

Chapter 4

Motivations for Labour Provision on Digital Platforms in Europe: Examining the Differences Between Only Gigers and Gigers and Renters

Joan Torrent-Sellens

Open University of Catalunya, Spain

Pilar Ficapal-Cusí

Open University of Catalunya, Spain

Myriam Ertz

 <https://orcid.org/0000-0001-9959-2779>

LaboNFC, University of Quebec at Chicoutimi, Canada

ABSTRACT

Research on the gig economy has rarely addressed the study on the motivations for the provision of labour services on digital platforms. Through a sample of 3,619 gigers in Europe, obtained from the COLLEM research, results have been obtained for labour providers (only gigers) and for labour and capital use providers (gigers and renters). The valuation of labour, being an internal resource of the gigers, has a great set of economic foundations, working conditions, and labour relations. On the other hand, the valuation of labour and capital uses is more focused on their economic and labour relations fundamentals, notably reducing the role of working conditions. These motivations suggest different platform strategies and public employment policies for both groups. While the promotion of the general job quality would also encourage the gig-job quality, the promotion of the labour and capital uses valuation requires specific actions on the platform operations.

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INTRODUCTION

During the last decades, economic globalization and the digital revolution have been profoundly and structurally transforming employment and labor relations (Martínez-Cerdá et al., 2020). Progressively, homogeneous and routine jobs; the industrial organization of work: atomization, hierarchy, and lack of autonomy in the workplace; stable lifetime employment in the same firm or organization; separate periods of training, employment, and retirement; only fixed rewards, and a framework of labor relations, with a social contract that exchanges homogeneous hours of work and fixed wages for productivity, are running out (Díaz-Chao et al., 2016). In substitution to traditional forms of employment, new and alternative forms of work, such as part-time, on-demand, or occasional employment, are being consolidated (Katz & Krueger, 2019).

From a technological perspective and like any other wave of disruptive innovation, digital-based technologies have generated a wide range of positive and negative effects on employment (Ballestar et al., 2020). In this sense, research on the effects of technology on employment has reached two basic consensus (Vivarelli & Pianta, 2000). An initial agreement is based on the idea that the first effect of technology on employment is a skills bias. Empirically, the thesis of *skill-biased technological change* has been extensively verified (Card & DiNardo, 2002; Moore & Ranjan, 2005). According to this approach, the process of technological innovation generated, or that can only be used, by more trained workers with better skills and flexible organizations open to change, would explain the improvements in employment.

On the other hand, technological innovation would also be linked to increases in unemployment, falls in wages or the deterioration of the working conditions of employees with less training and skills, and more rigid organizational schemes (Antonelli & Fassio, 2014). In this sense, the second consensus establishes that the workers' skills, capabilities, and competencies, the firms' strategic, organizational and productive models; managerial decisions; labor relations; cultural and institutional settings; and public policies are fundamental for explaining the results of technology on employment. The impact of technology on employment can only be understood from its complex interaction with the educational, economic, social, political, and cultural system where it is applied (Autor et al., 2003).

In recent years, and leaning with the first wave of change related to Information and Communication Technologies (ICT) and the non-interactive Internet (Internet 1.0), a new phase of disruptive technological change has been generated. This new phase of digitization began with the appearance of social networks (Web 2.0) that exponentially increased the capacity for interaction and sharing of audio-visual material between people (Carroll & Romano, 2011). More recently, it has been confirmed that we would be at the beginning of a new general-purpose technological wave (so-called the fourth industrial revolution), which reinforces and deepens the first waves of digitization (Torrent-Sellens, 2015). Robotics, artificial intelligence, machine learning, and deep learning, cloud computing, big data, 3D printing, Internet of things or social networks, and digital platforms, among others, are beginning to show signs of construction of a new interconnected technological base, a new technical-economic paradigm, that will be interrelated with social and cultural changes of unprecedented magnitude (Torrent-Sellens, 2019; Trajtenberg, 2018). This new digitization wave, which will strongly materialize in the coming years (Frey & Osborne, 2017; Pratt, 2015), has fundamental implications in explaining productivity and the structure of employment, which has garnered renewed interest from researchers in the field (Autor, 2015; Camiña et al., 2020).

Therefore, a new digital wave appeared. In the new forms of digitization, labor markets tend to polarize and relocate skills, tasks, occupations, and jobs favoring workers and the highest and lowest incomes in the employment structure. This dynamic harms workers and the average income of the oc-

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cupational structure (Frey & Osborne, 2017). This general trend, which is also related to a broad set of economic (globalization), social (immigration), institutional (international political relations), and political (crisis of the welfare state) factors, has intensely accelerated in recent years. In fact, it has been found that, unlike other technological waves, the current phase of digitization would be less likely to create employment and would have a greater tendency to displace it instead (Acemoglu & Restrepo, 2018; Autor & Salomons, 2018).

New jobs can only be conceived in the current labor context, on very few occasions, as classic standard employment relationships with long-term prospects, industrial relations, and complete social security (Gregory et al., 2016). However, through intensive uses of new digital technologies (such as professional networks and workflows, machine learning algorithms, or digital platforms), firms can find themselves at the end of flexible hiring, driven by a highly unpredictable environment, and organize their workflows through temporary, external employment networks and the concentration of the primary labor force in the segments where there is no shortage of qualified workers. This means that flexibility and multiple forms of alternative work, such as temporary contracts and individualized services, freelance work, or various jobs, will evolve upwards over the next few years (Weil, 2014). Undoubtedly, this general trend fits very well with the potential of the platform economy, in the sense that highly flexible and competitive digital exchange platforms can be used by some providers (job offers) that offer their services in a work exchange network, and where firms or other people (labor demand) buy or exchange (Katz & Krueger, 2019).

