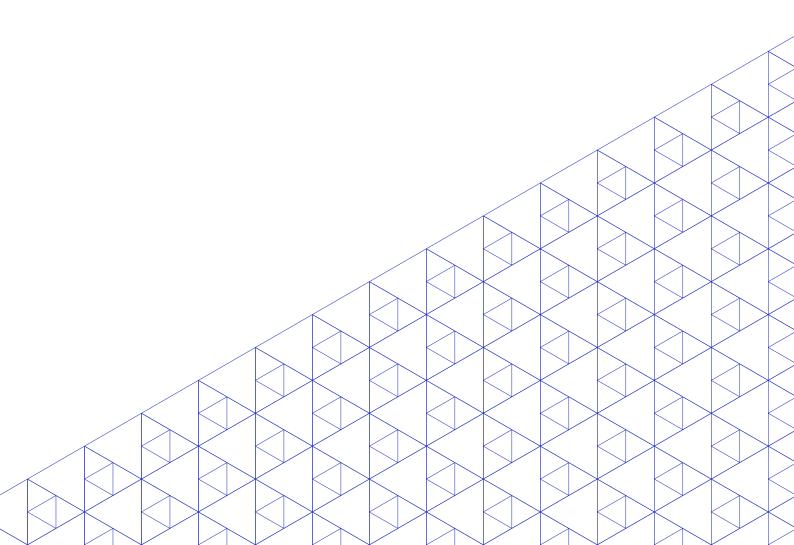


A global analysis of worker protest in digital labour platforms

Authors / Ioulia Bessa, Simon Joyce, Denis Neumann, Mark Stuart, Vera Trappmann, Charles Umney





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Abstract

This paper presents findings from the Leeds Index of Platform Labour Protest, a database of platform worker protest events around the world which gathers data from online news media reports and other online sources. For the period January 2017 to July 2020, we identified 1,271 instances of worker protest in four platform sectors: ride-hailing, food delivery, courier services and grocery delivery. Our results show that the single most important cause of platform worker protest is pay, with other protested issues including employment status, and health and safety. In most global regions, strikes, log-offs and demonstrations predominated as a form of protest. Furthermore, platform worker protests showed a strong tendency to be driven from below by worker self-organization, although trade unions also had an important presence in some parts of the world. From the four platform sectors examined, ride-hailing and food delivery accounted for most protest events. Although the growth of platform worker organization is remarkable, formal collective bargaining is uncommon, as is formal employment, with ad hoc self-organized groups of workers dominating labour protest across the different sectors, particularly in the global South.

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▶ Introduction

This paper presents findings from the Leeds Index of Platform Labour Protest with the aim of developing an understanding of labour unrest among platform workers as a global phenomenon.¹ The growth of platform worker protest has been remarkable. Despite widespread predictions that platform models would render worker organization impossible (Vandaele 2018), platform worker protests have made headlines across the globe. Nevertheless, platform worker protest also presents researchers with considerable challenges. It does not fit easily into established frameworks of labour relations. Formal employment and collective bargaining are rare, and rates of unionization low (ILO 2021a). Some platform workers are organized in traditional unions – most commonly in parts of Europe – but there has also been a growth of much smaller, new unions. Other platform workers – notably in the global South – organize informally in ad hoc groups drawn together around specific grievances. As a result, platform worker discontent is difficult to capture by conventional means. While platform worker protest features in news media coverage and case study research, there is little understanding of the wider picture. This paper addresses this gap by using innovative methods to build the first global analysis of labour unrest in this important and rapidly developing area of worker protest in platform work.

Labour unrest in platform work falls within the scope of the fundamental principles set out by the International Labour Organization (ILO). The Freedom of Association and Protection of the Right to Organise Convention, 1948 (No. 87) established the right of all workers to organize collectively, and the ILO recently reiterated that this applies to self-employed workers (ILO 2012; 2018). The Right to Organise and Collective Bargaining Convention, 1949 (No. 98) similarly established the right of all workers to bargain collectively. The spread of non-standard forms of employment led the ILO Committee of Experts on the Application of Conventions and Recommendations to make clear that "the full range of fundamental principles and rights at work are applicable to platform workers in the same way as to all other workers, irrespective of their employment status" (ILO 2020, para. 327). Matters are complicated in platform work, however, because workers are commonly (mis)classified as self-employed or independent contractors (Cherry 2016; De Stefano 2016), and many countries restrict the rights of self-employed workers to bargain collectively, often under regulations intended to prevent businesses from coordinating to fix prices (ILO 2021a). This widespread denial of collective rights further complicates efforts to capture platform worker protest by conventional means.

To overcome some of these difficulties, and as a contribution to building a more global understanding of platform worker protest, we have created a unique database: the Leeds Index of Platform Labour Protest (Joyce et al. 2020; Trappmann et al. 2020). This database gathers data on platform worker protests from online news media and other online sources and is based at the Centre for Employment Relations, Innovation and Change at the University of Leeds, United Kingdom. Drawing from the Leeds Index, this paper presents findings from 1,271 instances of worker protest during the period January 2017 to July 2020, in four platform sectors where protest has been prominent: ride-hailing, food delivery, courier services and grocery delivery. In adopting a framework based around the notion of protest, we draw on insights from social movement research (della Porta and Diani 2015). Our analysis considers where and how often platform workers engage in protest activities; what issues are driving their protests; and what methods of protest and forms of organization they use.

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² For detailed discussion of the application to platform work of ILO principles and rights at work, other labour standards and decent work standards, see ILO (2021a, chapter 5).

The paper is set out as follows. In the next section, we give a brief overview of previous research, identifying key themes concerning the issues driving platform worker protest, types of protest methods adopted, and forms of worker organization. We also outline our rationale for adopting a social protest lens for understanding labour unrest in platform work. Section 3 sets out our innovative research methods, including our choice of sectors to be investigated and analytical framework, and how our analytical categories were translated for data collection. We also discuss challenges in the methods we devised, and the limitations of the research. Section 4 presents our empirical findings, discussing in turn the geographical and sectoral spread of platform worker protest; the issues driving protest, the organizations involved and the types of protest taking place; regional variations in platform labour unrest; and similarities and differences in labour protest across different types of platform work. The final section presents our conclusions.

The main contribution of this paper is empirical. To date, efforts to understand key trends in platform work and to identify its most pressing policy issues have been hampered by the unavoidable limitations of case study research and the difficulties of conducting surveys in this area (United States Bureau of Labour Statistics 2018). As a result, platform work research has shown a tendency for sometimes speculative over-generalization based on small samples and limited evidence. At this juncture, there is considerable value in re-emphasizing the importance of establishing a firmer empirical basis for both analysis and policy-making. Our principal findings include clear evidence that the main driver of labour unrest in platform work is pay – by some distance and in all regions of the globe – in contrast to the algorithmic issues that have preoccupied previous literature. Furthermore, our findings underline that the remarkable upsurge of labour organization and militancy in platform work is driven from below, by processes of worker self-organization. In the 1,271 protest events we identified, there was evidence of union involvement in only a minority of cases – in the global South, their involvement was even less. We also found that platform workers adopt a range of protest methods, some familiar and some less so, and with considerable variation across different global regions. While these findings suggest the need for further theoretical development adequate for understanding these unexpected empirical findings, and for further policy development, those tasks are left for future research and policy-making. Despite the challenges of conducting research in this area – which inevitably places limitations on our own efforts - we conclude that the methods that we have developed offer unique insight into the scale, distribution and drivers of platform worker protest as a global phenomenon.

▶ 1 Labour unrest in platform work: A brief review of research

Labour unrest in platform work has become an important area of research in industrial relations and related fields. To date, however, this research effort has tended to be based on small-scale case studies looking at particular groups of workers in particular locations (for instance, Cant 2020; Tassinari and Maccarrone 2020; Chinguno 2019; Drahokoupil and Piasna 2019; Chen 2018; Nastiti 2017). This research has nevertheless identified a number of grievances felt by platform workers and has shown that platform workers can and do mobilize successfully to represent their interests. The aim of our research is to build on this foundation of case studies to develop a wider understanding of global trends.

The advent of online platforms for mediating paid work saw widespread predictions that worker resistance would be impossible under such conditions. Some commentators argued that the geographical dispersion of workers would lead to a fragmentation of old collectivities (Vandaele 2018). For others, the classification of platform workers as self-employed or independent contractors stripped them of longstanding rights and protections, fundamentally reducing their bargaining power (Aloisi and Gramano 2019; De Stefano 2016). Still others predicted that the technology of platforms, such as algorithmic management, "gamification" and the "digital panopticon", would subdue workers' capacity to challenge the demands of capital (van Doorn and Badger 2020; Veen, Barratt and Goods 2020; Woodcock 2020; Woodcock and Johnson 2018; Rosenblat and Stark 2016).

Yet, in less than a decade, it has become clear that such predictions were mistaken. Platform worker organization and resistance have developed rapidly across the globe. Here, there is a degree of historical recapitulation, as similar predictions were made during previous waves of new technology. Perhaps most famously, the moving assembly line was widely expected to overcome worker resistance once and for all (Edwards 1979), only for the subsequent history of auto worker unions to demonstrate the hazards of overhasty judgement. Contemporary platform worker organization offers to repeat the lesson. Indeed, some commentators even claim that platform worker organization represents a new and hopeful dawn for unions after decades of decline (Cant 2020; Woodcock and Graham 2020; Woodcock 2018).

In this sense, the debate has moved on from whether platform workers can organize, towards trying to understand emergent patterns and dynamics when they do. While it is still too early to predict the final outcome of platform worker organization, research has identified factors that seem set to influence its development, including issues driving platform worker protest, the range of different types of protest adopted by platform workers, and forms of organization found among platform workers. This section discusses previous research in these areas.

