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Work and social protection in the platform economy in Europe

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Abstract

The article presents emerging evidence on the development of the platform economy, paying particular attention to the motivations for entering platform work, the conditions of platform work and the extent of social protections afforded platform workers. Debate thus far has tended to be highly speculative and lacking in grounded empirical analysis, with policy-makers in particular actively looking to regulate platform work on the basis of its novelty as a form of employment within the wider context of the decline of the 'standard employment relationship'. The article explores such concerns through an analysis of European Union labor market data and a unique data-set of circa 1,200 online 'click workers' across four established platforms. A novel contribution of the analysis is to differentiate between those that only work on platforms (*work-dependent platform workers*) and those that do such work in addition to another job. The analysis suggests that work-dependent platform workers are more likely to be differentiated by their motivations for doing such work than their experiences of job quality or access to social protections. However, the relationship between platform working and levels of social protection is complex, notably in terms of combined level of social protection and the contractual arrangement of additional job holders. This leave us to conclude that policy initiatives designed to address gaps in social protections for platform workers would be more appropriately targeted towards problems of insecure work more broadly. Finally, a number of areas for future research are outlined.

Introduction

This article presents emerging evidence on the development of the platform economy in Europe, paying particular attention to the motivations for entering platform work, the conditions of platform work and the extent of social protection afforded platform workers. Platform work – that is, paid work mediated via online platforms – is a developing area of study. Research to-date has tended to focus at three main levels. First, at a general level, consideration has been given to the novelty of platform work and specifically the legal implications such work poses for contractual relations of employment (Adams et al., 2018; Cherry & Aloisi, 2016; Cunningham-Parmeter, 2016; Prassl & Risak, 2016; Todoli Signes, 2017). Second, at the level of the labor market, attention has focused on the extent of platform work, particularly in terms of the numbers employed (Farrell & Greig, 2016a; 2016a; Huws et al., 2017). Third, at the level of platforms themselves, studies have sought to evaluate the experiences of workers, typically with reference to exemplar platforms, such as Uber (for instance, Calo & Rosenblat, 2017; Chen et al., 2015; Rosenblat & Stark, 2016) or Amazon Mechanical Turk (for instance, Bergvall-Kåreborn & Howcroft, 2014; Ipeirotis 2010; Irani & Silberman, 2013; McInnis et al., 2016).

This body of research has highlighted the potentially deleterious working conditions of platform workers, posed questions about how to regulate such work and stressed the relationship between the emergence of platform work and wider labor market change, notably the decline of the so called ‘standard employment relationship’ (see, for example, Berg & De Stefano, 2010; Schor, 2018b). Yet, research in this area is still in its infancy. To date, speculation about platform work far exceeds the amount of systematic empirical evaluation. We still know very little about the working realities of platform workers and how this may vary between platforms. Likewise, while researchers have been keen to acknowledge the changing nature of the labor market in shaping platform work (Berg, 2016; Huws et al., 2018; Schor, 2018b), systematic analysis of the linkages between the growth of platform work and patterns of change in labor markets has yet to be developed.

Against this backdrop, the article aims to locate the dynamics of platform work within the wider context of labor market restructuring and the experiences of platform workers. We would argue that this

is necessary if we are to fully understand the extent and significance of the impact of platform work. With particular reference to the European Union (EU) context we seek to address two overarching questions. First, do labor market trends provide visible evidence of the decline of the standard employment relationship, suggestive of the basis for driving new forms of platform working? Second, is it possible to identify novel characteristics of platform workers that differentiate them from the experiences of other type of labor market participation? The value of such an analysis is particularly salient in the EU, as this is a context where policy makers are actively looking to regulate platform work, on the basis of its novelty as a form of employment. Of particular note is the extent to which problems encountered by platform workers in accessing social (and employment) protections are specific to these workers or part of a wider problem. Up to now, policy proposals for addressing the challenge of platform work have often focused too narrowly on particular problems faced by platform workers. We are concerned, however, to explore the nature and extent of continuity between platform work and the growth of other forms of insecure work. We therefore aim to develop an understanding of the reasons why people are doing platform work, their level of dependence on platform work, their job quality and extent of access to social protections.

Empirically the paper is informed by analysis of EU macro-level labor market data and an original survey of circa 1,200 workers across four leading platforms. Conceptually, the paper is framed by an approach that is sensitive to the employment relations features of platform work, rather than its technology. Instead of focusing on its novelty, our approach emphasizes important continuities between platform work and other forms of insecure and precarious labor. Our point of departure follows Stanford (2017), who argues that key features of platform work are not unique, but in fact have a long history in the capitalist organization of work. We also incorporate the insight of Schor (2018b) that, far from being a “disruptor” of existing forms of work, platforms actually reproduce many of its worst features, including inequalities and discriminatory practices, and general issues of insecurity.

The remainder of the article is organized into four sections. In the next section, we critically review extant conceptualizations of platform work, outlining its main characteristics, and highlighting its variegated nature. In the second section, we set the scene for locating platform work by discussing wider developments in European labor markets. The third section presents our survey findings. We contend that, even with the limited evidence available, it is clear that platform work should be viewed as a

(technologically enabled) form of insecure work and, as such, an integral part of wider trends. This supports a potentially more inclusive approach to policy-making in employment and social protections, than measures specifically for platform work. Finally, we identify some pressing areas for future research.

Emerging research themes

Platform work is the subject of a rapidly developing research literature. Early research was dominated by investigation of platform work carried out online – or, at least, organized and delivered online – which we term *online platform work* (Forde et al., 2017; Huws et al., 2016; Huws et al., 2017). Online platform work is commonly sub-divided into two types. The first comprises simple, often repetitive tasks, such as tagging images or providing transcriptions of short video clips. Often termed “clickwork”, workers are typically paid very small amounts of money – as little as 2 cents – for completing individual tasks, and earnings therefore depend on workers’ ability to find large numbers of tasks. Platforms mediating clickwork include Amazon Mechanical Turk (AMT), Microworkers, and Crowdfunder. More recently, it has become clear that the largest growth of platform work has taken place in work that is organized and (usually) paid for online, but that is carried out in person, requiring the physical presence of the worker at the time and place where the paid-for service is provided (Drahokoupil & Fabo, 2016). We refer to this as *offline platform work* (Forde et al., 2017; Huws et al., 2016; see also, De Stefano, 2016). Examples include providing taxi-driving services, home maintenance and other domestic tasks, food delivery, and dog-walking. More recent research has shifted significantly towards offline platform work, leading above all to numerous investigations of Uber, which is now perhaps the most-studied company in the world.

Many of the shortcomings of empirical research into platform work can be traced to a well-known problem facing researchers in this area; namely, the lack of reliable official data. The familiar choice between quantitative and qualitative research methods presents specific challenges in the study of platform work. Quantitative surveys tend to be conducted using online platform workers as participants, due to the relative ease of access (for instance, Berg, 2016; Ipeiriotis, 2010). Surveys conducted using a sample of the general working population (for instance, Huws et al., 2017) have proved useful for estimating the scale of participation in platform work, but sample sizes so far have proved too small to permit detailed statistical analysis of platform workers *per se*. By contrast, offline crowdworkers are

difficult to reach, and consequently this population is more amenable to qualitative case study methods. As a result, the familiar problems of comparing qualitative and quantitative findings are, in this field, overlaid by the tendency for these methods to investigate different groups of workers. Consequently, attempts to synthesize an overall understanding of the place of platform work in wider processes of labor market change face even greater problems than usual.

Nevertheless, it is our belief that despite the challenges there is now sufficient empirical research, of various kinds, to enable the identification of broad features and trends of platform work. We identify four emergent themes of research to-date.

The contested meaning of platform work

Accounts of platform work tend to fall into one of two competing camps: optimists and pessimists. Optimists typically understand platforms in terms of ‘sharing’ (Codagnone et al., 2016; Horton et al., 2016) or ‘collaboration’ (European Commission, 2016; PWC, 2016), whereas pessimists tend to locate it in terms of ‘gig work’ (Dokko et al., 2015; Graham et al., 2017; Huws et al., 2017). The polarized nature of debate is in part a result of the definitional ambiguity of platforms, with the views of optimists and pessimists largely existing in parallel rather than as part of an engaged debate. Optimistic accounts tend to emphasize the supposed benefits for workers: of “new” forms of work – whether in opportunities for self-reliance and “entrepreneurialism”; the potential for winning “freedom” from humdrum 9-5 employment; or simply in terms of opportunities for gaining additional income. By contrast, critics emphasize low earnings, insecurity, and the offloading of risk from companies to their workforce (see collection by Neufeind et al., 2018).

We do not intend to address definitional questions here (for that, see Botsman, 2013; Fabo et al., 2017; Huws, 2015). Instead, following Kenney and Zysman (2016) we focus on *platform mediated work*, as this terminology has the advantage of emphasizing the role of platforms in shaping potentially new ways of organizing paid work (Berg, 2016; Donovan et al., 2016). Of conceptual significance, platform work is often seen as heralding the end of the Standard Employment Relationship (Lewchuk, 2017; Stanford, 2017). For some, platform work ushers in the end of capitalism, leading to utopian visions of “fully automated luxury communism” (Bastani, 2019; see also Srnicek & Williams, 2015). For others, platform work heralds a dark dystopia, in which the end of work will mean precarity, unemployment, and a “race

to the bottom” driven by robots, AI, and ‘black box’ algorithms. In part, claims for the transformative potential of platform work are related to the extent to which it is seen as a radical break from previous forms of work.

The claimed novelty of platform work

A recurring feature of debates on platform work is the claim that it is something entirely new, representing a radical break with previous forms of employment and work organization. Whether optimistic or pessimistic, accounts share a common thread: predictions of radical transformation usually see technology as the driving force. The claim of technological newness is a common refrain from the platform companies themselves and can also be heard at the highest levels of policy development. One of the effects of foregrounding technology is to give the process an air of inevitability.