Nevertheless, the platform economy does not just generate opportunities to create jobs in the simplest tasks. For example, firms also offered high-quality consulting services or highly specialized expert work tasks. Indeed, the possibility of acquiring this type of specialized work through labor services on digital platforms without hiring may imply rethinking the work organization in firms. Although this reorganization process is challenging to foresee, it will undoubtedly impact how firms organize production and workflow. As in any other process of technological change, work on platforms, understood as the evolution of temporary work performed alternatively on digital platforms, generates risks for various segments of the labor markets but, at the same time, offers a wide range of opportunities for new employment (Bearson et al., 2020). As always, the balance in terms of job distribution and generated well-being will depend on a set of personal, economic, social, institutional, cultural, and political factors (Abraham et al., 2017). Beyond the effects on labor markets, working on digital platforms also directly impacts labor relations, pensions, social security, and welfare. In particular, the literature has pointed out the growing need to build a new and international social contract and legal framework between workers, employers, and the public administration that contemplates the construction of new alternative forms of employment (Harris & Krueger, 2015; Berg et al., 2019; De Stefano & Aloisi, 2018).

Precisely, and in the context of platform employment, in this chapter, we will analyze a relatively little-studied dimension: the participants' motivations to offer labor services. Even though we have considerable evidence on the motivations towards the provision of a wide range of goods and services on digital platforms (Li & Wen, 2019; Park & Armstrong, 2019; Vicente & Gil-de-Gómez, 2021), for labor services, the available evidence is relatively scarce (Doucette & Bradford, 2019). This is because, in the field of gig employment, research has focused on knowing the structure and results of this alternative form of employment rather than their motivations for participation. This interest is linked to the important changes generated in the employment of traditional sectors, such as hotel and commercial activity or passenger transport, which has generated significant controversies and the intervention of the public administration, especially in Europe (Kaine & Josserand, 2019; Schwellnus et al., 2019). How-

ever, understanding the reasons that lead gigers to offer their labor services on digital platforms is still fundamental because these motivations can shed light upon their duality of results. The implications for development and labor policies on the gig economy cannot be the same whether gigers enroll because of the flexibility, autonomy, and career development offered by the digital platforms or whether they enroll because of difficulties finding stable jobs or working in healthy conditions. Thus, and to enrich the evidence in the field, this chapter investigates the set of motivations that lead European gigers to offer their labor services. Moreover, and taking into account the importance of the individual characteristics and the occupational status of the participants in the digital platforms (Gleim et al., 2019; Torrent-Sellens et al., 2020), we will ask about the motivational differences between the participants who only offer labor (only gigers), and the participants who provide labor and also obtain income through the provision of other capital goods and services (gigers/renters).

LITERATURE REVIEW: LABOUR IN THE GIG ECONOMY

The starting point for platform employment, also called the “gig economy,” is established from the digital platform Uber’s success for driving services (Berger et al., 2018). This basic operating principle has spread rapidly to other firms and sectors. It has also transformed traditional remote labor markets, such as freelance or self-employed markets, organized through these platforms (Hall & Krueger, 2018). In these markets, interested firms (also individuals) call in a multitude of providers (crowd workers or gigers), which are more or fewer professionals, and acquire their labor services so that they no longer have to use the internal human or physical resources of the firms (De Groen et al., 2017). The literature emphasizes that different forms of platforms exist in the overall gig economy or platform economy. For example, Sun et al. (2021)’s chapter presents a platform typology comprising no less than seven types of collaborative economy platforms, some involving predominantly consumer-to-consumer (C2C), business-to-consumer (B2C), or both types of marketing. More generally, research has classified employment on digital platforms into two large groups (Berg et al., 2019; Codagnone et al., 2016; Fabo et al., 2017): location-based platforms (i.e., *Uber*, *Foodora*, *Deliveroo*, or *TaskRabbit*) and web-based platforms (i.e., *Amazon Mechanical Turk*, *Upwork*, *Topcoder*, or *Crowdanalytics*). The former generally involve physical activities and services locally performed that include transportation, deliveries, or home services. In the web-based platforms, work is done online, and a digital provider located anywhere can access, complete, send and collect assigned tasks. In both groups, the digital employment platform fulfills three functions (Howcroft & Bergvall-Kåreborn, 2019). First, it matches the supply and demand for job tasks. Second, it generates a range of tools and services that allow the delivery of tasks in exchange for income or rewards. Third, it establishes rules and coordination mechanisms through agreements and terms of service (Choudary, 2018).

Located or web-based platform work means that increasingly autonomous job providers offer their labor services through digital platforms and consequently compete with traditional business models based on firms with dependent workers. In this context, there are usually jobs that do not involve a formal relationship between employer and employee, so that considerably less structured jobs are created, which are tremendously flexible and far from the usual standards (Abraham et al., 2018). At the same time, the pricing structure of these services is continually under pressure. In fact, through platform work, there is a transfer of risks from the employer to the employee. This is because digital platforms are usually not considered employers but employment intermediaries. Therefore, the workers who use these platforms

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are no longer classic employees but self-employed or autonomous workers, with all associated risks or costs, such as accidents or illnesses, pensions, unemployment, or health (Aloisi, 2016; Wood et al., 2019).

The number of workers involved in the new alternative forms of employment has significantly increased over the last decade. About research for the United States, Katz and Krueger (2019) confirm that the new alternative forms of employment went from 10.1% of the total in 2005 to 15.8% in 2015. In this research, the alternative forms of employment considered are temporary help agency workers, shift or guard workers who remain on hold until they are called to work (on-call workers), project workers or service (contract workers), and independent or freelance employers (independent contractors or freelancers). In Europe, these alternative forms of work would have a lesser scope. For example, the average number of freelancers in Europe is around 7% of the workforce, and people with two or more occupations would be about 5% of the total. With very different realities by country (the Netherlands and Sweden stand out for the presence of temporary and contract workers, while a very high presence of self-employment characterizes Italy), these data have remained relatively stable over the last few years (Eichhorst et al., 2017). However, examining digital platform work and drawing on the research of population samples for 7 European countries, Huws et al. (2017) highlight a growing presence of eventual gigers, ranging from 9% in Germany and the United Kingdom to 22% in Italy. Along the same lines, more recent research places the share of gig employment in Europe at around 10% of the total employed population (Pesole et al., 2018; Urzì-Brancati et al., 2020).