1.1 Labour unrest in platform work through a protest lens

For this research, we adopted a focus on protest events as an indicator of labour unrest in platform work. In so doing, we drew on insights from social movement research. As della Porta and Diani (2015, 3) explain, "social movement studies ... stand apart as a field because of their attention to the practices through which actors express their stances in a broad range of social and political conflicts". Social movement research has also often featured labour and trade union struggles (for an overview, see Silver and Karataşlı 2015; see also Gamson 1975; Shorter and Tilly 1974). A key strength is the commitment of social movement research to understanding changing forms of protest – that is, shifts in the way that grievances are expressed, and how new methods of struggle develop and diffuse in shifting repertoires of contestation (Millward and Takhar 2019; Silver and Karataşlı 2015; Alimi 2015; Tarrow 2015; Krinsky and Mische 2013; Wang and Soule 2012). By contrast, industrial relations research tends to apply established, standard measures across many

different historical and institutional settings: measures such as official strike data, union membership and collective bargaining coverage. While this approach brings benefits in terms of consistency and comparability, it also carries disadvantages that become especially problematic when trying to understand forms of worker contestation that fall outside these conventional, institutional forms. In platform work, with little formal employment, low levels of union membership and very little stable collective bargaining, the standard measures are obviously at a disadvantage. Consequently, the social protest approach offers important benefits for understanding labour unrest in platform work, where significant levels of worker protest take place outside conventional frameworks.

1.2 Protest issues

Research to date has highlighted the importance of several issues as drivers of platform worker grievances and protest. Clearly, employment status has been a significant issue for platform workers, with misclassification – often termed "bogus self-employment" – a central point of consideration (Cant and Woodcock 2020; Aloisi and Gramano 2019; Cavallini and Avogaro 2019; Johnston and Land-Kazlauskas 2018; Cherry 2016). We might expect protests over misclassification to be more prevalent in the global North, where significant rights and protections accrue to legally defined employees (for instance, Aslam and Woodcock 2020; Cant and Woodcock 2020; Tassinari and Maccarrone 2020). This does not mean that employment status is not contested elsewhere. For instance, employment status has been a live issue for platform workers in South Africa (Chinguno 2019) and China (Elfstrom 2019). Though less researched, platform workers have also protested over other legal issues, especially around regulatory concerns, such as campaigns by taxiapp drivers for official limits on driver numbers or extensions of minimum wage legislation (Cavallini and Avogaro 2019; Dubal, Collier and Carter 2018; Parrott and Reich 2018). Overall, research suggests that legal and regulatory issues figure strongly in platform worker grievances and mobilization.

A second major research theme is centred on the technological aspects of platforms, most notably on the control of labour through practices of "algorithmic management". Problematic issues included informational asymmetries, non-transparent decision-making, arbitrary deactivation and the enduring pressure of ratings systems (Amorim and Moda 2020; Anwar and Graham 2020; Bronowicka and Ivanova 2020; MacEachen and Bartel 2020; Veen, Barratt and Goods 2020; Griesbach et al. 2019; Chen 2018; Newlands, Lutz and Fieseler 2018; Reid-Musson, Rosenblat and Stark 2016). It might be expected, therefore, that algorithmic issues would be at the fore of labour unrest in platform work.

Other potential worker grievances also appear in the research literature, albeit with less systematic exploration. One of these is pay. Since the earliest research on platform work, it has been recognized that rates of pay for platform workers are often significantly less than for similar types of work in non-platform settings, and sometimes well below legal minimums, where these are even present (Berg et al. 2018). Moreover, even in studies that focus on algorithms, the chief concern for workers is often the impact of algorithmic decisions on pay or on access to work, which amounts to the same concern: getting paid (for instance, Griesbach et al. 2019; Rosenblat and Stark 2016). Worker grievances around pay include low and reducing pay rates, missing payments, the payment of increased commission to the platform, and the deduction of tips from payments (Cant and Woodcock 2020; Chen 2018). Other research emphasizes the impact of piecework payment systems on work intensity and insecurity (Aslam and Woodcock 2020; Wu et al. 2019).

In addition to issues particular to platform work, it can also be assumed that worker grievances might arise over more general issues shared with non-platform settings, such as health and safety (including personal safety), general working conditions and non-pay benefits (such as insurance policies).

1.3 Types of protest

Platform worker protest involves a range of actions. Some are familiar from other worker protests. One common method is demonstration: that is, a collective event such as a march or static gathering designed

to voice a grievance (or grievances), usually but not always in a public space (for instance, outside the premises of a company, regulator or other public body (Joyce and Stuart 2021)). Demonstration events might sometimes comprise action taken by a single person, although this should not be taken to mean that only one person has the grievance. Research on protest and social movements sees demonstrations as "acts of commission", that is, "the performance of acts one usually does not perform or is forbidden to perform" (Ritter 2015, 468). Social movement researchers also emphasize the processes whereby forms of protest evolve, with new methods emerging and then diffusing across movements that have some degree of contact with one another. This process is evident in platform worker protests, where tactics drawn from social movements – especially anti-globalization and environmental protests – are commonly seen in demonstrations of platform workers. Examples include "critical mass" rideouts, where large numbers of cyclists ride slowly around a city centre, slowing traffic; flash mobs, where groups of workers appear suddenly at a venue such as a company headquarters and conduct a brief, noisy and disruptive protest; street rallies involving workers and supporters; publicity stunts; and the widespread use of colour and sound, in the form of flags, flares and sound systems (Cant 2020; Tassinari and Maccarrone 2020; Chesta, Zamponi and Caciagli 2019).

Platform workers also take part in strikes. The ILO (2021b) defines a strike as "a temporary work stoppage carried out by one or more groups of workers with a view to enforcing or resisting demands or expressing grievances, or supporting other workers in their demands or grievances".

However, a complication arises in relation to platform work because of the way in which strike action by persons in employment is recorded in official statistics (for instance, in estimates of days not worked due to strikes (ILO 2021b)). Since most platform workers are classified as self-employed or independent contractors, strikes of platform workers may not be recognized as such in standard strike data. Furthermore, as our data show, most platform worker strikes are small and brief - although there are also examples of much larger stoppages - and consequently would often not reach minimum size criteria for inclusion in official statistics. Other characteristics of platform worker strikes add to the difficulties of capturing these worker protests using conventional methods. In traditional industrial relations analysis, especially in the global North where the standard analytical frameworks were primarily developed, strikes almost always coincide with union membership. In platform work, by contrast, strikes often involve non-unionized workers, or a mix of unionized and non-unionized workers (Cant 2020; Cini and Goldmann 2020; Chesta, Zamponi and Caciagli 2019). One result of this is that the outcomes of strikes are very difficult to measure in conventional ways, because issues such as pay bargaining are not formalized into recurring institutional patterns. In countries where strikes are regulated by legally required procedures, non-unionized or partially unionized platform workers – who may well be legally classified as self-employed – will often not meet official criteria for inclusion in strike data. Nevertheless, there clearly are many examples of work stoppages by platform workers, and it is therefore important to try and develop methods for capturing these events.

For social movement researchers, demonstrations are examples of acts of commission, whereas strikes are acts of omission, that is; "the refusal to perform acts that one usually performs, such as go to work" (Ritter 2015, 46). Starting from the ILO definition of strikes as temporary withdrawals of labour, this act of omission has been extended by platform workers in many locations to include the collective "log-off", whereby numbers of platform workers coordinate to turn off the app in question and make themselves unavailable for work (Iazzolino 2021; Johnston and Land-Kazlauskas 2018; Vandaele 2018; Woodcock 2018). Effectively, the log-off has become a form of labour withdrawal that can be considered a type of strike action, albeit often brief in duration. In this sense, log-off protests appear to fall under the category of "demonstration stoppage" (Hyman 1989, 24) that is, a withdrawal of labour designed to show the seriousness of a grievance, rather than as a prolonged trial of strength. As Hyman further notes, demonstration stoppages usually comprise the vast majority of strikes. Viewed from this perspective, collective log-offs indeed appear to be a sub-species of strike, a version of demonstration stoppage tailored for the digital age. Nevertheless, there is evidence that, on occasion, collective log-offs can lead to more serious disruption, including significant malfunctions of the app (Cant 2020).

For social movement researchers, the spectrum of potential protest actions spreads far wider. Alimi (2015, 4) notes that, "in cases where movements face a fairly responsive political environment to their claims,

repertoires may include lobbying, press conferences, litigation". These are plainly present in the protests of platform workers and their organizations. Given the importance of legal issues around employment status in platform work – as well as other regulatory issues around platform business practices – it would be odd to exclude litigation from our analysis of protest events. Moreover, in many cases, the development of platform worker legal action is closely entwined with building union organization and use of other forms of protest (Rolf, O'Reilly and Meryon 2021; Aslam and Woodcock 2020).

1.4 Forms of organization

A third feature of platform worker resistance that appears in the literature but remains in need of systematic investigation is the unusual range of collective organizations involved. Some platform workers have organized within long-established trade unions familiar from other sectors, such 3F in Denmark, GMB in the United Kingdom and IG Metall in Germany (Joyce and Stuart 2021). Alongside these, previous research – and media coverage – has highlighted less familiar unions, such as the Independent Workers' Union of Great Britain, the Free Workers' Union (FAU) in Germany and Rideshare Drivers United in the United States. These unions were often formed relatively recently and tend to embrace radical political outlooks and militant organizing methods (Vandaele 2021; 2018; Cant 2020; Tassinari and Maccarrone 2020; Woodcock and Graham 2020; Woodcock 2018). These small, new unions have often succeeded in mounting high-profile campaigns to highlight grievances and mobilize workers, but they have also found it difficult to establish collective bargaining relations compared with more established, traditional unions (Joyce and Stuart 2021).

