

The platform economy in Europe

Results from the second ETUI
Internet and Platform Work Survey

Agnieszka Piasna, Wouter Zwysen
and Jan Drahekoupil

Working Paper 2022.05

etui.

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european trade union institute

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Brussels, 2022
©Publisher: ETUI aisbl, Brussels
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Print: ETUI Printshop, Brussels

D/2022/10.574/08
ISSN: 1994-4446 (print version)
ISSN: 1994-4454 (electronic version)



The ETUI is financially supported by the European Union. The European Union is not responsible for any use made of the information contained in this publication.

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Abstract

This paper presents some of the key insights from the second wave of the ETUI Internet and Platform Work Survey (ETUI IPWS) conducted in 14 member states of the European Union (EU) in Spring 2021. The use of standard probability sampling allows us to estimate the proportion of internet and platform workers, and to identify their characteristics, in a way that is generalisable to the working age population. We found the prevalence of internet and platform work to be relatively similar in the analysed countries, suggesting a uniform evolution of this type of work across the EU. In particular, 17 per cent of the working age population did some internet work in the past year, 4.3 per cent did platform work and 1.1 per cent can be classified as ‘main platform workers’; that is, working 20 hours or more per week or earning more than 50 per cent of their income through platforms. Internet and platform workers differ from the offline workforce in several ways. They tend to be somewhat younger but are far from constituting a student workforce. They are better educated than those who have never done internet work and this is particularly the case for higher skill professional work. Internet work seems mainly to complement offline precarious work and serves as an extra source of income for those on less stable contracts.

Introduction

The advent of digital labour platforms has been the vital spark that has reignited the debate on the future of work in the era of digitalisation. The combined effects of the spread of mobile devices, decentralised information networks and big data analytics have enabled the emergence of digital platforms that mediate the provision of work. These technologies have also expedited other forms of earning income by using the internet. Digitalisation can indeed radically transform existing business models, jobs and the way work is organised, challenging the relevance of existing ways of ensuring good working conditions and income.

The unprecedented demand for home deliveries under lockdown from early 2020 has fuelled the further expansion of food delivery platforms, making the image of platform workers swooping across emptied cities on their bicycles and scooters one of the symbols of the Covid-19 crisis. The pandemic has indeed accelerated the expansion of all kinds of platform work. Even ride-hailing, which was effectively inoperable during lockdown, has reported a bounce back after restrictions were relaxed. In online labour markets, an initial drop in demand has been followed by stable recovery. The shift to remote work in the pandemic may have given an impetus to companies to re-evaluate their working methods, possibly leading to more outsourcing to online labour platforms (Cedefop 2020). While systematic data on the effects of the Covid-19 crisis remain scarce, a 2021 panel survey suggests that a large majority of platform workers in the European Union (EU) report either working more hours or re-starting working on platforms because of the pandemic (Barcevičius et al. 2021: 46). This applies to all types of platform work despite the different effects of restrictions on social contacts for online and on-site workers.

Improving the working conditions of platform workers has become a central theme in the context of the European Pillar of Social Rights. The concern can be traced back to the 2016 Communication by the European Commission on a European agenda for the ‘collaborative economy’ (COM(2016) 356). In the following years, platform work and the protection of the self-employed has been addressed in several actions at EU level, including the 2019 Directive on transparent and predictable working conditions and the Council Recommendation on access to social protection for workers and the self-employed. The process culminated in December 2021 with a proposal by the European Commission for a directive on improving working conditions in platform work (COM(2021) 762), published together with draft Guidelines on

the application of EU competition law to collective agreements regarding the working conditions of solo self-employed people providing services.

From a regulatory perspective, the key challenges include the misclassification of employment status and the risks associated with algorithmic management. The degree of flexibility involved in platform work entails the risk that workers in a de facto subordinate relationship are misclassified as independent contractors, hence denying them access to protection through employment status (Drahokoupil and Fabo 2016; Drahokoupil and Piasna 2017). The use of algorithmic management by digital labour platforms represents another challenge to labour law as it enhances the risk of invasive monitoring and discriminatory practices while removing humans from decision-making and the chain of authority, rendering vital decisions about workers obscure and unaccountable (De Stefano and Taes 2021). While these issues are particularly pertinent in the context of platform work, other forms of work on the internet may also involve exposure to algorithmic management and facilitate self-employment.

Initiatives to improve the situation of platform workers come in the context of a large body of evidence on the working conditions of platform workers (Drahokoupil and Vandaele 2021). There are numerous studies, using a range of methods including ethnography and worker surveys, of the working conditions and preferences of workers performing on-location work, food delivery and taxi services in particular (e.g. Piasna and Drahokoupil 2021; Renau Cano et al. 2021). The evidence, both quantitative and qualitative, regarding online workers such as designers, translators or clickworkers is also growing (ILO 2021; Pulignano et al. 2021; Wood et al. 2019). Research shows a diversity of experience among platform workers with some – typically those relying on platform work as an additional source of income – benefiting from autonomy and flexibility. At the same time, platform work is also associated with difficult working conditions, health and safety risks and inadequate levels of income for those that rely on it as a source of living. However, it is more difficult to assess the extent to which individual experiences are representative of the worker experience in particular types of platform work or to put numbers on the proportions.

Lacunae in previous non-probability estimates

More specifically, we lack representative comparative evidence on the extent of platform work and the characteristics of the workers that engage in it (see the discussion in Piasna 2020). Trends in online work can be traced through tracking the tasks posted on the labour platforms which mediate the provision of digitally delivered services (Kässi and Lehdonvirta 2018; Kässi et al. 2021), but these only give information on the demand for different types of work and not the number of workers performing them. There are also surveys of online and offline platforms (de Groen et al. 2021) although the information they offer on the workers who work for them is patchy. There are good quality estimates of the extent of platform work in individual countries using labour

force surveys (e.g. Gazier and Babet 2018; OFS 2020) as well as administrative data (Le Ludec et al. 2020; STIL 2021). Given their general purpose, however, these surveys typically do not allow a more detailed analysis of the type of activities performed and the characteristics of the workers carrying them out, as well as their hours of work and the income they earn. Importantly, they are not comparable across countries.

The 2016 Eurobarometer survey, replicated in 2018, offered the first comparative data on the extent of platform work. It was based on representative telephone surveys in all EU member states (European Commission 2016; Eurobarometer 2018). Focusing mainly on the use of the services provided by online platforms, the survey showed a variation in the extent of platform work in the EU and offered basic breakdowns on the types of services offered as well as on worker demographics.

More detailed analysis was then presented by comparative surveys that focused specifically on platform work. These included the COLLEEM survey implemented by the Joint Research Centre of the European Commission (Pesole et al. 2018; Urzi Brancati et al. 2020); a study by the University of Hertfordshire (Huws et al., 2016, 2019); and, most recently, a study by PPMI Lithuania in the context of the impact assessment of the EU initiative to improve working conditions in platform work (Barcevičius et al. 2021). These studies, however, relied on online surveys with non-probability samples. Respondents were thus internet users who opted in to complete a self-administered survey. There was no sampling frame to ensure equal probability of being selected for different groups of the general population, including low frequency internet users, nor was there any information about non-response. In order to make the samples representative of the broader national population, the researchers relied on stratified sampling, weighting of the samples to match the population more closely and, in the cases of COLLEEM and PPMI, adjusting the results to the share of frequent internet users in a country.

It is now common practice to use online panels to obtain estimates which are representative of the population at large. This requires good quality panels, typically relying on offline recruitment. The panels used by the University of Hertfordshire in some countries are of apparently good quality, comparable to samples recruited over the telephone (Huws et al. 2019: 50-51). However, there are reasons to doubt the quality of the samples used in other countries (see Piasna and Drahokoupil 2019). More specifically, the comparative studies by Huws et al., COLLEEM and PPMI all collected data through a market research network which relies on panels of self-selected respondents who typically receive some type of reward, including cash payments, for completing various online surveys. Therefore, the online tool used to collect the data could itself be considered an example of online gig work and thus the samples of respondents were limited to self-selected online workers. More generally, the low quality of sampling makes estimates extremely sensitive to the choices made while cleaning the data and weighting the samples to match the selected properties of the population. As a result, the estimates for individual countries are not consistent; in an extreme case, differing by a factor of five.

The ETUI approach aims to avoid the methodological problems that come with reliance on opt-in (self-selected) online samples of inconsistent quality. The first wave of the ETUI Internet and Platform Work Survey (ETUI IPWS), conducted in 2018-2019, was thus based on standard probability samples recruited offline and representative of the entire adult population in five EU countries in central and eastern Europe (Piasna and Drahokoupil 2019). Interviews were administered face-to-face in respondents' homes via computer-assisted personal interviewing (CAPI).

This paper is dedicated to the second wave of this survey, conducted in fourteen EU countries in Spring 2021. The survey used another standard probability sampling technique, computer-assisted telephone interviewing (CATI) – which has become the gold standard of probability sampling – given the limited feasibility of face-to-face interviewing in the context of the pandemic.

Structure of the report

This working paper presents key insights from the second wave of the ETUI IPWS with the aim of providing comparative evidence on the size of the platform economy. It represents a first publication in a series that will explore in greater detail the particular topics covered in the survey and, at times, will employ more advanced techniques of data analysis. In what follows, we thus present descriptive evidence on the extent of internet and platform work and the characteristics of workers.

After introducing the methodology of the survey in more detail, we discuss the definition of internet and platform work that informs the ETUI surveys. The empirical section then presents estimates of the extent of internet and platform work in 14 EU countries, distinguishing various types of tasks and the intensity of individual involvement in the platform economy, and the characteristics of the workers who perform this type of work. In this context, we also compare the profiles of workers active in digital and traditional labour markets. This is followed by evidence on income and working hours.

The ETUI Internet and Platform Work Survey and its context

The second wave of the ETUI Internet and Platform Work Survey (ETUI IPWS) was carried out in Spring 2021. At that time, the Covid-19 crisis had been unfolding for over a year across the EU, profoundly changing labour markets and the livelihoods of millions of people. While business activity in many sectors has been severely restricted, those sectors that rely on the internet and digital tools to organise and carry out work have fared relatively well. In order to capture this shift to digital and remote work, as well as to explore how digital labour and online labour platforms are faring after one year of the pandemic, the second wave of the ETUI IPWS was given a considerably broader scope compared to the first wave in 2018-2019 (see report with results in Piasna and Drahokoupil 2019). The questionnaire was significantly expanded to include much more detailed information on earning money on the internet and through mobile apps – such as when this work started, how often it was performed, earnings and working hours – as well as to cover additional topics such as telework or the use of the internet at work. Geographical coverage was also expanded in comparison to the first wave which was based on five countries from central and eastern Europe (Bulgaria, Hungary, Latvia, Poland and Slovakia). The second wave covered 14 European countries, ensuring a balance in terms of geographical areas and labour market regimes (other than Nordic countries) and including Austria, Bulgaria, Czechia, Estonia, France, Germany, Greece, Hungary, Ireland, Italy, Poland, Romania, Slovakia and Spain.

Fieldwork for the survey was carried out by Ipsos between 5 March and 9 May 2021. The Covid-19 pandemic and the sanitary rules in place required a change from the personal face-to-face interviewing implemented in the first wave to telephone interviewing. Thus the survey was carried out via computer-assisted telephone interviewing (CATI) with fieldwork in all countries harmonised and coordinated by Ipsos.

One of the main features of the ETUI IPWS is that it reflects an entire adult (working age) population in each country. Its objective is to give a good indication of the incidence of internet and platform work in the whole population. The aim is to record the prevalence of such activities in each surveyed country; that is, to determine what share of individuals have any experience with such activities and, where they do, how often they engage in them, for how many hours and what share of their income comes from this type of work. We then want to determine whether this group is any different

from the rest of the working age population in terms of their demographic characteristics, labour market status or skills.

To allow such comparisons, the survey was addressed to a representative sample of adults (aged 18-65) residing in the country of interview (which means that their usual place of residency is in that country) at the time of data collection. A probability sample was selected using a random digit dialling (RDD) method that randomly selects individuals based on their mobile phone numbers. The target number of interviews per country was 1750 with final sample size ranging from 1476 in Slovakia to 1760 in Austria. This report is based on a total of 24108 respondents from 14 EU countries.

The analysis presented in this working paper was carried out using post-stratification weights to account for differences from the population at large. Cross-classification of gender and age group, cross-classification of education and age group (control totals drawn from the EU Labour Force Survey 2019) and region (control totals drawn from the Eurostat population data) were used to align the sample distributions with population distributions. The final post-stratification weights were also calibrated for the purposes of cross-national analysis. When results are presented for the entire sample combined, all countries are weighted equally so that larger countries do not overshadow the results for smaller ones.

Defining internet and platform work

The objective of the ETUI Internet and Platform Work Survey is to map the extent to which the internet, and in particular online platforms, websites or mobile applications, are used as a tool to generate income, encompassing platforms' intermediary role in matching workers with clients. We examine a broad range of paid activities that can be found or carried out online and that typically fall outside of a standard employment relationship.

We group online sources for generating income into two categories: internet work; and platform work as a subset of internet work for those tasks that can be carried out on a platform. Figure 1 illustrates the scope of and overlap between these two categories. We define work in a broad sense as an activity involving mental or physical effort with the aim of generating income.

Figure 1 Internet and platform work

Internet work	Platform work
	Activities 1-5 and 10 if performed through digital labour platforms
1. Remote clickwork	Platform work
2. Remote professional work	
3. On-location work	
4. Transport	
5. Delivery	
6. Influencer	
7. Renting	
8. Sell self-made products online	
9. Sell or re-sell other products online	
10. Other freelance services or tasks	Platform work

Source: Authors' elaboration.

Internet work. This is a broad category that covers possibly all the activities aimed at generating income through the use of online platforms, websites or mobile apps. This includes digitally-mediated services as well as the sale of

goods (but, importantly, excluding the second-hand sale of belongings by individuals) and the renting of assets online. These are typically conducted without an explicit or implicit contract for long-term employment. Internet work is not necessarily mediated by online platforms and only a subset of the activities defined as internet work can typically be done through digital labour platforms (see Figure 1).

In the survey, we asked respondents about ten types of online activity (see Box 1). We provided a detailed description of each one in order to separate internet work from the use of job search websites to look for regular work, as well as the use of internet or IT tools in traditional work. The survey questions asked to respondents is cited in Box 1 below.