Regarding platform employment results, some gigers are satisfied with digital platform employment and especially with the opportunity to work flexibly or earn an income, most of them occasionally (Barnes et al., 2015). The income from gig employment would be occasional, and in most cases, would complement other sources of income (Abraham et al., 2018; Katz & Krueger, 2019). The results for European employees who spend more than 10 hours a week and earn more than half of their wages through gig employment are much more modest, at around 2% of the employed population (Urzì-Brancati et al., 2020). The lack of employment protection also translates into downward pressure on wages for assigned tasks. Research in the field has found significant percentages of gigers with rewards below the average salary in their professional categories (Berg et al., 2018; De Stefano, 2016). Other gigers are integrated into these markets because they have no other options (involuntary platform work).

Of course, the providers and the people who obtain jobs through digital platforms, generally young and highly educated men (Urzì-Brancati et al., 2020), value their ability to provide alternative income and estimate that soon, these could become their primary source of income. Despite this possibility of completing income, gigers are generally concerned about the security of their income and their employment. The specificities of platform employment give it an interesting duality (Kässi & Lehdonvirta, 2018; Urzì-Brancati et al., 2020). On the one hand, it could represent for gigers an opportunity for autonomy and control of career advancement and the reconciliation between work and family life (Wong et al., 2021). In the same way, it offers job opportunities for specific groups of workers with access problems to physical labor markets (De Stefano, 2016). Nonetheless, on the other hand, it also carries a high risk of precariousness and higher levels of dissatisfaction (Keith et al., 2019). In this sense, the literature that attributes to gig employment, the promotion of instability, labor deregulation, and the impoverishment of working conditions is abundant (Berg et al., 2019). Due to its ability to avoid obligations related to labor legislation and employment protection, it has even been questioned whether gig employment will not put the very concept of employment at risk, giving rise to unprecedented legal uncertainty in labor markets (IOE, 2017). Although neither the expansion of atypical work, nor that of autonomous workers, nor the appearance of the so-called “precariat” (Standing, 2014), may be directly attributable to digital

labor platforms, evidence is beginning to accumulate that they are accelerating new forms of atypical work and new conceptualizations of workers, such as “people as a service” (Silberman & Irani, 2016). As most of the literature warns, the challenge is to avoid that: “these new forms of employment end up being new forms of precariousness” (Malo, 2018: 155).

In the context of the remote provision of digital labor services carried out in developing countries basically for European or United States contractors, it is highlighted that platform employment tends to amplify its positive or negative effects (Graham et al., 2017; Heeks, 2017). Regarding the positive effects, job generation, hourly and workplace flexibility, autonomy, and various tasks are perceived as highly positive in a context dominated by weak labor opportunities (De Stefano, 2016, Rani & Furrer, 2020). However, and regarding adverse effects, algorithmic and digital labor control mechanisms also result in low wages, social isolation, irregular working hours, overwork, lack of sleep, or exhaustion (Graham et al., 2017; Rani & Furrer, 2020; Wood et al., 2019). In fact, research also accumulates evidence about the negative evaluations that people make of the ways of organizing work on digital platforms in a context dominated by weak labor protection (Berg et al., 2019; Geissinger et al., 2021).

However, despite the interest and concern that gig employment arouses, there are still severe difficulties in studying it. For example, the exact number of digital labor platforms, the amount of gigers involved, or the income it generates is not available. The main reason is the general lack of official records and administrative data for their analysis (Abraham et al., 2018). As a result, researchers have resorted to different ways to alleviate this deficit, such as monitoring digital employment platforms and their gigers, web crawling, ad-hoc surveys, or approximations from existing databases. The result is a growing literature that has provided some first evidence on the size and structure of gig employment for European countries (Urzi-Brancati et al., 2020).

In this context, it has been pointed out that the individuals who provide their labor services through digital platforms present significant differences concerning the general population and the rest of the employees. In general, it has been found that there is a higher proportion of young men with a high educational level and residents of large cities (Huws et al., 2017). In a survey of 3,500 gigers from 75 countries in 2015 and 2017, Berg et al. (2018) characterized the sociodemographic and labor profile of gigers with the following features: a) although there are gigers of all ages, their average age is low and slightly over 30 years; b) there are important gender differences since women only represent a third of employment on digital platforms; c) the gigers are well educated since 57% had a university degree or master’s degree; d) among the graduates there is a certain specialization towards the contents related to natural sciences and medicine, engineering and information technologies (57%) and economics and management (25%); e) volunteering or working for the community (56% of the gigers had done it for more than a year) is a good precedent for gig employment; and f) gig employment is consolidating since 29% of gigers have already worked for more than three years on a platform.

In addition, other interesting aspects are also observed, such as the fact that the participation of women has a negative relationship with the intensity of platform work. This would mean that a greater number of tasks or a greater intensity of work by tasks would be associated with a lower presence of women on the platforms (Doucette & Bradford, 2019); that within the same age group, those individuals with less work experience have a greater probability of belonging gigers group; or that, although jobs that require a low level of skills predominate (Fabo et al., 2017), gigers have a high level of education (Pesole et al., 2018), giving rise to a mismatch that we could relate to over-education and/or over-qualification. All these elements point out the need to go beyond the mere descriptive exercise and suggest the purpose

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of isolating the effects that an individual's characteristics have on the probability of developing a job through a digital platform (Congregado et al., 2019).

