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PLATFORM WORK IN SELECTED COUNTRIES OF EASTERN AND CENTRAL EUROPE

Preliminary communication

UDK: 331.5:004.7](4-11)(4-191.2)

JEL classification: J23, J40, O33, F66

DOI: 10.17818/DIEM/2024/1.14

Accepted for publishing: July 7, 2023

Abstract

Labour markets are increasingly being organized through digital platforms. These platforms are often characterized by a systematic asymmetry of information and power in favour of platform providers. They rely on an independent workforce that receives low wages and no social security, and at the same time works for its own account and bears the risk independently. Non-standard form of business via digital platforms offers benefits such as more flexible working hours, more favourable prices, and opportunities for income generation, but it also come with challenges related to job stability, benefits, and legal protections. Since there are no official statistics on the size of platform work, a small number of literature deals with the research of the determinants of platform work. The aim of this paper is to determine how factors such as Internet purchases by individuals, GDP per capita, unemployment rate and DESI index affect the size of the platform work. The analysis was conducted on a sample of selected countries of Eastern and Central Europe (CEEC – Bulgaria, Czech Republic, Hungary, Slovakia, Romania and Estonia) and for this purpose Eurostat and ETUI Internet and Platform Work Survey data were used. The results of analysis show that the GDP per capita and Internet purchases by individuals influence the size of platform work in selected countries.

Keywords: labour markets, platform work, non-standard employment

1. INTRODUCTION

In recent years, digital technologies have encouraged development of digital platforms that matches supply and demand for products and services. Platform economy includes all commercial and non-commercial activities coordinated through platforms. Platform economy has been quoted as a force for economic growth and innovation, lower-cost goods and services, and low-barrier employment opportunities (De Groen et al, 2017). This non-standard form of business offers benefits such as more flexible working hours, more favourable prices, and opportunities for income generation, but it also come with challenges related to job stability, benefits, and legal protections. Even though, different terms are used to describe jobs performed via platforms, such as gig work, on-demand work, digital labour, crowd sourcing, piecework and collaborative consumption, in this paper we will use the term platform work. According to the Eurofund definition "platform work is a form of employment in which organisations or individuals use an online platform to access other

organisations or individuals to solve specific problems or to provide specific services in exchange for payment”.

Labour markets are increasingly being organized through digital platforms. Since these platforms operate at international level, they pose a serious challenge to legislation, which usually operates only at the national level. Digital platforms are often characterized by a systematic asymmetry of information and power in favour of platform providers. The three-sided architecture of the platform is essential because it allows the platform provider to transfer legal obligations, entrepreneurial risks, labour costs and inputs of production to the other two parties. These platforms depend on an independent workforce that receives low wages and no social security, and at the same time works for its own account and bears the risk independently. Due to the characteristics of the platforms, platform work very often has the characteristics of precarious work. According to ILO definition, a precarious job is employment that offers compensation, hours, or security inferior to a “regular” job. Therefore, the European Commission proposes a set of measures to improve the working conditions in platform work and to support the sustainable growth of digital labour platforms in the EU. The proposed Directive seeks to ensure that people working via digital labour platforms are granted the employment status that is legal and corresponds to their real work arrangements (European Commission, 2021).

Platform economy in European Union is growing quickly. In 2016 revenue from platform economy was estimated at 3 billion euros, while in 2020 it reached 14 billion euros. More than half million digital labour platforms now operate in the EU, enabling access to services for customers and generating opportunities for businesses and people. Even though most of the platforms operating in EU were created in Europe, they compete with international platforms, based mainly in North America (European Council).

Since there are no official statistics on the number of people who work via platforms, a small amount of literature deals with the research of the determinants of platform work. The aim of this paper is to determine how factors such as Internet purchases by individuals, GDP per capita, unemployment rate and DESI index affect the size of the platform work. The analysis was conducted on a sample of selected countries of Eastern and Central Europe (CEEC), and for this purpose Eurostat and ETUI Internet and Platform Work Survey data were used. Bulgaria, Czech Republic, Hungary, Slovakia, Romania and Estonia are included in the analysis due to data availability.

2. PLATFORM WORK – THEORY AND LITERATURE REVIEW

The concept of platform work has led to the development and extension of several theoretical frameworks and models that seek to explain the dynamics, challenges, and implications associated with this emerging form of employment. These theoretical perspectives offer different lenses through which scholars and policymakers can analyse and understand the complex phenomenon of platform work. Research often combines elements from multiple theories to provide a comprehensive understanding of this evolving field. Additionally, as platform work continues to evolve, new theoretical frameworks may emerge to address emerging challenges and trends.