Box 1 Survey questions measuring internet and platform work

'Some people earn money by using online platforms, websites or mobile applications. [...] Please tell me if you have ever tried to earn money by finding work or connecting with clients through online platforms, apps or websites in any of the following ways:

1. Remote clickwork (doing short tasks on your computer or other online device on a freelance basis, for instance 'clickwork', data entry or sorting, transcriptions, paid online surveys)
2. Remote professional work (creative, IT or professional work on a freelance basis through an online platform, app or website)
3. On-location work (work found through an online platform, app or website done at a client's home or another location away from your home, for instance handyman work, cleaning, beauty treatment or childminding)
4. Transport (transporting people – as a taxi or other driving service – where you find the passenger through an app, online platform or website)
5. Delivery (delivering food or other goods where you get the order through an app, online platform or website)
6. Influencer (generating income through your blogs or social media accounts, for instance a youtube channel, instagram, tiktok)
7. Renting (renting out accommodation that you own, using an online platform, app or website where guests can make a reservation directly online, such as Airbnb or booking.com)
8. Sell self-made products online (selling online products you made yourself, excluding sale of belongings)
9. Sell or re-sell other products online (selling or reselling products online, excluding sale of belongings)
10. Other freelance services or tasks (any other types of freelance work not mentioned through an online platform, app or website).'

Additionally we asked remote professional workers (category 2 of internet work), see Box 1 what types of tasks they perform with the possibility of indicating more than one. We are thus able to differentiate between the following five types of task within remote professional work: writing and translation; graphic design and multimedia; software and web development; sales and marketing support; and other activities.

For each activity, respondents were asked to indicate if they have ever tried it and, if so, with what frequency. Those who have done any of these activities in the past 12 months are defined in this working paper as internet workers.

Platform work. This category only includes work done on online labour platforms and is *a subset of internet work*. From the list of activities classified as internet work, only some can potentially be performed through labour platforms, namely remote clickwork; remote professional work; on-location work; delivery work; transport; and the residual category of ‘other’ freelance activities – that is, categories 1 to 5 and 10 as depicted in Figure 1. The first step to identify platform work is thus to only consider the provision of platform-mediated services and exclude the renting of accommodation, generating income through social media accounts and the sale of products online. In the second step, to identify platform work within these types of activity, we asked respondents to provide the name of the website, platform or app that they typically use in their internet work. Based on this information, we classified an activity as either being done through a digital labour platform or not. While the classification of the most popular digital platforms, such as Uber, Deliveroo, Amazon Mechanical Turk and TaskRabbit, was straightforward, for lesser known websites we based the classification on the literature. Thus, we consider as digital labour platforms those that match supply and demand; provide a set of tools and services that enable the delivery of work in exchange for compensation; and set rules of governance, usually enabling one-off transactions and self-employment (e.g. Drahokoupil and Piasna 2017; Graham et al. 2017; Vallas and Schor 2020). This way of setting up the data means that for each of the activities that can be done through platforms (1 through 5 and 10), platform workers are a subset of all internet workers doing this activity.

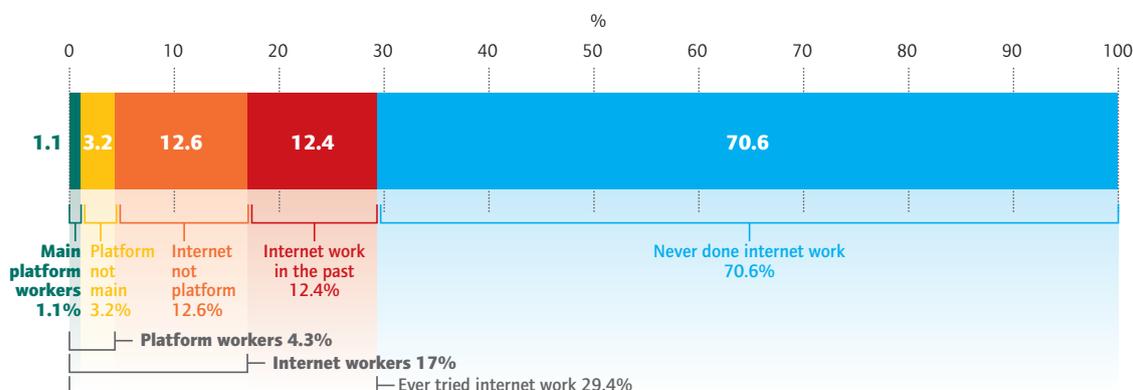
The extent of internet and platform work

The overall picture: the size of the platform economy

The second wave of the ETUI IPWS shows that experience with using the internet as a tool to generate income is widespread in all the analysed countries. As illustrated in Figure 2, among the respondents in 14 EU countries, almost 30 per cent declared having ever tried to earn money by finding work or connecting with clients through online platforms, apps or websites. This shows the huge potential of digital tools for labour intermediation as well as for private selling or renting. Among those who have any experience with internet work, most were doing it currently but there is also a large group who had only done it in the past and who had stopped at least a year before the survey: this category represents 12.4 per cent of all respondents. This relatively large share of individuals who have tried internet work in the past but who have given it up for some reason is consistent with earlier findings about generally high turnover in the platform economy (e.g. Brawley and Pury 2016; Drahokoupil and Piasna 2019).

Those who have provided internet work over the past 12 months account for 17 per cent of all respondents and are categorised as **internet workers**. A quarter of them indicated that they carried out this work through a digital labour platform. This group is defined as **platform workers** and corresponds to 4.3 per cent of all surveyed working age adults. The rest of internet workers (12.6 per cent of all respondents) either carried out tasks that are not classified as platform work, such as the renting of accommodation, selling goods or generating income through social media accounts; or, when asked to provide a name of the website or app that they use for this work, indicated an IT tool that they use to carry out the work, such as a graphic design software or a communication app, and not an online platform connecting them with clients or tasks. However, at least some of the responses may result from a misunderstanding of the question. Therefore, our estimate of the size of platform work is a conservative one as we constrain it with two simultaneous criteria – the first being a performance of certain tasks classified as internet work on a freelance basis; and the second the naming of an actual digital labour platform through which the work is done. Finally, about a quarter of platform workers are classified as **main platform workers**. For this group, platform work represents a significant part of their working lives. We define these based on their working hours and earnings, encompassing platform workers who claim to work more than 20 hours a week on digital labour platforms or earn more than 50 per cent of their income from this

Figure 2 The extent of internet and platform work



Note: Average across 14 EU countries. All working age adults.
Source: ETUI IPWS.

type of work. Main platform workers represent 1.1 per cent of all respondents in our sample.

The prevalence of both internet and platform work is relatively similar across the analysed countries (Table 1). We do not find any striking outliers with a very low or a very high share of respondents reporting activity in digital labour markets. Moreover there is no clear geographical pattern with central and eastern European countries displaying both the highest and the lowest incidences of internet and platform work.

Experiences with internet work are most widespread in Slovakia (43.3 per cent of respondents having ever tried this type of work) and Poland (37.3 per cent) and least common in Romania (19.3 per cent) and Hungary (20.9 per cent). The prevalence of internet work being done in the past 12 months is highest in Slovakia (25.2 per cent) and Czechia (20.1 per cent) and lowest in Romania (9.9 per cent) and Italy (12.4 per cent). When it comes to the intensity of internet work, on average 10.3 per cent of respondents report doing it on at least a monthly basis with the highest share in Slovakia (14.3 per cent) and Czechia (13.6 per cent) and the lowest in Romania (4.9 per cent) and Poland (7.8 per cent). Internet work on at least a weekly basis is performed on average by 5.6 per cent of respondents in all analysed countries, ranging from 10 per cent in Slovakia to 3.2 per cent in Hungary. However, even platform work performed on a weekly basis is usually only a side job providing supplementary income and only in about one-half of such cases is it performed for more than 20 hours per week.

Table 1 Internet work, by frequency and by country (% of all respondents)

	Internet work					
	Ever	Did in the past 12 months	At least monthly	At least weekly	At least 50% of income	At least 20 hours per week
Overall	29.4	17.0	10.3	5.6	3.0	2.8
Austria	28.1	17.1	10.8	5.1	2.3	2.1
Bulgaria	31.2	19.1	9.8	5.4	2.9	3.5
Czechia	33.8	20.1	13.6	8.8	3.6	3.8
Estonia	24.4	15.0	8.6	4.9	2.3	2.3
France	25.9	16.1	11.5	6.9	2.6	2.2
Germany	30.5	16.9	11.2	5.7	2.3	1.6
Greece	27.5	15.7	9.9	3.5	2.5	2.3
Hungary	20.9	13.3	9.6	3.2	4.6	2.8
Ireland	31.4	18.7	13.2	6.5	4.3	2.7
Italy	25.0	12.4	8.9	5.3	2.4	3.3
Poland	37.3	19.4	7.8	5.2	4.1	4.2
Romania	19.2	9.9	4.9	3.3	1.5	1.8
Slovakia	43.3	25.2	14.3	10.0	3.6	3.5
Spain	33.6	18.6	10.4	5.1	2.5	3.0

Source: ETUI IPWS.

While on average 4.3 per cent of respondents reported doing platform work in the 12 months preceding the interview (Table 2), this ranges from a high of 6.5 per cent in Ireland and 5.7 per cent in Slovakia to a low of 2.2 per cent in Romania and 2.5 per cent in Hungary. Overall, in Ireland and Slovakia platform work tends to be performed with a higher frequency than in other analysed countries while Romania, Poland, Hungary and Greece display a below average intensity of platform work. With the exception of Ireland, in all other countries platform work was a main source of income for less than one per cent of the adult population, ranging from 0.4 per cent in Hungary to 0.96 per cent in France.

While there is an expected pattern of longer hours associated with higher earnings in platform work, this is less evident in Germany and Ireland. In these two countries, the share of workers for whom platform work is a main source of income is much higher than the share that performs this work for more than 20 hours per week. This indicates a relatively higher economic dependency on platform work in Germany and Ireland but might also reflect higher hourly earnings.

Table 2 Platform work, by frequency and by country (% of all respondents)

	Platform work					
	Done in the past 12 months	At least monthly	At least weekly	At least 50% of income	At least 20 hours per week	Main platform work
Overall	4.3	2.8	1.4	0.7	0.7	1.1
Austria	5.1	3.1	1.1	0.6	0.3	0.9
Bulgaria	3.8	2.0	1.1	0.5	0.8	1.0
Czechia	4.6	2.8	1.8	0.5	0.9	0.9
Estonia	4.5	2.7	1.4	0.5	0.7	0.7
France	5.6	3.6	2.2	1.0	0.8	1.4
Germany	4.4	3.2	1.7	0.8	0.2	1.1
Greece	4.4	3.2	0.8	0.8	0.9	1.4
Hungary	2.5	1.9	1.0	0.4	0.4	0.7
Ireland	6.5	4.5	2.2	1.7	0.8	2.2
Italy	3.8	2.9	1.7	0.6	0.8	1.2
Poland	2.9	1.3	0.9	0.6	0.8	1.2
Romania	2.2	1.6	0.9	0.5	0.6	0.7
Slovakia	5.7	4.0	2.1	0.5	0.5	0.9
Spain	4.8	2.3	1.1	0.9	1.0	1.3

Source: ETUI IPWS.

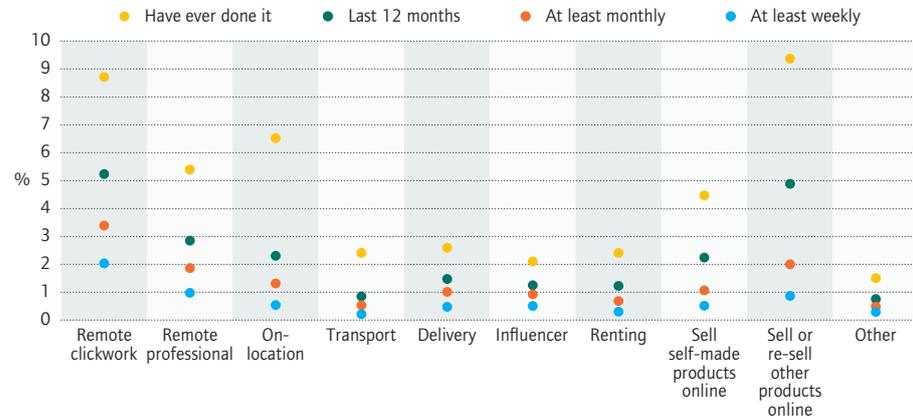
Types of tasks performed in internet and platform work

As shown in Figure 3 (panel a), among the different types of activities within internet work, e-commerce (i.e. the selling and re-selling of products online, other than second-hand belongings and self-made products) and remote clickwork are the most popular, having ever been tried by around 9 per cent of respondents and each performed in the past 12 months by around 5 per cent of surveyed adults. These are followed by on-location work and remote professional work. Remote professional work is split fairly equally across its different types (Figure 3, panel b), with graphic design and multimedia being the most frequently reported category. Delivery, transport, renting and working as an influencer are much less common types of internet work: 2-3 per cent of respondents have ever tried each of these activities and only around 1 per cent in each case do so on a monthly basis.

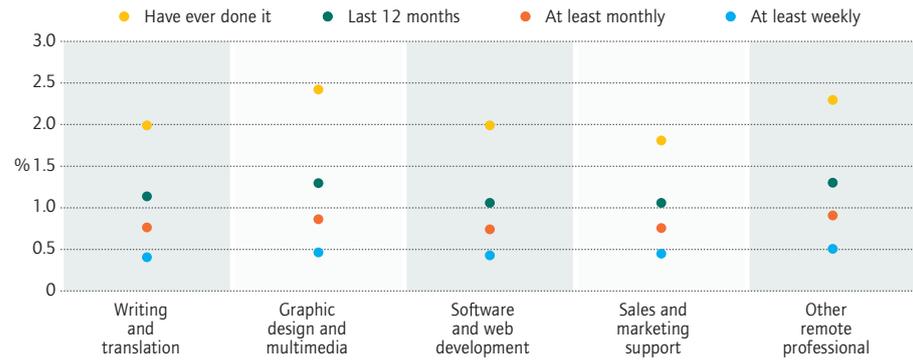
The most frequent type of platform work is remote clickwork (Figure 4), performed by nearly 2 per cent of respondents in the past 12 months with 0.7 per cent claiming to be doing it on at least a weekly basis. The other types of platform work were each performed by less than 1 per cent of respondents over the last year. The high skill category of remote professional work was done on at least a monthly basis by just over 0.4 per cent of working age adults. Interestingly, the transport of people – the type of platform work receiving the most publicity and being probably the most recognised due to the vast media coverage and amount of litigation – was the least frequently reported type of specific platform work in our sample.

Figure 3 Internet work, by type of activity (%)

a) Main types of internet work

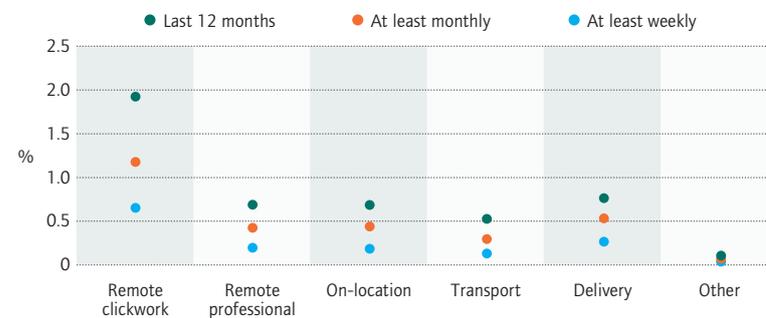


b) Types of tasks in remote professional work



Source: ETUI IPWS.

