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Digital technological platforms
– an opportunity or a threat to quality work?

INTRODUCTION

Over the last decade, digital technological platforms (DTP) have transformed the modern labour market. The business model adopted by enterprises using this innovative solution has created a variety of new opportunities offering access to services for customers and potential income for contractors. It has also developed a new quality of conditions for providing work. Within just a few years of beginning this universal use of DTP, the providers of platform-mediated services have become part of the gig economy and the cybertariat, categories revealing the deepening of economic inequality that had already been known before, but which had definitely been less frequently used prior to the emergence of digital platforms. The paper discusses the relationship between technological innovations and human work. The author aims to identify the characteristics of work performed through DTP, and uses her own methodology to assess them through the prism of the main dimensions of quality work. This assessment is based on the criteria developed by the European Anti-Poverty Network (EAPN), which form the core of the contemporary approach to the problem in the European Union. The results of the evaluation verified the hypothesis concerning insufficient conditions for quality work in a significant part of this segment.

The paper is divided into four parts. The first discusses the significance of DTP for the labour market; the second proposes a classification of service providers in order to help assess the diversity of their working conditions and systematise
the knowledge about the segment under examination; the third presents research methodology, and the fourth develops the results of the evaluation concerning quality work standards for DTP. The paper quotes the latest global scientific journals, books and research reports published in the field.

THE SIGNIFICANCE OF DTP FOR THE LABOUR MARKET
— LITERATURE REVIEW

The 2009 launch of the first DTP (Uber), enabling instantaneous coordination of demand for the services and their supply, has led, within a few years, to the transformation of a significant part of the labour market. Services ordered via platforms through dedicated smartphone apps have been expanding rapidly. In consequence, work has become fragmented into separate tasks carried out by individual contractors, and people have begun to be identified with the services (Prassl, 2018).

Work performed as short-term tasks and based on different types of contract that enable such work have long been known and treated as a way to reduce unemployment. This intensified in the initial period of the 2007+ crisis, when an increasing number of people, left with no other choice, became involved in unstable project-based or task-related work. This segment of the labour market has been labelled as the gig economy (Minter, 2017). However, it was only the emergence of digital communication platforms that made it possible for customers to express demand for services on such a massive scale and for platforms to direct them to the “crowd” of service providers awaiting further orders. Commissioning work via the Internet had begun a few years earlier (e.g. Amazon Mechanical Turk, since 2005), but DTPs completely changed its character. It can be assumed that DTPs are a manifestation of digitisation defined in a broad sense and also in the education process (Bejinaru, 2019; Bratianu et al., 2020).

The gig economy is now associated with that part of the economy where the offer of many independently operating service providers is coordinated with the demand for a given service through a dedicated DTP (Stewart, Stanford, 2017). One of the few comprehensive studies on the subject, carried out in the UK in 2017, proposed the definition of the gig economy as a part of the economy that involves the provision of labour services for fixed remuneration by individuals or businesses using DTPs, which allows the creation of an effective match between supply and consumer demand (Lepanjuri et al., 2018). In 2019, about 30 platforms were recorded as operational, including 11 on a global scale (Schwellnus et al., 2019).

The creators of DTP saw the new business model as a chance to achieve high profits by hiring service providers on terms that ensured low average costs of providing universal services and, as a result, contributed to developing competitive advantage over service providers operating based on the traditional model (Neamțiu et al., 2019). Growing competition in the global economy and a short-term-result
driven orientation caused by the need to respond to volatile demand in a flexible manner imply a relatively low level of remuneration for services rendered (Spreitzer et al., 2017). The gig economy also embraces crowdsourcing, which consists in transferring the tasks previously performed in-company to a wide, undefined group as an open order via DTP. According to Kessler (2018), large projects that could be implemented by teams of employees are increasingly divided into small tasks with very low remuneration and outsourced to independent subcontractors. The source of low average service provision costs in the gig economy is the shift of the burden of securing factors of production to service providers (a car, a bicycle, a phone, a computer, etc.), self-organisation of the workplace, responsibility for the adequate level of qualifications, payment methods (payment only for the performed service, with the service being as fragmented as possible), no guarantee of continuity, and absence of regulation on the minimum rate or social security. However, the main factor of production is the technology owned by the platform developer. Despite these shortcomings, service providers would not be able to operate without digital technological platforms. DTPs give access to orders as well as ensure minimum standards for buyers and service providers through the so-called platform culture (Kuhn, 2016; Stanford, 2017; Minter, 2017). Joining DTP involves accepting its terms, while “dismissal” is conducted through the deactivation of a service provider if he violates the terms required by the platform, usually based on customer feedback (Todoli-Signes, 2017).