Previous research also identifies non-union collective organization among platform workers. Perhaps the most well-known is the SMart cooperative in Belgium (Drahokoupil and Piasna 2019). In the global South, non-union organizations have become increasingly important in the collective representation of informally employed workers (Eaton, Schurman and Chan 2017). Consequently, we expected to find non-union organizations involved in platform worker protests, especially in the global South. Case study research also suggests that platform worker protests are often self-organized by groups of workers spontaneously meeting in town squares or other urban spaces (Cant 2020; Cini and Goldman 2020), and very often in online groups as well (Aslam and Woodcock 2020; Maffie 2020; Panteli, Rapti and Scholarios 2020; Reid-Musson, MacEachen and Bartel 2020; O'Meara 2019; Irani and Silberman 2013). Indeed, research has emphasized the importance of online organization for developing and sustaining platform workers' capacity for offline protest in both unionized and non-unionized settings (Geelan 2021; Maffie 2020; Vallas and Schor 2020; Chinguno 2019). We therefore sought to capture this range of different organizational forms in our research.

In practice, drawing clear distinctions between different types of unions is not straightforward. Nevertheless, several well-known attempts have been made. Richard Hyman (2001) developed an influential model based on historical and institutional factors shaping differences in trade union ideology and identity. Connolly, Kretsos and Phelan (2014) looked at the influence of political traditions on radical union strategies. Turner's (1962) classic study linked differences in union structure and policy to the nature of the workforce being organized, while Clegg (1976) famously examined the influence of collective bargaining arrangements in shaping union structures and methods. The emergence of new unions among new layers of workers has potentially important implications for unions more widely. Historically, the growth of new union organizations with distinctive organizational methods has been important in broader patterns of union renewal (Darlington 2013). Numerous studies have noted differences in the organizing approaches adopted by newer unions and by more established unions (Cini and Goldman 2020; Doherty and Franca 2020; Vandaele 2018). Moreover, there is already evidence of the diffusion of methods between newer unions and more established unions – in both directions – in emergent "communities of practice" (Smith 2021; see also Però 2019). Consequently, despite difficulties in drawing sharp distinctions, the widely recognized presence of "non-standard" unions in platform work alongside more established unions suggests that an effort to capture this new development is warranted.

Building on case study evidence, we distinguish between "traditional unions" and "new unions", using the following dimensions: date of founding (recent or longstanding); size (small or large); political outlook

(radical or mainstream labour movement); affiliation to national union federation (non-affiliated or affiliated); organizing approach (militant and bottom-up or moderate and officer-led). On this spectrum, new unions tend to be recently founded, small, politically radical, non-affiliated to national confederations, and with a militant and bottom-up approach to organizing. On the same spectrum, traditional unions tend to be longstanding, large, politically more moderate (social democratic), affiliated to national federations, and with a more moderate approach to organizing that is more likely to be directed by union officers.

As with previous attempts to distinguish between different types of unions, we found areas of overlap and blurring between types. For instance, not all traditional unions are affiliated to national federations, and some have a history of radicalism or pursue versions of bottom-up organizing methods. Furthermore, some "new" unions are relatively longstanding, while some adopt a less radical political outlook. As a result of these issues our data-gathering was necessarily painstaking (see section 3). Moreover, our final categorization of unions is, in places, fuzzy; while many unions fall clearly into one group, others are more borderline. Nevertheless, we are confident that our findings in this area capture important aspects of an evolving picture. As shown below, distinguishing between types of unions has strengthened our analysis and generated useful results.

This approach enabled us to explore trends in the case study research and to gauge how widespread these might be. Previous research suggests that traditional unions find it easier to organize platform workers where institutional settings are helpful. For instance, where platform workers are classified as employees³ – especially in parts of Europe – traditional unions have been able to incorporate platform workers into existing collective bargaining arrangements (Jesnes et al. 2021; Joyce and Stuart 2021; Ilsøe and Jesnes 2020). Elsewhere, where platform workers are classified as self-employed or independent contractors, traditional unions have faced greater difficulties. In some case studies, researchers noted the relative absence of traditional trade unions from platform work (Cini and Goldman 2020; Doherty and Franca 2020; Vandaele 2018). For some, this absence represents an extension of mainstream trade unions' wider difficulties in dealing with non-standard employment (Atzeni 2020). Our research was thus able to assess the extent and nature of traditional and new union presence in platform worker protests on a far larger scale than previously possible.

We also examined the nature and extent of non-union forms of worker organization. To capture formal organizations that were not trade unions, we distinguished a category of "worker collective"; examples include cooperatives and bodies akin to non-governmental organizations. We were also keen to capture the important current of self-organization among platform workers, in which workers coordinated and mobilized protests, raised grievances and represented their own interests without any formal organization. We termed these ad hoc groupings simply "group(s) of workers", to emphasize their informal and self-organized nature.

In sum, emergent understandings of platform worker organization and resistance remain fragmentary, based mostly on small number of case studies. While these studies provide rich detail of workers' experiences and the issues that underlie grievances, they cannot answer general questions about the frequency of platform worker protests, the causes and methods used, the collective actors involved, and how these vary across sectors and regions. Indeed, to date, it has not been possible to answer even basic questions such as how many protests take place, where they happen or how numbers change over time.

Finally, it should be noted that platform worker research to date has been concentrated in a relatively small number of cities in the global North. Evidence of platform worker struggles in the global South is far less developed (Mallett 2020; Carmody and Fortuin 2019; Prabhat, Nanavati and Rangaswamy 2019). Examples include studies of taxi-app drivers in China (Elfstrom 2019; Chen 2018); "remote" platform workers in Africa (Anwar and Graham 2020); taxi-app drivers in Cape Town (Carmody and Fortuin 2019) and Johannesburg (Chinguno 2019) in South Africa; and app-based motorbike taxi drivers in Indonesia (Nastiti 2017). However, the limited extent of research makes it impossible to estimate how widespread platform worker resistance

The legal classification of platform workers is complex, involving differences in legal frameworks as well as preferences in company hiring practices. We are not able to discuss the issues in detail here (for overviews, see Forde et al. 2017; Joyce and Stuart 2021).

is in the global South, not to mention variations in the issues driving it, or the methods workers adopt to voice their grievances and to press their demands. A shift towards research methods designed to capture the global picture is therefore timely. The next section sets out the methodology that we developed.

2 Methodology: Leeds Index of Platform Labour Protest

The Leeds Index documents incidents of platform worker protest on a global scale.⁴ Given the characteristics of platform work as an emerging and unstable set of practices for organizing paid work, and given the low level of institutionalization of labour unrest noted above, it was important to identify non-standard measures for capturing worker protests on a very broad geographical basis and in a wide range of settings. Therefore, we turned to online news media, drawing on two sources that gave us access to large amounts of previously untapped data. Most of our data were gathered via the GDELT Project,⁵ which monitors worldwide online news, with real-time translation in over 100 languages and a news search interface. By searching the GDELT database, we were able to identify many hundreds of news articles covering protests by platform workers. In addition, we drew on data from the *China Labour Bulletin* for protests in China.

For this paper, we focused on four sectors of platform work: ride-hailing, food delivery, courier services and grocery delivery. These sectors were selected because of the prevalence of worker protest in them, which has featured strongly in media coverage and case study research. Worker resistance in other forms of platform work, such as clickwork and online project work, has been examined elsewhere (Wood, Martindale and Lehdonvirta 2021; Irani and Silberman 2013) and is also less likely to feature in the news media sources we drew upon. This research thus focuses on in-person, "geographically tethered" platform work (Woodcock and Graham 2020, 50–52), rather than the whole of the platform economy.

To maximize coverage of worker protests in our chosen sectors, we selected the largest global and regional platforms in each, totalling 36 platforms headquartered in 15 countries. Companies with a global presence (which we defined as operating in two or more world regions) included Uber, Uber Eats, Deliveroo, Cabify, Glovo, Bolt, Foodora and Zomato. To improve the geographical coverage, we also included platforms with a significant presence in regional markets, including Ola and Swiggy in India; Rappi and PedidosYa in South America; Meituan, Ele.me and DiDi in China; Grubhub, DoorDash, Instacart and Postmates in North America; Jumia Food and Little Cab in Africa; and Careem for North Africa and the Middle East. In addition to searching platforms by name, we used keywords relevant to worker protests, including "riders", "protest", "strike", "resistance", "fight", "dispute", "demonstration", "log-offs", "legal", "litigation", "court", "labour", "trade union" and "gigworker". In addition, we used context sensitive keywords, such as "Rappitenderos", the term used for workers in the Colombian delivery company Rappi.

Using these methods, we identified 1,271 protest events across a total of 60 platforms in 57 countries (Tables 1 and 2 in the Appendix). All the protests that we recorded mentioned specific platforms by name. Some protests involved workers from more than one platform, so that searching for "big name" platforms – which appear to account for the vast majority of protests – also captured smaller platforms in our data, thereby expanding coverage.

Although the GDELT Project is known for its own machine-based event coding system, we coded protests manually. Information was collected about the date and location of each protest, the name(s) of the platform(s) involved, the type of protest action, the number of participants, the duration of action, the collective organizations involved and the issue(s) mentioned as the cause of the protest.

Types of protest identified included strikes and log-offs, demonstrations, legal action and institutionalization. We use the term "institutionalization" to capture the formalization of worker protest, such as the formation

For an overview of the global size, growth and types of platform work, see ILO (2021a).

⁵ The GEDELT Project, https://www.gdeltproject.org.

of works councils, the founding of unions or the signing of agreements between workers and platform. By "legal action", we refer to a particular action in which workers used legal means to challenge some aspect of their work relationship with a platform, such as employment status. The nature of our source material – news media reporting – meant that we could not reliably record the duration of legal action, so the date recorded is usually the beginning of a court hearing. Causes of platform worker protest included pay, employment status, working hours, health and safety, other working conditions, deactivation, union representation and other regulatory issues.