Figure 4 Platform work, by type of activity (%)



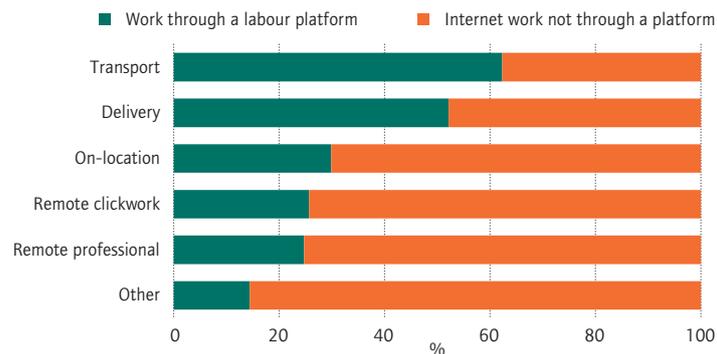
Source: ETUI IPWS.

In our classification, platform work is a subset of internet work (see Figure 1). Overall, 25 per cent of all internet workers work through a labour platform (see Figure 2). However, the overlap between these two categories is different

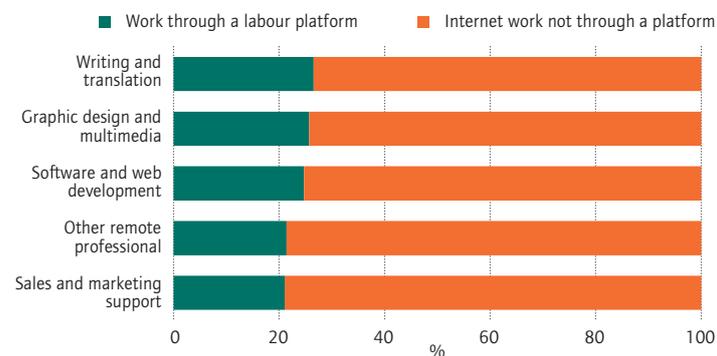
depending on the type of tasks in question. As depicted in Figure 5, the majority of internet workers doing transport and delivery work provide this work through digital labour platforms (62.3 per cent and 52.2 per cent, respectively). For on-location work, which includes activities such as handywork, babysitting and tutoring, this proportion falls below one in three (29.9 per cent) falling further to one in four for remote clickwork and remote professional work. This might suggest that labour platforms have penetrated the segments of transport and delivery to a much greater extent than other freelance or informal markets. This can be the result of a much more developed organisation of transport and delivery services by various intermediaries connecting own-account workers with clients prior to the emergence of the platform economy. Such structures were largely lacking in home-based freelance work and thus the potential for growth for platforms in these markets can still be sizeable.

Figure 5 Platform workers as a subset of internet workers

a) Main types of internet work



b) Types of tasks in remote professional work



Source: ETUI IPWS.

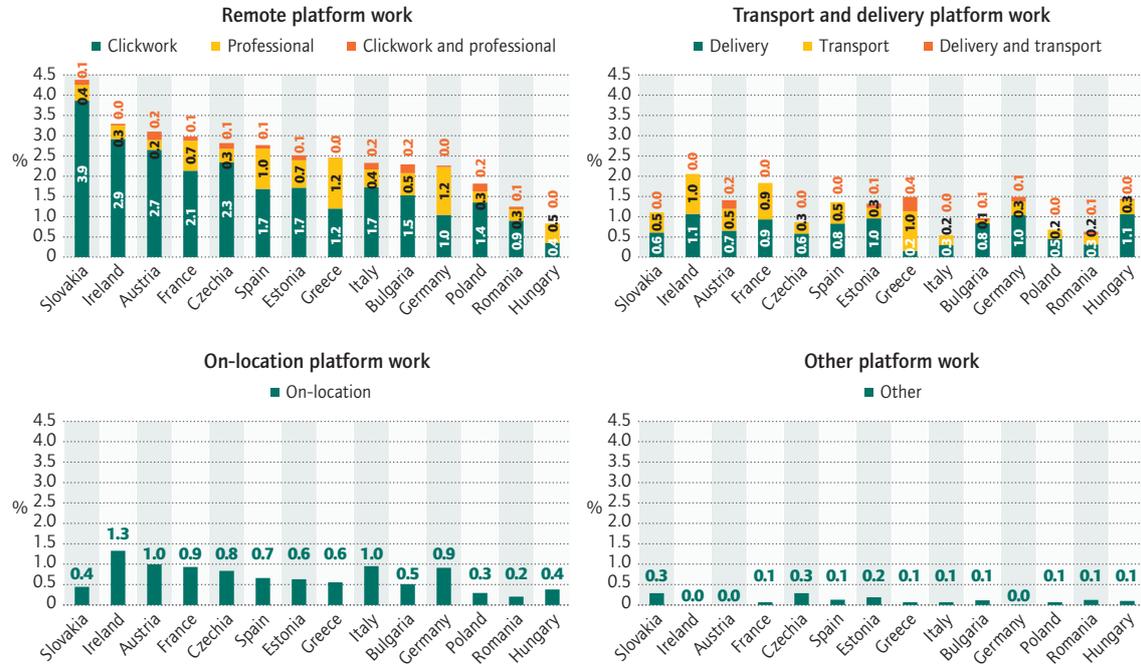
Differences across countries: incidence and intensity of involvement

Figure 6 shows how the incidence of platform work differs across the 14 EU countries included in the survey. Remote platform work shows substantial cross-national variation. It is most frequently reported in Slovakia (4.4 per cent of all respondents) and least commonly in Romania (1.3 per cent) and Hungary (0.8 per cent). There is also a difference in the skill profile of remote platform work across countries. More skill intensive activities in the category of remote professional work represent a higher share of the platform work performed in Germany, Greece and Spain. In contrast, in Austria, Slovakia and Ireland, lower skilled tasks are relatively more frequent. Transport and delivery work are most commonly reported in Ireland and France, while the highest number of platform workers reporting that they have done both these types of activities in the past year is found in Greece. On-location platform work is most common in Ireland (1.3 per cent of respondents) followed by Austria, Italy and France.

The intensity of involvement in platform work also differs between countries (Figure 7). For instance, in Germany and Italy the vast majority of remote platform workers do this work monthly or more often. On the other hand, in Poland, Spain and Estonia more than half of those engaged in remote professional work do it only occasionally. In Hungary, Romania and Ireland, almost all transport and delivery platform workers do this work on at least a monthly basis. In contrast, in Poland and Italy more than half do it only occasionally.

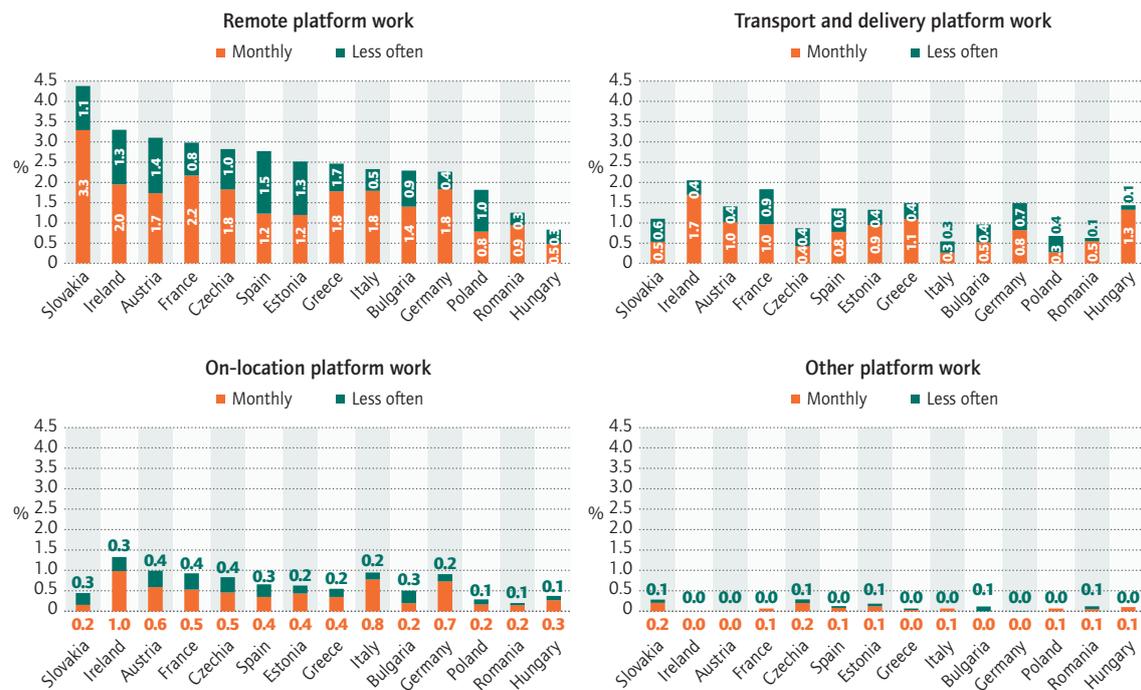
The platform economy is characterised by high turnover and relatively short tenure, even accounting for this being a fairly new sector. A large group of the platform workers we surveyed had started this type of work only in the past year (Figure 8). The highest share of the influx is observed in delivery platform work where nearly half (48 per cent) of riders were new entrants. On the other hand, remote professional work had the lowest proportion of new entrants with only about a quarter starting this work in the past year; that is, since the outbreak of the Covid-19 crisis. As this question was added only in the second wave, we are not able to distinguish the impact of the pandemic in which delivery work has been in particularly high demand due to lockdown and given the generally lower entry barriers into delivery work compared to those in high skill professional platform work.

Figure 6 Platform work by broad type and by country (%)



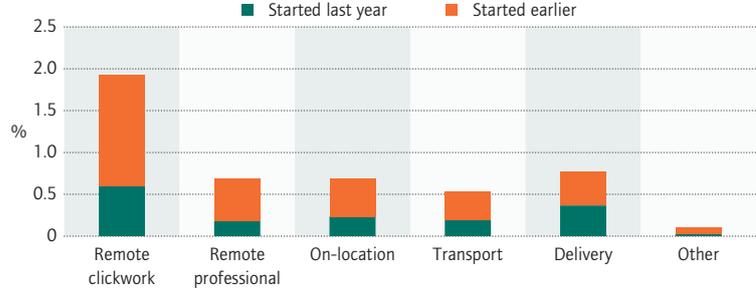
Source: ETUI IPWS.

Figure 7 Frequency of platform work, by type and by country (%)



Source: ETUI IPWS.

Figure 8 Platform work, by type and by time since started



Source: ETUI IPWS.

Who are the workers?

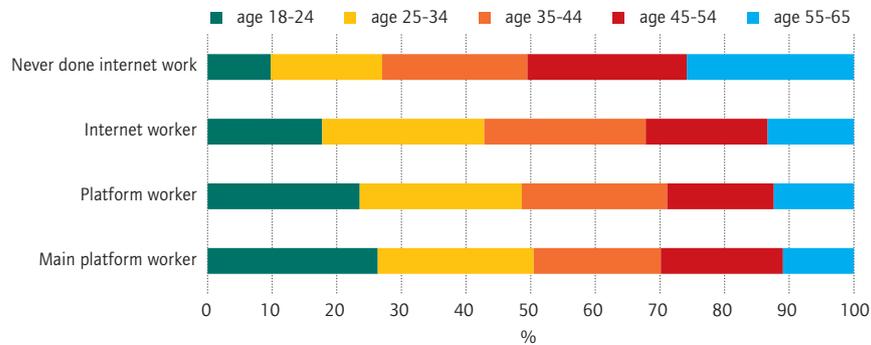
While the estimates of the extent of platform work in existing surveys often diverge, the findings on worker characteristics are more consistent. Previous research has found platform workers to be younger and more educated than the general population. Platform workers, particularly those who are more active, are more likely to be men; while migrants are over-represented. At the same time, however, these differences are sometimes overemphasised. In fact, as concluded by the COLLEEM survey, broadly echoing the first wave of the ETUI IPWS, although some of the more sporadic activities are indeed more likely to be done by students, the online workforce is not radically different from the offline one.

The findings in this second wave of the ETUI IPWS confirm this broad picture while offering some nuance and caveats about worker characteristics and the underlying differences. These are presented in this section.

Age

The age profile of four groups of workers is compared in Figure 9: internet workers; platform workers; main platform workers; and those who have never done any type of internet work. Internet workers are indeed younger than those who have never done any internet work. Young people are thus much more likely to be found among platform workers (24 per cent being 18-24 years of age) and main platform workers (26 per cent were in this age group) while making up just 10 per cent of those who have never done any internet work). Even so, older age categories are well represented among internet workers and also among platform workers, including among those for whom this is their main activity. Eleven per cent of main platform workers are aged 55-65 and 19 per cent are 45-54. These differences are statistically significant ($p < 0.05$).

Figure 9 Internet and platform workers by age group



Source: ETUI IPWS.

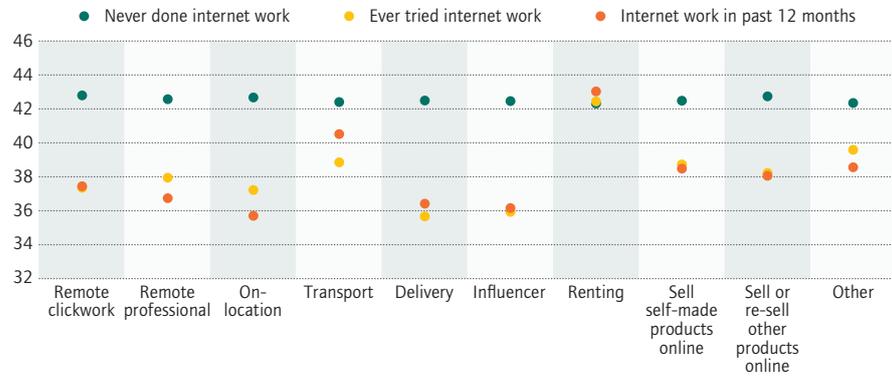
The differences can be explored in more detail by comparing average age by activity. These are found in Figure 10 for internet work and Figure 11 for platform work – for internet workers we compare with those who have never done internet work; while for platform work we compare between different types of workers who have done platform work.

The age profiles of internet workers and those who have never done such work are most similar in transport and, in particular, renting. Those active in renting in the last 12 months were, on average, slightly older than those who have never been engaged in this. This seems intuitive given that older people can be assumed to be more likely to have accumulated property to rent out. The age differences are much greater in delivery (42.5 ‘never’ vs. 35.7 ‘ever’ and 36.4 ‘in the past 12 months’) than for transport (42.4 ‘never’, 38.9 ‘ever’, 40.5 ‘in the past 12 months’), which is not surprising given that delivery is typically performed on a bicycle or scooter.