Running a DTP-based business creates the need for operations on a massive scale, hence the pursuit of global expansion can be considered natural. Growing economies of scale are conducive to the expansion of companies and the monopolisation or oligopolisation of subsidiaries in a given area, which leads to further consequences. The platform owner, on the other hand, takes the risk associated with the legal environment of operations conducted in various countries and its potential changes (Todoli-Signes, 2017). Work is considered to be the main product of the gig economy (Prassl, 2018). This segment of the economy generates a huge demand for the contractors whom the platform needs to offer particular services to its users.

**Service providers in the DTP segment**

The gig economy includes several groups of actors: the originators and organisers setting up operations, who are usually platform owners, and their employees, contractors performing tasks (service providers) via DTP, which actively enables the provision of services and determines the amount of remuneration for contractors and profits for owners (Lepanjuuri et al., 2018), as well as customers who order and consume services. The issue that raises the most controversy is the status of the service providers, which is often unclear, or the formal arrangement does not correspond to the actual situation (e.g. some Uber drivers who provide transport
services to passengers, formally operating as volunteers engaged by another organisation, and offering city sightseeing services in exchange for pocket money. Therefore, it is particularly important to examine the supply side of services in this segment. So far, no precise and comprehensive classifications have been created of the service providers in the gig economy, which would reflect the complexity of this new group. Accordingly, the paper presents a number of preliminary classifications based on the reference literature.

Based on the way they perform their tasks, service providers in the gig economy can be divided into two groups (Bogenhold et al., 2017; Graham et al., 2017; De Stefano, 2016; Prassl, 2018):

1) operating online – working in the cloud (crowd work; digital labour platforms); highly qualified specialists (freelancers): programmers, analysts, translators, designers, or contractors of simple work, e.g. labelling goods for online stores,

2) operating offline – working on orders placed through mobile apps (on-demand work via apps or gig work) – performing traditional tasks, mainly simple work: passenger transport, courier services, cleaning, delivery of meals.

Based on the freedom of choice to work within the gig economy, two groups that cover the four categories of service providers can be distinguished (Prassl, 2018, pp. 28–29):

1) working in the gig economy by choice – free agents, or “remote talents”, for whom gig work is the main source of income, and casual earners, for whom it is a source of additional income,

2) forced to work in the gig economy – financially strapped, forced to accept gig work (as primary or additional) to make ends meet, some of them being reluctant, preferring traditional employment, which is currently unavailable to them.

According to Prassl (2018), until now the majority of service providers have worked in the gig economy by choice.

Further to the classification above, the following categories can be distinguished based on the degree of dependence on income from gig work:

1) non-dependent, having other opportunities to earn income (freelancers, some of those who make extra money from gig work),

2) partially dependent (those for whom gig work is an important additional source of income, e.g. people paying off loans),

3) fully dependent (those who have no chance to make a living from other sources).

This group is most susceptible to microwages and the growth of the cybertariat.
The above classifications will also determine the level of satisfaction with gig work and may be a source of conflicting opinions, from praise for the modernity to extreme criticism of the working conditions and remuneration.

Based on their formal status, service providers can operate as:
1) self-employed (registered economic activity, so-called independent subcontractors),
2) contractors (civil law contract, so-called independent employees),
3) contractors (subcontractors) operating through the agency of another enterprise,
4) having another status (often unlawful and not reflected in the actual situation; e.g. a volunteer or renting a production factor for a fee – for example a bicycle, in the case of meal deliveries).

This classification reveals that in the gig economy the employment contract is absent, although the nature of tasks and the degree of dependence of the service provider on the platform would fully justify the use of employment regulations. The nature of the tasks, their fragmentation and identification difficulties are conducive to informal, unregulated solutions. New categories of workers, e.g. an independent worker or a dependent entrepreneur, are discussed (Steward, Stanford, 2017; De Stefano, 2016). The informal nature of the tasks performed by free contractors is considered to be a prerequisite for precarisation (Merkel, 2019).