We recorded details about collective organizations across several categories. Most obviously, we recorded the type of organization as discussed above: traditional unions; new unions; worker collectives (non-union); and groups of workers (ad hoc, self-organized). Often, it was relatively straightforward to distinguish traditional and new unions. For example, we classified GMB and IG Metall as traditional unions, whereas the Independent Workers' Union of Great Britain and FAU we classified as new unions. Other cases were less clear, and for those we carried out additional background research, examining evidence in relation to the dimensions outlined above: date of founding; size; political outlook; affiliation to national union federation; and organizing approach. We adopted a similar approach, where necessary, to distinguish worker collectives (non-union). Due to the prevalence of legal actions, we found that law firms could be identified as actors within some platform worker protests. The causes of platform worker protest included pay, employment status, working hours, health and safety, other working conditions, deactivation, union representation and other regulatory issues.

To present the findings, we divided the protests among the standard ILO regions: Africa, Arab States, Americas, Asia and the Pacific, and Europe and Central Asia,⁶ with the addition that we further divided the Americas into North America and Latin America and the Caribbean to bring out the differences in platform worker protests between these two very different areas. Our use of ILO regions is not intended as a rigorous comparative framework. Obviously, the ILO regions vary greatly in terms of population and economic activity, and, as underlined in the recent World Employment and Social Outlook report, it is notoriously difficult to estimate the scale of platform work and the numbers of workers engaged in it (ILO 2021a). We therefore expected to see significant differences in levels of worker protest across regions – as was indeed the case (see section 4). Some differences in our findings seem easy to explain; for instance, lower levels of labour protest in food delivery in Africa than in North America and Europe (see section 4) seems likely to be because far fewer people in Africa pay for food delivery than in Europe and North America, and the sector is consequently much smaller. Other differences require more detailed analysis than we can present here. Consequently, our methods should be seen as exploratory, and our findings should not be read as a formal comparative study, even though we were able to develop statistical insight into some important areas.

The limitations of this research derive mainly from the nature of our data source, namely online news reports. Although these gave us unprecedented access to platform worker protests from across the globe, they also presented challenges. Most notably, news reports are not compiled by professional researchers, so we faced recurring problems with missing data. Sometimes, important information was simply absent. In other cases, information was present but unclear. For instance, it was not always possible to identify the number of participants (here, pictures could assist our estimates) or the duration of the protest. Sometimes the causes of the protest were unclear. It could even be difficult to discern the nature of the protest taking place: for instance, a demonstration and a brief strike/log-off can be hard to distinguish in online reportage. Our data contain gaps and missing values because of these types of inconsistent reporting.

More systematic difficulties are likely to have resulted from restrictions on press freedoms in some parts of the world. As a result, we faced the same problems in data collection that affect reporting and recording of labour unrest more widely. Consequently, it is likely that, in our data, platform worker protest is underreported in non-random ways that are unavoidable within the limits of this study; readers should bear this

⁶ More information about ILO regions and countries is available on the ILO website, https://www.ilo.org/global/regions/lang--en/index.

in mind in what follows. We also recognize that restrictions on freedom of association will have affected the ability of workers to voice their grievances and press their demands. Therefore, our findings do not attempt to draw simple correlations between levels of protest and levels of discontent. Exploring those complex relations will require further research.

Nevertheless, despite these challenges, our approach has been successful in gathering data on platform worker protests on a truly global scale to a degree that has not previously been possible. Our main findings are set out in the next section.

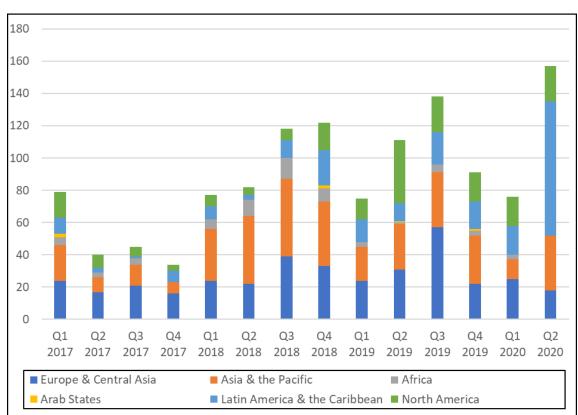
▶ 3 Platform worker protest: A global view

This section sets out our empirical findings. Our unique resource of empirical data enables us to provide initial answers to several big-picture questions that have thus far remained outside the grasp of research. We are able to give an overall estimate of the scale of platform worker protests over time and to assess the main issues driving platform worker protests. We also estimate the prevalence of trade union organization – both traditional unions and new variants – in platform worker protests. In addition, we assess variation in these dimensions across different regions and different sectors of platform work and over time.

Our results identify a variety of different types of protest. We find that platform workers around the world engage in a repertoire of contestation that includes strikes, log-offs and demonstrations, as well as legal challenges. Protests tend to be relatively small and short-lived, although this is not always the case. As platform workers often make a living via several platforms, it is common for their protests to target more than one platform at a time, although this is also not always the case. The lack of formal employment, the use of multiple platforms by workers and the low levels of unionization mean that conventional expectations in industrial relations of a close fit between workers, company and union are usually absent in platform work. Instead, the picture that emerges is of a dynamic interrelationship between self-organizing groups of workers and a mix of unions – both traditional and new – as well as non-union forms of organization.

3.1 Geographical and sectoral spread of platform labour protest

Our data suggest a general increase in the volume of protest events over time. While we cannot draw firm conclusions about the reasons for this general increase, we would expect the process to be broadly similar to that outlined by Beverly Silver (2003) for the earlier global spread of labour unrest in textile manufacturing and the auto industry, with characteristic patterns becoming apparent in the years following the global spread of investment. The increasing trend of platform worker protest continued into 2020, despite the restrictions in place in many countries to combat the coronavirus disease (COVID-19) pandemic. Indeed, this continuation of previous trends may well indicate the impact of the pandemic on platform work, which included notable increases in demand for some platform-mediated delivery services, and greater demand for workers, but which also led to huge reductions in the use of platform-mediated taxi services in many countries during lockdown conditions and to collapsing earnings for workers. Figure 1 depicts the quarterly frequency of platform worker protest incidents globally from January 2017 to mid-2020, broken down by region.



▶ Figure 1. Number of protests every quarter, by region

Note: Figures for July 2020 were excluded as the quarter was incomplete; consequently n=1245.

The protest events we identified were widely but unevenly distributed. For instance, protests in Latin America and the Caribbean quadrupled in the second quarter of 2020, and there was a concurrent rise in protests related to health and safety concerns (see Figure 4). This seems likely to reflect issues related to the COVID-19 pandemic and a lack of personal protective equipment and health insurance provided by platform companies. Figure 2 shows a global map of platform labour protests, which indicates that some countries feature large numbers of protest events while others within the same region feature far smaller numbers. While the United States had the highest number of protest events of any country, Argentina, China, India and the United Kingdom all had over 100 events between 2017 and 2020 (see Table 2 in the Appendix).



Figure 2. Global map of labour protest events

When we look at overall frequencies across regions over the study period, there was a relatively even spread across Asia and the Pacific and across Europe and Central Asia, with close to 400 protests in each region. Between 200 and 250 protests were recorded for North America and Latin America and the Caribbean, with much lower numbers in Africa and the Arab States (see Figure 1 in the Appendix). If anything, figures from our data are likely to underestimate platform worker protest, since not all protest events will be reported (see discussion in section 3). Evidence from survey-based methods in some countries suggests slightly higher rates of participation in protests by platform workers than our findings indicate (ILO 2021a, 215), although these sources are based on samples of platform workers rather than analysis of protests and may therefore overestimate participation rates (cf. United States Bureau of Labour Statistics 2018).

The number of protest events also varied considerably across different platforms. Some platforms had very small numbers of recorded protest events, while two major global players – Uber and Deliveroo – had far more. It is not possible to draw firm conclusions from our data about why some platforms generate higher levels of worker protests, other than that they have a larger workforce. Higher levels of protest for some platforms may, in part, reflect the presence of those platforms in more – and more protest-prone – countries, or there may be particular aspects of their organization of work that generates more worker grievances. However, more detailed investigation will be required to answer these questions.

Of the 1,271 protest events that we found, 67.2 per cent targeted a single platform, while 32.8 per cent targeted multiple platforms. The multi-platform type of protest features in previous case study research and seems to reflect the way in which individual workers often work through multiple platforms. It is often assumed that solidarity across workers at different companies is difficult to generate. Viewed historically, however, solidarity between workers in the same occupation, especially in a shared geographical space (e.g. city or region) is not unusual. Indeed, as authors such as Ruth Milkman (2020) have noted, the return of significant levels of insecure work – in which we would include platform work – in the global North has prompted a resurgence of the trade union forms and methods developed before the post-1945 consolidation of heavily workplace-based trade unionism, which has come to dominate much of the industrial relations thinking and research. Certainly, our evidence supports previous case study research that shows strongly similar worker grievances across different platforms, with common demands developing as a result. When we looked at multi-platform protests, the driving issues and types of protest were broadly similar to those in single-platform protests (we discuss this issue later). In one interesting divergence from other findings, however, we found that multi-platform protests were unevenly spread, being far more common in Latin

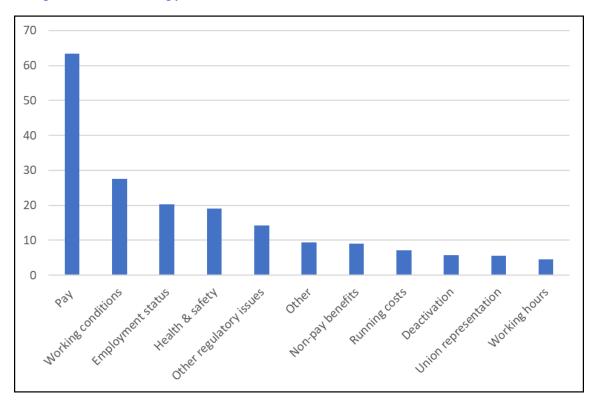
America and the Caribbean (50 per cent) followed by Asia and the Pacific (26.6 per cent) and Europe (20.7 per cent). Reasons for this variation remain unclear.