The pattern is reproduced in platform work where transport is characterised by the smallest differences in average age by different intensity of involvement, ranging between 39.4 and 42.3 years, while the greatest age differences were found, along with ‘other freelance’ activities, in delivery (ranging between 33.6 and 42.4). These differences are statistically significant ($p < 0.05$).

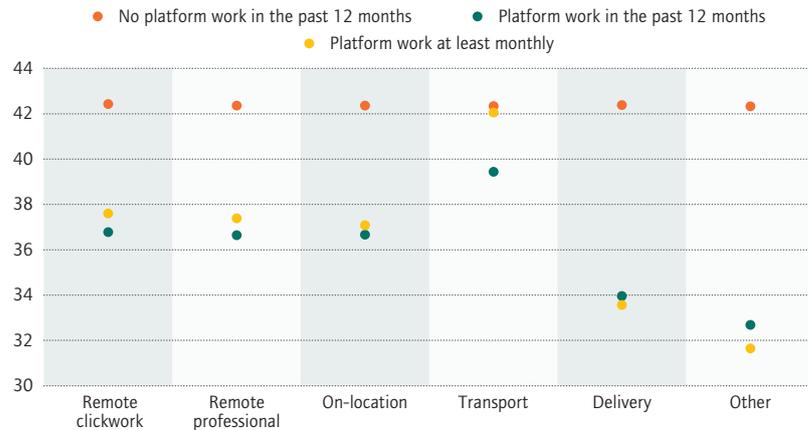
Age distributions for the different types of platform work are compared with the age distribution for respondents who have never done any internet work in Figure 12. The age distribution of all types of platform work are the reverse of respondents who have never done any internet work, with the distributions of on-location and other freelance workers being most skewed towards younger workers. The former can be attributed to the high share of young women, often students, who provide care services. The distribution for delivery and transport includes both young and old cohorts that engage in delivery and taxi services respectively.

Figure 10 Average age of internet workers, by type of activity and frequency of this work



Source: ETUI IPWS.

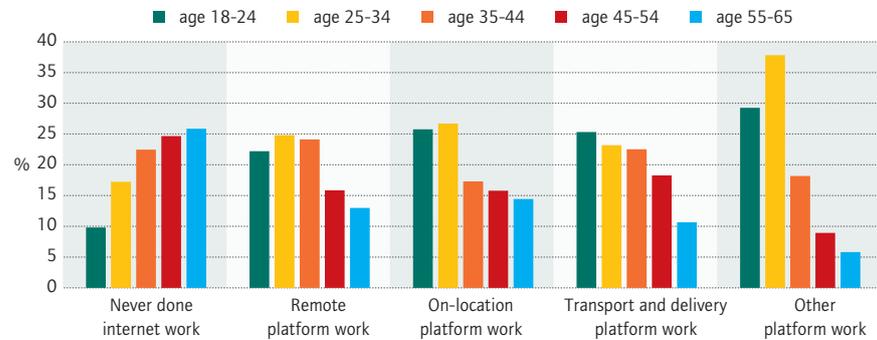
Figure 11 Average age of platform workers, by type of activity and frequency of this work



Source: ETUI IPWS.

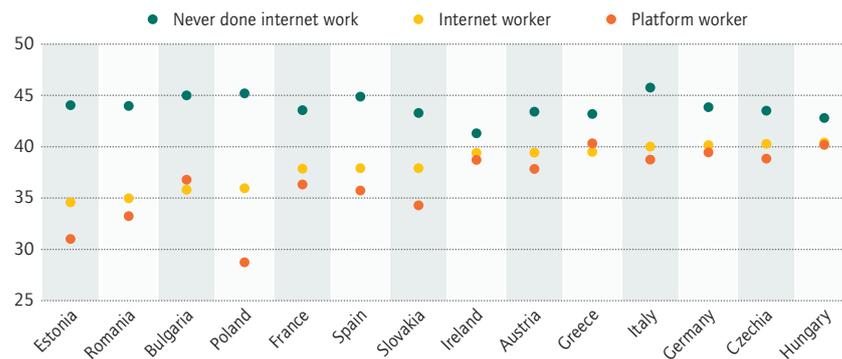
Finally, Figure 13 compares the average age of internet workers, platform workers and those who have never done any internet work across countries. The structures of the differences within countries are similar. Poland stands out as the country with the youngest platform workers, with an average of 28.7 years (compared to 36.0 for internet workers and 45.2 for those who have never done any internet work). Wide differences can also be found in Estonia and Romania. These differences are statistically significant ($p < 0.05$). At the same time, however, the differences in average age are relatively small in around half the countries in the sample. In Hungary, the range is only between 40.2 and 42.8 years.

Figure 12 Age profile of platform workers, by broad type of task



Source: ETUI IPWS.

Figure 13 Average age of platform and internet workers compared with other respondents, by country

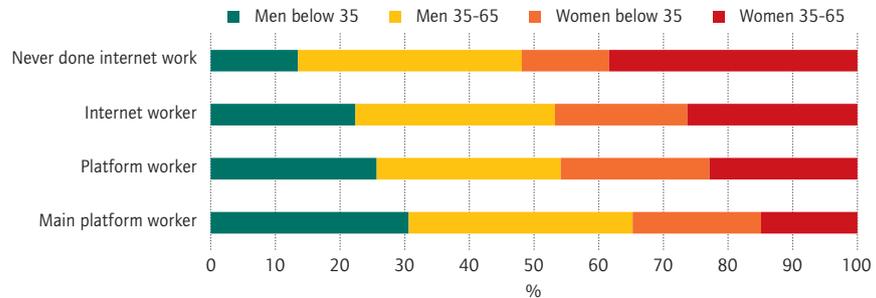


Source: ETUI IPWS.

Gender and dependent children

As far as gender composition is concerned, men indeed prevail among internet (53 per cent male) and platform (54 per cent male) workers, with the share of women being lowest among main platform workers (35 per cent). These differences, as well as the others discussed in this section, are statistically significant ($p < 0.05$). The gender composition of internet and platform workers is compared with those who have never done any internet work in Figure 14. The latter also breaks down gender by age, distinguishing between younger (<35 years) and older workers (≥ 35 years). It thus shows young men and women being a minority among those who have never done any internet work.

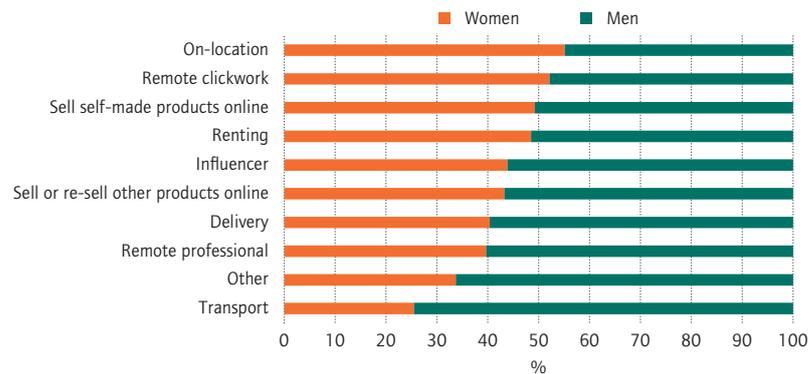
Figure 14 Internet and platform workers by gender and age



Source: ETUI IPWS.

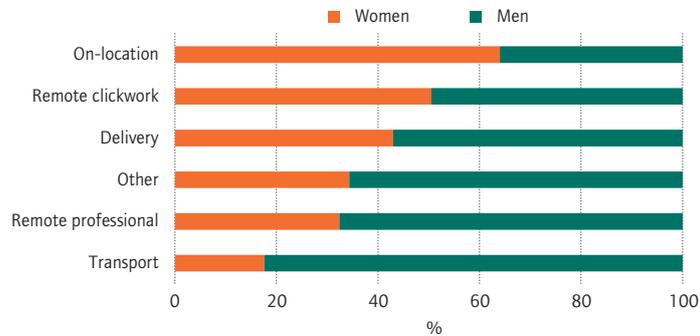
At the same time, the gender ratios in individual activities differ, perhaps unsurprisingly, reflecting the gendered nature of traditional labour markets. The gender composition of internet and platform workers by type of activity can be found in Figure 15 and Figure 16 respectively. Transport, remote professional and other freelance activities, including IT, are dominated by men as far as both internet and platform work are concerned. Women constitute a slight majority of internet workers performing on-location activities (55 per cent women) and remote clickwork (52 per cent women). There is a gender balance in selling and renting activities. The gender division in platform work is stark. Women thus represent a large majority of on-location workers (64 per cent) – this category is dominated by young women performing care services. Platform-based clickwork is gender balanced. Transport is 82 per cent male while remote professional activities is 68 per cent male.

Figure 15 Internet workers, by type of activity and gender



Source: ETUI IPWS.

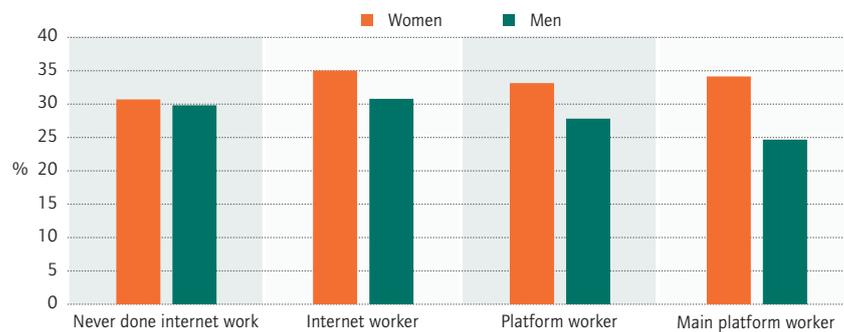
Figure 16 Platform workers, by type of activity and gender



Source: ETUI IPWS.

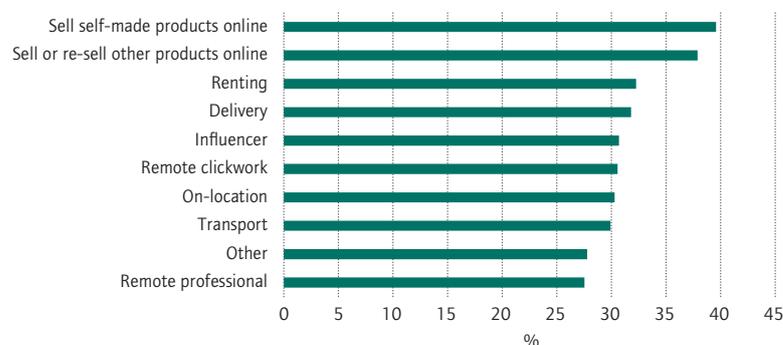
The share of parents, defined as people living in the household with children aged 12 or younger, among internet and platform workers and those who have never done any internet work is presented according to gender in Figure 17. Those with children, both men and women, are somewhat more likely to do internet work. However, there is no real difference for platform work: the differences in the share of those with children among male and female platform workers can be related to the compositional differences in these categories. The representation of parents among internet workers by type of activity is presented in Figure 18. Parents are represented most among sellers (38-40 per cent) and renters (32 per cent) and least likely to be represented among remote professional workers and other freelancers (both 28 per cent) and transport workers (30 per cent).

Figure 17 Proportion of parents with young children (aged 12 or younger) among internet and platform workers



Source: ETUI IPWS.

Figure 18 Proportion of parents with young children (aged 12 or younger) among internet workers, by type of activity



Source: ETUI IPWS.

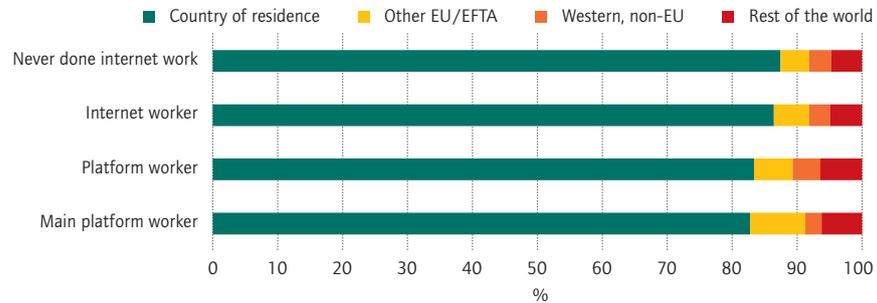
Country of birth

The second wave of the ETUI-IPWS allows the analysis of differences in terms of country of origin between people who work in the platform economy and those who do not. Migrant status is one of the hallmarks of labour market vulnerability, with migrant workers often segregated into lower paid and more insecure work and who might therefore be overrepresented in the platform economy. In this section, we group workers in four categories depending on their country of birth: those born in their country of residence; those from EU/European Free Trade Area (EFTA) countries; migrants from other western countries such as North America, Australia or other European countries; and migrants from the rest of the world.

The survey shows that migrants are generally more likely to do internet work and platform work than those born in the country of residence. There is little difference between those born in the country of residence and migrants from other western countries; but those from the rest of the world and especially EU/EFTA workers are more likely to earn money through the internet and to do platform work. Among EU migrants and those from the rest of the world, 6 per cent are platform workers while main platform workers make up 2 per cent and 1.5 per cent respectively; compared to 4 per cent platform workers and 1 per cent main platform workers for those born in the country of residence. As shown in Figure 19, those born in the country of residence make up 87 per cent of those who have never done internet work but only 83 per cent of platform workers. These differences are statistically significant ($p < 0.05$).

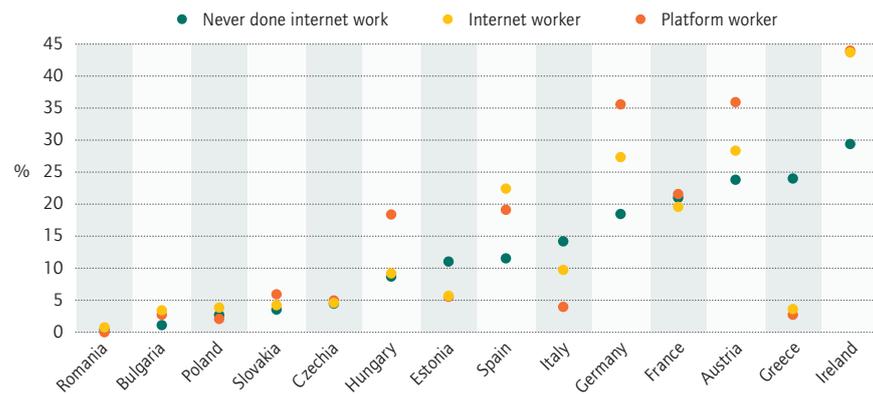
Figure 20 shows the country variation in this pattern of internet and platform workers being more likely to be migrants. The overrepresentation of migrants holds in most countries. Even in countries with relatively few migrants, such as Romania, Bulgaria, Poland or Slovakia, internet workers are much more likely to be foreign born (between 1.2 and 3 times as likely). This relationship is reversed, with the foreign-born population being less likely than the native-born to engage in internet and platform work, only in three countries: Estonia,

Figure 19 Internet and platform workers by country of birth



Source: ETUI IPWS.