Numerous commentators have been critical of the (re)growth of technological determinism in accounts of platform work. An alternative view has been provided by Stanford (2017), who identifies five “broad organizational features” of platform work: work is carried out ‘on-demand’; there is a preference for piecework payment systems; workers commonly provide their own work equipment; there is a ‘triangular relationship between the producer, the end-user and the intermediary’; and there is ‘some form of digital intermediation’ (ibid.: 384). For Stanford, ‘only the last of these common features of platform work has any obvious connection to modern technology’ (ibid.). By contrast, the four other features each have a long history in the capitalist organization of work. It seems highly problematic, therefore, to prioritize technology over other aspects, if we are to gain an adequate grasp of platform work.

A focus on technology is also often associated with claims for the “disruptive” effects of platforms on existing business models and forms of work organization. However, as Schor (2018b) notes, in other respects, platforms are not disruptive at all. Once analysis shifts away from technology, towards earnings, hours, working conditions, and other employment relations issues, the apparent novelty of platform work is reduced, and it is possible to see platform work in relation to broader labor market dynamics. As Schor (ibid.: 126) explains, “platforms are less disruptors than reproducers of existing trends in labor markets”, especially in terms of discrimination and other inequalities.

How significant is platform work?

Further controversy can be found among attempts to assess the scale and significance of platform work. This is a highly contested area, exacerbated by the lack of reliable data. Official statistics have yet to catch up with rapidly evolving forms of online economic activity, despite repeated calls to rectify this problem (Forde et al., 2017). In addition to the problem of data shortages, estimates also vary by different definitions of platform work. Table 1 gives an overview of the varied estimates provided by some of the better-known studies.

Table 1: Varied estimates of platform work

Study	Definition	Geographical area	Workers
Alsos et al., 2017	Platform work: working age, labor platforms, also Airbnb	Norway	0.5 to 1% of population. Plus 2,300 Uber drivers.
Balaram et al., 2017	Gig economy: using platforms to find small tasks, sometimes completed on-demand	UK	Around 3% of adults aged 15+ have tried gig work of some form.
BEIS, 2018a, 2018b	Gig economy: exchange of labor for money between individuals or companies via digital platforms; short-term basis; payment by task.	UK	4.4% of total population
CIPD, 2017	Gig economy: including online tasks; providing transport; local delivery of food or other goods; at least once in past year.	UK	4% of people aged 18-70
De Groen et al,	Using Eurofound's (2015)	EU28	About 12.8 million

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2017	definition of platform work		workers
Farrell & Grieg 2016a	Income to bank account from platform mediating exchange of work for pay (labor platform)	US	0.4% of adults do platform work each month. Total of 0.9% of adults over 3 years.
Harris & Krueger, 2015	Gig economy: work involving use of internet-based app to match customers to workers.	US	0.4% of workforce
Heeks, 2017 references To and Lai, 2015	Online platform work: paid task- or project-based work delivered digitally, organized via online platform.	China	25 million registered
Huws et al., 2017	Platform work: sale of labor via a platform	Austria (AT), Switzerland (CH), Germany (DE), Italy (IT), Netherlands (NL), Sweden (SE), UK	Ever done platform work: 19% of adults in AT, 12% in DE, 22% in IT, 9% in NL, 10% in SE, 18% in CH, 9% in UK.
Ilsøe & Madsen, 2017	Platform work: earning money at least once over last 12 months	Denmark	1% of population.
Jesnes et al., 2016	Sharing economy: labor (work) platforms, and capital (sale or rental) platforms.	Norway	10% of population worked for platform at some time; 2% on weekly basis

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Kuek et al., 2015	Online micro tasks and online professional tasks	World	47.8 million registered, 4.8 million active.
McKinsey Global Institute, 2016	Digital platforms for independent work, comprising platforms for people to sell goods or lease assets or provide labor services	US, Austria, Belgium, Germany, Denmark, Greece, Spain, Finland, France, Ireland, Italy, Luxembourg, Netherlands, Portugal, Sweden, UK	Estimated 9 million people using platforms to provide paid labor services (4% of working age population)
PWC, 2017	Collaborative economy: small tasks and household services; collaborative finance; accommodation and facilities; professional services; peer-to-peer transport, car-sharing	Finland	30,000 active platform workers
Statens Offentliga Utredningar (SOU), 2017	Sharing economy: individuals provide to unacquainted individuals; access to underutilized resources, property or services; paid or unpaid; via digital platforms or analogue forums.	Sweden	4% of working age population have looked for work on platforms, 2.5% have performed some.

Statistics Finland, 2017	Collaborative platforms: peer-to-peer accommodation or transport; household services; professional services; collaborative finance.	Finland	About 0.3% of Finns aged 15-74 years earned more than 25% of income from work or other platform activities during previous 12 months.
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Source: Adapted from Eurofound 2018; Farrell and Grieg 2016a.

Such differences aside, it is nevertheless possible to draw two initial conclusions. First, platform work presently forms a small but significant part of overall work and employment: in all likelihood, between around 1-5 per cent of the working age population have undertaken some form of platform work at some time, with a smaller group doing so on a regular basis (Forde et al., 2017). Second, the evidence suggests a pronounced unevenness in its extent, with considerable variation within and between countries, between different sectors of the economy, in addition to widely varied levels of participation between different individuals (Huws et al., 2017).

While some US research has concluded that the growth of platform work has peaked (Farrell and Grieg, 2016b), most commentators expect that it will continue to expand. Although media coverage tends to focus on technology as the key driver of growth, there is clear evidence to suggest that other factors are more salient. For example, Forde et al. (2017) interviewed 50 experts from across the EU and beyond, almost none of whom named technology as a key driver of future growth. Rather, more familiar business concerns were listed, including the tax advantages to companies of switching from a directly-employed workforce to a self-employed (or independent contractor) model; other cost-savings associated with the outsourcing of risk, such as the provision of work equipment and vehicles; and other institutional and regulatory factors, such as the pre-existence of casualised work and “grey” economic activity. This range of factors suggests similar underlying dynamics to the wider growth of other forms of insecure work in recent years. These findings also suggest that the growth of platform work – as one type of insecure work – is also likely to continue.

The experience of platform work

We know far less about the lives of those engaged in platform work than we do for most other forms of work. Nevertheless, certain features are becoming clear. Researchers have identified a number of demographic characteristics of platform workers (typically with reference to AMT), such as their typically young median age, fairly even gender split, and often high educational attainment (Berg, 2016, 2018; Huws et al., 2018; Jolly, 2018). Studies have shown that platform work often returns only very low rates of pay, well below any legal minimum threshold (Berg 2016; Forde et al. 2017). Platform workers often spend significant periods of time looking for work – 18 minutes for every hour of work, according to Berg’s (2016) research – which effectively represents unpaid work (see also, Graham et al., 2017; Wood et al., 2017). Evidence also suggests that most people who engage in platform work have another job or main source of income, to which platform work provides a supplementary source of income (Huws et al., 2017), although Berg’s research found that up to 40 per cent cited platform work as their main source of income.

So far, there has been little systematic analysis of differences between those who rely upon platform work as their main source of work and income, and those for whom it is a supplementary activity. Several studies (CIPD, 2017; Huws et al., 2017; Ravenelle, 2017a; Schor, 2018a) suggest that those who are most reliant upon platform work like it least and have lower earnings than those who have other sources of income. For instance, Schor and Attwood (2017) have shown that hourly rates of pay for full-time Uber drivers are significantly less than for those drivers who have leeway to pick and choose the hours they work, and who are thus able to take advantage of peak hours for customers and surge pricing arrangements. However, other research has found enthusiasm for platform work to be more evenly divided (Forde et al., 2017), or even that frequent platform workers report greater levels of satisfaction than those who work via platforms more occasionally (BEIS, 2018b). And even critical accounts find platform workers expressing surprising levels of overall satisfaction, especially in relation to the potential for flexible working hours (Forde et al., 2017). Overall, then, previous research has highlighted a number of issues in the experience of platform work, but a lack of systematic and comparative analysis means that understanding of the relationship between them remains obscure. In particular, it is far from clear how dependence upon platform work shapes other aspects of workers' experience.

The mediation of working arrangements via online platforms often serves to obfuscate management decisions and increases managerial means of control, with workers unable to challenge detrimental decisions – a common complaint of platform workers (Chen et al., 2015; Crouch, 2018; Degryse, 2016; De Stefano, 2016). The integration of user-ratings into performance evaluation systems commonly increases power imbalances between worker and employer, and heightens pressure on workers to conform to unpredictably changing company policies for fear of sudden “deactivation” (Calo & Rosenblat, 2017; Donovan et al., 2016; Rosenblat & Stark, 2016). As a result, inequalities and discrimination become further entrenched (Hunt & Machingura, 2016; Ravenelle, 2017; Rosenblat et al., 2017; Rosenblat & Stark, 2016; Schor, 2018b).

The experience of platform work is also significantly influenced by the (often disputed) legal classification of platform workers. While it is not possible fully to explore these issues here, a considerable literature has developed examining consequences of the way that platform workers are usually classified as self-employed or independent contractors (Cherry, 2016; Cherry & Aloisi, 2016; De Stefano, 2016; for an overview, see Forde et al., 2017). One important consequence of this classification is that platform workers lose any employment rights and protections that might apply more widely. More pertinent to the purpose of this article, lack of legal employee status acts, in many European countries, as a barrier preventing access to wider social protections. However, this is another area of the experience of platform workers that remains under-researched. Studies commissioned by the EU have explored problems with access to social protections for self-employed workers (Matsaganis, 2017), and for non-standard workers more generally (Spasova, 2017). Forde et al. (2017) have shown that dependence on platform work is associated with reduced access to social protections, although the relationship is not straightforward.