More broadly, through our data, we located examples of platform worker protest in all the sectors we examined: ride-hailing, food delivery, courier services and grocery delivery. However, it is notable that the overwhelming majority of incidents were concentrated in the ride-hailing and food delivery sectors (see Figure 2 in the Appendix).

3.2 Issues, organizations, and types of protest

What form do platform labour protests take? Who is involved in them? And what do they tend to be about? Using our data, we were able to distinguish between different types of protest. Most protests by platform workers involved either strikes/log-offs (38.1 per cent) or demonstrations (36 per cent), although the relative importance of these methods varied from region to region. A significant minority of protests also involved legal challenges (Table 3 in the Appendix). However, as we discuss below, some types of protest were more common in some parts of the world than in others.

► Figure 3. Issues motivating protests (%)



Note: Total greater than 100 per cent because some protests involved more than one issue.

As can be seen from Figure 3, protests were motivated by a wide variety of issues. However, by far the most prevalent cause, identified as a factor in 63.8 per cent of protests, was grievances over pay. The prevalence of pay as an issue driving platform worker discontent is one of our most striking findings, in sharp contrast to the emphasis in previous literature on issues around algorithmic management. In our findings, protests by platform workers are far more likely to be driven by platform company decisions about levels of remuneration than by day-to-day issues with the operation of algorithms. Working conditions and employment status were the next most prevalent issues, albeit with a highly uneven spread across different

regions. Health and safety issues were involved in 19.1 per cent of protests overall. We found no distinctive differences in motivating issues when protests targeted multiple companies: pay was still the primary issue (68.3 per cent), followed by working conditions (47.8 per cent) and health and safety (35.7 per cent).

Q4 Q1 Q3 Q4 Q2 Q3 Q4 Q2

▶ Figure 4. Frequency of health and safety issues as a cause of protests over time (%)

Note: Figures for July 2020 were excluded as the quarter was incomplete.

Figure 4 shows a huge increase in protests over health and safety through the first half of 2020, apparently reflecting concerns around COVID-19 prevention among platform workers. Before 2020, health and safety issues accounted for 11.1 per cent of protests, rising to 30.3 per cent in the first quarter of 2020 and further increasing to 65 per cent in the second quarter as COVID-19 spread across the globe.

Regarding the collective organizations involved in worker protests, self-organized groups of workers were involved in approximately 80 per cent of cases. These groups of workers were the key form of collective organization in platform worker protests across the globe, significantly outstripping union organization, either traditional or new. In 48.3 per cent of the protests that we identified, a group of workers acted without the involvement of any other organization (see Table 2 for details). Indeed, in our data, protests where self-organized groups of workers were *not* involved were far less common than cases where they were. This important finding reflects how platform worker protest is driven by self-organization among workers, more so than by union organizing efforts, however important these might be in some settings. Clearly, this finding rebuts the still widely held but mistaken belief that unions cause labour unrest.

Where we did identify trade union involvement, traditional unions were present in 18.3 per cent of protests at the global level, and new unions in 13.1 per cent, giving a total of 31.4 per cent of cases in which some form of trade union organization was involved (Table 4 in the Appendix; see also Figure 5). Given the significant focus on new unions in much of the case study research, our finding that traditional unions are found more often in platform worker protests might come as a surprise. On the other hand, given the huge disparity in size and resources between new and traditional unions, the fact that their presence is in any way comparable is truly remarkable. It is difficult to think of comparable examples from other sectors. Indeed, the prevalence of ununionized protest in platform work is reminiscent of much earlier periods of

pioneer organizing among new groups of workers, such as the early days of the mass production industries (see Darlington 2013).

A distinctive feature of union organization in platform work that may help to explain these unusual findings is that platform worker protests usually comprise a small minority of the workers on a platform. This gives unions the capacity to organize protests (of various types) while still working with a relatively small base of members. In addition, unions organizing in platform work can and do mobilize workers well beyond their immediate membership, organizing demonstrations and even strikes that involve both members and non-members. New unions have shown a marked tendency to do this (Joyce and Stuart 2021; Cant 2020). These features of union organization in platform work coincide to break the close link between union membership and collective action, which is a standard assumption of established industrial relations perspectives. In platform work, the relationship between collective organization, union membership/ non-membership and collective protest is much more fluid and dynamic than most settings where industrial relations are studied. As a result, the tendency of platform workers to self-organize, first noted in case study research, is strongly supported by our findings. The picture that emerges is one whereby platform workers first organize themselves and later may look towards established organizations - of various types - to aid their efforts, and may sometimes even move from one organization to another in search of a better fit (cf. Aslam and Woodcock 2020). Even these basic patterns vary considerably across different regions (see below). Moreover, labour organizing among platform workers is still in its infancy, and the final form(s) that this highly dynamic process might take remain unclear.

Protests where self-organized groups appeared to be absent tended to be those where trade unions were using formal institutional means to contest platform practices, such as by challenging the legal status of workers through the courts or seeking regulatory rulings on collective bargaining arrangements. In such cases, unions can pursue cases independently of any existing worker organization. Alternatively, media reports of legal or other regulatory cases may simply omit details of worker organization, leading to an underestimation of actual levels. This area would benefit from further research.

Legal actions also included cases where individual workers – rather than unions – have challenged a platform through the courts independently of any collective organization. Protest events of this type are most likely in countries with established institutional and legal frameworks for managing labour relations and with clear and enforceable individual labour rights. Across all the legal cases that we found, traditional unions, new unions and worker collectives all featured in between 15 and 20 per cent of cases. We discuss below how these varied across regions.

Turning to the size of protests, we found wide variation in the number of workers involved. The modal range for participant numbers is 11–49, followed by 50–99. However, we counted 65 cases in which more than 1,000 workers were involved. An examination of data on the duration of protests indicates that they usually lasted less than 24 hours, suggesting that platform labour protest generally tends to comprise mainly very short actions (Tables 5 and 6 in the Appendix).

► Table 1. Number of participants and types of protes		Table 1	1. Number o	of partici	pants and	types of	protest
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	<1	0	11-	-49	50	-99	100	-499	500	-999	>10	000
Variable	N	%	N	%	N	%	N	%	N	%	N	%
Strikes***	1	0.5	60	32.6	52	28.3	21	11.4	10	5.4	40	21.7
Demonstrations***	13	5.8	68	30.4	56	25.0	63	28.1	7	3.1	17	7.6
Institutionalization***	2	25.0	2	25.0	1	12.5	3	37.5	0	0	7	0
Legal action***	19	57.6	3	9.1	1	3.0	3	9.1	0	0	7	21.2

Note: *p-value<0.05, ** p-value <0.01, *** p-value<0.001

P-values were obtained using chi-square tests.

To identify the types of protest action associated with different numbers of participants, p-values (shown in Table 1) were obtained using chi-square tests, which test whether the events in each row of the table (types of protest) occur with the same probability across the different columns (each category of numbers of participants). In the case of Table 1 this means that the probability of each type of protest occurring is different across different categories of numbers of participants, indicating that some types of protest appear more likely to be linked to fewer participants, whereas others are linked to a higher number of participants. As an example, legal action and institutionalization are associated with very few participants, whereas strikes and demonstrations have significantly higher numbers of participants. This would be broadly in line with expectations, given the often individual nature of court proceedings and other applications for official regulatory action; even where there is involvement from supporting collective organizations, these would often not result in large numbers taking part in individual events. With regard to the number of participants per protest, the numbers of participants both for strikes/log-offs and for demonstrations are noteworthy. In many cases, activists were able to organize more than 100 individuals. In some 50 cases of strikes/log-offs, more than 500 workers participated.

Where we identified sufficiently large numbers of strikes and demonstrations, we were able to investigate regional spread/coverage. The majority of strikes/log-offs and demonstrations were found in Europe and Central Asia and in Asia and the Pacific. With regard to numbers of participants, in both regions the majority of strikes/log-offs involved 11–49 or 50–99 participants. Similarly, demonstrations in Europe and Central Asia most frequently involved 11–49 platform workers (for more details, see Tables 7 and 8 in the Appendix).

▶ Table 2. Frequency of types of organizations and coalitions of organizations in protests

Actors	Frequency	Percentage
New union + group of workers + worker collective	15	1.2
Traditional union + group of workers + worker collective	39	3.1
New union + traditional union	7	0.6
New union + traditional union + group of workers	5	0.4
New union + traditional union + worker collective	1	0.1
Traditional union + group of workers	80	6.3
Worker collective + group of workers	150	11.8
New union + group of workers	95	7.5
Traditional union + worker collective	4	0.3
All collective organizations	13	1
Group of workers only	614	48.3
Worker collective only	29	2.3
New union only	31	2.4
Traditional union only	81	6.4
Other	107	8.4
Total	1271	100

Table 2 shows the frequency of different coalitions of collective organizations involved in platform labour protest. Almost half the protests we identified involved self-organized groups of workers only. In 11.8 per cent of protests, groups of workers cooperated with worker collectives; in 6.3 per cent, they cooperated

with traditional unions; and in 7.5 per cent they cooperated with new unions. The data also vary widely across regions. It is clear, for instance, that in countries such as China, where independent trade unionism is restricted, self-organized worker organization may be the only realistic option for platform workers wishing to protest. By contrast, in regions where trade unionism is on a firmer institutional footing, the role of trade unions was evidently much more significant. We explore these variations further in the next section.

3.3 Regional variations in platform labour unrest

This section notes the important contrasts and similarities between platform worker protest in different regions. Figure 5 depicts the variation in the types of organizations involved in protest across different regions. As discussed earlier, self-organized groups of workers were the modal type in each continent. However, it is instructive to examine the variations more closely. In Asia and the Pacific, groups of workers were the overwhelming majority, reflecting at least in part the prohibitions on independent trade unions in China, as well as the significant numbers of protests we found there. Similar restrictions on unions also appear to be reflected in the figures for protest in the Arab States, although we need to take into consideration the relative lack of data from this region, as well as its significantly smaller population. By contrast, in Europe and Central Asia, traditional unions were a more significant part of the picture. Interestingly, the economically developed regions tended to feature more trade union presence in platform worker protests, whereas developing regions tended to be reliant on self-organized groups of workers almost exclusively. An exception was North America, which also mainly relied on self-organized groups of workers.