Labour process theory focuses on the role of digital labour platforms as intermediaries connecting workers and clients (Gandini, 2019). It explores the platform's design, algorithms, and governance mechanisms in shaping work relationships. Key concepts include pricing mechanisms, reputation systems, and the power dynamics between platform operators, workers, and clients (Graham et al., 2017). Marketplace model frames platform work as a digital marketplace where workers offer their services and clients seek specific tasks or services (Popiel, 2017). It draws parallels with traditional marketplaces. It emphasizes supply and demand dynamics, price-setting mechanisms, and competition among workers on the platform.

Labour market intermediation model examines how digital labour platforms serve as intermediaries in the labour market, influencing the matching of workers and jobs. It considers factors such as information asymmetry, search costs, and the role of platforms in reducing frictions in the labour market (Agrawal et al., 2015). Platform work often coexists with other forms of employment, creating hybrid work arrangements. Precarious work model highlights the precarious nature of many platform jobs, characterized by income instability, limited access to benefits, and reduced job security (Ilsøe, Larsen & Rasmussen, 2019). It considers the implications of precarity on worker well-being and societal inequality.

Labour regulation theory centres on the legal and regulatory aspects of platform work, including debates over worker classification (independent contractor vs. employee), minimum wage, and social protections. It examines how labour rights are evolving to address the challenges posed by platform work (De Stefano & Aloisi 2018). Some researchers apply social network theory to platform work, emphasizing the role of social connections and referrals in securing jobs and building a reputation (Gandini 2016). Network theory explores how personal networks and social capital influence success on digital labour platforms. Innovation and entrepreneurship model views platform work as a form of entrepreneurial innovation, allowing individuals to monetize their skills and assets. It considers the opportunities and challenges of entrepreneurial platform work, including income variability and risk (Nambisan et al., 2018).

The expansion of digital platform businesses has led some to declare that traditional “jobs” will come to an end. To better understand the economic, technological and socio-political factors at work, Stanford (2017) in his article provides a theoretical and historical perspective on the growth of work mediated by digital platforms. According to him, all the main features of platform work were all observable in previous periods of capitalism, but they became less prominent in the 20th century with the growth of the standard forms of employment.

As previously stated, due to lack of data, little literature has addressed the determinants of platform work. De Groen et al. (2018) tried to estimate the size of the platform economy based on platforms with a significant share of paid labour. For the purpose of estimating the size of crowd employment in Europe, this research applies a triangulation method. The results show that crowd employment platforms in Europe generated around €4.5 billion in gross revenue and 12.8 million active workers in 2016.

Huws, Spencer & Syrdal (2018) have conducted a representative online survey in Austria, Netherlands, Sweden and United Kingdom to investigate whether the leading political discourse, in which the model of standard employment is opposed to model of atypical non-standard employment, allows us to capture the variety of fluid labour markets where work is dynamically reshaped in the interaction between different types of work organisation and employment status. They conclude that most platform workers simultaneously work through the platform and combine that work with other types of employment or sources of income generation. Besides that, they found that various ICT-related practices associated with crowd work are widespread across the rest of the labour market.

Over the past decade, digital labour platforms have grown exponentially. Rani and Dahir (2020) analyse the influence of COVID-19 pandemic on digital labour platforms, such as freelance online web-based platforms and location-based platforms (transportation and delivery platforms). Workers in the platform economy have been affirmed as a part of the ‘emergency services’, and because of that the COVID-19 pandemic immediately revealed vulnerabilities faced by platform workers. Polowska (2021) investigates the influence of the COVID-19 on the work of bicycle couriers in Poland. The analysis of the research material suggests that the couriers did not feel the negative impact of the coronavirus on their professional life. Also, the results show that during the period of pandemic and the closure of the Polish economy, working as a courier had alleviated problems in the labour market

McDonald et al. (2020) conducted the survey to explore the features and frequency of digital platform work in Australia to determine the characteristics and experiences of platform workers, and to recognise the extent to which they combine other forms of paid employment with digital platform work. The types of work that platform workers are doing include transport and food delivery, writing or translation work, odd jobs or maintenance work, and professional services work. Platform workers are usually paid per completed task or job, rather than for the time or hours they work, and most of them are working from their homes. Current platform workers emphasize flexibility for “being their own boss”, and ‘choosing their own tasks or projects’ as the best dimensions of work on the platform.