Based on the number of digital platforms that a particular service provider can use, service providers can be divided into those using:
1) one platform,
2) two or more platforms.

This classification determines the choice and acceptance of platform terms by service providers. The possibility of cooperation with more platforms eliminates the risk of income loss if the contractor is excluded from the app, for example due to negative consumer feedback, and potentially increases his bargaining power.

**RESEARCH METHODOLOGY**

In order for the quality work standards in the gig economy to be assessed, the criteria has to be clearly defined, which was achieved through the synthetic review of the approaches to gig work represented by organisations whose mandate is to protect labour rights.

Quality work is an ambiguous and vague concept, usually related to working conditions. In some cases, the quality of employment is referred to, but this raises associations with the status of the employed person, while, as previously emphasised, the problem involves precisely the unspecified status of the service provider – the contractor performing commissioned jobs, so the category of quality work is more relevant, as long as it refers to the conditions created by the demand side of the labour market and the institutional framework in which
work is performed. The evaluation of quality work is sometimes perceived as unnecessary, especially by employers. This is due to the focus on quantitative employment parameters.

In 2008, the European Trade Union Institute developed the job quality index. It consists of six components: wages, non-standard forms of employment, working time and work-life balance, working conditions and job security, skills and career development, and collective interest representation (Leschke, Watt, 2008, p. 5; ETUI, http). Quality work is often replaced by the concept of decent work. ILO uses it in such a context, assuming that “...it involves opportunities for work that is productive and delivers a fair income, security in the workplace and social protection for families, better prospects for personal development and social integration, freedom for people to express their concerns, organise and participate in the decisions that affect their lives and equality of opportunity and treatment for all women and men” (ILO, http). The above examples referring to quality work determinants can be considered similar.

Given the importance of social cohesion, criteria that define quality work formulated by EAPN gain in significance. The organisation formulated 10 principles (EAPN, http) which specify that standards defining quality work are met if the work:

1) provides adequate/living wages – which requires that a minimum income be defined as sufficient to prevent poverty in the working population,
2) provides a sustainable contract and adequate employment rights – which means that it provides protection against unfair dismissal, adequate severance pay, as well as counteracting precarisation and segmentation of the labour market,
3) entitles the worker to appropriate social security protection – including the right to health insurance, paid holidays, unemployment benefits and pension rights having cross-border portability,
4) ensures quality working conditions and environment, including: health and safety provisions, working environments and rational working time, especially for low-skilled workers,
5) allows for the reconciliation of private and professional life – assumes reasonable conditions for flexible working time,
6) respects the right to participate in collective bargaining and social dialogue – ensures the right to vote on matters concerning employees as well as participation and transparency in governance,
7) protects the worker against discrimination on all grounds – protects against pay inequalities based on sex, nationality and any other forms of discrimination, in the process of recruitment and work performance,
8) guarantees access to training and personal development – creates conditions for updating and enhancing qualifications, as well as for the development of professional competences and soft skills,
9) allows for progression in work – gives professional advancement opportunities,
10) nurtures job satisfaction – an essential component of well-being.
EAPN adopts the above criteria as relevant to the assessment of all types of activities, regardless of the type of contract, form of employment, job agency, organisational forms, and activity sectors. Therefore, it gives them a universal character, as they relate to the assessment of the characteristics of the job that a person performs, and not to the type of contract he has concluded. They can be seen as a coherent set of contemporary criteria defining quality work, so the evaluation presented in the paper was based on them. It uses critical analysis of the latest research results published in global journals, supplemented by logical deduction and comparative analysis of quality work opportunities for the selected groups of service providers in the gig economy.

**RESULTS**

The results of the assessment of quality work standards for tasks generated through DTP are presented below. The evaluation was carried out according to EAPN criteria and based on the reference literature, including the results of empirical research and case studies.