Although the occupational status of digital platform providers' employment remains unclear, the literature finds that gig employment is usually positively associated with the most atypical forms of employment, such as self-employment, multiple employment, or temporary or part-time employee contracts. Furthermore, it is common for gigers to be found in the most atypical occupational structure sections (Huws et al., 2017; Pesole et al., 2018). Occupational status, therefore, seems to play an essential role in providing labor services in digital platforms (Urzi-Brancati et al., 2020; Torrent-Sellens et al., 2020). Therefore, and related to the individual and occupational characteristics of platform employees, we pose a first research question:

First Research Question: Are participants' individual and occupational characteristics in digital platforms that provide labour (only gigers) different from those that provide labor and other rental goods and services (gigers/renters)?

The advent of digital platforms has profoundly transformed both economic and labor exchanges (Torrent-Sellens, 2019). Within this context, field research has pointed out the collaborative nature of this new set of online resource circulation systems (Ertz et al., 2016), which enable people to both obtain and provide, temporarily or permanently, valuable resources or services through direct interaction with other people or through a mediator (Ertz et al., 2017). A platform provider is a person who provides a specific resource or service, either directly to an obtainer or indirectly through a mediator. Thus, the collaborative provision refers to re-exchange or reuse, such as reselling or secondhand purchase, subleasing, swapping, free or paid donation, and reconditioning or refurbishing (Ertz et al., 2019).

Participation in digital platforms is based on a multidimensional set of motives (Barnes & Mattsson, 2017; Hawlitschek et al., 2018; Torrent-Sellens et al., 2020). First, the technological foundations of platform exchange should be noted (Belk, 2014) and, in particular, people's ability to know about and operate within digital platforms, which includes knowledge about the existence and utilities of the platforms (Gazzola et al., 2019; Hamari et al., 2016). Secondly, research on platform exchanges has also confirmed that the antecedents of digital participation might be different depending on whether people are acting as obtainers or providers (Barbosa & Fonseca, 2019; Ertz et al., 2017). Strong support had been found for the prevalence of utilitarian motives, especially economic and practical ones, at the obtainment stage (Bucher et al., 2016; Wilhelms et al., 2017). However, a broader set of non-utilitarian and pro-social drivers, such as creating better communities through alternative non-profit exchanges, sustainability, solidarity, or helping people, also fosters provision (Li & Wen, 2019; Park & Armstrong, 2019; Vicente & Gil-de-Gómez, 2021; Ertz et al., 2021). For example, in their analysis of motivations for participation in digital platforms in Europe, Torrent-Sellens et al. (2020) find that the provision of goods and services on digital platforms is a function of previous experience as a source, convenience and utility factors, and pro-social drivers. In the same line, Ertz et al. (2021) emphasized the fact that providers are usually motivated by a broader scope of motives than mere profit in their investigation of the switchover process, which involves users switching over to the provider role within the collaborative economy. And third, research has also found a set of barriers hindering participation in collaborative exchanges (Barnes & Mattsson, 2017; Hawlitschek et al., 2018). Procedural, process, and privacy risk concerns, distrust among participants, and effort expectancies are the most common barriers identified in the literature (Edbring et al., 2016; Ter Huurne et al., 2017).

However, despite the critical evidence available for the set of motivations that support the provision of all types of goods and services on digital platforms, research on the motivations for the provision of labor services is not very abundant, incorporating theoretical postulates or analysis on specific platforms (Doucette, & Bradford, 2019; Jabagi et al., 2019). In fact, research on gig employment has focused more on studying the structure and outcomes of this alternative form of employment, characterizing gigers, or analyzing their implications for employment, industrial relations, or public employment policies. In this research, we will address the analysis of the motivations that predict the provision of labor services to cover this gap. To this end and considering the importance of platform participants' occupational status (Gleim et al., 2019; Torrent-Sellens et al., 2020), we will ask about the differential motivations between the participants that only provide employment (only gigers) and the participants that provide employment and obtain income from the exchange of other capital goods and services (gigers/renters). Therefore, our second research question is:

Second Research Question: Are the motivations of labor services provision (only gigers) in digital platforms different from those that provide labor services and other capital goods and services (gigers/renters)?

To answer our two research questions, the microdata from the COLLEEM (COLLaborative Economy and EMPloyment) Survey have been used (Pesole et al., 2018; Urzi-Brancati et al., 2020). The COLLEEM survey, sponsored by the Joint Research Center (JCR) of the European Union, has two waves of data corresponding to 2017 and 2018. In our research, microdata from 2017 (fieldwork was carried out during the second half of June) has been used. Specifically, it is a telephone survey of a representative sample (stratified by groups of age and gender) of 32,409 internet users aged 16-74 in 14 European countries (around 2,300 individuals per country): United Kingdom, Germany, France, Italy, Spain, Finland, the Netherlands, Sweden, Hungary, Slovakia, Romania, Croatia, Lithuania, and Portugal.

COLLEEM asks whether the respondent has ever earned income from different online sources, among which there are two corresponding to labor service platforms: "providing services via online platforms, where you and the client are matched digitally, payment is conducted digitally via the platform, and the work is location-independent, web-based" and "providing services via online platforms, where you and the client are matched digitally, and the payment is conducted digitally via the platform, but work is performed on-location." We have named the former as web-gigers and the latter as located-gigers. The sum of both classifications determines the total number of platform workers or only gigers. In total, there have been identified 3,619 European gigers. Additionally, the COLLEEM survey also obtains binary information about other income sources related to the exchange of different types of goods and services not related to the provision of labor services. These alternative forms of obtaining income through digital platforms have their origin in the sale of possessions (i.e., *Amazon*, *eBay*, or *Zalando*), rentals for accommodation (i.e., *Airbnb*, *Booking*, or *Homelidays*), product leasing (i.e., *Wallapop*, *Vibo*, or *eBay*) or money loans on platforms crowdfunding (i.e., *Verkami*, *GoFundMe* or *Teaming*). The additive indicator of these four additional ways of earning income has been called *gigers/renters*.

