

Digital platforms: a new shape of work and business

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Abstract. The article reveals the main content of digital platforms, as well as analyzes its main indicators. Nowadays, digital platforms have become a basic element of modern life, so the authors reviewed the features of their development, identified the factors influencing the successful development, and presented the impact of digital platforms on the lives of workers and businesses around the globe. Analysis was done by types of platforms, by the level of development of society; as a result of this analysis, the authors came to the main conclusions on the dynamics of digital platforms. One of the primary key points is that networking platforms are a major source of income for a certain portion of the population. The relationship between the main trends in the digitalization of the labor market and social programs was also revealed. The need to regulate the economics of digital platforms is discussed.

1 Introduction

Digital platforms have become an important part of life today - we can arrange travel, order groceries, and use many other services online. To provide all of this, they connect their clients, or consumers, with workers who are willing to take on orders - or, as they say, for this or that "job". In the past decade, along with the rapid growth of digital platforms such as Uber, Gojek, Deliveroo, Rappi, Upwork, Topcoder, the number of workers living on one-time wages, or workers on digital platforms, has grown everywhere in the world.

Digital platforms have opened up unprecedented opportunities for workers, entrepreneurs, and society, leveraging innovative ways of working on a global scale. But at the same time, they create serious obstacles to decent work and fair competition.

In recent years, digital technologies have taken root in a wide variety of industries and fundamentally changed them, shaking the traditional foundations of labor markets to their core [1,4,6].

The revolution in information and communications technology and the development of the Internet have triggered a wave of new production processes and products, stimulating competition and increasing productivity. This has resulted in the emergence of digital platforms, a new way of arranging work and business [2-3].

Compared to 2010, there has been a five-fold increase in the number of digital platforms that provide online or direct worker services in the taxi and courier industry globally.

2 Methods and types of the Earth’s remote sensing

Today, **online platforms are common**, where workers perform tasks online (e.g., freelancing, microservices, competitive programming) and **localized**, where tasks are performed in person at specific locations (e.g., taxi services, courier delivery, home and care services).

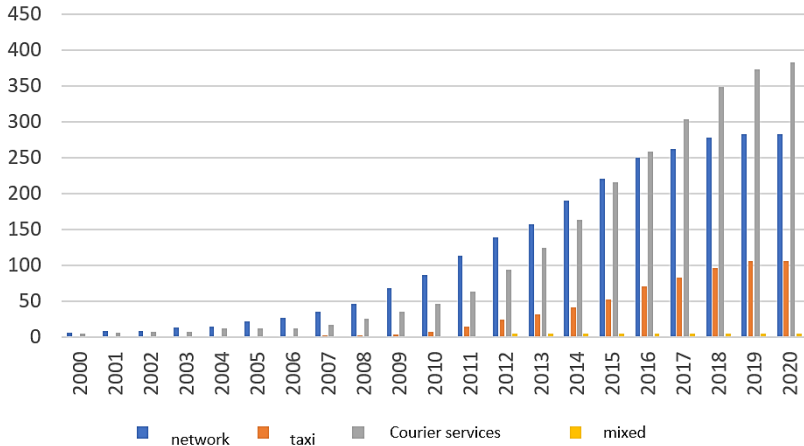


Fig. 1. Number of active digital platforms in the world in selected categories
 *Only platforms that are currently active are represented.

The growth of digital platforms is mainly funded by venture capital funds. It is concentrated in the hands of a small number of companies, particularly in the field of taxi transportation, where, thanks to such funds, these companies have been able to operate and grow, despite financial losses.