Figure 20 Share of the foreign-born among those who have never done internet work, internet workers and platform workers



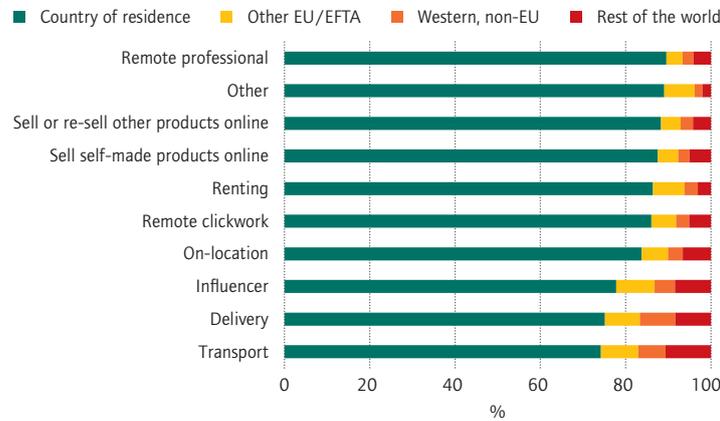
Source: ETUI IPWS.

Italy and Greece. In France there is no substantial difference in the share of those who are foreign-born by whether they do internet or platform work.

Figure 21 shows how composition by country of birth varies across the different types of internet work. Migrants – especially those born in third countries – are especially likely to be engaged in transport work, delivery work, be social media influencers and to do on-location work. On the other hand, migrants are relatively less likely to be engaged in carrying out remote professional work, other freelance activities and selling or renting. The share of third country migrants – both from western and other countries – varies more widely than those of EU/EFTA migrants.

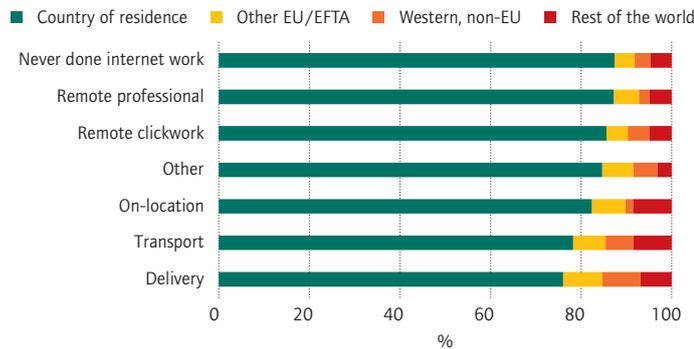
Figure 22 shows differences in country of origin depending on the type of platform work. Here as well there is a clear variation, with migrants represented to a greater degree in transport and delivery work and to a lesser one in remote professional work – similar to those who have never done internet work.

Figure 21 Internet work by type of task and by workers' country of birth



Source: ETUI IPWS.

Figure 22 Platform work by type of task and by workers' country of birth



Source: ETUI IPWS.

Education

As shown in previous sections, most of the internet and platform work reported in this second wave of the ETUI IPWS consists of relatively simple tasks and does not require specific skills. However, participation in online labour markets requires certain levels of digital literacy which might constitute a barrier for some lower skilled workers. In this section, we aim to uncover the relationship between formal education and internet work for the different types of tasks performed online as well as the different levels of involvement in the platform economy. Three categories are discerned regarding the educational level of respondents: lower secondary or below (ISCED 0-2); upper and post-secondary (ISCED 3-4); and tertiary (ISCED 5-6).

There is a clear gradient in the probability of doing internet work by the highest qualification of workers. While 77 per cent of those with at most

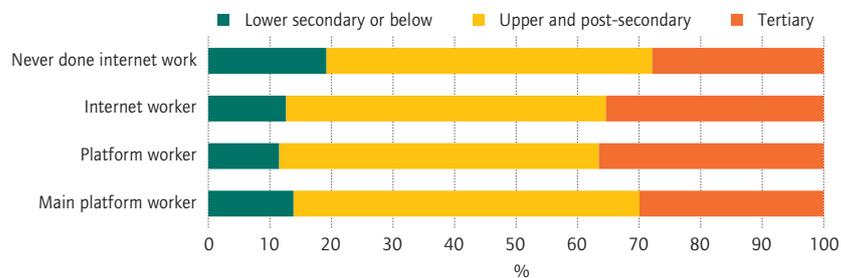
lower-secondary qualifications have never done internet work this falls to 71 per cent of those with upper secondary or post-secondary non-tertiary qualifications and to only 66 per cent of those with tertiary qualifications. Among the university educated, 20 per cent have done internet work in the last 12 months and 5.3 per cent platform work, compared to 12 per cent and 2.8 per cent respectively among the lower educated.

Figure 23 shows how the composition of different groups of working age people varies: among those who have never done internet work 19 per cent are lower educated while this is only 13 per cent among internet workers and 11.5 per cent among platform workers. On the other hand, 28 per cent of those who have never done internet work have a higher qualification, compared to 35 per cent of those who have done internet work in the last 12 months and 36.5 per cent of those who have done platform work. These differences are statistically significant ($p < 0.05$).

Besides the differences by educational qualification, we can also see that internet work is more likely to be undertaken by those currently in formal education (e.g. students) than others. Among students, 25 per cent have done internet work in the last year compared to 15 per cent of non-students. Furthermore 7.5 per cent of students have done platform work, 1.8 per cent as a main activity, compared to 3.5 per cent of non-students doing platform work and 1 per cent as main platform work.

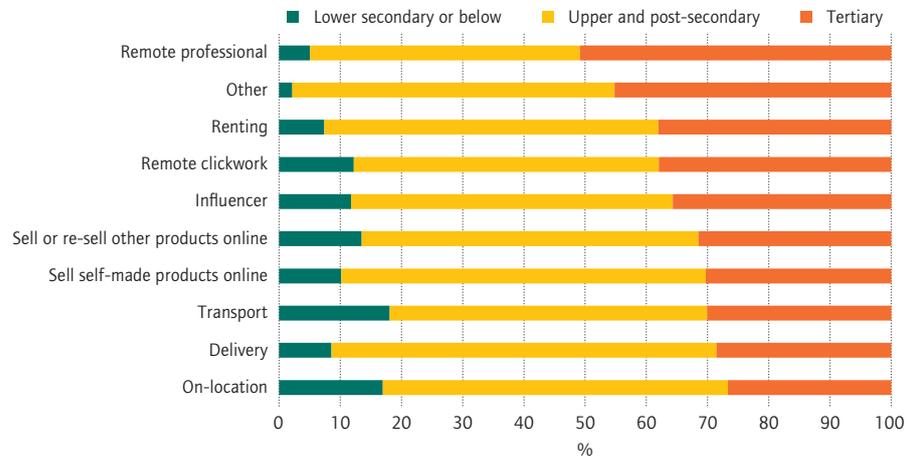
While students are, on average, up to twice as likely as non-students to be doing internet or platform work, this is mostly due to the age difference between students, who are on average younger, and non-students. The difference between students and non-students becomes much smaller when we compare people of a similar age (e.g. within a group of 18-24 year-olds or 25-34 year-olds, etc.). Students are mainly more likely to do clickwork, remote professional work or on-location work.

Figure 23 Educational attainment of internet and platform workers



Source: ETUI IPWS.

Figure 24 Educational attainment of internet workers, by type of activity

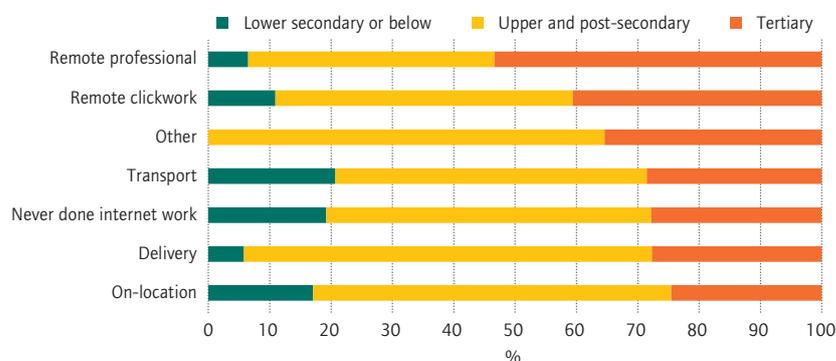


Source: ETUI IPWS.

Figure 24 shows the variation in formal qualifications by type of internet work. There is a clear variation with the share of lower-qualified workers being highest in transport and on-location work, and lowest by far among those carrying out remote professional work or other freelance activities. Half of all internet workers doing remote professional work have a university degree compared to less than a third of on-location, transport or delivery workers or those who sell and re-sell products online.

Figure 25 shows the composition by level of qualification for those who are engaged specifically in platform work. As with internet workers, remote professional platform workers stand out as being generally more highly educated with over half having tertiary qualifications. The share of lower qualified workers is highest among those doing transport work. Interestingly, delivery and on-location platform workers are similar to transport workers in their low share of high qualifications but they do have relatively more middle qualified workers, particularly so among delivery workers.

Figure 25 Educational attainment of platform workers, by type of platform work



Source: ETUI IPWS.

Place of residence by degree of urbanisation

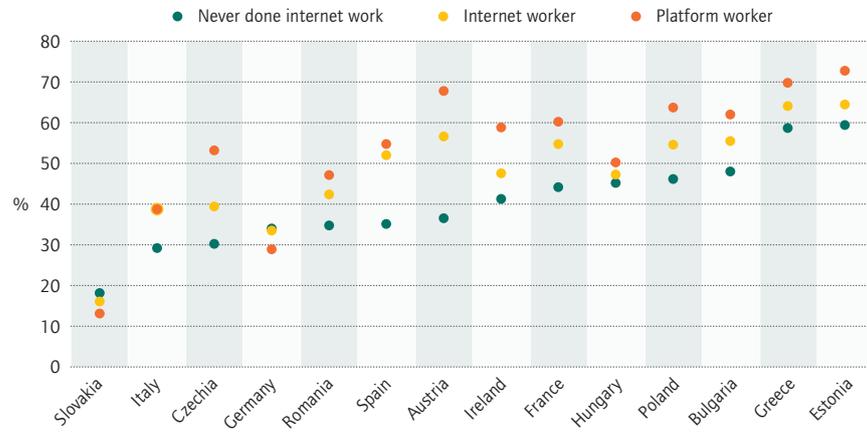
As online labour markets open up the possibility of location-independent work, with many tasks being allocated and performed online, these could potentially attract workers from areas with fewer employment opportunities available locally, thus typically in smaller towns and rural areas. At the same time, there are many types of task in the platform economy that are performed on-location, such as transport, delivery and childminding, with demand usually concentrated in large urban areas.

The second wave of the ETUI IPWS shows that, on average, those doing internet or platform work are more likely to live in big cities¹ than those who have never done internet work. This difference is statistically significant ($p < 0.05$). We also found an expected pattern based on type of task in that 49 per cent of those performing remote platform work (clickwork or professional) live in big cities compared to 64 per cent of those doing transport or delivery work.

Figure 26 shows how this varies by country. With the exception of Slovakia and Germany – where platform work is more likely for those not living in big cities – both internet and platform workers are more likely to live in large urban centres. The difference is particularly large (over 30 per cent more likely) for internet workers in Italy, Czechia, Spain and Austria; and for platform workers in Italy, Czechia, Romania, Spain, Austria, Ireland, France and Poland.

1. Respondents were asked where they lived and were offered the following categories: a big city; the suburbs or outskirts of a big city; a town or a small city; and a rural area or village.

Figure 26 Share of respondents living in a big city or the suburbs of a big city



Source: ETUI IPWS.

Interdependencies between digital and traditional labour markets

Internet and platform workers, as discussed in the previous section, represent a somewhat distinct group as far as their demographic profile is concerned. At the same time, the differences from the general working age population are relatively small and vary by activity and country. A more precarious labour market position, as suggested by previous research, may be the key characteristic of internet and platform workers. Results from the first wave of the ETUI IPWS indeed showed that workers engaging in internet or platform work were generally also employed, but tended to work more often in precarious or non-standard work. There is also a higher fraction of solo self-employed or freelancers, which could indicate internet and platform work being seen as a main activity.

This section aims to understand how the different forms of internet and platform work interact with the offline, more traditional labour market. The main question is whether this is a completely new market, offering opportunities for those who are not fully attached to the traditional labour market, thus replacing offline work, or whether these are mainly additional activities. In order to address it, we first describe the self-reported employment status of survey respondents, referring to their main activity. Then, we analyse the skills match between online and offline activities by comparing the occupations and sectors of survey respondents doing various types of internet and platform work.

Labour market status

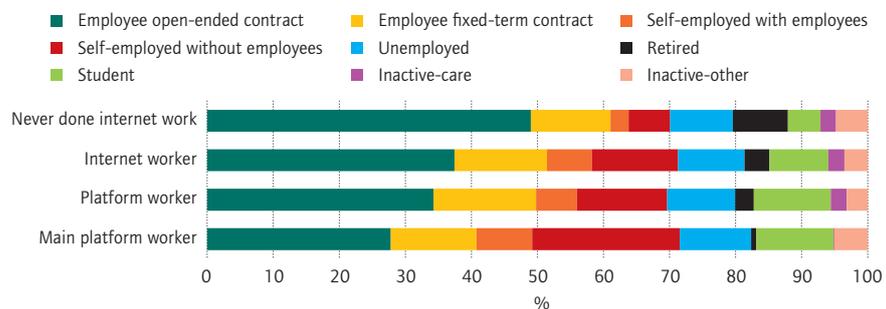
Involvement in internet work differs strongly by status on the labour market (Figure 27). There is a clear trend where those in standard employment – employees with an open-ended contract – are less likely to do internet work and their share further declines when we look at platform workers and main platform workers. These differences are statistically significant ($p < 0.05$). Even so, about one-third of main platform workers are workers with a standard employment contract. Employees on a temporary contract are somewhat more likely to do internet and platform work – they make up 12 per cent of those who have never done internet work but 16 per cent of platform workers.

The self-employed are especially likely to do internet work: 22 per cent of main platform workers are actually own-account workers compared to 6 per cent of those who have never done internet work. This can reflect both

that the self-employed are more likely also to do internet work, possibly as an extension of their main activity, and that internet and platform workers are more likely to report themselves as being self-employed. Rates of self-employment are especially high among those doing remote professional work, transport work and delivery work. Self-employed people with employees are also more likely to do internet and platform work (making up 8 per cent of main platform workers compared to 3 per cent of those who have never done internet work) but it is a weaker relationship. This suggests that at least some own-account workers rely heavily on internet and especially platform work to find clients. Moreover, many of them lack the independence of the genuinely self-employed. It is illustrative that, while 22 per cent of the self-employed who do internet work cannot set their own prices, this is the case for 28 per cent of the self-employed doing platform work. This relationship varies strongly by activity and the rate is by far the highest for transport platform workers (in which 42 per cent of the self-employed cannot set their own prices) and delivery platform workers (37 per cent); while for other types of platform work this is much lower (24 per cent for remote professional workers, 21 per cent for clickworkers and only 12 per cent for on-location workers).