As in other platform exchanges, the motivation of gigers to carry out their work is of great interest for a better understanding of the phenomenon and how it may evolve in the future. In this sense, COLLEEM collects evaluative information, in the form of a Likert scale with five items (ranging from 1: "not at all important" to 5: "very important"), on a set of motivations that include working conditions and rewards (autonomy, prices, access to clients, or taxes) and labor relations and employment policies (flexibility,

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partial employment, stability, and health). Despite the limitations of these data, as for example, that the motivations are collected in an aggregate way and not for each of the labor exchanges carried out by the gigers or due to the traditional response bias problems, the analysis of the marginal effects of the motivations for gig employment or gig employment and rental platform income has been considered relevant. In the first place, this is because the available evidence in this area is quite scarce. Secondly, the biases in the response and the endogeneity problems between variables have been corrected as far as possible.

The descriptive statistics for our sample of gigers can be detailed as follows (Table 1). Regarding gender, 62.8% of the sample were male. The participants' mean age was 34.5 years (SD=12.6), distributed across the following categories: men and women between 15 and 24 years old (18.4% and 10.4%, respectively), men and women between 24 and 54 years old (39.8% and 23.5%, respectively), and men and women between 55 and 74 years old (4.6% and 3.3%, respectively). Regarding household status, 35.5% of the gigers lived married and living with husband/wife, 20.5% live in a domestic partnership, and 35.2% are single (never married). Regarding children, almost half of the gigers do not have children (47.6%), while 27.1% have one child and 18.2% have two children. Regarding education, 57.5% of the gigers in the sample have some type of university education completed. Regarding the situation of gigers within the labor market, descriptive statistics indicate that: 1) the vast majority are full-time employees (60.4%) with a relative presence of part-time employees (15.4%) and self-employed (13.1%); 2) another significant part of gigers are students (14.4%) or unemployed (7.2%); 3) they mainly carry out their main jobs under conditions of job stability (76.6%), although an important part also works part-time (21.7%); and 4) years of work experience are 11.5 (SD = 10.8). The distribution of gigers across the 14 countries in the sample is uneven. Among the countries with the highest participation, those of the Mediterranean area : Portugal, Spain, and Italy (with shares exceeding 10% of the total). In comparison, the lowest percentages (less than 5% of the total) are found in Scandinavian countries (Finland and Sweden).

To contrast our two research questions, we have used an ordinary least squares (OLS) regression model that has been completed by bootstrapping based on 500 subsamples. OLS regression should be used only if some standard requirements of the data are achieved, such as normality, linearity, and homoscedasticity (Hair et al., 2010). The skewness and kurtosis values suggest that the variables can be assumed to be normally distributed (below the threshold of 2.58). Multicollinearity diagnoses have been addressed by testing tolerance and variance inflation factor (VIF) among the explanatory variables. Given that all these values were below the threshold tolerance=0.10 and VIF=10.0, multicollinearity may not be a concern in our regression models. Finally, homoscedasticity was visually examined and tested in plots of standardized residuals against the predicted value and with the Durbin-Watson test ($1.5 < DW < 2.5$). We performed six independent regression models. Six models were significant ($p=0.000$) and explained almost 60% of the variance of the output variables. The econometric analysis has been carried out with the SPSS v.23 program.

We have used three variables to estimate. First, a variable related to the existence of income sources from the exchange of labor services on digital platforms. This variable (only gigers) takes three values: 1, when the gigers have obtained income from a platform and located-based job; 2, when the gigers have obtained income from a platform and web-based job; and 3, when the gigers have obtained income from web-based and located-based digital platform jobs. Second, we have estimated effects on the combination of labor service exchange activities and income through other non-labor channels. This second variable (gigers/renters) takes five values: 0, when income is only from labor; "1" when obtaining labor income is combined with an additional source of income from exchanging goods and services of another non-labor nature; "2" income from gig employment and from 2 non-labor sources; "3" income from gig

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Table 1. Participants, sociodemographic and labor valid frequencies of the sample

Sociodemographic Issues	Valid Percentage	Labor Issues	Valid Percentage
Age (years)	34.2	Labor status	
Gender		Employee or self-employed	70.5
Female	37.2	Unemployed	7.2
Male	62.8	Student	14.4
Civil status		Retired	3.7
Single, never married	35.2	Others	4.3
Domestic partnership	20.5	Work experience (years)	11.5
Married and living with a partner	35.5	Work status	
Separated or divorced	5.0	Full-time employee	60.4
Others	4.5	Part-time employee	15.4
Level of education (ISCED: 1 to 8)		Self-employed with employees	2.8
No education or primary education	8.8	Self-employed without employees	10.3
Secondary education	33.5	Others	11.1
Tertiary education	57.5		
Country of residence			
Continental Europe ¹	17.5		
Mediterranean Europe ²	39.8		
Atlantic Europe and Scandinavia ³	15.3		
Eastern Europe ⁴	27.4		

Notes. 1: France, Germany, and the Netherlands. 2: Italy, Spain, Portugal, and Croatia. 3: United Kingdom, Sweden, Finland, and Lithuania. 4: Hungary, Romania, and Slovakia.

employment and 3 non-labor sources; and “4” income from gig employment and 4 non-labor sources. These non-labor sources of income can come from obtaining income from the sale of possessions, accommodation rentals, product leases, or money loans. Finally, the third variable to explain corresponds to the percentage of monthly income linked to gig employment. This variable takes 4 values: 1, when the percentage of gig employment over monthly income is less than 25%; 2, when they are between 26% and 50%; 3, when they are between 51% and 75%; and 4, when they are between 76 and 100% of the total monthly income. The descriptive statistics of the three variables to be explained can be detailed as follows: 1) the majority of gigers (65.2%) obtain income only through one job (web-based or located-based); 2) income completion is generally carried out through a single non-labor activity (54.0%), and 3) for more than half of the gigers (52.9%) the employment carried out on digital platforms represents a share of the monthly income of less than 25%.