1) **Adequate/living wages** – this criterion is fulfilled only for those working via the platform by choice, i.e. those with other earning options; the universal problem of microwages, numerous cases of under-payment or non-payment; threat of cybertariat (Kuhn, 2016);

2) **Sustainable contract and adequate employment rights** – no group has a sustainable contract; separate tasks are offered to contractors who remain in constant competition with each other; no equivalence to employee rights (Minter, 2017; Ostoj, 2019); irregularity and unpredictability identified as the greatest disadvantages of work in the gig economy (Lepanjuuri et al., 2018); task performance assessment is often delegated to customers (reputation-based system) or permanent online monitoring is in place; easy deactivation of the service provider and the selection of a group of contractors; oversupply of unregulated labour services, easy replacement (Kessler 2018; Wood et al., 2019);

3) **Appropriate social security protection** – none due to the absence of employment contracts; service providers are protected as much as they arrange for such protection themselves, which is difficult with low earnings (Minter, 2017); in practice, insurance is available to those who only do extra work in the gig economy, thanks to another job outside this sector (Berg et al., 2018);

4) **Quality working conditions and working environment** – service providers need to provide the basic factors of production themselves; the platform ensures basic standards of operation through the regulations it adopts and requires contractors to comply with; work is often very intensive and performed in unlimited time (Berg et al., 2018; Wood et al., 2019); operating costs are often indicated as an element that service providers would like to change (Lepanjuuri et al., 2018);
5) **Reconciliation of private and professional life** – relative autonomy of service providers; they specify the number of days and hours that they are ready to work, as well as the tasks they will undertake, which is good for those who only do extra work; in practice, the irregularity of tasks and income causes the need for constant (often 24-hour) readiness to accept an offer while payment only covers the particular service rendered, which is extremely harsh when the service provider depends on one platform only, analyses quotes for an hourly rate for actual work and another taking into account the waiting time, which is usually 1/3–1/4 lower (Wood et al., 2019; Kessler, 2018);

6) **Right to participate in collective bargaining and social dialogue** – the absence of corresponding channels for representation and collective bargaining; attempts at self-organisation in order to fight for the status of workers are known (e.g. Foodora meal deliverers in Italy); the need for support from traditional trade unions; it is almost impossible to protect the interests of service providers in this way (Tassinari, Maccarrone, 2017);

7) **Protection of the worker against discrimination on all grounds** – theoretically, the position of providers waiting for orders is equal; online work makes the opportunities of people with disabilities equal; in practice, no protection against discrimination is guaranteed when tasks or remuneration are given; discrimination may take place based, for example, on the service provider’s name being associated with nationality, gender or country of origin (online services); women are three times as likely as men to be at risk of non-payment and work anti-social hours (Graham et al., 2017; Hunt, Samman, 2019);

8) **Guaranteed access to training and personal development** – complete absence of any guarantees; professional development remains the responsibility of the service provider, who has to incur the costs involved (Todoli-Signes 2017);

9) **Progression in work** – no guarantees of professional development, since most microtasks involve simple and repetitive work; highly qualified specialists (mainly men) can enhance their CV with the ability to solve non-standard problems, based on the history of completed orders (Wood et al., 2019);

10) **Job satisfaction** – common among freelancers; job satisfaction is very low with other groups; income and other work-related benefits are indicated as the least satisfactory (Lepanjuuri et al., 2018).

The EAPN quality work criteria can be considered so demanding that today they are fulfilled by just a few paid jobs. However, in the case of digitally mediated work, these criteria are not satisfied or are met conditionally, or only for selected groups. The greatest benefits seem to be achieved by highly qualified specialists, operating online as freelancers, who work via platforms by choice. Another group that is less affected by the shortcomings of the gig economy includes the service providers who earn extra income, supplementing their more regular remuneration. However, their work also does not meet the relevant criteria of quality work (time, task schedule, etc.). Paradoxically, working time flexibility, often identified as
an advantage, turns out to be excessive in the case of gig work, as it threatens work-life balance. It also negatively affects health and job satisfaction because of its instability and unpredictability. The situation is further complicated by a significant level of monopolisation, especially in offline work, which restricts the freedom of choice for service providers and increases the bargaining power of platforms. It can be assumed that platform-enabled gig work does not meet the majority of the EAPN criteria for quality work in relation to all the groups.