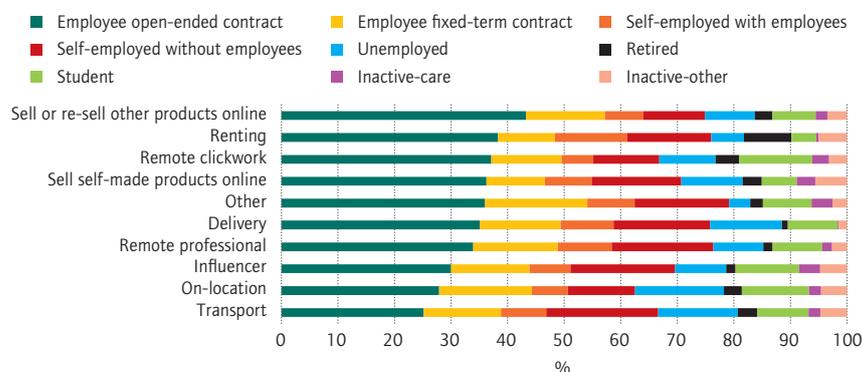
The unemployed and the inactive – whether due to care responsibilities or otherwise – are not more likely to do any type of internet work. This indicates that there is not a large proportion of non-working people earning extra money through apps or digital platforms. Students are over-represented in internet work, constituting 5 per cent of those who have never done internet work but 12 per cent of platform workers and main platform workers. The retired have the reverse association in which they have a clearly lower probability of doing internet work. This indicates that the heaviest involvement in internet and platform work is mainly on the part of non-standard workers (temporary employees, own-account workers and students).

Figure 27 Labour market status of internet and platform workers



Source: ETUI IPWS.

Figure 28 Internet workers by labour market status and type of activity



Source: ETUI IPWS.

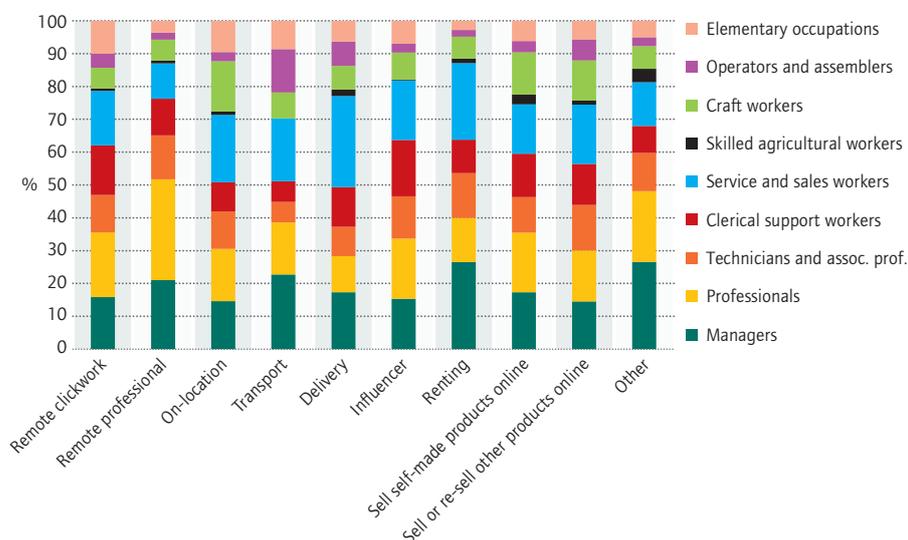
There is also sizeable variation between types of internet work. Employees on open-ended contracts are especially unlikely to do on-location or transport work, but they are quite likely to do remote professional work and other activities such as renting out accommodation or selling. Employees on temporary contracts are relatively likely to do professional freelance work, on-location work and delivery. The self-employed, especially own-account workers, are over-represented in professional freelance work, transport and delivery work, selling products and raising money through social media influencer activity. The unemployed are relatively more likely to do on-location work (making up 16 per cent of those in this segment), transport and delivery work (respectively 14 and 13 per cent). Students mainly carry out remote clickwork and earn via social media. The inactive are not particularly present while those who are retired are generally unlikely to be involved with internet work, the exception being the renting out of accommodation.

On-location, transport and delivery work are thus carried out most often by precarious workers or the unemployed and seem most often to appear in the place of other work. On the other hand, remote clickwork, renting and selling seem to be more readily combined with other, offline, work and to be complementary to it.

Occupational and sectoral variation

Involvement in internet work also differs between people depending on the content of their offline jobs as defined by occupation and sector. Looking first at the level of occupational variation, then around 20 per cent of managers report earning money on the internet in the past 12 months while this proportion is only 11 per cent among workers who are plant and machine operators and 9 per cent among skilled agricultural workers. Out of those doing internet work, plant and machine operators are most likely to work intensively on a platform (12 per cent), followed by elementary workers (9 per cent) and service and sales workers (9 per cent).

Figure 29 Occupational mix by type of internet work

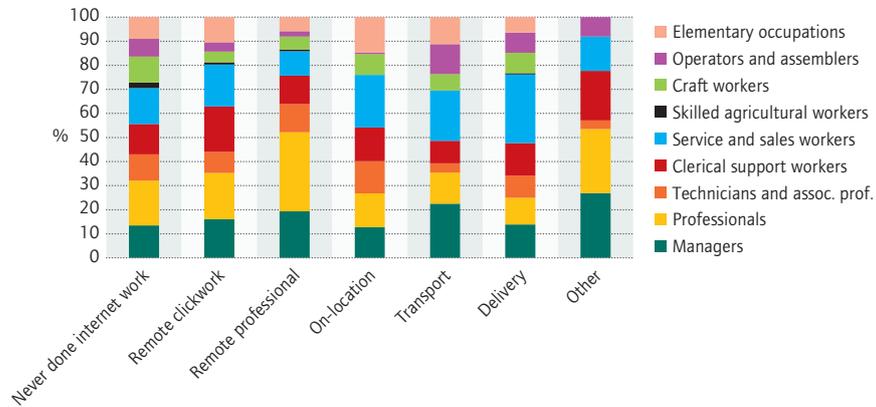


Source: ETUI IPWS.

There is large variation among remote clickworkers (Figure 29), of whom around 10 per cent work in elementary occupations and 17 per cent in service and sales jobs while 20 per cent are professionals and 16 per cent managers. The mix among workers doing remote professional work shifts to more high skill occupations, with 31 per cent being professionals and 21 per cent managers compared to only 11 per cent who work in service and sales and 4 per cent in elementary jobs. On-location work is characterised by a much higher share of workers in craft and related trades occupations (15 per cent) and a high share of workers in service and sales (20 per cent). Transport and delivery differ substantially from each other. Transport workers are more likely to be managers (23 per cent vs. 17 per cent), professionals (16 per cent vs. 11 per cent) and, especially, plant and machine operators (13 per cent vs. 7 per cent) in their offline jobs. Transport workers are less likely than delivery workers to be doing clerical work (6 per cent vs. 12 per cent) or services work (19 per cent vs. 28 per cent). Those earning money by renting out accommodation are most likely to be managers (26 per cent); an activity which is done much less by workers in elementary (only 3 per cent). The compositions of those earning money through selling self-made items or by reselling other items are quite similar, with a higher representation of technicians (11 per cent and 14 per cent) and crafts workers (13 per cent and 12 per cent). Those making a living as social media influencers are distributed much more evenly among different occupational groups with the exception of skilled agricultural work.

There is a similar distribution among platform workers (Figure 30). Remote clickwork is relatively likely among all occupational groups but especially among elementary workers and managers. Remote professional work is carried out mainly by managers and professionals while on-location work is more common among those in elementary occupations. Transport work

Figure 30 Occupational mix by type of platform work



Source: ETUI IPWS.

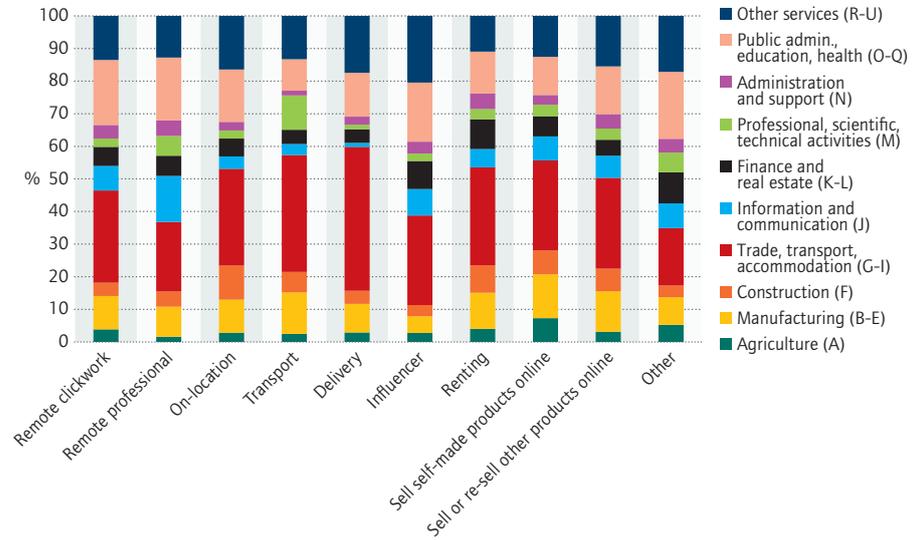
through platforms is most likely for plant and machine operators and this is relatively similar for delivery although this is also more likely for service and sales workers.

As with the differences by occupation, there is a relationship between the sector of offline employment and online activities (Figure 31). Indeed, there are some very clear overlaps between sectors of offline and online work, such as for workers doing delivery or transport work via the internet, of whom more than one in three also work offline in either the trade or the transport and accommodation sectors (44 per cent and 36 per cent, respectively). Moreover, a somewhat higher share of people working in finance and real estate also sell items online (9 per cent); and there is a higher share of ICT activities (14 per cent) and professional and scientific activities (6 per cent) among remote professional workers. However, somewhat surprisingly, among internet workers in transport there is a high share who are employed offline in professional, scientific and technical activities. Remote clickwork and remote professional work are also very likely to be done by those working in public administration, education and health.

The pattern of sectoral overlap is similar among platform workers (Figure 32). Workers in trade, transport and accommodation are highly represented in all types of platform work but especially in delivery. ICT professionals make up 14 per cent of remote professional workers and 10 per cent of clickworkers. Professional, scientific and technical activities are well represented among remote professional workers and on transport platforms.

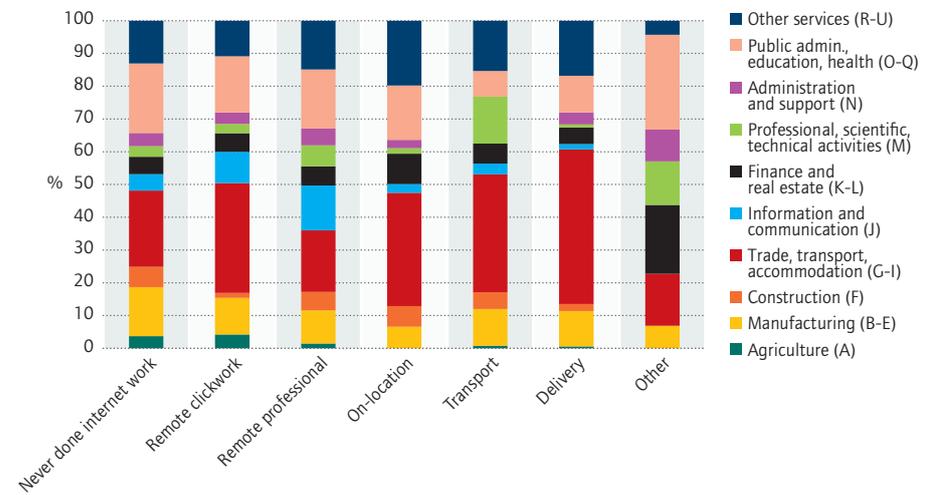
These descriptions suggest that there is an overlap between people's offline work and their internet and platform work, particularly when it comes to tasks requiring specific skills such as remote professional work, transport and some types of on-location work. On the other hand, there is a sizeable group doing tasks, such as in clickwork or delivery, that seem unrelated to the skill profile and sector of the offline job.

Figure 31 Sectoral mix by type of internet work (NACE Rev. 2 broad categories)



Source: ETUI IPWS.

Figure 32 Sectoral mix by type of platform work (NACE Rev. 2 broad categories)



Source: ETUI IPWS.

Earnings and working hours

Internet and platform workers commonly face the issue of the variability and unpredictability of their working hours and income. Unpredictable, low and unfair income thus represents a common grievance in various surveys of platform workers (e.g. EIGE 2021; Barcevičius et al. 2021: 60-63). This issue is most pertinent to those people for whom platform work constitutes a significant or main part of their income as they may, in particular, face long, irregular and unsocial working hours. Many of them work more hours than regular workers in order to earn a similar income (ILO 2021). A key issue, in this context, is not only the low compensation but also the amount of time that is unpaid, yet that is an essential part of platform work such as waiting for or securing tasks through platforms (e.g. Pulignano et al. 2021). The number of unpaid hours has been found to be highest among people in high skill online platform work (ILO 2021; Barcevičius et al. 2021: 61). According to the ILO, people working on digital labour platforms spend around one-third of their time on unpaid work.

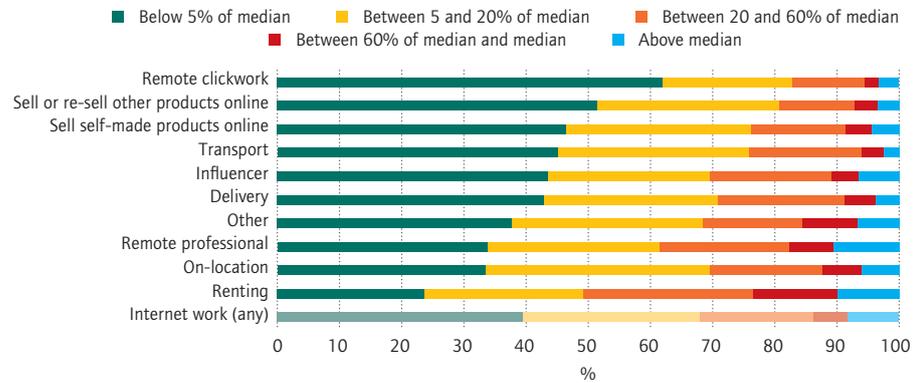
Available survey evidence has found that, in most cases, income from platform work represents a very small share of workers' income – less than 10 per cent in COLLEEM (Pesole et al. 2018) or 'almost none' in the first wave of the ETUI IPWS. A very high proportion of internet workers in our first wave in fact claimed that they had earned no income at all from internet work in the past year. However, for a small minority, platform work is the only source of income (see also Piasna and Drahokoupil 2021).