Table 2 shows the results of the estimates related to the individual and sociodemographic predictors of gig employment. In line with that obtained by the literature in the field (Congregado et al., 2019), individual factors are essential in predicting gig employment. The gender coefficient determines a remarkable predictive capacity for men, while explanatory power (much lower than gender) is also found for the youngest and most educated. For their part, the two postulated predictors of labor status have also been significant. Specifically, it is found that the more atypical the giger’s main job (part-time or self-employment) is, the greater the likelihood of obtaining income through digital employment. Similarly, job instability also plays an explanatory role. The more temporary or occasional the giger’s main job, the more likely it is to earn income by exchanging labor services through digital platforms.

The results obtained for the individual and labor characteristics of the gigers that complement their income with digital platform exchanges of non-labor goods and services are also significant. As in the case of only gigers, youth, atypical employment, and job instability are confirmed as clear predictors of this expanded modality. However, unlike gigers, gender and education level play a more important

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Table 2. Individual and sociodemographic predictors of income from labor and rental services on digital platforms: only gigers, gigers/renters, percentage of total monthly income

Predictors	Only Gigers		Gigers/Renters		Gig-Job % of Total Monthly Income	
	Marginal Effect	Bootstrap 95% CI ¹	Marginal Effect	Bootstrap 95% CI ¹	Marginal Effect	Bootstrap 95% CI ¹
Gender (0, female; 1, male)	0.232*** (0.022)		0.537*** (0.056)		0.382*** (0.041)	
Age (15 to 74 years old)	-0.010*** (0.001)	[0.191;0.277]***	-0.009** (0.002)	[0.431;0.657]***	-0.009** (0.002)	[0.305;0.461]***
Level of education (ISCED: 1 to 8)	0.076*** (0.005)	[-0.008;-0.011]**	0.135*** (0.013)	[-0.005;-0.013]**	0.075*** (0.010)	[-0.006;-0.012]***
Atypical employment (0, full-time; 1, part-time or self-employment)	0.245*** (0.029)	[0.064;0.085]***	0.238*** (0.072)	[0.107;0.160]***	0.367*** (0.053)	[0.057;0.095]***
Job instability (1, permanent; 2, temporary; 3, occasional)	0.143*** (0.026)	[0.184;0.305]***	0.141*** (0.065)	[0.093;0.381]***	0.230*** (0.048)	[0.137;0.324]***
Statistics						
N (observations)		2,409		2,409		2,065
Adjusted R ²		0.863		0.644		0.770
Estimation SE		0.541		1.367		0.922
F value		3,040.3		873.8		1,386.9
p-value		0.000		0.000		0.000

Notes. OLS estimation and Bootstrapping based on 500 subsamples. Confidence intervals were evaluated by applying a two-tailed test for a Student's t-distribution (95% confidence interval). Estimated coefficients: Non-standardized coefficients. Standard errors of the non-standardized effects in brackets. *** p < 0.001; ** p < 0.01; * p < 0.05 (bilateral significance in bootstrapping).

role in explaining the likelihood of obtaining income through employment and other digital platform exchanges. Men and individuals with higher education levels are more likely to generate income through digital platforms, complementing employment services with other non-labor income. Finally, we have also contrasted the effects of the individual and labor characteristics of the gigers in determining their participation in their total monthly income. The results obtained are very similar to those for gig activity, although the coefficients for men, atypical employment, and employment instability are clearly higher.

The results obtained confirm our assumption of differential motivation regarding the predictors of entry into gig-only and gig-and-renting activities (Table 3). As for the only gigers, the primary motivational predictors of their participation in paid job exchanges through digital platforms are related to economic conditions (fair price, freedom of choice of prices or taxes), working conditions (flexibility), and labor relations (difficulties in finding stable jobs). These main motivations are completed by another set of predictors, with clearly lower but also significant coefficients. Thus, the motivations to act and obtain income from gig employment are also linked to other employment conditions (autonomy, interesting jobs), other labor relations (preference for part-time employment or the possibility of working in conditions of illness or disability), and other economic conditions (access to more clients or consumers).

In contrast, the motivations to act and earn income as a giger and renter through digital platforms have clearly different intensities and signs than those of only gigers. First of all, it is essential to point out that economic motivations (fair price, choice of price, taxes, and access to more clients/consumers) are much more critical for gigers/renters than in the case of only gigers. Second, this circumstance also occurs for the dimension of labor relations. The coefficients of motivations related to difficulties in finding stable employment or preferences for part-time employment are clearly higher for gigers/renters than for only gigers. And, alternatively and thirdly, the motivations related to employment conditions

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(flexibility, autonomy, and interesting jobs) show negative signs and low explanatory capacity, contrary to what happened with only gigers.

Finally, the predictive role of motivations to explain the percentage of monthly income represented by gig employment has also been contrasted, although with less robustness. Some motivations related to labor relations (preference for part-time employment in case of illness or disability), working conditions (attractive job offers), or economic conditions (access to more clients or consumers) have been revealed as not significant. Furthermore, autonomy in the choice of tasks has a negative coefficient, which indicates that this type of autonomy would be a brake to obtain higher percentages of income. Among the most important motivations to explain a higher relation to gig employment are those of the economic dimension (fair price, taxes, or choice of prices) and flexibility, autonomy in developing tasks, and difficulties to get a stable job.