The questions of legal classification raise a pertinent question of the appropriate policy response for dealing with the problems that have been highlighted thus far (Fabo et al., 2017). One assumption underlying many proposals for developing new policy on employment and social protections is that platform work represents a new departure, something that can be clearly distinguished from other forms of work, and sufficiently different to require specific measures for dealing with the challenges it brings. In the EU context, this debate has seen suggestions for a new 'intermediate' employment classification to be

applied to platform workers (Todoli Signes, 2017), as well as calls for renewed legal definitions of both worker and employer (Prassl & Risak, 2016). Proposals are also under development among Members of the European Parliament (MEPs), with a view to developing a Directive on Platform Work, designed to reframe employment regulation to encompass these new practices (Risak, 2018). These proposals assume that there is something distinctive about platform work, and about the needs of platform workers. Yet, as the above discussion has shown, such an assumption is questionable, and we favour an alternative approach; namely, to see platform work as part of a broader picture of increasing insecurity and precarity across a wider range of employment. Our argument is that, if platform work shares important continuities with broader patterns of change in European labor markets, then it is appropriate that measures to (re)regulate it should be similarly broadly drafted. In the following sections, we will examine empirical evidence to support this analysis.

To summarize, briefly. First, despite the limitations of existing research, the above discussion points towards the importance of grasping platform work as *work*; that is, with a focus on its labor and employment relations aspects, rather than its technological novelty. A second conclusion recognizes the importance of significant disparities in the amount of platform work that people undertake, the level of income they achieve, and the extent of their dependence upon it, both as a source of work and a source of income.

This brings us to a consideration of labor market aspects of platform work. Those who have addressed labor market issues in platform work have usually focused narrowly on conditions pertaining to particular platforms (Hall et al., 2017; Ipeirotis, 2010), or sometimes on platforms more widely (Beerepoot & Lambregts, 2015; Horton, 2013; Schmidt, 2017) but have not addressed issues in labor markets more broadly. Treating platforms as if they were simply marketplaces, however, significantly underplays their crucial active role as organizers of work, discipliners of labor, and guardians of brands (Donovan et al., 2016). Furthermore, focus on platforms as markets for labor means neglecting the role of platforms in wider labor market restructuring. As a result, despite a rapidly expanding body of research, there is still little systematic exploration of the position of platform work in wider patterns of change. It is our contention that understanding in this area would benefit greatly from a more detailed consideration of the empirical complexity and unevenness of platform work, as a foundation for

conceptual clarification and theoretical development, and the remainder of the paper will consider these issues.

Labor market trends in Europe

This section draws on macro-level data from the European Union to examine broad trends in employment and the potential degree of change in what is commonly termed the Standard Employment Relationship (SER). Does the data suggest a visible decline in the SER and could this be used to provide solid evidence of a key driver for platform work? Many have pointed to overlaps between various types of ‘non-standard’ or contingent forms of employment and the rise of platform work (Coyle, 2017; Katz & Kreuger, 2016), with platform work often characterized as being undertaken on a self-employed basis, or as an additional, rather than main job, for example. The purported connection between ‘non-standard’ work and the platform economy is particularly salient in the EU context, where emerging views on regulating platform work view it in a similar way to other non-standard employment, as a form of work that can be clearly categorized and regulated through a Directive.

Take in Figure 1.

Figure 1 presents employment trends in the EU over the period 2002–2018, with reference to precarious employment, defined as jobs of less than three months in duration, part-time employment, temporary employment, self-employment and second job holding. Rates of employment in the EU have risen since the early 1990s, reaching a record high of 72 per cent in 2017, with dips of varying degrees in individual countries apparent in the aftermath of the 2008 recession, and recovery since then. Rates of precarious employment, using standard EU definitions, remained relatively low and steady throughout this period, standing at 2.3 per cent in 2017, the same level as in 2008 at the start of the global economic crisis. Figures such as these are taken by some as evidence that claims for the decline of the SER are exaggerated.

Such trends offer only partial insights, however. Other evidence highlights that many workers in full-time, permanent employment experience significant feelings of insecurity and precariousness in their

working lives, because the experience of precarious employment is not limited to contractual matters (Fudge, 2012; Gutierrez-Barbarrusa, 2017; Lewchuk, 2017). Gutierrez-Barbarrusa (2017), for example, argues that multiple indicators of insecurity and poverty need to be used to gain a full picture of precariousness in employment, and using indicators built on such measures, suggests significant rises in precariousness in Europe since 2008. Furthermore, the narrowness of the official definition used to map macro trends is problematic, capturing very short-term jobs rather than ‘precarious’ work per se (Eurostat, 2018).

What about individual forms of employment, which in one way or another, are said to reflect a departure from the standard employment relationship, and which may be suggestive of where particular types of platform work may be concentrated? Part-time work is well established in many countries (Rubery et al., 2005). It has grown in incidence and share across the EU since the recession. (Eurofound, 2017a) and now accounts for almost one fifth of all jobs, an increase from 1 in 7 jobs in 2001 (ibid.) There is, however, considerable variation between countries, from a high of 45 per cent in the Netherlands to as low as just two per cent in Bulgaria. Part-time work is uneven in a number of respects. Most part-time workers are women, and the gendered dimension of this form of work is even more pronounced for those who work very short hours (under 10 per week), although the most rapid growth of short hours part-time work has been among young workers (under 25 years) and older workers (over 64 years). Many short hours part-timers do not consider themselves to be workers at all, variously describing themselves as students (26%), retired (9%), or unemployed or inactive (Eurofound 2017a).

Part-time work can be further subdivided into whether it is considered voluntary or involuntary. High rates of involuntary part-time employment are strongly associated with higher rates of unemployment in individual countries. Yet, between 2007 and 2015 – a period of recovering employment levels – the proportion of part-time workers describing themselves as involuntary (in other words they would prefer a full-time job) increased (from 22% to 29%), suggesting wider shifts in which underemployment was becoming a key feature of segmented labor markets (Horemans et al., 2016). In summary, part-time work has increased, involuntary part-time work has increased, and both are associated with women’s employment and sectors known for low pay, low skills, and insecure employment. The data also suggest significant overlaps between part-time work and other forms of non-standard employment.

It is highly likely that the platform economy has important connections with many of these trends. The International Monetary Fund's World Economic outlook in 2017, specifically highlighted the rise of underemployment, for example, through involuntary part-time and gig economy work, as a central challenge to existing national welfare systems (IMF, 2017).

Temporary employment is another form of non-standard work where it has been argued that significant numbers of platform economy workers are likely to be found (Brinkley, 2016; Guardian, 2018). Again, there is considerable variation across Europe, with temporary employment accounting for around a quarter of the workforce in countries such as Spain, compared to headline rates of temporary employment at just five per cent in countries such as the UK. The overall figure for temporary employment in the EU has scarcely changed since 2007, falling slightly from 14.5 per cent in 2007 to 14.2 per cent in 2016, and dipping just below 14 per cent during the recession (Eurofound, 2017a). The motives for taking up temporary work are varied, although across Europe as a whole, more workers take on temporary jobs involuntarily, preferring a permanent job (*ibid.*: 7). Temporary work is significantly associated with younger workers, agriculture, some service sectors, and elementary occupations. It is higher for part-time workers, less educated workers, and slightly higher for women workers.

Having a second job might be thought of as an indicator of reduced availability of secure and well-paid work, and therefore levels might be expected to rise if the SER were declining. Yet available figures present anything but a clear picture. The EU average rate is rather low, with little more than four per cent in total having a second job, a rate that appears relatively stable over time.

Self-employment features significantly in debates on platform work. Since most platform workers are classified (by the platforms, at least) as self-employed, or sometimes as independent contractors, any significant growth in platform work might show up in official data by virtue of an increase in the numbers of self-employed. Yet, figures for self-employment show no increase since the beginning of this century. This could be taken as evidence that little has changed. On closer inspection, though, the figures reveal important changes in the composition of self-employment in Europe. Most obvious is the difference between countries. As Figure 1 shows, around 1 in 7 EU jobs are done on a self-employed basis. This average, however, masks significant variation between highs of 30 per cent in Greece and lows of eight per cent in Denmark. Further, since the last recession, some countries have experienced an increase in

self-employment and others a decrease (Eurofound, 2017b). There is also unevenness across different sectors, with notable increases in the services and public sectors. Variations between different types of self-employment are also observable. Since the economic crisis, the number of self-employed workers with employees has fallen, while the number of self-employed without employees has risen; again, within a stable overall total. While some 60 per cent of self-employed workers in the EU say they are self-employed by choice, a fifth say that they had no other choice – a figure that rises to 24 per cent for self-employed workers without employees.

Eurofound (2017b) has further explored the complexity of self-employment. The data revealed groups of self-employed workers that shared important similarities among a population whose diversity fitted poorly with the categorization of official statistics. This analysis revealed five clusters of self-employed workers that “capture [the] diversity more accurately” (ibid.: 15). Three of these clusters (employers, small traders and farmers, and stable own-account workers) comprised around three-quarters of the total number of self-employed workers in the EU. The remainder were made up of “vulnerable self-employed” and “concealed self-employed”. Together, these groups encompassed some eight million people who, compared with the other groups, were more dependent, had less autonomy over their work, experienced greater precarity, lower incomes, less job security, and poorer working conditions. Significant numbers of platform economy workers are likely to be found in these figures, yet precise numbers are, as yet unknown.

Aggregate labor market data reveals a degree of complexity. Superficially the data suggest relatively little change in aggregate trends and no clear indicator of platform employment driving particular types of non-standard employment or the broader decline of the SER. Rather, it is clear that different types of non-standard employment encompass a relatively large proportion of those employed across the EU labor market and within these different categories of employment there is evidence of increased vulnerability and precarity in employment. It is at this level of complexity in terms of labor market change that platform work is located. Yet, aggregate data tells us nothing about either the extent of platform work or the experiences of such work. It is to the latter than we now turn.