100 90 80 70 60 50 40 30 20 10 0 Europe & Asia & the Africa Arab States Latin America & North America Central Asia Pacific the Caribbean ■ Worker collective New union Traditional union Group of workers

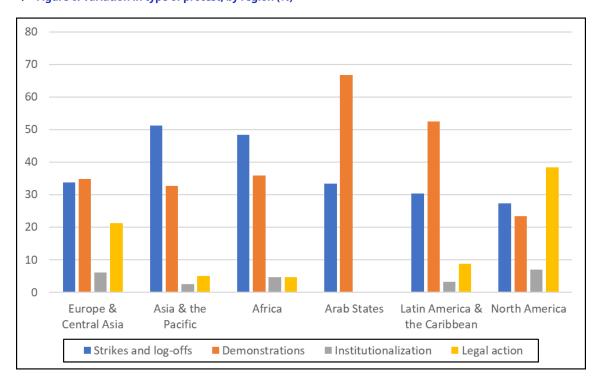
▶ Figure 5. Types of organization involved in protest events, by region (%)

Note: Percentages do not total 100 as some protests involved more than one type of organization.

A further sharp divide between the global North and South was revealed in the variation in the types of protest action. Figure 6 shows that, in the global South, platform worker protest was overwhelmingly dominated by strikes/log-offs and demonstrations, with strikes forming the vast majority of protests in Africa and in Asia and the Pacific, and demonstrations more common in Latin America and the Arab States. Further

qualitative investigation may be required to understand these differences in worker strategy. By contrast, in Europe and Central Asia and in North America, while strikes and demonstrations remained important, there was a more even mix, with legal action playing a much larger role than in the global South. Indeed, in North America, legal action was the most frequent kind of protest event, with more legal actions occurring than demonstrations or strikes. We found little difference when looking at multi-platform protests: strikes/log-offs (45.4 per cent) remained the most frequent type of action, followed by demonstrations (36.6 per cent).

► Figure 6. Variation in type of protest, by region (%)



When considering sectors according to region, food delivery was found to be the most contested form of platform work in Europe and Central Asia and in Latin America, whereas the ride-hailing sector experienced the most protests in Africa, North America and the Arab States. The balance between these sectors was relatively even in Asia and the Pacific (Figure 3 in the Appendix).

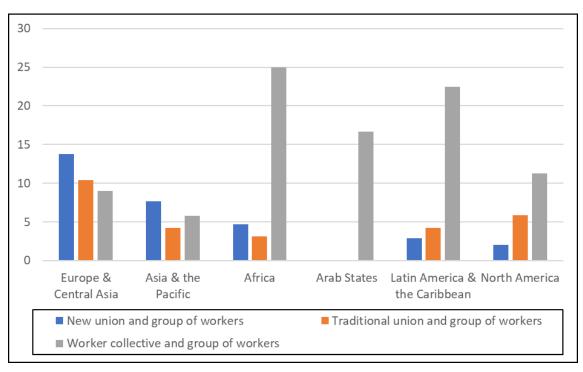
▶ Table 3. Variation in the types of issues motivating protest, by region

	Ove	erall	Cer	pe & ntral sia		& the		orth erica	Am &	ntin erica the obean	A	frica		Arab tates
Variable	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Pay***	804	63.4	233	62	284	74.9	121	59.6	121	50.4	43	67.2	2	33.3
Working hours	58	4.6	16	4.3	27	7.1		2	6	2.5	5	7.8	0	0
Working conditions**	189	27.5	80	26.9	38	20.7	29	44.6	34	29.1	7	35	1	25
Employment sta- tus***	257	20.3	114	30.3	33	8.7	75	37.1	32	13.3	3	4.7	0	0
Union representa- tion**	71	5.6	27	7.2	11	2.9	20	9.9	12	5	1	1.6	0	0
Other regulatory is- sues***	180	14.2	34	9	60	15.8	14	6.9	56	23.3	13	20.3	3	50
Deactivation	70	5.5	25	6.6	12	3.2	10	5	19	7.9	4	6.3	0	0
Health & safety***	243	19.2	27	7.2	52	13.7	30	14.8	112	46.7	22	34.4	0	0
Non-pay benefits*	114	9	30	8	55	14.5	15	7.4	10	4.2	4	6.3	0	0
Running costs/equip- ment***	91	7.2	26	6.9	19	5	13	6.4	9	3.8	23	35.9	1	6.7

Note: * p-value<0.05, ** p-value <0.01, *** p-value<0.001

P-values were obtained using chi-square tests.

Table 3 is row-specific table looking at the probability of whether events at each row (different issues) occur with the same probability across the different columns (regions). This means that the probability of an issue occurring is different across the different regions, with some issues being more important in some regions than other issues. As Table 3 shows, pay was involved in by far the largest number of protests in every region. When we look at the other issues over which protests were held, Europe and Central Asia and North America were distinguished from Asia and the Pacific, Africa and Latin America by their much higher prevalence of protests relating to employment status. In Latin America and the Caribbean and in Africa, health and safety concerns figured more highly than elsewhere, featuring as the second most common cause of protest at a rate much higher than the global mean. This is likely to reflect the more dangerous nature of transport and delivery jobs in these countries, with comparatively higher risks of workers being victims of –often violent – crime. By contrast, working hours and deactivation did not show much variation across regions.



▶ Figure 7. Types of coalition as a proportion of all protests, by region (%)

Lastly, it can also be seen that the types of coalitions involved in protests varied across regions. In general, coalitions between different types of collective organizations comprised only a minority of protests in our data. For the cases where we did find evidence of cooperation, we compared how often different types of organizations collaborated with each other (Figure 7). As most of the protests that we identified involved self-organized groups of workers, these groups were also very common in the coalitions that we found. Besides representing a minority of protests, coalitions were also notably varied. In Europe and Central Asia the mix of coalitions is the most even, with groups of workers cooperating with both new and traditional trade unions more or less evenly. In Africa, groups of workers cooperated much more frequently with worker collectives than with unions, and a similar picture was apparent in both Latin America and, to a lesser extent, in North America. Africa, Latin America and North America all showed low levels of union involvement in platform worker protests, either in coalitions or independently. According to the data, the Arab States featured very low results for any type of coalition, and protests tended to involve only coalitions of workers collectives and self-organized groups of workers.

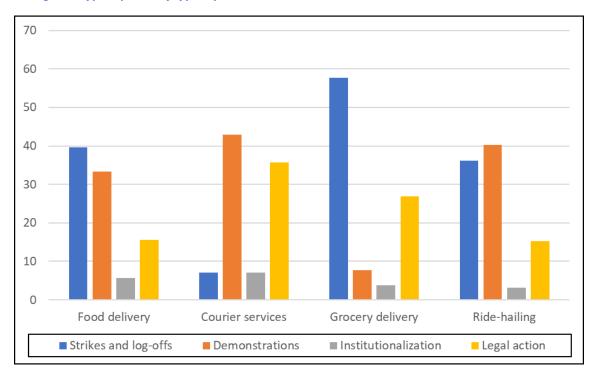
3.4 Types of platform work: Similarities and differences in labour protest

We also sought to understand whether different types of protests and issues were more prevalent in particular types of platform work. Interestingly, sectoral differences appeared considerably smaller than the regional differences described in the previous section. Indeed, the relative unimportance of sectoral differences throws the significance of differences between the global North and South into sharper relief.

Here, we need to distinguish between our two most contested sectors – ride-hailing and food delivery – and the sectors that we looked at where protests were less common, namely grocery delivery and courier services. As shown in Figure 8, there was an interesting similarity across the two most contested sectors.

Demonstrations and strikes/log-offs were most frequent, although demonstrations were marginally more common in the ride-hailing sector and strikes/log-offs marginally more common in food delivery. Legal action was the third most common form of protest in both cases, and institutionalization the least common. In the other two sectors, the data may be skewed owing to sparse numbers, but it is interesting to note that strikes seemed to be far more utilized in grocery delivery, with a negligible presence in courier services. Further investigation may be required to examine whether this is a statistical quirk and what might explain it if not.

► Figure 8. Type of protest by type of platform (%)



Once again, as Figure 9 shows, there was relatively little difference between the two main sectors regarding the types of collective organizations involved. Apart from self-organized groups of workers, there was a relatively even mix of organizations, with more variation where the data was sparser and conclusions riskier.

90 80 70 60 50 40 30 20 0 Food delivery Grocery delivery Ride-hailing Courier services ■ New union ■ Traditional union ■ Worker collective Group of workers Law firm

► Figure 9. Type of organization by type of platform (%)

Similarly to Table 3, Table 4 is row-specific, reflecting whether the events on each row (issues) occur with the same probability across the different columns (platform sectors). According to the data, issues appear at different rates in each platform sector; in other words, different issues motivate protest in different platforms. Issues including pay, working hours, union representation and deactivation show little variation across platform sectors, being equally important for all. These issues were evenly distributed across different types of platform work, with no statistically significant variation. For other issues, however, such as working conditions, other regulatory issues, health and safety, and running costs and equipment, the variation across platform sectors was statistically significant, and therefore more variation across different platforms occurred. The sparsity of data was an issue in two platform sectors, namely courier services and grocery delivery; further investigation is required.