Table 3. Motivational predictors of income from labor and rental services on digital platforms: only gigers, gigers/ renters, percentage of total monthly income

Predictors	Only Gigers		Gigers/Renters		Gig-Job % of Total Monthly Income	
	Marginal Effect	Bootstrap 95% CI ¹	Marginal Effect	Bootstrap 95% CI ¹	Marginal Effect	Bootstrap 95% CI ¹
Flexibility	0.053*** (0.009)		-0.048** (0.021)		0.124*** (0.018)	
Preference for part-time job	0.020** (0.007)		0.072*** (0.017)		0.006 (0.014)	[0.089;0.156]*** [-0.023;0.036]
Autonomy: choice of tasks	0.023* (0.011)	[0.035;0.069]***	-0.049* (0.025)	[-0.086;-0.011]** [0.038;0.102]***	-0.045** (0.021)	
Autonomy: performing tasks	0.034** (0.011)	[0.006;0.034]** [0.003;0.045]*	-0.041* (0.025)	[-0.097;-0.006]* [-0.089;0.000]	0.056** (0.021)	[-0.089;-0.005]** [0.015;0.098]**
Difficulties finding job stability	0.040*** (0.006)	[0.013;0.057]** [0.029;0.051]***	0.122*** (0.015)		0.072*** (0.013)	[0.048;0.096]*** [-0.027;0.024]
Job despite illness or disability	0.021** (0.006)	[0.009;0.035]** [-0.003;0.033]	0.051** (0.015)	[0.095;0.151]*** [0.022;0.079]***	-0.001 (0.013)	
Interesting job offers	0.017* (0.009)	[0.001;0.024]**	-0.069** (0.021)	[-0.104; 0.032]***	-0.008 (0.018)	[-0.043;0.030] [-0.042;0.032]
Access to more clients/ consumers	0.019** (0.008)	[0.029;0.067]*** [0.029;0.061]***	0.054** (0.019)	[0.016;0.087]**	-0.003 (0.017)	
Fair pay/reward	0.048*** (0.009)	[0.041;0.069]***	0.167*** (0.021)	[0.129;0.208]*** [0.096;0.173]***	0.142*** (0.019)	[0.104;0.179]*** [0.001;0.065]*
Choice of price for services	0.044*** (0.008)		0.135*** (0.020)		0.032* (0.017)	[0.053;0.113]***
Taxes declared by the platform	0.054*** (0.007)		0.155*** (0.016)		0.085*** (0.014)	
Statistics						
N (observations)		3,320		3,320		2,967
Adjusted R ²		0.881		0.708		0.772
Estimation SE		0.500		1.190		0.942
F value		2,239.8		731.8		914.7
p-value		0.000		0.000		0.000

Notes. OLS estimation and Bootstrapping based on 500 subsamples. Confidence intervals were evaluated by applying a two-tailed test for a Student's t-distribution (95% confidence interval). Estimated coefficients: Non-standardized coefficients. Standard errors of the non-standardized effects in brackets. *** p < 0.001; ** p < 0.01; * p < 0.05 (bilateral significance in bootstrapping).

DISCUSSION AND IMPLICATIONS

Research on the gig economy has generally focused on analyzing the effects of this atypical form of employment on employees, labor markets, or public policies. This has been the case due to the evident concern about the existence of a new form of precarious and unprotected employment due to the intensive labor use of digital platforms. On the other hand, this same evidence has also highlighted some positive effects of gig employment, such as greater autonomy and flexibility, incentives for career development, or options to complete work income. However, and in contrast to research for providing other goods and services through digital platforms, the gig employment literature has rarely dealt with analyzing the motivations underlying the provision of labor services. This analysis is critical because, through the motivations of activity and income in gig employment, it is possible to infer some of its results, either favorable or unfavorable. For example, suppose the motivations of a giger are the flexibility or the autonomy provided by digital platforms. In that case, it is expected that, if fulfilled, the results of the gig employment will be perceived satisfactorily.

On the other hand, if the motivation of gigers is the difficulty in finding a stable job, then it is expected that, if their instability is confirmed, the perception of gig employment will be negative. Therefore, participation motives are important in explaining some gig employment outcomes, such as satisfaction. Besides, our intention to know the motivations of the gigers has been completed by the need to delve into the knowledge of what happens inside digital platforms. In particular, we tackled the individual and motivational differences of two different agents that exchange goods and services on digital platforms: agents that only exchange employment (only gigers) and agents that combine employment exchanges with income generation through other non-labor income (gigers/renters). Therefore, the provision of a database of 3,619 European gigers, obtained from the COLLEEM research project, has been beneficial for our purpose.

The results of our research point to several differences between only gigers and gigers/renters. Concerning individual and labor characteristics, provision on digital platforms is driven by the younger population and a more atypical work situation (part-time or self-employment) and unstable (temporary or occasional). These predictors are equally valid for both only gigers and gigers/renters. However, among gigers/renters, there is a greater likelihood that their participation is found among men and people with high education levels. Both the results of the sociodemographic and labor characterization of gigers and their predictive capacity to explain participation in digital platforms are in full harmony with the research in the field (Berg et al., 2018; Congregado et al., 2019; Huws et al., 2017). Young and educated men with temporary or occasional main jobs are much more likely to use digital platforms for gig employment.

The result also suggests a somewhat differentiated profile among platform users who only exchange labor or combine labor to obtain non-labor income. In fact, it indicates that the provision of labor on digital platforms has its main origin in the problems that young people have to get stable and full-time jobs, while the combined provision of labor and obtaining income is also related to men with higher education levels. Thus, gig employment is more related to the need to get additional labor. In contrast, gig employment and obtaining non-labor income are related to generating income associated with possessions. Therefore, only gigers value their labor resource, while gigers/renters value labor and capital resources (possessions, rooms, money).

Undoubtedly, both from the fiscal and public policies, valuation mechanisms should not be treated in the same way. In the case of only gigers, the organization of the activity and its tax treatment and social security should be considered from the perspective of the employment regime. On the other hand,

the activity on the platforms of the gigers/renters has a double perspective of job and capital valuation. Therefore, different tax and social security treatments should be developed depending on the tasks performed. However, in both cases, it is worth noting the difficulties of implementing mechanisms for organizing and protecting employment, especially in web-based gig employment without an international agreement that provides coverage (Berg et al., 2019).