3. DATA AND METHODOLOGY

Available evidence on the extent of platform work comes primarily from three sources (Piasna & Drahokoupil 2019). One source is survey that was conducted by the University of Hertfordshire and commissioned jointly by the Foundation for European Progressive Studies and UNI Europa, the European services workers union. The aim of the survey was to collect the information on the scope and characteristics of platform workers (Huws et al. 2019). The other source is the Collaborative Economy (COLLEEM) survey conducted by the Joint Research Centre of the European Commission. The survey was aimed to deliver quantitative evidence on digital platform work in 14 European Member States regarding motivation and working conditions of platform workers (Pesole et al. 2018). Third source is ETUI Internet and Platform Work Survey. The aim of ETUI survey is to estimate the degree to which the internet, and particularly websites online platforms, or mobile applications, are used as a tool to generate income.

Due to availability of data, data on the size of platform work are based on the second ETUI Internet and Platform Work Survey. In spring 2021, the survey was conducted in 14 European Member States: France, Austria, Hungary, Greece, Bulgaria, Estonia, Czechia, Germany, Ireland, Poland, Italy, Spain, Slovakia, and Romania. For this purposes we extract data for selected CEEC's - Bulgaria, Czech Republic, Hungary, Slovakia, Romania and Estonia. Our data-set consists of 11807 observations.

Figure 1 shows that the largest number of respondents who work through the platform are between 18 and 34 years old. Older respondents belonging to the age group of 55 to 65 years work the least through digital platforms. This data is not surprising since it is known that the older population uses digital technologies less compared to younger age groups.

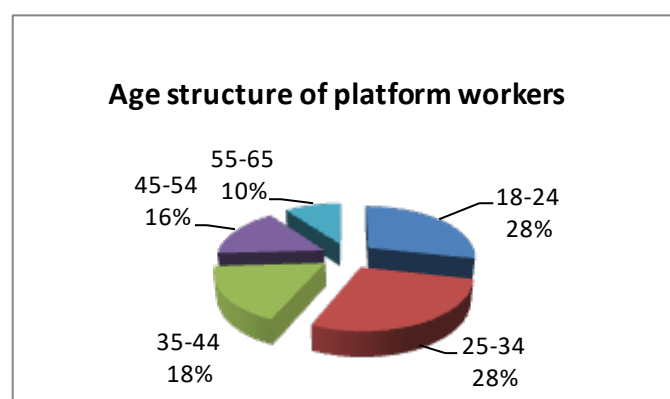


Figure 1 Age structure of platform workers

Source: ETUI Survey and authors' calculations

Since platform work has been characterized as a new form of precarious work (Huws et al., 2018), it would be expected that platform work could be particularly attractive to women who

need to combine income and care responsibilities. In our sample, this is not the case because 60% of the workers on the platform are men (Figure 2). This can be explained by the characteristics of platform work - the great risk that platform workers take upon themselves.

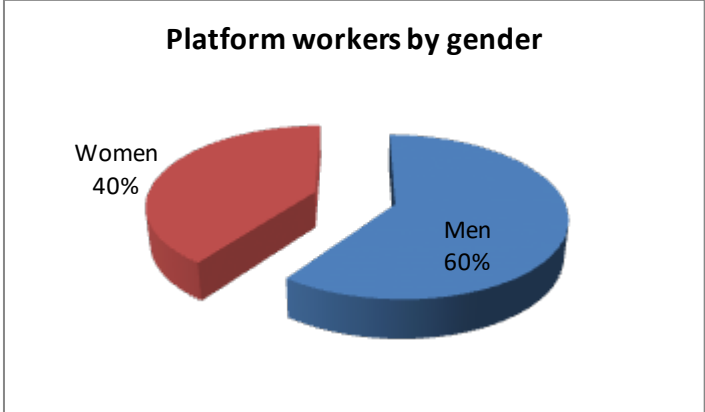


Figure 2 Platform workers by gender

Source: ETUI Survey and authors' calculations

Figure 3 shows that mostly people with secondary education (60%) work on digital platforms. This finding is in line with expectations since people with a higher level of education try to avoid precarious jobs. Also, when acquiring a tertiary education, students can use work through the platform as a source of income, and in this way (due to the flexibility of working hours) study and work at the same time.