The data on the income and working hours of internet and platform workers presented in this section are complementary to previous research. This sample allows for more detailed analysis, reflecting the differences between various activities and types of tasks and also the variation between countries. The differences in working hours and earnings for online workers differ statistically significantly ($p < 0.05$) by the type of activity being carried out.

Income

Figure 33 shows how much respondents earned from internet activities in the last month they did them, expressed in bands calculated as a share of the median wage at country level. Table A1 (in the appendix) shows the income bands used in each country in the survey. It is immediately clear that many workers report earning very little, with 40 per cent of internet workers earning

Figure 33 Monthly income from internet work, in income bands relative to median wages and by type of activity



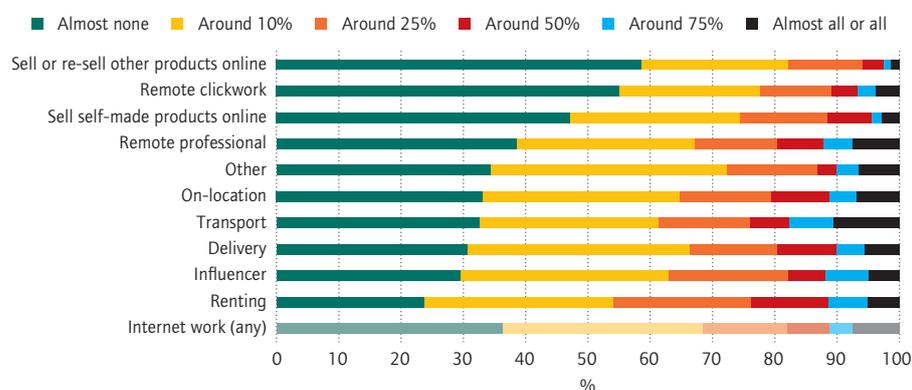
Note: The figure shows monthly income earned through internet work, based on bands relative to the monthly median wage (drawing on Eurostat, earn_ses18_mdeci) of a full-time worker in a given country and adjusted for inflation to the latest year.
Source: ETUI IPWS.

less than 5 per cent of the median earnings of a full-time worker. With the exception of renting activities, at least one-third of workers in every type of activity report earning less than 5 per cent of full-time median earnings while for clickworkers this proportion rises to more than 60 per cent. More than 90 per cent of workers doing clickwork, delivery or transport work and selling items online earn less than 60 per cent of the median full-time wage.

This shows very clearly that internet and platform work remain largely a source of additional income as they would position a worker who relied exclusively on them below the poverty line. On the other hand, 8 per cent of all internet workers do earn more than median earnings. This rises to around 10 per cent of people who rent out accommodation and who do remote professional work.

Figure 34 shows the share of total annual income that people earn from internet work. First of all, there is a non-negligible amount (7 per cent overall) of workers who make almost all of their annual earnings through the internet – 7.5 per cent of remote professional workers, 7 per cent of on-location workers and 11 per cent of drivers. On the other hand, more than half of internet workers doing remote clickwork or selling items make almost no income from it. For the vast majority of workers – over 85 per cent for all categories – the total share of income made through the internet is less than half of their annual income, and often much less.

Figure 34 Contribution of internet work to annual personal income, by type of activity



Source: ETUI IPWS.

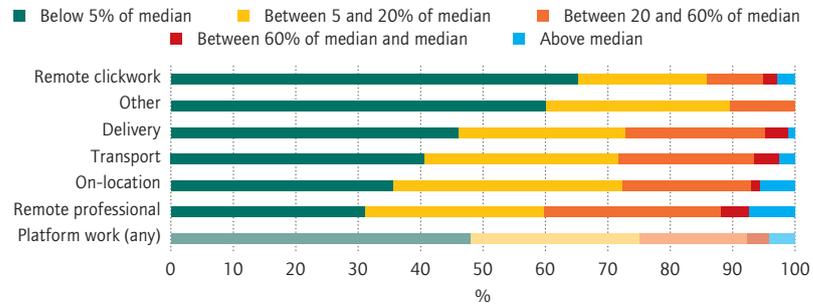
Earnings when looking only at platform workers tend to be lower (Figure 35 shows bands of income relative to the median and Figure 36 the share). Here earnings tend to be highest for remote professional workers followed by on-location workers. Income from remote clickwork is particularly low: 61 per cent of platform workers earn almost no income from this type of work compared to only around one-third of those doing on-location, delivery or transport work. Transport workers tend to earn a larger share of their income through platforms.

The mismatch between bands of income and the share – where remote professional workers are more likely to earn more relative to the median whereas transport workers report the highest proportion of annual income – reflects the differences in the offline labour market. In other words, transport platform workers are more likely to carry out this activity as their main source of income, but income remains relatively low; whereas remote professional workers more generally obtain additional, but relatively higher, earnings through this type of work.

In addition to providing an indication of relative banded earnings, a subset of internet and platform workers also reported the actual earnings they made in the last month they did internet or platform work. Where this was not available the midpoints from the bands were used to impute earnings.² Figure 37 shows that mean earnings for internet workers are highest by far for those renting out accommodation – at around 700 euro per month on average – followed by remote professional workers who earn a mean of 400 euro per month. These figures are highly skewed upward due to a very unequal distribution: median earnings lie much lower, at around 150 euro per month for remote

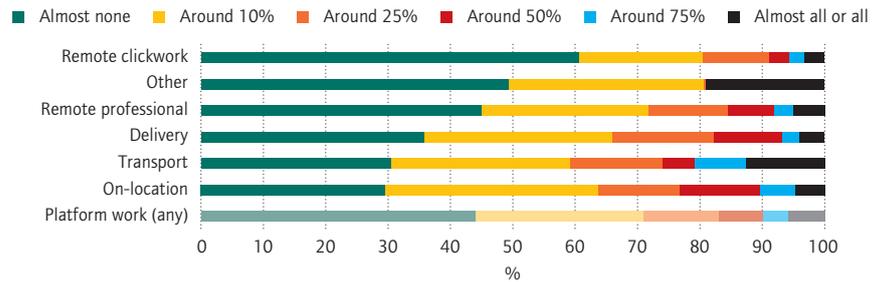
2. Due to outliers in earnings we trimmed the top 5 per cent, replacing it with the value of the 95th percentile in the country.

Figure 35 Monthly income from platform work, in bands relative to median wages and by type of activity



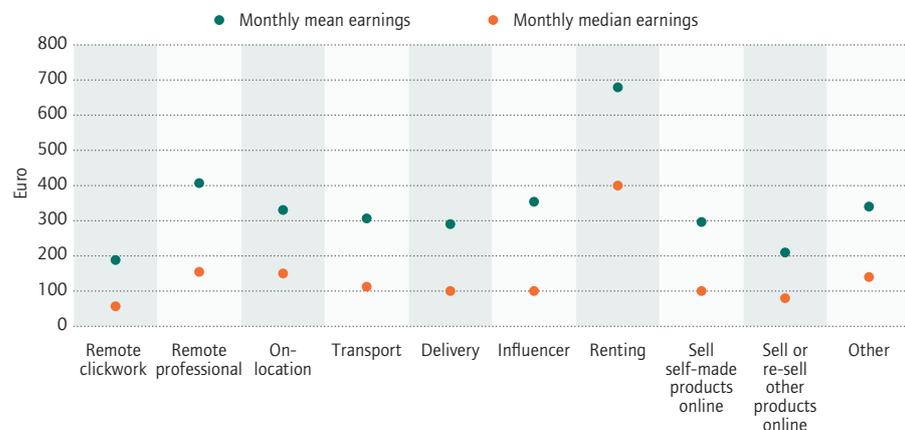
Note: The figure shows monthly income earned through internet work, based on bands relative to the monthly median wage (drawing on Eurostat, earn_ses18_mdeci) of a full-time worker in a given country and adjusted for inflation to the latest year.
Source: ETUI IPWS.

Figure 36 Contribution of platform work to annual personal income, by type of activity



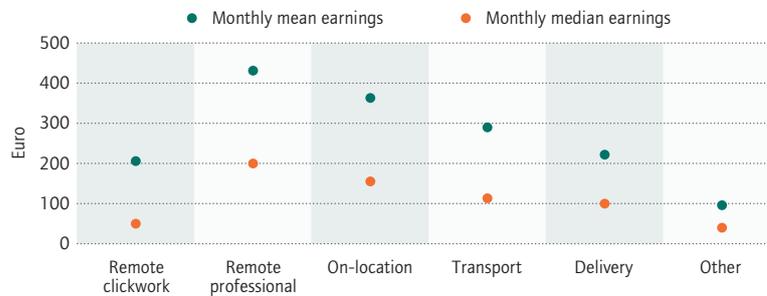
Source: ETUI IPWS.

Figure 37 Average monthly earnings from internet work by type (in euro)



Note: Total monthly earnings are trimmed, by setting values above the 95th percentile in each country to the 95th percentile, as there are sizeable outliers in the data.
Source: ETUI IPWS.

Figure 38 Average monthly earnings from platform work by type (in euro)



Note: Total monthly earnings are trimmed, by setting values above the 95th percentile in each country to the 95th percentile, as there are sizeable outliers in the data.

Source: ETUI IPWS.

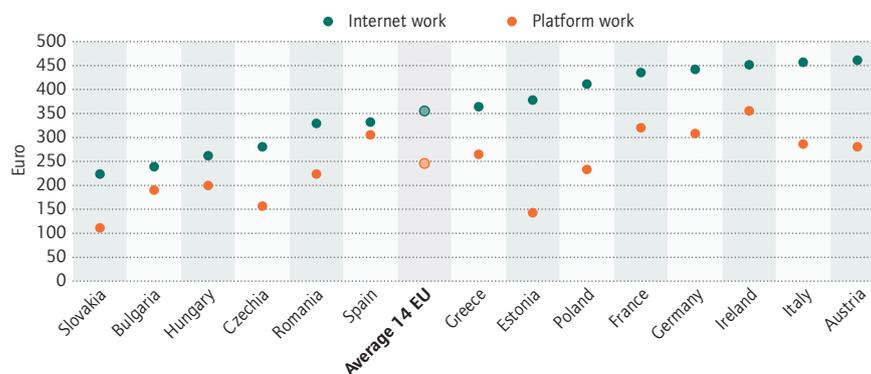
professional workers and around 100 euro per month (or less) for the other types with the exception of renting. They are lowest for remote clickworkers.

Figure 38 shows mean and median earnings for platform workers. Remote professional work clearly stands out as having the highest earnings – 200 euro per month for the median earner and over 400 euro at the mean. Clickwork sees by far the lowest earnings, at only around 50 euro per month for the median earner. Other freelance work also has very low earnings, but this is a rather rare category.

Figure 39 differentiates the earnings from internet and platform work by country, highlighting that earnings from internet work tend to be higher than from platform work (as the former includes types of activities associated with above-average earnings such as the renting out of accommodation). Across the 14 analysed countries, an internet worker earns a mean of 350 euro per month while a platform worker earns a mean of 250 euro per month. The average income from internet work is highest in Austria, Italy, Ireland and Germany while it is lowest in Slovakia, Bulgaria and Hungary. Interestingly, earnings from platform work seem to differ somewhat less between countries, meaning they are relatively lower in the higher-paying countries.

In summary, the total amount of income from internet and platform work tends to be quite low for most workers. There is, however, a subset of people – primarily in transport work and remote professional work, outside of renting – who do earn a substantial amount of their income through internet and platform work. Transport workers do not make a high amount but stand out as making the highest share of their income from this type of work.

Figure 39 Mean monthly earnings from internet and platform work by country (in euro)



Note: Total monthly earnings are trimmed, by setting values above the 95th percentile in each country to the 95th percentile, as there are sizeable outliers in the data.
Source: ETUI IPWS.

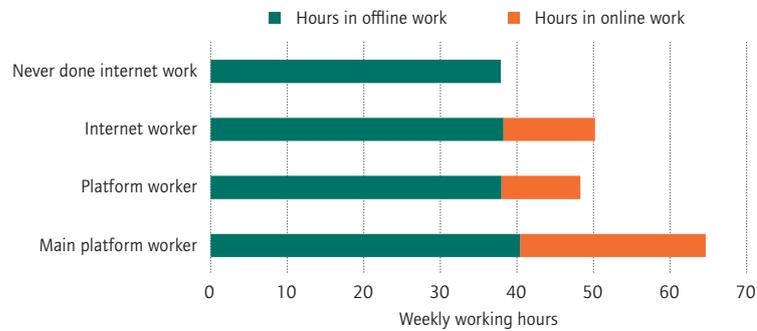
Working hours

Figure 40 shows average weekly hours for people who have never done internet work compared to those who do internet work and then for platform workers. The key finding is that internet and platform work is clearly an addition to offline work, and does not appear to substitute for it, as all types of workers work on average 38 hours per week when employed in the traditional economy. Offline workers are not statistically significantly different in this respect from those who have never done internet work, those who do internet work and those who do platform work.

At the mean, internet workers spend 10-12 hours per week in online work. The median internet and platform worker works online only 5-6 hours per week, however, as the mean is skewed upwards by some workers working very long hours.

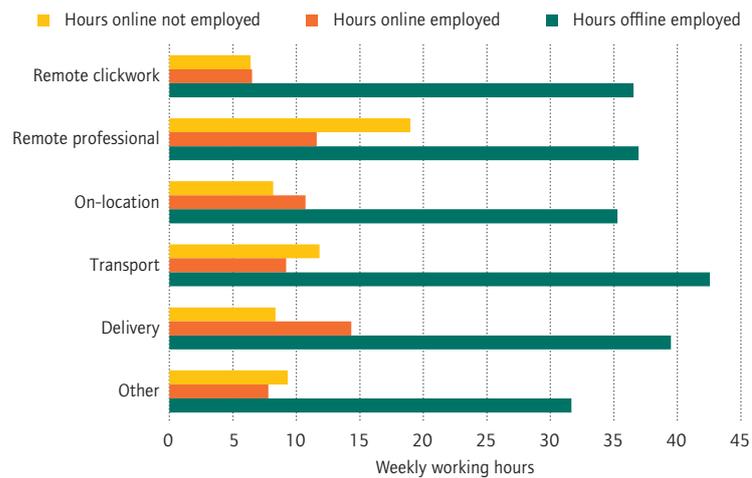
Figure 41 shows the average weekly hours of work for platform workers, distinguishing between the hours they work online and, for those who are also employed in the traditional economy, the hours worked offline. There is some difference in weekly working hours in the traditional economy for different groups of platform workers classified by the type of tasks they carry out on the platform. Transport workers work more hours on average while on-location workers work fewer hours in offline jobs. Online hours are generally the longest for delivery workers and in remote professional work. Remote professional platform workers, transport platform workers and other platform workers tend to work more hours when they are not employed – indicating some substitution of hours – than those that do work. Delivery workers and on-location workers, however, tend to put in longer hours on average in platform work when also employed offline.