In terms of motivations, only gigers and gigers/renters present a very different profile. According to the results obtained among the gigers, there are a good number of reasons related to economic conditions (fair price, choice of prices, and taxes), working conditions (flexibility and autonomy), or labor relations (difficulties in finding stable employment). On the other hand, among gigers/renters, economic motivations (fair price, choice of prices, taxes, and access to clients) and labor relations (difficulties in finding stable jobs and preference for part-time) have a much better predictive capacity. On the contrary, working conditions (flexibility or autonomy) exert negative prediction effects. These results suggest differentiated motivational profiles depending on whether the exchanges are solely labor or labor uses of capital. The only gigers, as they exchange their resources, are motivated by a comprehensive set of factors that include economic, working, and labor conditions. Gigers/renters, as they trade their resource and non-labor assets, are more interested in economic and labor relations drivers. As labor participation loses importance, it is common for motivations about working conditions to diminish in significance among gigers/renters.

These results are in line with what was obtained by the little existing motivational literature. Keith et al. (2021) find motivational disparities based on primary or secondary consideration of employment on *Amazon Mechanical Turk*. Gigers who perceive it as the main job are much less sensitive to motivational and attractive factors, such as enjoyment. In contrast, gigers who perceive it as an additional job are more sensitive to pull factors such as enjoyment and challenge. These different motivational factors are related to differentiated satisfaction perceptions. In an investigation that analyses the relationship between motivational factors and the labor results of two types of gigers (those that rely on an intermediary platform to place their services -sharers- and those that sell their products directly -direct sellers-), Gleim et al. (2019) obtain differentiated results based, among others, on economic motivational factors (perceived commerciality). Direct sales workers obtain positive evaluations of the product offered, organizational trust, and job satisfaction. Conversely, sharers present a more complicated relationship with the labor outcome variables.

Once again, these results generate implications in terms of platform management and public employment policies. The valuation of labor is motivated by a relatively balanced mix of economic, working conditions, and labor relations. Therefore, improvements in the quality of gig employment should be based on those conditioning factors related to the overall employment structure. In fact, policies or strategies aimed at improving the flexibility of the general labor markets or increasing work stability would also generate positive returns for the job quality in digital platforms since they affect the motives of gigers to enroll in these alternative forms of employment. On the other hand, improving the conditions of efficiency and competition in digital markets would be very well received by gigers/renters since these strategies or policies would directly impact the primary motivation of these digital platform agents.

LIMITATIONS AND FUTURE RESEARCH AVENUES

The research has had a significant number of limitations, which mark the future of our research claims. The main limitation of the research comes from the data used. Gigers and gigers/renters' motivations identified (drivers and barriers) are not a complete set (some motivations may be missing) which suggests that our research design must be contextualized into some behavior theory, such as the theory of planned behavior. In this sense, we intend to expand our future research in several ways: first, by expanding the dimensions and number of motivational factors that drive or weaken gigers' motivations in Europe; secondly, by extending the analysis to different types of labor services exchanges through digital platforms; and thirdly, by contextualizing our predictive model through the use of an explanatory theory of labor behavior, such as the theory of tasks provision.

CONCLUSION

In this research, we have investigated the existence of profile and motivational differences between digital platform providers that only exchange labor (only gigers) and those that exchange labor and various uses of capital (gigers/renters), such as possessions accommodations, or money. The results obtained have confirmed these differences. Although the essential characteristics of the user of digital platforms are linked to the young population and with problems of stability or security in their employment, the valuations of labor and capital in digital platforms are based on the male population and with high levels of education. Regarding motivations, the valuations only of employment and employment and the uses of capital also have different antecedents. Being an internal resource for gigers, labor valuation has a good set of economic, working conditions, and labor relations fundamentals. On the other hand, the valuations of labor and capital uses are more focused on their economic and labor relations fundamentals, greatly diminishing the importance of working conditions. These differential motivations are essential for the management of platforms or the generation of public employment policies. In the case of only gigers, actions aimed at improving the quality and security of employment in general terms will also generate returns for gig employment quality. In the case of gigers/renters, specific actions must be developed to promote the efficiency and proper functioning of digital markets to boost their activity.

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KEY TERMS AND DEFINITIONS

Alternative Work: All those unusual forms of employment. It refers especially to temporary or occasional employment.

Collaborative Economy: The set of resource circulation systems that enable consumers to both obtain and provide, temporarily or permanently, valuable resources or services through direct interaction with other consumers or through a mediator.

Digital Platform (Economics): Digital network for the connection of economic agents and for the coordination of all types of exchanges.

Digital Platform (Labour or Employment): Digital networks for the exchange and coordination of employment tasks. They fulfill three basic functions: 1) to match the supply and demand for job tasks; 2) to generate a range of tools and services that allow the delivery of tasks in exchange for income or rewards; and 3) to establish rules and coordination mechanisms through agreements and terms of service.

Digitization: Digital transformation process. It refers to the growing and massive use by individuals and firms of all digital technologies. Digitization includes both the use of first-wave digital technologies, such as ICT, Internet, or electronic commerce, as well as new-wave digital technologies, such as robotics and artificial intelligence, social networks, big data, Internet of things, or digital platforms, among others.

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Gig Economy: Refers to the exchange of sporadic or temporary jobs organized by tasks. In this economy, interested firms (also individuals) call in a multitude of providers (gigers), which are more or fewer professionals, and acquire their labor services. In most cases, the hiring of tasks in the gig economy has been done in less regulated contexts, especially outside the conditions of security and employment protection that are offered within firms.

Giger: Individuals who provide labor services through digital platforms directly, to a firm or other individual, or indirectly through a mediator.

Giger/Renter: Individual who provides labor services and other non-labor goods and services through digital platforms. This provision of products, services, and jobs can be done directly, to a firm or another person, or indirectly through a mediator.