The experience of platform work: preliminary findings

The article now turns to a preliminary analysis of findings from our survey of online platform workers, conducted in 2017, across four “clickwork” platforms: Amazon Mechanical Turk (AMT), Clickworker, CrowdFlower and Microworkers. The final usable sample was based on 1232 respondents, spread evenly across the four platforms. Of these six out of ten were men (60%) and four out of ten were women (40%). A large majority of respondents, nearly three quarters (74%), were 40 years old or younger, with nearly four out of ten (39%) under 30 years of age. Of those over 40, 16 per cent were 50 years of age and under, with just ten per cent 51 years or older. The majority of respondents (85%) were ethnically white. The data supported previous research that platform workers are more highly educated than on average across the labor market. Around half of all respondents (51%) were qualified to Bachelor’s degree level or higher, with just under a quarter (24%) currently studying for a degree. Just ten per cent were members of trade unions.

Given the relative youth of platform workers, it was perhaps unsurprising that a minority reported that they were married (35%), with around four out of ten (42%) reporting that they were single. The majority claimed to have no dependents (60%), including children under the age of 16. The nationality of respondents was diverse, covering many European countries, North America, Australia and New Zealand, India and Pakistan, South-east Asian, Africa, Brazil and Russia. The dominant nationalities included: American (circa 30%), British (circa 7%), German (circa 13%), Italian (circa 10%), and Spanish (circa 8%).

The survey found that respondents made frequent use of platforms as a source of work. Approximately six out of ten (59%) respondents claimed to have undertaken work via a platform every day or nearly every day. Around a further fifth (21%) claimed to source work via platforms once or twice a week. The final fifth were less frequent users of platforms, be that once or twice a month or just a few times a year. These findings represent a greater intensity of platform work, compared with previous research: for instance, Huws et al. (2017) found that 50-57 per cent carried out platform work at least weekly, compared with some 80 per cent of our sample. More precisely, the study found relatively high numbers of hours worked for low rates of pay. The median number of hours worked per week was 16 hours and the median rate of pay was just \$6 per hour.

Following previous studies, many platforms workers did such work in addition to another or multiple jobs. Specifically, six in ten platform workers performed such work in addition to another job, while a further eight per cent held multiple jobs. Of those with another job, six in ten held a full-time position and four in ten a part-time position. Intriguingly, just under one half (48%) claimed to work on an open-ended contract, while 14 per cent had no contract of employment and 15 per cent reported they were self-employed. For around a third (32%), however, platform working was their only source of employment. This point of differentiation is of some interest, and, as noted, is a well-known finding from previous studies (see Berg, 2016), but remains under-explored. We do not know to date the potential different motivations for entering platform work or whether there are different experiences of undertaking platform work between those who work on platforms in addition to another job or those that work on platforms relatively full-time. Given the central questions of the article around the putative decline of the standard employment relationship and the novelty of platform work this bifurcation is explored in more detail below. To do so, we categorize our respondents into two groups, those that only work on platforms (hereafter, usually labeled *work-dependent platform workers*) and those that hold one or more jobs in addition to platform work (labeled *non-dependent platform workers*). We then compare the two groups (as our dependent variable) in terms of their motivations for doing platform work, their quality of work and the extent to which they have access to social protections, descriptively at first and then via multivariate analysis. It is worth noting that workers who have no other form of paid work than that carried out via platforms may, at the same time, have another source (or sources) of income. However, since employment status is important in relation to social protections, we focus here on differences between those who engage in another form of paid work, and those who work for pay only via platforms.

The motivations for, and context of, doing platform work

Table 2 details the potential motivations for, and context of, entering platform work. More subjective motivations were considered along a five point scale from strongly disagree to strongly agree, with the table presenting the data for positive responses. In addition, more contextual factors relating to economic, personal (notably health) and household issues were also considered. A point of debate in the literature is the extent to which platform workers undertake such work as a means to supplement the income of additional, poorly paid employment or whether it is more of a leisure activity with income seen

as ‘pin money’ (for a discussion of this see Berg, 2016). The findings revealed notable differences between those dependent on platform work and those that engaged in such activity in addition to other employment. A large majority (86%) of respondents saw platform work as a means for additional income with a statistically significant larger proportion of non-dependent platform workers citing this as a reason. However, the latter group was also much more markedly likely to report that they saw platform work as a leisure activity (72%) when compared to their counterparts that were platform work dependent (28%). In contrast, such workers were more likely to regard platform work as the best job (39%) they could find or, more saliently, that such work was the only alternative they could find to make ends meet.

Table 2: Motivations and context for platform work (%)

	Work dependency	Non-work dependency	Total (per cent)	n
Subjective reasons for doing platform work (strongly agree/ agree)				
Option for additional income	83	88	86	1223*
Prefer to work from home	85	67	73	1220**
Personal preferences	69	68	69	1215
Enjoyable	59	65	63	1222
Leisure activity	28	72	54	1214**
No other alternative (to make ends meet)	50	27	34	1223**
Best job could find	39	30	33	1222**
Can only work from home	46	26	32	1221**
Economic, personal and household context				
Fit with family or social commitments (well)	89	88	89	1231
Long-term illness (Yes)	30	19	23	1231**
Disability (limited activities)	26	19	21	1231**
Experience of long-term unemployment (>12 months)	47	11	23	1231**
Make ends meets (difficulty)	46	31	36	1227**
Pension savings (Yes)	19	43	35	1231**

Cross-tabulation: Chi-square: * significance at 0.05; ** significance at 0.01

A significant proportion of platform work dependents also reported that they did such work as they could only work from home (46%) or that this was their locational preference for work (85%). This raises intriguing questions about why this should be the case. The additional contextual findings shed some potential light on this. While a large majority of total respondents regarded platform work in a positive light in terms of work-life balance (89%), there was no notable difference between our two

categories of workers. There were, however, significant personal and economic points of differentiation. First, work-dependent platform workers were significantly more likely to be associated with reporting long-term illness (30%) and disabling conditions (26%), compared to those with additional employment. There was also a significant difference in terms of the experience of long-term unemployment. Nearly half (47%) of those that were work-dependent on platforms reported that they had experienced a period of long-term unemployment – that is of over 12 months – in the past five years, compared to around one in ten (11%) of those holding down other jobs. Against this background, nearly half of those working on platforms claimed that they had difficulty making ends meet (46%), although it is worth noting that this was also the case for nearly three in ten (31%) of those with additional jobs. Given these challenging circumstances the option of saving towards a pension seemed a remote possibility, being the case for less than one in five (19%) of our work-dependent platform workers.

Job quality

The motivations for getting into platform work suggest that for some categories of workers this was rather a constrained choice, faced with long-term unemployment, potentially disabling health conditions and a real lack of labor market alternatives. But what of the quality of such work? This is examined in more detail in Table 3. Again, respondents were asked to consider various aspects of job quality and to respond on a scale from strongly disagree to strongly agree, with the table reporting only the positive responses. The main finding was the relative similarity in responses between the two categories of workers. A majority of respondents (69%) reported that the work undertaken entailed short-repetitive tasks, a perhaps rather obvious finding for those performing work on sites associated with clickwork and Human Intelligence Tasks (HITs). Despite the nature of such work, around half were of the view that such tasks allowed them to learn new skills (56%) or provided them with an opportunity to utilize their existing skills (49%), although far fewer saw such work as commensurate with their level of qualification (38%). There were, however, some clear differences in viewpoint between those that were work-dependent on platforms and those that were not, with the former more likely to report negative aspects of job quality. While in all cases the responses were in the minority, those that were platform dependent were significantly more likely to report that, as a result of working on platforms, they were deprived of essential workers' rights (38%) and sickness/ health care benefits (29%), worked under high stress (20%)

and generally felt insecure in their work (27%).

Table 3: Subjective and extrinsic job quality

	Work dependency	Non-work dependency	Total (per cent)	n
Subjective measures of job quality				
Short repetitive tasks	69	68	68	1230
Can learn new skills	52	58	56	1229
Opportunity to utilize skills	46	51	49	1223
Qualifications match work performed	37	38	38	1228
Deprived of essential workers' rights	38	32	34	1229**
Feel insecure	27	20	22	1228**
Cannot access education	11	11	11	1229
Deprived of sickness/health care benefits	29	23	25	1230*
Work under high stress	20	19	20	1226*
Extrinsic measures of job quality				
<i>Hours:</i>				1231**
1-9	20	28	26	
10-19	23	28	27	
20-29	14	19	18	
30-39	12	10	11	
>40	31	15	20	
<i>Pay (US \$ per hour):</i>				1231
<5	39	34	35	
5-9	35	37	36	
10-14	11	12	12	
>15	15	18	17	

Cross-tabulation: Chi-square: * significance at 0.05; ** significance at 0.01

Respondents' perceptions of different aspects of job quality provided less insight into the more basic, extrinsic aspects of the conditions of work, which could be important drivers of how workers actually view their working environment. Table 3 also presents data on hours worked and pay (in US dollars per hour). In line with the findings of previous studies (Berg, 2016; Huws et al., 2017) work in the platform economy was associated with low rates of pay. The majority of respondents (71%) earned less than nine dollars, with just over a third (35%) earning less than five dollars. There was, however, no association between pay levels and our two categories of workers. Mediating such findings with gender also revealed no statistical associations, although a basic cross-tabulation between earnings and gender (for all workers) revealed that more men (20%) than women (14%) reported earning more than 15 dollars

per hour.

The main point of difference was in hours worked and notably at the higher end of the scale. Around a third (31%) of those that were platform work dependent reported that they worked more than 40 hours per week, roughly double (15%) the proportion of those that undertook such work in addition to another job. Additional job holders worked fewer hours on platforms, but even here it was evident that the number of hours worked were far from trivial. In fact, nearly half (47%) of those with another job worked between 10 and 29 hours per week on platforms. Overall, the median hours for those work-dependent on platforms was 21 hours a week compared to 15 hours for those with an additional job, though it should be noted that for those with an additional job that was part time the median hours worked on platforms was 20 hours. There was a basic association between hours worked and pay, with those working more than 40 hours per week associated with earning higher levels of hourly pay. However, when mediated by our worker categories, those work-dependent on platforms were more likely to be associated with working more than 40 hours across all levels of pay.