Figure 40 Hours worked online and offline per week (mean)



Source: ETUI IPWS.

Figure 41 Hours worked by platform workers, in offline and online work (mean)

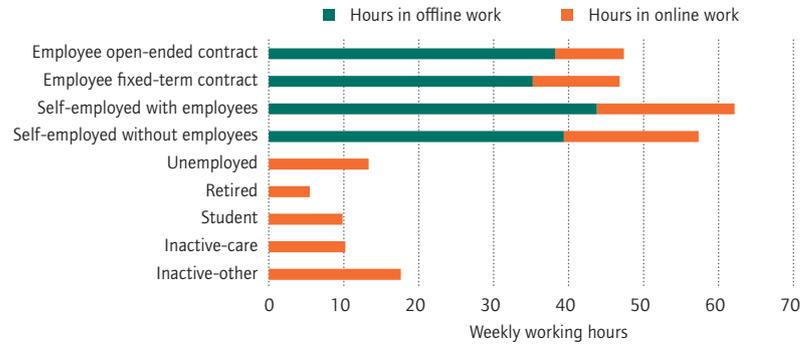


Source: ETUI IPWS.

Figure 42 shows in more detail mean online and offline hours worked by internet workers depending on their relationship with the labour market. On average, offline hours are longest for the self-employed, especially those with employees. In addition, the self-employed report working more hours online compared to those in dependent employment which results in an accumulation of exceptionally long weekly hours of work. The unemployed and those inactive for reasons other than care, retirement or study also tend to work more hours online than employees. Interestingly, retired people (but who are younger than 65) also work online but spend, on average, the shortest hours in this type of work.

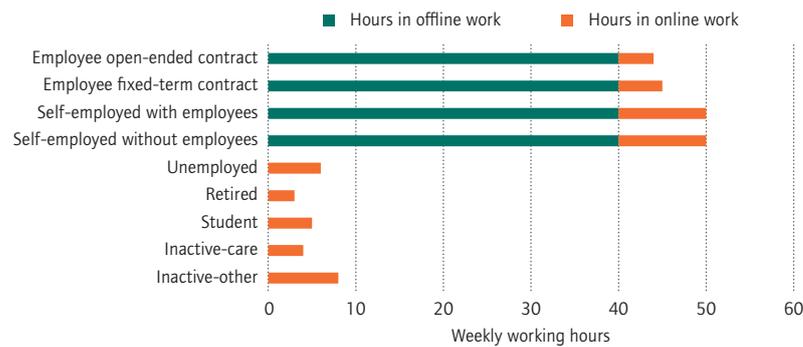
Figure 43 supports these findings with reference to median weekly hours. As there are some outliers in our sample who claim to work very long weekly hours, pushing up the means, the median hours spent working online tend to be substantially lower. The median employed worker spends four to six hours

Figure 42 Hours worked (mean) offline and online by labour market status



Source: ETUI IPWS.

Figure 43 Hours worked (median) offline and online by labour market status



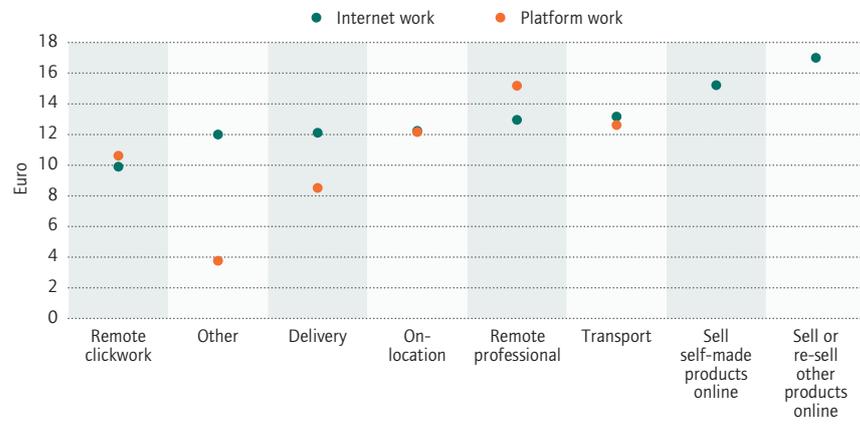
Source: ETUI IPWS.

per week working online – if they work online – rising to 10 hours for the self-employed. The unemployed spend six hours working online, slightly more than students who spend four to five hours per week in online work.

In summary, hours spent online are quite separate from the time spent in offline work. They tend to be highest for self-employed workers. Hours worked also vary between types of activity – they tend to be higher in remote professional work, transport and selling, and lowest in remote clickwork.

Figure 44 combines information on the monthly earnings from internet and platform work and the hours spent per week on this activity to approximate an hourly wage (in euro) for the last time people did this type of work. For platform workers, the hourly rate tends to be highest for remote professional work, followed by transport and on-location work although, when it comes to internet activities, selling tends to bring the largest income per hour worked and transport is again also relatively high. Remote clickwork and other freelance internet work bring relatively low hourly incomes.

Figure 44 Hourly earnings in internet and platform work (in euro)



Note: Total monthly earnings are trimmed, by setting values above the 95th percentile in each country to the 95th percentile, as there are sizeable outliers in the data.
Source: ETUI IPWS.

Conclusions

Digital labour platforms are at the centre of the debate about the future of work, both among researchers as well as social partners and policy-makers. Their much-publicised market expansion in the past decade was deemed spectacular, not least because of the controversy surrounding platforms' business models and employment practices, but also the technological transformation in work and in approaches to employment that they ushered in. Online labour intermediation has expanded the pool of available workers beyond geographical or organisational boundaries, facilitating the real-time matching of work demand and supply on an unprecedented scale. Automation of organisational functions, including through the use of algorithmic management and increased surveillance, has redefined the roles of workers and managers as well as the demarcations between jobs and tasks. With the Covid-19 pandemic, telework entered the mainstream, urging many employers to adapt their organisational policies to leverage more effectively a dispersed and flexible workforce. Once such practices have been tried and tested, a model of remote platform work, including a change to employment status or without it, might see its adoption across wider segments of the traditional economy.

For these reasons, it is vital to keep track of developments in the platform economy; to understand who performs this type of work and how often; what work and employment conditions are offered; and what type of tasks and skills are in demand in digital labour markets. In other words, reliable data on the prevalence and profile of platform work in Europe are absolutely needed.

However, platform work has proven elusive to measure, as testified by conflicting results from previous comparative studies (see overview in Piasna 2020; Pesole et al. 2018; Huws et al. 2016). One difficulty stems from the unclear demarcation of this type of work. Digital labour platforms do not form a distinct sector or occupation as they mediate a variety of tasks and services. Neither can they be defined by a common or distinctive employment form as they fulfil the role of an intermediary with greater or with lesser scope of control over the workers they organise, often performing the *de facto* role of an employer, but not always. There are also various websites and apps that meet several but not all of the defining criteria of a digital labour platform. It is thus challenging to formulate clear and unambiguous survey questions about platform work and for workers to assert with certainty the work that they perform is indeed mediated by a platform.

More importantly, on a conceptual level it becomes clear that digital labour is a broader phenomenon, not one that is confined to work on the most well-known online labour platforms. There is a substantial group of workers who operate on entirely virtual labour markets where labour matching is done online and no offline employment relationship is established between the parties.

The ETUI Internet and Platform Work Survey is designed to capture these forms of digital labour. We thus distinguish between **internet work** and **platform work**: the former capturing a broader concept of digitally-mediated labour; the latter measured in a very restrictive way based on both a descriptive definition of the type of work and the names of platforms provided by respondents.

The results of the second wave of the ETUI IPWS, consistent with previous single country surveys (e.g. Gazier and Babet 2018; OFS 2020), show that platform work is still fairly rare but that internet work is much more pervasive, suggesting further growth potential for the platform economy. Interestingly, we found the prevalence of internet and platform work to be relatively similar across the 14 European countries included in the survey, suggesting a uniform evolution of this type of work across those countries. In particular, **17 per cent** of the working age population did some internet work in the past year (approximately between March 2020 and March 2021); **4.3 per cent** did platform work; and **1.1 per cent** can be classified as main platform workers – that is, working 20 hours or more per week or earning more than 50 per cent of their income through platforms. While still relatively rare, platform work is a growing phenomenon as over one-third of platform workers started within the last year.

The ETUI IPWS offers good geographical representation of EU member states – the 14 countries included in this second wave cover 84 per cent of the EU27 working age population – as well as large representative random samples for each country. Therefore we are able to calculate approximately the size of the online workforce at EU level. Based on our results, we estimate that there were about **47.5 million internet workers, 12 million platform workers and 3 million main platform workers** in the EU27 in 2021.³ Moreover, as the median internet and platform worker puts 5 hours per week into this type of work, this would correspond to 237.5 million hours spent weekly in online work across the whole EU; or 6.25 million full-time equivalents (FTE), thus workers doing internet work on a full-time basis. Similarly, 72 million hours per week are spent on platform work, conservatively estimated, which is equivalent to 1.9 million full-time workers.

3. To estimate the number of people doing internet and platform work, we assume the shares we estimate hold across the whole of the EU, then multiply these by the EU population aged 18-64 which stood at 279,430,686 people on 1 January 2020 (DEMO_PJAN obtained from Eurostat). For the estimates of hours, the number of workers was multiplied by the median online hours of 5 per week. To get to full-time equivalent workers we assumed a full-time working week of 38 hours.

Not all types of internet work are similarly frequent. The most popular activities that people did in the last year are some form of remote clickwork (5 per cent of the working age population) and the selling or reselling of products other than second-hand items (5 per cent). Close to 10 million people across the EU (3.4 per cent of the working age population) do clickwork on a monthly basis, followed by 5.6 million (2 per cent) who are selling items and 5.2 million (1.9 per cent) who are doing remote professional work. Somewhat surprisingly, given the amount of media attention it receives, the smallest internet activity is transport, carried out by 1.5 million people on a monthly basis (0.5 per cent of the working age population). In terms of specifically platform work, around 3.8 million people did remote clickwork at least once in the year, followed by delivery, remote professional and on-location work, each done by about 2 million people, and 1.5 million transport workers.

Internet and platform workers differ from the offline workforce in several ways. They tend to be younger on average but they do not seem to be predominantly student-aged people earning a bit of extra money. They are more likely to be highly educated than those who have never done internet work; this is particularly the case for those who perform creative freelance work.

Online work seems mainly to act as a complement to offline precarious work and to serve as an extra source of income for those on less stable contracts. This is particularly so for on-location, transport and delivery work; while clickwork, renting and selling are activities carried out more generally. The hours spent in online work seem to be unrelated to the hours spent in offline work. This means that people who are not economically active in the traditional labour market spend a similar number of hours in platform work to those who are employed or self-employed.

While for some workers the type of job they do in the traditional economy matches the skills profile of their online activities, this is not universal. For instance, professional service workers and those in the ICT sector are most likely also to offer remote freelance work online; while plant and machine operators and those in transport and logistics are most likely to do transport work. However, we found in general a wide variation in the occupational and sectoral profiles of all types of internet and platform work.

Finally, income from internet and platform work is very low and, for the vast majority of workers, this type of work provides only a very small share of their total income. The lowest pay levels are in clickwork, where the median worker earns 50 euro per month from this type of activity, followed by delivery (100 euro) and transport (113 euro). Only a small group – around 5-10 per cent of internet and platform workers – make sizeable earnings, particularly through the renting of accommodation, remote freelance work and transport work.

It is not possible to determine with our data the extent to which such low earnings result from respondents treating this work as only top-up income

or rather from the way online markets currently operate. In the light of earlier studies pointing to the insufficient availability of work as one of the main grievances among platform workers (e.g. Piasna and Drahokoupil 2021; Vallas and Schor 2020) and the amount of work that is required but not remunerated by platforms (e.g. Pulignano et al. 2021), it appears that low earnings are largely unwelcome. Nevertheless, they are prone to remain an integral feature of the platform economy if no action is undertaken to improve work and employment conditions.

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All links were checked on 23 December 2021.

Appendix

Table A1 Monthly income bands

	A	B	C	D	E
Bulgaria	Less than 50 Bulgarian lev	Between 50 and 200 Bulgarian lev	Between 200 and 500 Bulgarian lev	Between 500 and 900 Bulgarian lev	900 Bulgarian lev or more
Czechia	Less than 1400 Czech koruna	Between 1400 and 5500 Czech koruna	Between 5500 and 17000 Czech koruna	Between 17000 and 28000 Czech koruna	28000 Czech koruna or more
Germany	Less than 200 Euro	Between 200 and 700 Euro	Between 700 and 2000 Euro	Between 2000 and 3300 Euro	3300 Euro or more
Estonia	Less than 60 Euro	Between 60 and 250 Euro	Between 250 and 750 Euro	Between 750 and 1250 Euro	1250 Euro or more
Ireland	Less than 160 Euro	Between 160 and 650 Euro	Between 650 and 2000 Euro	Between 2000 and 3300 Euro	3300 Euro or more
Greece	Less than 70 Euro	Between 70 and 250 Euro	Between 250 and 800 Euro	Between 800 and 1300 Euro	1300 Euro or more
Spain	Less than 100 Euro	Between 100 and 350 Euro	Between 350 and 1000 Euro	Between 1000 and 1800 Euro	1800 Euro or more
France	Less than 120 Euro	Between 120 and 500 Euro	Between 500 and 1500 Euro	Between 1500 and 2500 Euro	2500 Euro or more
Italy	Less than 110 Euro	Between 110 and 450 Euro	Between 450 and 1300 Euro	Between 1300 and 2200 Euro	2200 Euro or more
Hungary	Less than 13000 Hungarian forint	Between 13000 and 50000 Hungarian forint	Between 50000 and 160000 Hungarian forint	Between 160000 and 250000 Hungarian forint	250000 Hungarian forint or more
Austria	Less than 150 Euro	Between 150 and 600 Euro	Between 600 and 1700 Euro	Between 1700 and 2900 Euro	2900 Euro or more
Poland	Less than 200 Polish zloty	Between 200 and 800 Polish zloty	Between 800 and 2400 Polish zloty	Between 2400 and 4000 Polish zloty	4000 Polish zloty or more
Romania	Less than 150 Romanian leu	Between 150 and 700 Romanian leu	Between 700 and 2000 Romanian leu	Between 2000 and 3500 Romanian leu	3500 Romanian leu or more
Slovakia	Less than 50 Euro	Between 50 and 200 Euro	Between 200 and 600 Euro	Between 600 and 1000 Euro	1000 Euro or more

Note: If the amount reported by the respondent fell on the overlap between the bands, it was classified in the lower category.

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