CONCLUSIONS

A few years ago, the World Bank and the United Nations Organization considered platform-enabled work as a way to increase employment and fight poverty, but little was known then about quality work related issues in this segment (Wood et al., 2019). This paper argues that although DTPs create new income-earning opportunities and represent innovation in the economy, they pose a genuine threat to the quality of work in all relevant dimensions and may exacerbate the existing economic and social inequalities and lead to new ones. Therefore, based on the EPAN criteria, the research hypothesis on the low quality of work in the gig economy was verified positively. The implementation of new DTP-operated business models should be accompanied by the improved awareness of their impact on quality work. Additionally, new legal solutions should be adopted to protect the rights of service providers in their relations with DTP enterprises. The view that in low and middle income countries, the absence of quality work standards in the gig economy is not acutely experienced, because labour rights are not universally respected there, should not be seen as an adequate justification (Wood et al., 2019). The research methodology proposed in this paper has its limitations stemming from the lack of quantitative data on the scale of the problems. In the light of intense discussion and numerous cases being analysed, however, it was assumed that the issue had significant importance. Enterprises operating as DTPs and the conditions they offer to service providers should, in the years to come, become the focus of in-depth research aimed at reducing the threats to quality work.

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**Summary**

Digital technological platforms that facilitate the provision of many services are a relatively new development in the economy, especially in the labour market. As they are becoming increasingly prevalent, the characteristics of this business model are gradually revealed. The model creates many novel ways to make goods available and generate income, but it also translates into a new quality of work. In the discussion of the labour market segment operating based on technological platforms, the world literature tends to employ the concepts of the gig economy and cybertariat, which are unequivocally negative in their connotations.

The paper discusses the relationship between technological innovations and work. It aims to determine the characteristics of work carried out through digital technological platforms in the cross-section of the major dimensions of quality work. The paper presents the verification of the research hypothesis assuming that the business model adopted by digital technological platforms threatens the standards of quality work. The analysis uses the methodology designed by the author and employs the criteria developed by the European Anti-Poverty Network, constituting the quintessence of the contemporary approach to the issue in the European Union. Its main conclusion is that the gig economy segment is highly heterogeneous, which makes it difficult to assess and discuss the problems arising in this segment and their solutions. In consequence, it requires a clarification through adequate classifications and identification of problem groups. However, the research results reveal that a significant part of the gig economy generates very low quality work.

*Keywords*: gig economy, cybertariat, work.

**Cyfrowe platformy technologiczne – szansa czy zagrożenie dla jakości pracy?**

**Streszczenie**

Cyfrowe platformy technologiczne pośredniczące w świadczeniu wielu usług są relatywnie nowym zjawiskiem w gospodarce, szczególnie na rynku pracy. Wraz z poszerzaniem się zakresu ich wykorzystania, stopniowo ujawniają się właściwości tego modelu biznesowego. Tworzy on wiele nieznaných wcześniej możliwości dostępu do dóbr i osiągania dochodów, ale kształtuje też nową jakość pracy. W opisach segmentu rynku pracy rozwijającego się w oparciu o platformy technologiczne w światowej literaturze przedmiotu coraz częściej pojawiają się pojęcia gospodarki fuch (gig economy) i cybertariatu, czyli kategorie o zdecydowanie negatywnym wydźwięku.

Artykuł odnosi się do relacji pomiędzy innowacjami technologicznymi a światem pracy. Jego celem jest diagnoza cech pracy realizowanej za pośrednictwem cyfrowych platform technologicznych w przekroju głównych wymiarów jakości pracy. W artykule, przy wykorzystaniu autorskiej
metody, poddano weryfikacji hipotezę badawczą stanowiącą, że model biznesowy realizowany przez cyfrowe platformy technologiczne zagraża standardom jakości pracy. Do analizy jakości pracy zastosowano kryteria wypracowane przez European Anti-Poverty Network, stanowiące kwintesencję współczesnego podejścia do tego problemu w Unii Europejskiej. Badanie prowadzi do wniosku, że segment **gig economy** jest dalece niejednorodny, co utrudnia ocenę i dyskusję nad rodzącymi się problemami i ich rozwiązaniami. Wymaga zatem doprecyzowania za pomocą odpowiednich klasyfikacji i wyodrębnienia grup problemowych. Wyniki badań wskazują jednak na to, że znaczna część **gig economy** generuje pracę bardzo niskiej jakości.

**Słowa kluczowe:** gig economy, cybertariat, praca.

JEL: J81, J83, O33.