Access to social protections

There has been much debate about whether platform workers need to be accorded new social protections and this has animated contemporary policy discourse. At the EU level, for example, consultations are currently taking place around a new Directive specifically targeted at supporting platform workers (see above). The question of how access to social protections for platforms workers differs to that of other workers is a relatively unexplored issue, particularly in terms of workers' perceptions of available protections. The survey asked platform workers about whether they had access to a range of social protections, and the extent to which such protections were available at the workplace level, through private insurance schemes, via state regulation or not available at all. The different means were explored, as social protections tend to vary by nation state depending on specific employment and regulatory regimes. As Figure 2 shows, with the exception of healthcare, the most common response for each form of social protection was that it was *not* available. While a little under a quarter (23%) reported this to be the case for health care – for which a third noted there was state provision – a little over three-quarters (76%) reported there was no protections available for housing. Given the importance of national specificity, the extent of 'no protection' was cross-tabulated comparatively (USA and Canada; UK and

Ireland; Western and Northern Europe; Eastern Europe and Rest of the world). A clear and significant association was evident, with respondents from the USA and Canada and the UK and Ireland more likely to report ‘no protection’ available than respondents from Europe (both West and East).

Take in Figure 2.

Given the seemingly limited access to different types of social protection, the analysis again seeks to tease out possible differences between those that are dependent for work on platforms and those that do such work in addition to another job. Logically, those with another job may have various protections at work conferred on them by such employment. The findings presented in Table 4 provide some evidence for this, as with the exception of housing benefit there is a statistically significant difference between the two categories of worker: workers with an additional job were less likely to report they had no access to social protections. With the exception of healthcare, for those dependent on platforms for work between 68 per cent and 82 per cent reported they had no access to the different means of social protection. This was the case for more than eight out of ten for supporting maternity/ child care provisions (80%) and caring for the family (82%). The largest reported difference related to sickness insurance/leave with a 32 per cent difference between those work-dependent on platforms and those not. While this suggests that those with another job were able to derive important protections at work from such employment, it is important to note that even for such workers for most of the protections (healthcare and sickness aside) the majority reported that, in their view, they had no access to the various social protections.

Table 4: No access to social protection, by work dependency (%)

	Work dependency	Non-work dependency	Total (per cent)	n
Healthcare insurance	35	17	22	1231**
Sickness insurance/ leave	68	37	47	1231**
Disability benefits	75	54	60	1231**
Old age benefits	73	48	56	1231**
Support/ contributions childbirth rearing	80	64	69	1231**
Caring for family	82	67	72	1231**
Protection for unemployment	77	56	63	1231**
Housing benefit	79	74	76	1231

*Cross-tabulation: Chi-square: * significance at 0.05; ** significance at 0.01*

Multivariate analysis of platform work dependency and motivations, job quality and social protections

The analysis thus far is suggestive of a possible association between the dependency on platforms for work and a range of work characteristics. To test just how robust these findings were, we conducted a number of multivariate models. We present in Table 5 four models, broadly following the analysis thus far. The dependent variable is a dummy of work dependency on platforms (1) and another job (0) and since it is a binary variable the appropriate approach was logistic regression. Model 1 investigates the motivations for working on platforms and the economic, personal and household context, Model 2 examines subjective perceptions of job quality, work and hours, and Model 3 interrogates levels of access to different types of social protection. Finally, in Model 4 the dimensions of all three previous models are entered step-wise into the logistic regression. Controls are included in all models for gender (0 male; 1 female), age (<30; 31-45; 46-60; >60), education (0 no degree; 1 degree) and national context (USA and Canada; UK and Ireland; West/ Northern Europe; Eastern Europe; Rest of World).

Table 5: Logistic regression: Platform work dependent

	Model 1			Model 2			
	B	S.E.	Exp(B)	B	S.E.	Exp(B)	
<i>Motivations to work</i> (reference: disagree)				<i>Job quality</i> (Ref: disagree)			
Additional income	-1.009	.393	.363**	Repetitive tasks	.106	.262	1.112
Work from home	1.087	.350	2.964**	Learn skills	-.439	.191	.644*
Preference	-.247	.345	.781	Use skills	-.115	.189	.892
Enjoyable	.135	.313	1.145	Match quals	.131	.180	1.139
Leisure	-.326	.235	.722	Workers' rights	.248	.193	1.281
No alternative	.568	.200	1.765**	Insecure	.464	.203	1.591*
Best job	.266	.202	1.305	No education	-.375	.260	.687
Only from home	.534	.182	1.705**	Health benefits	.136	.198	1.146
<i>Economic, personal and household context</i>				Stress	.303	.215	1.353
Work-life balance	.344	.244	1.411	<i>Hours</i> (Ref: 1-9 hours)			
Long-term illness	.272	.231	1.313	10-19 hours	.347	.194	1.415
Disability	-.302	.245	.740	20-29 hours	.344	.222	1.411
Long-term unemployed	1.698	.171	5.461**	30-39 hours	.783	.254	2.188**
Make ends meet	.003	.166	1.000	>40 hours	1.434	.220	4.196**
Pensions saving	-.723	.176	.485**	<i>Pay</i> (Ref: >15 US dollars)			
				<5 dollars	.763	.219	2.145**
				5-9 dollars	.496	.221	1.642**

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				10-14 dollars	.337	.267	1.400
<i>Controls</i>							
Gender (ref category: men)	.338	.154	1.402*		.559	.138	1.749**
Age (Ref category: over 60)							
Under 21 - 30	.484	.497	.616		-.477	.425	.620
31-45	-.905	.499	.404		-1.094	.425	.335**
46-60	-.647	.524	.524		-.778	.477	.459
Educated to degree level	-.367	.153	.693*		-.549	.137	.578**
Comparative (Ref: USA)							
UK and Ireland	.671	.277	1.955*		.611	.247	1.842*
West/ North Europe	.118	.181	1.125		.266	.171	1.305
East Europe	.009	.378	1.009		-.273	.331	.761
Rest	.277	.391	1.319		.134	.364	1.143
Pseudo R2			0.343			0.159	
Observations			1165			1204	

Note: *** significant at 1 per cent; ** significant at 5 per cent

	Model 3			Model 4 Full (models1,2,3) (significant only)			
	B	S.E.	Exp(B)		B	S.E.	Exp(B)
<i>Social protections (none)#</i>				<i>Motivators and context (R2 .315)</i>			
Health care insurance	.228	.174	1.256	No Alternative	.554	.225	1.741*
Sickness insurance/ leave	.946	.190	2.575**	Only from home	.564	.200	1.758**
Disability benefits	-.122	.209	.886	Work from home	1.065	.380	2.902**
Old age benefits (pensions)	.583	.190	1.791**	Additional income	-1.082	.446	.339*
Maternity/ child rearing	-.018	.246	.982	Work-life balance	.533	.265	1.704**
Family caring	-.180	.255	.835	Long-term unemployed	1.617	.190	5.037**
Unemployment support	.257	.211	1.293	Pensions saving	-.423	.203	.655*
				<i>Job quality (R2 .358)</i>			
<i>Controls</i>				Learn skills	-.768	.244	.464**
Gender (ref category: men)	.414	.135	1.512**	Hours			
Age (Ref category: over 60)				30-39 hours	.653	.310	1.922*
Under 21 - 30	-.804	.425	.448	>40	1.376	.277	3.959**
31-45	-1.270	.424	.281**	<i>Social protections (R2 .401)</i>			
46-60	-.962	.444	.675*	Sickness insurance/ leave	.940	.234	2.560**
Educated to degree level	-.393	.134	.675**	<i>Controls (R2 .426)</i>			
Comparative (Ref: USA)				Degree	-.419	.168	.657*
UK and Ireland	.434	.245	1.544	Comparative			
West/ North Europe	.485	.157	1.624*	UK and Ireland	.810	.319	2.247*
East Europe	.435	.330	1.545	West/ North Europe	.650	.223	1.915**
Rest	.351	.354	1.420				
Pseudo R2			0.175			.426	
Observations			1231			1141	

*Note: *** significant at 1 per cent; ** significant at 5 per cent; # housing excluded*

The models all offer some preliminary confirmation of the findings thus far. In terms of the motivations and context for doing platform work, Model 1 reveals that those reporting that they work on platforms because they see no alternative to such work to make ends meet, that they prefer to work from home or that they can only work from home, were more likely to be work-dependent on platforms. Those that look to platform work as an additional source of income were more likely to hold another job. Economic drivers appeared to be particularly significant, with experience of long-term unemployment and lack of pensions savings associated with work dependency on platforms. The impact of long-term unemployment appeared to be particularly noteworthy. Workers that had experienced a spell of more than one year unemployed in the last five years were nearly 5.5 times more likely to be dependent on work on platforms compared to those that had not experienced long-term unemployment.

The predictors of job quality were to some extent less pronounced. Those workers reporting feeling insecure at work or that felt constrained in their ability to learn new skills at work were more likely to be dependent on platform work, but, apart from this, subjective experiences of work quality appeared to be rather similar regardless of whether platform work was a dedicated activity or an accompaniment to another job. Nevertheless, the differences around hours and pay appeared to be stark, with platform-dependent workers more likely to work longer hours and more likely to receive lower average hourly rates of pay. Of particular significance, the odds of those working more than 40 hours per week being dependent on platforms for work was around four times greater than for those working less than ten hours per week. The model did appear to be somewhat sensitive to how levels of pay were recalibrated, but regardless the lowest hourly pay level was consistently associated with platform dependency, and the wider findings remained the same.

Turning to social protections, again respondents' perceptions of their ability to access different forms of social protection were not, in the main, significant predictors of the level of work dependency on platforms. There were however two notable exceptions. There was a positive association between no access to sickness insurance/ leave and no access to old age benefits (such as pensions) and being dependent on platform work. The latter finding is of particular concern given that platform-dependent workers were much less likely to be saving towards a pension than those that perform platform work in

addition to another job.