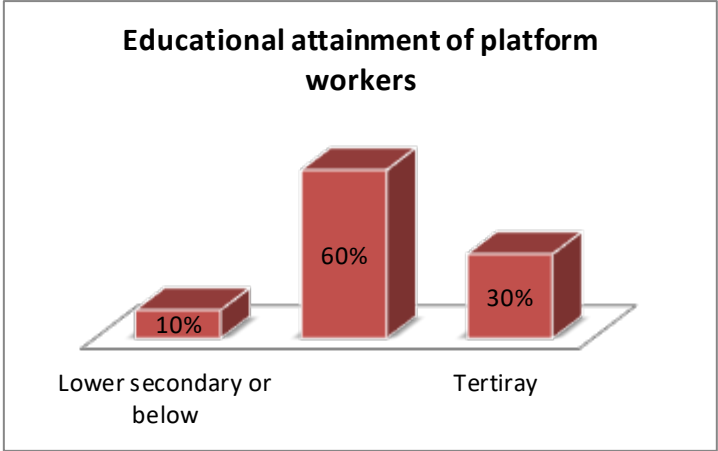


Figure 3 Educational attainment of platform workers

Source: ETUI Survey and authors' calculations

In order to study how selected variables affect the size of platform work, multiple regression was performed. The dependent variable is size of platform work measured in number of platform workers and considering variables that might influence the size of platform work (independent variables) included in the model are: Internet purchases by individuals, GDP per capita, unemployment rate and DESI index. Data for independent variables are taken from Eurostat database.

Variable Internet purchases by individuals represents the percentage of individuals aged 16 to 74 who have used the internet for purchases in the three months prior to the survey. According

to Eurostat, GDP per capita is calculated “as the ratio of real GDP to the average population of a specific year” and unemployment rate “as number of people unemployed as a percentage of the labour force”. The Digital Economy and Society Index (DESI) reviews indicators on Europe's digital performance and tracks the progress of EU countries.

4. RESULTS AND DISCUSSION

In order to determine how factors such as GDP per capita, unemployment rate, DESI index and online purchases affect the size of platform work, multiple regression analyses was performed. A significant regression model was obtained ($F=13,895$, $p=0.06$). The percentage of explained variance amounted to about 89%. Key regression parameters are given in Table 1.

Table 1 Key regression parameters

	<i>Coefficients</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	9,813203	4,202045	0,052236
Internet purchases	0,489456***	5,045787	0,037105
GDP per capita	-0,0009**	-3,94999	0,058523
Unemployment rate	-0,59618	-2,67795	0,115731
DESI index	0,127483	2,4093	0,137593

Note: ** and *** significant at 10 and 5 %, respectively

Source: authors' calculation

Based on the results of the regression analysis, it is evident that the variables Internet purchases and GDP per capita have statistically significant influence on the size of the platform work in the selected countries. Positive sign of estimated coefficient for Internet purchases suggest that increase in e-commerce by individuals have positive impact on the size of platform work. This finding is in line with expectations since in 2020 a noticeable increase in online shopping customs had been noted across Europe, with many consumers from different countries declaring that they had started e-shopping more due to the influence of the COVID-19 pandemic. The same trend was observable in 2021 (Statista). Therefore, as a result of higher internet purchases, the demand for platform workers also increases.

Although small, the negative sign of the coefficient for GDP per capita indicates the negative impact of this variable on the size of platform work. This means that with the growth of GDP, the size of the platform work decreases. This finding can be explained by the fact that platform work is precarious form of employment and this type of employment is relatively less represented in countries with higher GDP per capita.

5. CONCLUSIONS

Platform economy is becoming a force for innovation and employment growth. It's important to note that platform work can offer flexibility and opportunities for income generation, but it can also come with challenges related to job stability, benefits, and legal protections. Since labour markets are increasingly being organized through digital platforms and these platforms operate at the international level, they pose a serious challenge to legislation, which usually operates only at the national level. Due to the characteristics of the platforms, platform work very often has the characteristics of precarious work. Therefore, the European Commission proposes a set of measures to improve the working conditions in platform work and to support the sustainable growth of

digital labour platforms in the EU. Regulatory and labour rights discussions regarding platform work continue to evolve in many countries to address these challenges.

This paper presents the results of a study of the relationship between size of platform work and selected variables such as internet purchases, GDP per capita, unemployment rate and DESI index. The results suggest that internet purchases have positive and GDP per capita negative impact on the size of platform work. These findings, and new knowledge about platform economy in general, are important for policy makers in order to create policies that will simultaneously encourage the positive and reduce the negative effects of the platform work.

The biggest limitation of this research is reflected in the limited data since official statistics on the size of platform work do not exist. This is the reason why a more detailed analysis and cross-country analysis was not done. Recommendations for future research emerge from the aforementioned data limitation. Therefore, a more detailed survey, that will cover a larger number of countries and participants, needs to be conducted in order to make a more comprehensive analysis. Future research should definitely investigate the impact of platform work on the labour market and how this type of work affects employment and unemployment indicators in certain countries.

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