Table 4. Variation in issues, by platforn	m sector
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	Food delivery Courier		Grocery o	delivery	Ride-hailing			
Variable	N	%	N	%	N	%	N	%
Pay	437	64.4	12	85.7	18	69.2	337	61.6
Working hours	30	4.4	0	0	0	0	28	5.1
Working conditions ***	118	21.7	1	50	1	100	67	49.3
Employment status *	147	21.6	7	50	3	11.5	98	17.9
Union representation	33	4.9	3	21.4	1	3.8	34	6.2
Other regulatory issues ***	60	8.8	0	0	0	0	120	21.9
Deactivation	40	5.9	1	7.1	0	0	31	5.7
Health & safety ***	160	23.5	2	14.3	9	34.6	71	13.0
Non-pay benefits **	50	7.4	4	28.6	0	0	59	10.8
Running costs/equipment ***	13	1.9	0	0	0	0	78	14.3

Note: * p-value<0.05, ** p-value <0.01, *** p-value<0.001

P-values were obtained using chi-square tests.

Table 5 indicates whether different kinds of coalition were more prevalent in different sectors of platform work, using p-values to test whether different coalitions occur with the same probability across the different platform sectors. As shown in Table 5, all coalitions involved a self-organized group of workers as one party. Of these, coalitions with traditional unions were more prevalent in food delivery than ride-hailing, while coalitions with new unions were fairly evenly split between the two sectors (with slightly more cases in food delivery). Coalitions with worker collectives were also significantly associated with food delivery.

▶ Table 5. Coalitions between organization types, by platform sector

	Food delivery		Courier		Grocery	delivery	Ride-hailing	
Variable	N	%	N	%	N	%	N	%
Traditional union + group of workers***	60	8.84	0	0	0	0	20	3.7
Worker collective + group of workers***	78	11.5	0	0	8	30.8	64	11.7
New union + group of workers	55	8.1	0	0	0	0	40	7.3

Note: * p-value<0.05, ** p-value <0.01, *** p-value<0.001

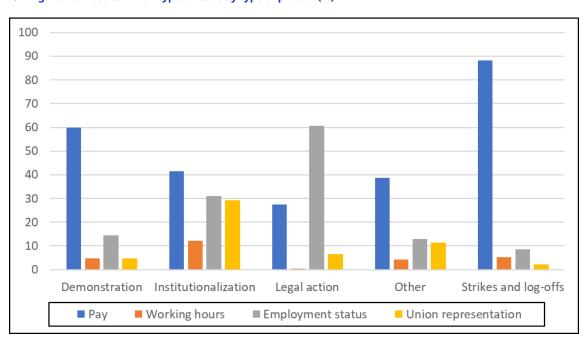
Variations produced by the kind of issue at stake.

P-values were obtained using chi-square tests.

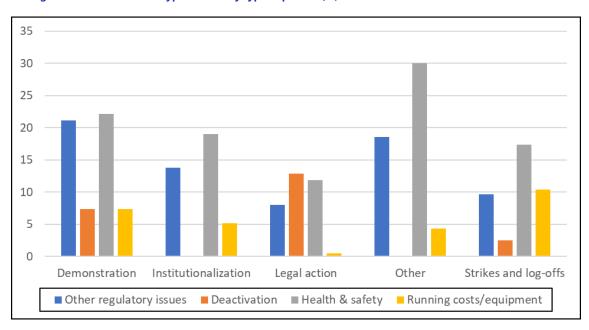
Finally, we considered whether different kinds of issues tend to produce different kinds of protest. Figures 10 and 11 show the most common kinds of issues reported in our data when considering different types of protest. Figure 10 reveals that, at the global level, strikes and demonstrations among platform workers tended overwhelmingly to be about pay. This is unsurprising, given that pay was by far the most prevalent issue motivating platform labour protest overall. However, the picture was more complex for protest events involving institutionalization and legal action. Legal action was most likely to relate to employment status. Furthermore, attempts to challenge platform workers' self-employment status through legal action were particularly common in Europe and Central Asia and in North America, but much less so in Africa, Asia and the Pacific, and Latin America. Protests designed to gain institutional recognition related to an even mix of issues; while they were most frequently about pay, they were almost as likely to involve claims in support of union recognition or employment status, and in 12.7 per cent of cases such protests were about working

hours. Figure 11 shows a more mixed picture, with health and safety being related to all different types of action. A similar rationale follows for the rest of the issues shown in Figure 11.

► Figure 10. Most common type of issue by type of protest (%)



▶ Figure 11. Least common type of issue by type of protest (%)



The data on protests over health and safety are presented graphically in Figure 3 (and in Table 9 in the Appendix). The main takeaway here is that health and safety, while not one of the most common issues motivating platform labour protest, nonetheless remained an important presence. Notably, health and safety concerns tended to be pursued through a wide range of methods and were not particularly associated with one form of protest. As noted above, however, these protests tended to be relatively concentrated in certain geographic regions and were more frequent during the COVID-19 pandemic. In May 2020, for example, coordinated strikes took place across companies and borders in Latin America (specifically in Chile, Costa Rica, Argentina, Mexico, Peru and Ecuador). In the wake of the COVID-19 crisis and the discursive classification of food delivery workers as "essential workers" exposed to a higher risk of infection, platform workers in our sample demanded higher pay and provisions for healthcare and criticized the insufficient protective gear provided by platform companies (mainly PedidosYa, Glovo, SinDelantal and Uber Eats).

▶ Table 6. Variation in issues, by type of organization

	Nev	New union		Traditional union		collective	Group of workers		
Variable	N	%	N	%	N	%	N	%	
Pay	178	76.5***	103	47.2***	178	72.1***	714	70.7***	
Working hours	12	7.2*	6	2.8	16	6.5	48	4.8	
Working conditions	51	45.5***	56	32.9*	51	34*	157	28.4	
Employment status	36	21.7	90	41.3***	29	11.7***	146	14.5***	
Union representation	22	13.3***	29	11.3***	11	4.5	41	4.1***	
Other regulatory issues	21	12.7	27	12.4	42	17	149	14.8	
Deactivation	8	4.8	18	8.3	22	8.9*	54	5.3	
Health & safety	32	19.3	41	18.8	72	29.1***	198	19.6	
Non-pay benefits	30	18.1***	22	10.1	24	9.7	74	7.3***	
Running costs/ equip- ment	24	14.5***	15	6.9	28	11.3**	88	8.7***	

Note: * p-value<0.05, ** p-value <0.01, *** p-value<0.001

P-values were obtained using chi-square tests.

Table 6 tells a more complex story, presenting the correlations between types of organization and different issues. The most interesting finding is that a protest can include multiple issues and, at the same time, multiple types of organizations, which makes Table 6 the first cell-specific table (in contrast to those discussed so far). P-values in each cell of the table are used to test whether different issues are more likely to be associated with different types of organization; analysis clearly suggests that this is the case. Unsurprisingly, we see that trade unions – both traditional and new – were much more likely to be involved in protests seeking to secure pay and union representation. However, traditional unions were notably more likely to get involved in protests relating to employment status than new unions, as were worker collectives and groups of workers. New unions, on the other hand, were more likely to be involved in protests about working conditions, running costs and equipment, and non-pay benefits. Further investigation will be required to explain these differences. As already noted, pay concerns cut across all kinds of organizations, whereas working hours and other regulatory issues appeared to be of less interest to most types of platform worker organization.

▶ Conclusion

The increasing prevalence of protests by platform workers is an important new development in worker organization and contestation on a global scale. The rapid and largely unexpected emergence of this arena of workers' struggles presents significant challenges to established understandings of how labour protest develops, and our urgent attention is required if we are to adequately understand its patterns, dynamics and possible future direction. In this research, we have taken an important first step towards developing such an understanding.

The innovative research methods developed by the Leeds Index designers present a unique, global view of platform labour protests. Our results give striking insights into the scale of platform worker protests, the issues driving worker grievances and the types of organization that workers have used to pursue those grievances. Several features stand out.

Our findings suggest both notable similarities and differences among platform worker protests across the world. The analysis shows that pay is universally a pre-eminent concern for platform workers and tends to be the subject of protests in all regions of the world. Indeed, the overwhelming presence of pay as the major cause of platform worker protest suggests that we need to be cautious about centralizing issues such as algorithmic control. Moreover, while much scholarship places emphasis on forms of online activity such as the subversion of algorithms, our findings show that more traditional methods, such as strikes and demonstrations, are also widely used in platform worker protests. Here, we also found intriguing variations in patterns of protest across different regions – including variation in the balance of issues in platform worker protests in different settings – which suggest that further investigation would be beneficial. Differences in the types of collective organizations in evidence in different regions also requires further research.

At the same time, some genuinely distinctive aspects of platform work became apparent through analysis of our data. In particular, the number of protests that were directed at multiple companies is a distinctive characteristic of platform work, which likely reflects the nature of platform labour markets, where workers often rely on multiple platforms to earn a living. It also suggests that platform workers are well networked, with strengthening sinews of solidarity that transcend individual companies. It is also important to note that platform labour protest tends to emerge from the bottom up, particularly in the global South, where such protests are overwhelmingly led by informal groups of workers.

Differences emerging from our dataset appear much more significant between regions than between different types of platform work. When we compare ride-hailing with food delivery (as the two sectors where protest is the most common), there appear to be few differences in the types of protest, the organizations involved or the issues motivating them. However, differences across region are more noticeable, and divides between the global North and South are striking. Protests relating to legal and institutional status conducted by traditional unions form a bigger part of the picture in Europe and Central Asia, compared with Latin America, Asia and the Pacific, and Africa. Health and safety concerns are a more widespread cause for action in the global South. Nonetheless, factors such as the importance of pay as a source of dispute cut across regions, cautioning researchers against making simplistic contrasts.

The limitations of this research mainly stem from the nature of our data sources. News media reporting is inevitably less comprehensive than employment relations researchers would like. At times, we found frustrating gaps in the data, although these also presented tantalizing glimpses of avenues for further research. Most obviously, our data do not include types of platform work that are less publicly visible – especially those conducted entirely online – and where worker protests are also likely to be hidden. The development of alternative methods for investigating these areas would certainly be beneficial. More immediately, we aim to expand the scope of our current methods to include a wider range of sectors in platform work. There also seems to be good potential for using similar methods to investigate worker protest in other highly informalized sectors outside platform work.