Looking at the modelling in its entirety a number of findings stand out as being particularly robust. Firstly, motivations and context appeared to be rather pronounced characteristics of those work-dependent on platforms. Those workers that work only on platforms were more likely to report that they turned to such work because they could only or they preferred to work from home, and they also saw a good fit between platform work and their home-life commitments. This is not to suggest, however, that this was a simple matter of choice. There also appeared to be strong economic predictors. Workers that saw platform working as their only real option to earn an income or had experienced long-term unemployment were far more likely to be reliant on platforms as their source of work. The impact of long-term unemployment was the most notable finding from the study, and again the odds were some five times greater that a worker with experience of long-term unemployment would have turned to platforms as their main job.

Across all variables included in the model, dimensions of job quality and social protection seemed to be less significant sources of difference between our categories of workers. There were however significant associations with the inability to learn new skills and a lack of access to sickness insurance/leave and the extent to which a worker was dependent on platforms or not. However, a couple of important caveats are needed. First, the model included individual measures of social protection only. When all measures of social protection were combined (that is a composite of *no protection* against each measure) there was a significant difference between our two categories of workers. That is, those work-dependent on platforms were more likely to report 'none' against all categories of social protections compared to those that held an additional job. All other significant findings in the model remained the same. Second, when the relationship between contract status (as an independent variable) and social protection (as a dependent variable) was further explored, there was a consistent association between platform working and part-time working to reported lack of access to social protection compared to those in full-time work. In other words, when we compare the difference between those work-dependent on platforms and those with an additional job, it is clear that the contractual nature of the additional job matters.

The simple basis of hours worked also seemed to be important. Those workers that reported they

worked more than 40 hours per week on platforms were four times more likely to be work dependent (rather than not) on platforms compared to those that worked less than ten hours. Finally, a number of wider contextual variables were associated with our categories of workers. Firstly, less educated workers – that is, workers not educated to degree level – were more likely to be dependent on platform work than those that worked on platforms in addition to another job. And there also seemed to be some geographical associations, with workers in the UK and Ireland and West/ North Europe more highly associated with work dependency on platforms.

Conclusions

The main aim of the article has been to examine the dynamics of platform work within the context of wider labor market restructuring and the actual experiences of platform workers. We would argue that there is a significant need for more fine-grained analysis of platform workers and their relationship to changes in the wider labor market, notably in terms of those working in other forms of insecure work. Such analysis is necessary for two reasons. First, debates on platform work have thus far often shared a preoccupation with the novelty of such work, despite differing in the degree of optimism or pessimism about its likely consequences. Second, policy makers have been looking to introduce new regulatory instruments – such as Directives within the European Union context – to address specific concerns around the working conditions and protections of platform workers. Yet, to some extent, both extant academic debate, notable exceptions aside, and policy makers have sought to understand platform work on the basis of a number of problematic assumptions: that novel technology is driving platform work; that platform work is emblematic of a decline in the standard employment relationship; and, that platform work is relatively easy to characterize as distinctive from other forms of work and hence requires specific forms of regulation. The article has sought to evaluate and challenge such assumptions with reference to careful empirical analysis, notably a unique dataset of the experiences of platform workers, and in doing so provide a more dynamic understanding of the working conditions of platform workers and their location in the wider labor market.

The first level of analysis sought to evaluate whether labor market trends, with a focus on Europe, provide visible evidence of the decline of the standard employment relationship, suggestive of the basis

for driving new forms of platform working. At a superficial level, there appeared to be no evidence of this, as employment trends across the European Union, were somewhat stable in relative terms. There has certainly been an increase in part-time work, but wider trends in precarious working, second job holding and self-employment have not appreciatively increased as a proportion of total employment. While this could be taken as evidence of the stability of the standard employment relationship, deeper analysis suggests caution. Non-standard forms of employment now account for a large share of total employment and at an aggregate level there have been notable increases in the numbers employed in part-time employment and temporary employment. More significantly, it is clear that those working on a part-time, temporary or self-employed basis have varied experiences, such as whether they do such work on a voluntary or involuntary basis, and it is at this level of disaggregation that platform work needs to be located.

The second level of analysis looked directly at the experiences of platform workers and aimed to evaluate the characteristics of platform workers that potentially differentiate them from the experiences of other types of labor market participation. It did so by uniquely analyzing the different experiences of those that only perform work on platforms, what we label work-dependent platform workers, and those that undertook such work in addition to another job. The findings revealed that platform work dependency was characterized more by distinctive motivations than experiences of job quality or social protections. Such workers were more likely to undertake such work as they had no alternative, or they could only work from home or had experience of long-term unemployment.

The findings on social protections were, at first sight, rather surprising, given the animated policy discourse on the need to address the lack of social protections faced by platform workers. One reading of the findings is that platform workers do not experience lower levels of social protection than those with other jobs. This would be far too simplistic an interpretation, for at least two key reasons. First, all those that work on platforms, be they work-dependent or additional job holders, reported relatively low levels of social protection across a range of categories, suggestive of wider labor market and societal deficiencies. Second, level of access to social protection is not as simple as to whether those working on platforms have another job or not, as the type of additional job clearly matters. When those with additional jobs were disaggregated into full-time and part-time work, there was a clear distinction between

the different routes into platform work and levels of social protection. Compared to those undertaking platform work in addition to a full-time job, part-timers that work on platforms and platform work dependents were significantly more likely to report they had no access to the range of different social protections.

The analysis presented in the article raises a number of pressing avenues for future research. First, it is clear that a much more empirically sensitive understanding of the routes into platform work is needed, and how this is shaped by contemporary labor market change. We still know rather little about the reason why workers chose to engage in platform activity, either as their prime source of work or in addition to a full-time or part-time job. Second, the nature of dependency on platform work is a relative unknown in empirical terms. This article has sought to understand dependency purely in terms of working patterns, but another crucial indicator is financial dependency and the relationship between platform work and household realities. Understanding the dynamics of the routes into platform work and different categories of dependency is necessary if policy makers and academic debate are to fully understand the significance of platform work to the evolving 21st century labor market.

References

Adams, A., Freedman, J. & Prassl, J. (2018). Rethinking legal taxonomies for the gig economy. *Oxford Review of Economic Policy*, 34(3), 475-494.

Alsos, K. et al. (2017). Når sjefen er en app (When the boss is an app), Fafo.

Balaram, B., Warden, J. & Wallace-Stephens, F. (2017). *Good gigs: A fairer future for the UK's gig economy*. UK: RSA (Action and Research Centre).

Bastani, A. (2018). *Fully Automated Luxury Communism: A Manifesto*. London: Verso Books.

Beerepoot, N. & Lambregts, B. (2015). Competition in online job marketplaces: Towards a global labour market for outsourcing services? *Global Networks*, 15(2), 236-255.

BEIS (2018a). The characteristics of those in the gig economy, Research Paper: 2018 no. 2. Department for Business, Energy and Industrial Strategy (BEIS), UK Government.

BEIS (2018b). The experiences of individuals in the gig economy, Department for Business, Energy and Industrial Strategy (BEIS), UK Government.

Berg, J. (2016). Income security in the on-demand economy: Findings and policy lessons from a survey of crowdworkers. ILO: Geneva.

Bergvall-Kåreborn, B. & Howcroft, D. (2014). Amazon Mechanical Turk and the commodification of labour. *New Technology, Work and Employment*, 29(3), 213–223.

Botsman, R. (2013). The sharing economy lacks a shared definition. *Fast Company*, 21 November. Retrieved from: <https://www.fastcompany.com/3022028/the-sharing-economy-lacks-a-shared-definition>.

Brinkley, I. (2016). In search of the Gig Economy. The Work Foundation. Lancaster: The Work Foundation. Available at: <http://www.theworkfoundation.com/wf-reports/?in-search-of-the-gig-economy/>

Calo, R. & Rosenblat, A. (2017). *The Taking Economy: Uber, Information, and Power*, Seattle. Retrieved from: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2929643.

Chen, L., Mislove, A. & Wilson, C. (2015). Peeking Beneath the Hood of Uber. In *Proceedings of the 2015 ACM Conference on Internet Measurement Conference, IMC '15*, 495–508. Retrieved from: <http://www.scopus.com/inward/record.url?eid=2-s2.0-84954090639&partnerID=tZOtx3y1>.

Cherry, M.A. (2016). Beyond misclassification: the digital transformation of work. *Comparative Labor Law and Policy Journal*, 37.

Cherry, M.A. & Aloisi, A. (2016). *Dependent Contractors' in the Gig Economy: A Comparative Approach*, Saint Louis.

CIPD (2017). *To Gig or Not to Gig: Stories from the Modern Economy*. London: CIPD.

https://www.cipd.co.uk/Images/to-gig-or-not-to-gig_2017-stories-from-the-modern-economy_tcm18-18955.pdf

Codagnone, C., Biagi, F. & Abadie, F. (2016). The Future of Work in the “Sharing Economy”: Market Efficiency and Equitable Opportunities or Unfair Precarisation?.

Coyle, D. (2017). Precarious and productive work in the digital economy, *National Institute Economic Review*, 240, Issue 1.

<http://journals.sagepub.com/doi/abs/10.1177/002795011724000110?journalCode=nera>

Cunningham-Parmeter, K. (2016). From Amazon to Uber: Defining Employment in the Modern Economy. *Boston University Law Review*, 96, 1673–1728.

Degryse, C. (2016). *Digitalisation of the economy and its impact on labour markets*, Brussels.

Dokko, J., Mumford, M. & Whitmore Schanzenbach, D. (2015). *Workers and the Online Gig Economy*,

Donovan, S.A., Bradley, D.H. & Shimabukuro, J.O. (2016). What Does the Gig Economy Mean for Workers?. Retrieved from:

<http://search.ebscohost.com/login.aspx?direct=true&db=tsh&AN=112855546&site=ehost-live>.