Overall, despite some limitations, our initial findings demonstrate the potential of the methods that we have developed for grasping non-standard forms of worker protest in highly informalized and weak institutionalized settings. This has proved especially valuable for capturing platform worker protests in the global South, but also in many parts of the global North. Furthermore, our findings also vindicate the application of approaches derived from the study of social movements to understandings of worker protest as an aspect of employment relations. These approaches have brought an important degree of flexibility that allows for the inclusion of forms of struggle that are seldom captured elsewhere. Though still at an early stage, the findings presented here point to the potential for developing still better ways of understanding platform worker protest as an emerging, yet already important, global phenomenon.

Annex

This Appendix contains additional tables and figures giving greater detail on selected points discussed in the main text.

► Annex Table 1. List of platforms included in the dataset

S.No.	Platform name	Target of single platform protest in at least one case	S.No.	Platform name	Target of single plat- form protest in at least one case
1	99		31	Just Eat	
2	Addison Lee	Х	32	LeCab	
3	Baidu Waimai		33	Little Cab	
4	Bolt (previously Taxify)	X	34	Loggi	
5	Cabify	Х	35	Lyft	X
6	Careem	X	36	MARAMOJA	
7	CitySprint		37	Meituan	X
8	Cornershop		38	Mensanas	
9	Delivereasy		39	Mercadoni	
10	Deliveroo	X	40	Mondo Ride	
11	DiDi	X	41	Nova	X
12	DoorDash	X	42	Ola	
13	Dunzo		43	Paytm	
14	Easy Go		44	PedidosYa	X
15	Ele.Me	X	45	Postmates	X
16	Fone Taxi		46	Pronto	
17	Foodora	X	47	Rapido	
18	foodpanda	X	48	Rappi	X
19	Geocab		49	Ride Panama	
20	Gett		50	Sgnam	
21	Glovo	X	51	SinDelantal	
22	Gojek	X	52	Stuart	
23	Grab	X	53	Swiggy	X
24	Green Tomato Cars		54	Treggo	
25	Grubhub	X	55	Uber	X
26	Honestbee	X	56	Uber Eats	X
27	iFood		57	UrbanGo	
28	inDriver		58	Yabu	
29	Instacart	X	59	Yandex	
30	Jinn	X	60	Zomato	X

▶ Annex Table 2. Countries/provinces included in the dataset, and frequency of total protests

Country	Frequency	Percentage	Country	Frequency	Percentage
Argentina	114	9.0	Malaysia	3	0.2
Australia	32	2.5	Mexico	62	4.9
Austria	2	0.2	New Zealand	3	0.2
Bangladesh	1	0.1	Nigeria	6	0.5
Belarus	1	0.1	Norway	3	0.2
Belgium	19	1.5	Pakistan	6	0.5
Brazil	17	1.3	Panama	3	0.2
Canada	14	1.1	Paraguay	1	0.1
Chile	5	0.4	Peru	4	0.3
China	160	12.6	Philippines	3	0.3
Colombia	9	0.7	Portugal	1	0.1
Costa Rica	9	0.7	Qatar	2	0.2
Dominican Republic	1	0.1	Romania	1	0.1
Ecuador	3	0.2	Russian Federation	11	0.9
Egypt	4	0.3	Saudi Arabia	1	0.1
Finland	1	0.1	Singapore	2	0.2
France	68	5.4	South Africa	22	1.7
Germany	29	2.3	Republic of Korea	6	0.5
Ghana	3	0.2	Spain	86	6.8
Guatemala	1	0.1	Sweden	1	0.1
India	118	9.3	Switzerland	1	0.1
Indonesia	28	2.2	Taiwan, China	9	0.7
Ireland	2	0.2	Uganda	4	0.3
Italy	16	1.3	United Kingdom	117	9.2
Japan	4	0.3	Ukraine	1	0.1
Jordan	3	0.2	Uruguay	11	0.9
Kenya	25	2.0	United States	189	14.9
Lithuania	1	0.1	Viet Nam	4	0.3
Total				1268	100.0

Note: Three cases did not have a value for country; therefore, n=1268 plus three missing values.

► Annex Table 3. Types of protest event

Type of protest	Frequency	Percentage
Demonstration	457	36
Institutionalization	58	4.6
Legal action	201	15.8
Other	70	5.5
Strike and log-off	483	38.1
Total	1269	100

► Annex Table 4. Collective organizations in protest events

Collective organization	Frequency	Percentage
New union	166	13.1
Traditional union	218	18.3
Worker collective	247	20.4
Informal group of workers	1011	79.7
Law firm	27	2.2
Other	113	9.1

Note: Percentages do not total 100 because events may involve multiple actors.

► Annex Table 5. Number of participants in protest events

Number of participants	Frequency	Percentage
<10	40	8.5
11-49	137	29.2
50-99	115	24.5
100-499	92	19.6
500-999	20	4.3
>1000	65	13.9
Total	469	100

Note: Data on number of participants were available in 469 cases.

► Annex Table 6. Duration of protest events

Duration	Frequency	Percentage
Up to 24 hours	331	83.6
2 days	18	4.5
3 days	14	3.5
4 days	6	1.5
5 days	10	2.5
1 to 2 weeks	10	2.5
3 to 8 weeks	3	0.8
>8 weeks	4	1
Total	396	100

Note: Data on duration of protest events were available in 393 cases.

▶ Annex Table 7. Number of participants in strikes, by region

	•	<10	11	-49	50)-99	100	-499	500	-999	>1	000
Region	N	%	N	%	N	%	N	%	N	%	N	%
Europe & Central Asia	1	100	15	25	14	26.9	5	23.8	2	20	1	2.5
Asia & the Pacific	0	0	40	66.7	35	67.3	7	33.3	8	80	34	85
North America	0	0	1	1.7	0	0	2	8.5	0	0	3	7.5
Latin America & the Caribbean	0	0	4	6.7	1	1.9	2	9.5	0	0	1	2.5
Africa	0	0	0	0	2	3.8	4	19	0	0	1	2.5
Arab States	0	0	0	0	0	0	1	4.8	0	0	0	0

▶ Annex Table 8. Number of participants in demonstrations, by region

		<10	11	-49	50)-99	100	-499	500)-999	>1	000
Region	N	%	N	%	N	%	N	%	N	%	N	%
Europe & Central Asia	5	38.5	33	48.5	12	21.4	17	27.0	0	0	3	17.6
Asia & the Pacific	5	38.5	8	8.8	22	39.3	16	25.4	6	85.7	10	58.8
North America	1	7.7	6	8.8	4	7.1	5	7.9	1	14.3	2	11.8
Latin America & the Caribbean	1	7.7	21	30.9	15	26.8	22	34.9	0	0	2	11.8
Africa	1	7.7	2	2.9	3	5.4	3	4.8	0	0	0	0

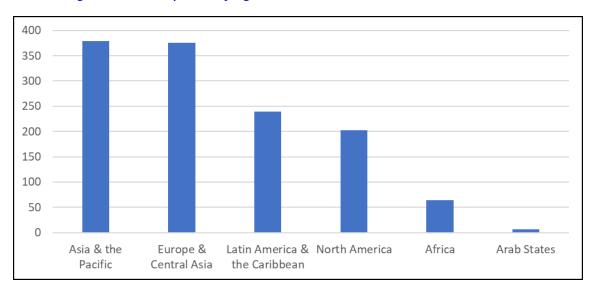
Note: There are no cases for the Arab States.

▶ Annex Table 9. Protests on health and safety issues (frequencies and percentages of all events), by year and region

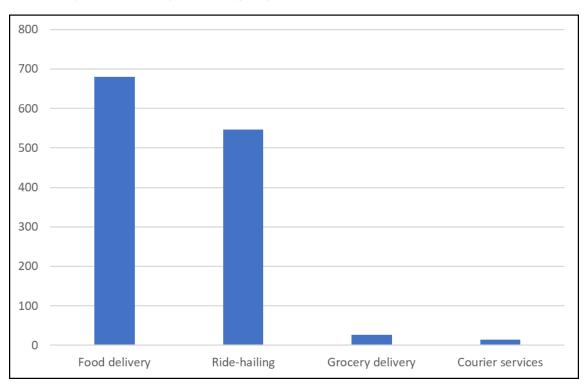
	2017		20	18	2019		2020	
Region	N	%	N	%	N	%	N	%
Europe & Central Asia	6	7.7	1	0.8	8	6.0	11	26.2
Asia & the Pacific	2	4.4	12	22.2	14	8.9	24	44.4
North America	3	8.8	1	2.8	5	5.4	21	51.2
Latin America & the Caribbean	6	28.6	13	29.5	21	33.9	72	66.1
Africa	4	33.7	12	33.7	4	33.7	2	66.7

Note: There are no incidents for the Arab States. Data for 2020 cover only the first seven months.

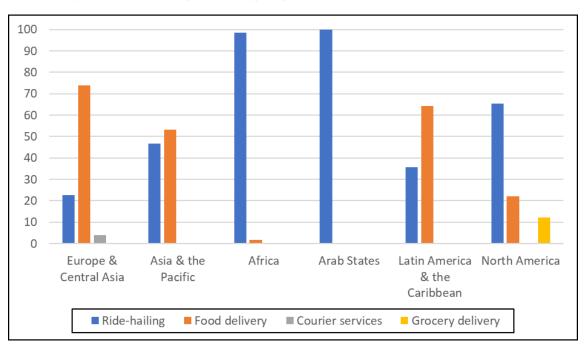
► Annex Figure 1. Number of protests by region



► Annex Figure 2. Number of protests by type of platform



► Annex Figure 3. Distribution of protest, by type of platform work (%)



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