Drahokoupil, J. & Fabo, B. (2016). The platform economy and the disruption of the employment relationship. ETUI Policy Brief. Brussels: ETUI. Retrieved from:

<http://www.etui.org/Publications2/Policy-Briefs/European-Economic-Employment-and-Social-Policy/Collective-labour-law-under-attack-how-anti-crisis-measures-dismantle-workers-collective-rights>

Eurofound (2018). Platform work: Types and implications for work and employment – Literature review. Working Paper. Luxembourg: Eurofound.

European Commission (2016). Communication From The Commission To The European Parliament, The Council, The European Economic And Social Committee And The Committee Of The Regions: A European Agenda For The Collaborative Economy. Retrieved from:

<http://ec.europa.eu/DocsRoom/documents/16881>.

Eurostat (2018). 2.3% of EU employees have a precarious job. Eurostat.

<http://ec.europa.eu/eurostat/web/products-eurostat-news/-/DDN-20180209-1>

Fabo, B., Karanovic, J. & Dukova, K. (2017). In search of an adequate European policy response to the platform economy. *Transfer: European Review of Labour and Research*, 23(2), 163–175. Retrieved from: <http://dx.doi.org/10.1177/1024258916688861>.

Farrell, D. & Greig, F. (2016a). Paychecks, Paydays, and the Online Platform Economy: Big Data on Income Volatility. JPMorgan Chase & Co. Institute.

Farrell, D. and Greig, F. (2016b). The Online Platform Economy: Has Growth Peaked?, JPMorgan Chase & Co. Institute.

Forde, C. and Slater, G. (2016). Labour market regulation and the competition state. *Work, Employment and Society*, 30(4), 590-606.

Forde, C., Stuart, M., Joyce, S., Oliver, L., Valizade, D., Alberti, G., Hardy, K., Trappman, V., Umney, C. and Carson, C. (2017). *The Social Protection of Workers in the Platform Economy*. EMPL Committee of the European Parliament, D-G Internal Policies. Brussels: European Commission.

Fudge, J. (2012). Precarious migrant status and precarious employment: the paradox of international rights for migrant workers. *Comparative Labor Law and Policy Journal* 34, 95-132.

Fudge, J. & Strauss, K. (Eds) (2013). *Temporary Work, Agencies and Unfree Labour: Insecurity in the New World of Work*. New York and London: Routledge.

Graham, M., Lehdonvirta, V., Wood, A., Barnard, H., Hjorth, I., & D Simon, P. (2017). *The risks and rewards of online gig work at the global margins*. Oxford: Oxford Internet Institute. Retrieved from: <https://www.oii.ox.ac.uk/publications/gigwork.pdf>

De Groen, W.P., Lenaerts, K., Bosc, R., Paquier, F. (2017). *Impact of digitalisation and the on-demand economy on labour markets and the consequences for employment and industrial relations*. EESC (European Economic and Social Committee) and CEPS (Centre for European Policy Studies).

Or...

De Groen, W.P., Kilhoffer, Z., Lenaerts, K., Salez, N. (2017), 'The impact of the platform economy on job creation', *Intereconomics*, 52(6), pp. 345–351.

Guardian (2018). *US Gig Economy: Data Shows 16m people in contingent or alternative work*. The Guardian, 7 June, 2018. Available at: <https://www.theguardian.com/business/2018/jun/07/america-gig-economy-work-bureau-labor-statistics>

Gutierrez-Barbarrusa, T. (2017). The growth of precarious employment in Europe: Concepts, indicators and the effects of the global economic crisis. *International Labor Review*, 155(4), 477-508.

Hall, J. V, Horton, J.J. & Knoepfle, D.T. (2017). Hall, J. V., Horton, J. J., & Knoepfle, D. T. (2017).

Labor market equilibration: Evidence from uber. Working paper. Retrieved from:

<https://pdfs.semanticscholar.org/2e66/8481068d50e22181ba8226ca586aa7fae2f6.pdf>

Harris, S.D. & Krueger, A.B. (2015). A proposal for modernizing labor laws for twenty-first-century work: The independent worker. Discussion paper 2015/10. Washington DC: The Hamilton Project, Brookings. Retrieved from: [https://onlabor.org/wp-](https://onlabor.org/wp-content/uploads/2016/10/modernizing_labor_laws_for_twenty_first_century_work_krueger_harris.pdf)

[content/uploads/2016/10/modernizing_labor_laws_for_twenty_first_century_work_krueger_harris.pdf](https://onlabor.org/wp-content/uploads/2016/10/modernizing_labor_laws_for_twenty_first_century_work_krueger_harris.pdf)

Heeks, R. (2017). Decent work and the digital economy: A developing country perspective on employment impacts and standards in online outsourcing, crowdwork, etc. Development Informatics Working Paper No. 71. Manchester, UK: Global Development Institute, SEED. Retrieved from:

http://hummedia.manchester.ac.uk/institutes/gdi/publications/workingpapers/di/di_wp71.pdf

Horemans, J., Marx, I., & Nolan, B. (2016). Hanging in, but only just: part-time employment and in-work poverty throughout the crisis. *IZA Journal of European Labor Studies*, 5(5). Retrieved from:

<https://link.springer.com/article/10.1186/s40174-016-0053-6>

Horton, J. J. (2010). Online labor markets. International workshop on internet and network economics, 515-522. Berlin, Heidelberg: Springer. Retrieved from:

https://www.researchgate.net/profile/John_Horton7/publication/220853421_Online_Labor_Markets/links/5758354908ae414b8e3f53ae/Online-Labor-Markets.pdf

Horton, J.J., Stern, L.N. & Zeckhauser, R.J. (2016). Owning, using and renting: some simple economics of the “sharing economy”. NBER Working Paper Series, 42. Retrieved from:

<http://www.nber.org/papers/w22029>

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Hunt, A. & Machingura, F. (2016). A good gig? The rise of on-demand domestic work. Development Progress Working Paper, 7. London: Overseas Development Institute. Retrieved from: <https://www.odi.org/publications/10658-good-gig-rise-demand-domestic-work>

Huws, U. (2015). Online labour exchanges, or “crowdsourcing”: implications for occupational safety and health. European Occupational Safety and Health Agency. Bilbao: OSHA.

Huws, U., Spencer, N.H., & Joyce, S. (2016). Crowd Work in Europe: Preliminary results from a survey in the UK, Sweden, Germany, Austria and the Netherlands. Brussels: FEPS and UNI- Europa. Retrieved from: <http://www.uni-europa.org/wp-content/uploads/2016/12/2016-12-Crowd-work-in-Europe.pdf>

Huws, U., Spencer, N.H., Syrdal, D.S. and Holts, K. (2017). Work in the European gig economy – research results from the UK, Sweden, Germany, Austria, the Netherlands, Switzerland and Italy. Brussels: FEPS and UNI-Europa. Retrieved from: https://uhra.herts.ac.uk/bitstream/handle/2299/19922/Huws_U._Spencer_N.H._Syrdal_D.S._Holt_K._2017_.pdf?sequence=2

ILO (2017). Job Quality in the Platform Economy. Issue Brief for the Global Commission on the Future of Work, ILO: Geneva. http://www.ilo.org/wcmsp5/groups/public/---dgreports/---cabinet/documents/publication/wcms_618167.pdf

Ilsøe, A. and Madsen, L. W. (2017). Digitalization of work and digital platforms in Denmark. Employment Relations Survey Centre (FAOS). Copenhagen: University of Copenhagen. Retrieved from: <https://faos.ku.dk/english/news/digitalization-of-work-and-digital-platforms-in-denmark/>

IMF (2017). Recent wage dynamics in advanced economies: drivers and implications. Chapter 2 in IMF World Economic Outlook, October 2017: Seeking Sustainable Growth. Washington DC: International Monetary Fund. Retrieved from:

<https://www.imf.org/en/Publications/WEO/Issues/2017/09/19/world-economic-outlook-october-2017>

Ipeirotis, P.G., 2010. Analyzing the Amazon Mechanical Turk marketplace. XRDS: Crossroads, 17(2), 16–21. Retrieved from: <https://dl.acm.org/citation.cfm?id=1869094>

Irani, L.C. & Silberman, M.S. (2013). Turkopticon: Interrupting worker invisibility in Amazon Mechanical Turk. Proceedings of the SIGCHI Conference on Human Factors in Computing Systems, 611-620. ACM. Retrieved from: <https://cloudfront.escholarship.org/dist/prd/content/qt10c125z3/qt10c125z3.pdf>

Jesnes, K., Øistad, B., Alsos, K., Nesheim, T. (2016). Aktører og arbeid i delingsøkonomien. Fafa-notat 2016: 23. Norway: Fafø and SNF. Retrieved from: <https://www.fafø.no/index.php/zoo-publikasjoner/fafø-notater/item/aktorer-og-arbeid-i-delingsokonomien>

Jolly, C. (2018). Collective action and bargaining in the digital era. In Neufeind, M., O'Reilly, J. & Ranft, F. (Eds.), *Work in the Digital Age: Challenges of the Fourth Industrial Revolution*. Rowman and Littlefield International: London.

Katz, L.F., & Krueger, A.B. (2016). The rise and nature of alternative work arrangements in the United States, 1995-2015. Working Paper 22667. Cambridge, MA: National Bureau of Economic Research. https://krueger.princeton.edu/sites/default/files/akrueger/files/katz_krueger_cws_-_march_29_20165.pdf

Kenney, M. & Zysman, J. (2016). The rise of the platform economy. *Issues in Science and Technology*, 32(4), 61–69. Retrieved from: <http://scholar.google.com/scholar?hl=en&btnG=Search&q=intitle:No+Title#0%5Cnhttp://www.nap.edu/catalog/21913%5Cnhttp://www.mendeley.com/research/managing-platform-ecosystems/%5Cnhttp://aisel.aisnet.org/icis2008/53%5Cnhttp://www.journals.cambridge.org/abst>.

Kuek, S.-C., Paradi-Guilford, C., Fayomi, T., Imaizumi, S. & Ipeiritis, P. (2015). The global opportunity in online outsourcing. Working Paper ACS14228. Washington DC: World Bank Group. Retrieved from: <http://documents.worldbank.org/curated/en/138371468000900555/The-global-opportunity-in-online-outsourcing>

Lewchuk, W. (2017). Precarious jobs: Where are they, and how do they affect well-being? *Economic and Labour Relations Review*, 28(3), 402–419.

McInnis, B., Cosley, D., Nam, C., & Leshed, G. (2016). Taking a HIT: Designing around rejection, mistrust, risk, and workers' experiences in Amazon Mechanical Turk. Proceedings of the 2016 CHI conference on human factors in computing systems, 2271-2282. ACM. Retrieved from: http://delivery.acm.org/10.1145/2860000/2858539/p2271-mcinnis.pdf?ip=82.36.196.68&id=2858539&acc=CHORUS&key=4D4702B0C3E38B35%2E4D4702B0C3E38B35%2E4D4702B0C3E38B35%2E6D218144511F3437&acm_s=1556369707_1f42a8390ccabd2fdb41474a2351f2e4

McKinsey Global Institute (2016). Independent work: Choice, necessity, and the gig economy. Brussels, San Francisco, Washington and Zurich: McKinsey Global Institute. Retrieved from: https://www.mckinsey.com/~/_media/McKinsey/Featured%20Insights/Employment%20and%20Growth/Independent%20work%20Choice%20necessity%20and%20the%20gig%20economy/Independent-Work-Choice-necessity-and-the-gig-economy-Full-report.ashx

Matsaganis, M., Özdemir, E., Ward, T. and Zvakou, A. (2016). Non-standard Employment and Access to Social Security Benefits. Research Note 8/2015. Brussels: European Commission.

Neufeind, M., O'Reilly, J. and Ranft, F. (Eds.) 2018. *Work in the Digital Age: Challenges of the Fourth Industrial Revolution*. London: Rowman and Littlefield International.

Prassl, J. & Risak, M. (2016). Uber, Taskrabbit, & co: platforms as employers? Rethinking the legal analysis of crowdwork. *Comparative Labor Law & Policy Journal*, 37, 619. Retrieved from: <https://heinonline.org/HOL/LandingPage?handle=hein.journals/cllpj37&div=39&id=&page=&t=1556369837>

PWC (2016). Assessing the size and presence of the collaborative economy in Europe. Report delivered to European Commission. London: PWC. Retrieved from: <http://grupo.us.es/iwpr/wp-content/uploads/2017/12/INFORME-PWC-COMISIÓN.pdf>

Ravenelle, A.J. (2017). Sharing economy workers: Selling, not sharing. *Cambridge Journal of Regions, Economy and Society*, 10(2), 281–295. <https://doi.org/10.1093/cjres/rsw043>

Risak, M. (2018). Fair Working Conditions for Platform Workers: Possible Regulatory Approaches at the EU Level. *International Policy Analysis*. Berlin: Friedrich-Ebert-Stiftung. Available at: <https://www.fes-connect.org/reading-picks/fair-working-conditions-for-platform-workers/>

Rosenblat, A., Levy, K.E.C., Barocas, S. and Hwang, T. (2017). Discriminating Tastes: Uber's Customer Ratings as Vehicles for Bias. *Policy & Internet*, 9(3), 256-279. Retrieved from: <https://doi.org/10.1002/poi3.153>

Rosenblat, A. & Stark, L. (2016). Algorithmic Labor and Information Asymmetries: A Case Study of Uber's Drivers. *International Journal of Communication*, 10(2016), 3758–3784. Retrieved from: <http://dx.doi.org/10.2139/ssrn.2686227>

Rubery, J., Ward, K., Grimshaw, D. and Beynon, H. (2005). Working time, industrial relations and the employment relationship. *Journal of Industrial Relations*, 14(1), 89–111. Retrieved from: <https://doi.org/10.1177/0961463X05050300>

Schmidt, F.A. (2017). Digital labour markets in the platform economy: mapping the political challenges of crowd work and gig work. Bonn, Germany: Friedrich Ebert Stiftung, Division for Economic and Social Policy. Retrieved from: <https://www.voced.edu.au/content/ngv:76462>

Schor, J. (2018). The platform economy: consequences for labour, inequality and the environment. Neufeind, M., O'Reilly, J. and Ranft, F. (Eds.), *Work in the Digital Age: Challenges of the Fourth Industrial Revolution*. London: Rowman and Littlefield International.

Schor, J. and Attwood-Charles, W. (2017). The “sharing” economy: labor, inequality, and social connection on for-profit platforms. *Sociology Compass*, 11(8), e12493. Retrieved from: <https://doi.org/10.1111/soc4.12493>

Spasova, S., Bouget, D., Ghailani, D., and Vanhercke, B. (2017). Access to Social Protection for People Working on Non-Standard Contracts and as Self-Employed in Europe: A Study of National Policies. ESPN Synthesis Report, European Social Policy Network (ESPN). Brussels: European Commission. Retrieved from: <http://ec.europa.eu/social/main.jsp?langId=en&catId=1135&newsId=2798&furtherNews=yes>

Srnicek, N. and Williams, A. (2015). *Inventing the Future: Postcapitalism and a World Without Work*. London: Verso Books.

Stanford, J. (2017). The resurgence of gig work: Historical and theoretical perspectives. *Economic and Labour Relations Review*, 28(3), 382–401. Available at: <https://doi.org/10.1177/1035304617724303>

Statens Offentliga Utredningar (SOU) (2017). *Ett arbetsliv i förändring – hur påverkas ansvaret för arbetsmiljön?* Stockholm, Sweden: SOU. Retrieved from: <https://www.regeringen.se/rattsliga-dokument/statens-offentliga-utredningar/2017/03/sou-201724/>

Statistics Finland (2017). Labour force survey 2017: platform jobs. Finland: Statistics Finland.

Retrieved from: https://www.stat.fi/til/tyti/2017/14/tyti_2017_14_2018-04-17_tie_001_en.html.

De Stefano, V. (2016). The Rise of the “Just in Time Workforce”: On-Demand Work, Crowdwork, and Labour Protection in the “Gig-Economy”. Conditions of Work and Employment Series No. 71. Geneva: International Labour Office. Retrieved from: https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---travail/documents/publication/wcms_443267.pdf

International Labour Office. Retrieved from: https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---travail/documents/publication/wcms_443267.pdf

Tassinari, A. & Maccarrone, V. (2017). The mobilisation of gig economy couriers in Italy. Transfer:

European Review of Labour and Research, 23(3): 353–357. Retrieved from:

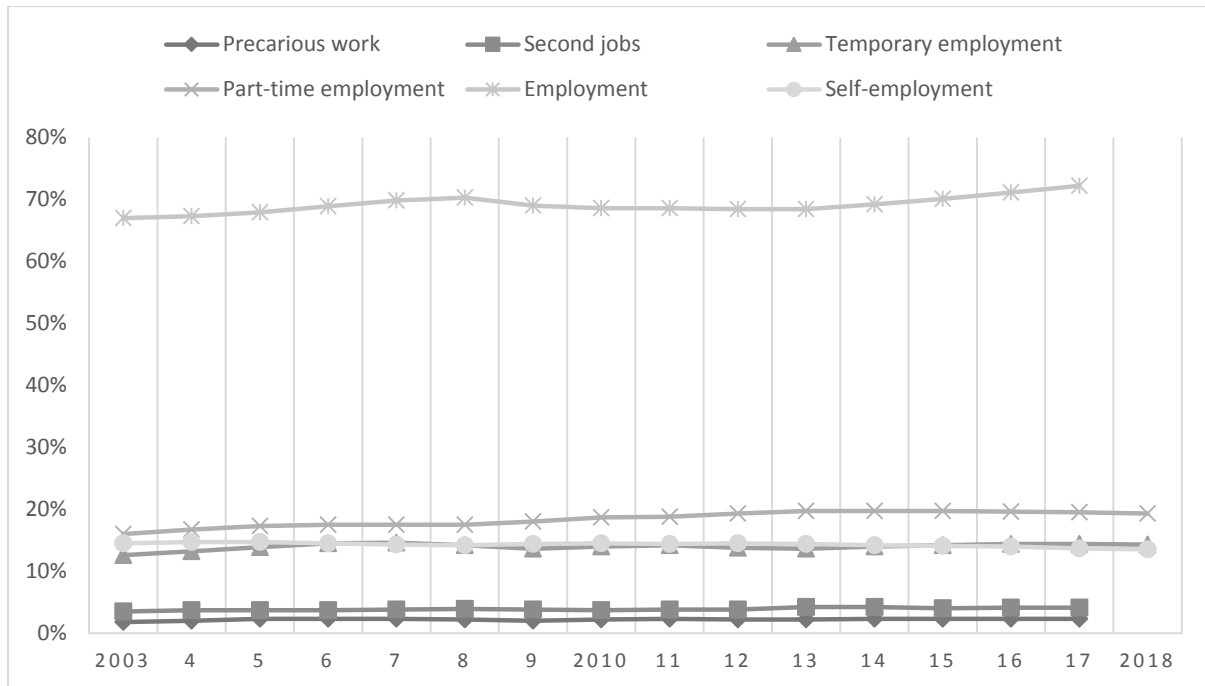
<http://journals.sagepub.com/doi/10.1177/1024258917713846>

To, W.-M. and Lai, L.S.L. (2015). Crowdsourcing in China: Opportunities and concerns. IT Professional, 17(3), 53–59. Retrieved from: DOI: 10.1109/MITP.2015.47

Todoli Signes, A. (2017). “Uber economy”: employee, self-employed or the need for a special employment regulation? Transfer: European Review of Labour and Research, 23(2), 193–205. Retrieved from: <https://doi.org/10.1177/1024258917701381>

Wood, A., Graham, M. & Lehtonvirta, V. (2017). Good gig, bad gig: job quality in the global platform economy. Sheffield: International Labour Process Conference.

Fig 1: Work and employment in EU28, 2002-2018



Source: *Labour Force Survey*, Eurostat

Fig 2: Access to social protection by different social protection schemes (%)