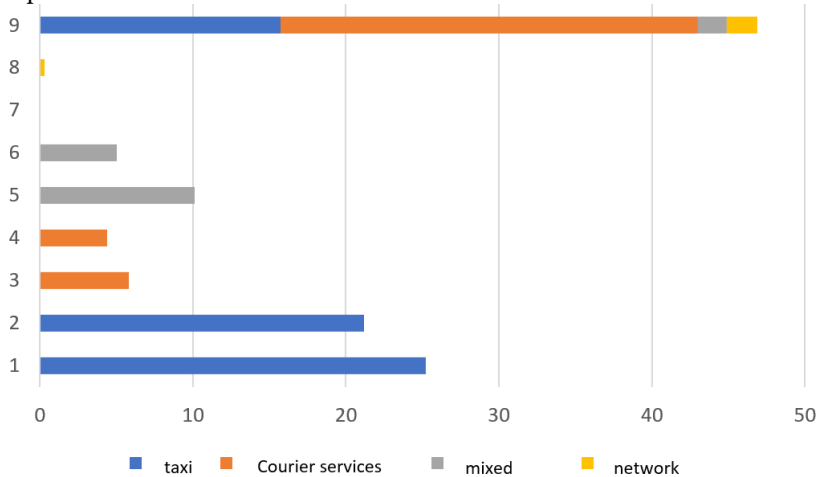


Fig. 2. Total investment from venture capital and other sources by category of digital platforms in 1999-2020 (US dollars, billion)

3 Analysis of the main ERS data sources for the DEM development

North America, Asia and Europe account for the lion's share of global digital platform revenues.

Digital platforms are characterized by dynamism, and their work arrangement has nothing in common with traditional enterprises. They provide a bridge between businesses and clients on the one hand and workers on the other, transforming the labor process in a way that can have a major impact on the future of the world of work.

– Distinctive features of the platform business model:

The success of platforms depends on the network effect. They need to involve a sufficient number of users from all sides (e.g., clients and employees) to sustain their operations and growth.

- Creating value by collecting and monetizing data is probably the biggest innovation brought to business by digital platforms. They tirelessly collect and analyze data, taking business operations to a level beyond the reach of traditional businesses.

- Efficient communication between employees on the one hand and clients and consumers on the other is achieved by digital platforms with the help of algorithms. The main components of such algorithmic combinability are ratings, client and consumer feedback, the skill level of workers, refusals of services, and acceptance of work. The algorithms are also used to control workers, to track and evaluate their work, that is, to manage work processes.

- The operation of digital platforms generally does not involve large investments in fixed assets, production and storage facilities, or personnel. Instead, they invest in cloud infrastructure, and their operations depend on the skills, ideas, and material resources of their users (clients and employees). This creates an opportunity for rapid growth at a low cost.

- The main source of funding for digital platforms is venture capital funds. So, for example, taxi platforms are using venture capital to attract users with generous subsidies and bonuses as they explore new markets. This helps them expand quickly, but once their range of users reaches the necessary level, they reduce subsidies, if not increase the amount of fees charged to drivers.

Thanks to venture capital funds, platforms can also operate at a loss for quite a long time. Uber, for example, has received \$25.2 billion in venture capital funding since 2009 in 28 rounds and has expanded its operations to 69 countries, but has yet to make any profits.

To attract users, who in turn attract new users, creating network effects and added value, digital platforms resort to different pricing mechanisms (using, for example, all kinds of payments and subscriptions). Other mechanisms play an important role in the platform business model - such as bonuses, dynamic pricing, prizes, and the provision of additional benefits (including increased profile viewability and priority access to projects).

A substantial part of the platforms' income also comes from employee fees. In 2019, for example, Upwork earned \$300 million, of which, impressively enough, 62% came from various fees from employees and only 38% from clients. At the same time, the practice of levying fees on workers may be contrary to international labor standards, which prohibit agencies, employers, and intermediaries from levying such fees.

Principles of platform management. To take advantage of a particular platform, employees, clients, and businesses have to accept the terms and conditions under which it provides services. These terms are usually determined unilaterally by the platform and cover such things as exclusivity, acceptance/rejection of services, account disconnection, dispute resolution, and data usage. This allows platforms to largely control workers' freedom of action, as well as regulate the ability of clients and businesses to contact workers.

4 Conclusions

The proliferation of digital platforms has created both opportunities and challenges for traditional businesses. To understand how digital platforms are changing and challenging traditional businesses, the ILO interviewed 85 businesses across industries.

Opportunities. Platforms open up new opportunities for traditional businesses to outsource a range of tasks, services, and retail activities, and it's good for their organizational efficiency. When enterprises turn to network platforms, they mainly pursue three goals: recruitment, cost savings, and efficiency gains, and access to the information they need to implement new things.

Platforms also foster startups, in some cases helping businesses refocus their operations and expand their reach into markets.

At the same time, digital platforms also pose a threat to traditional businesses. It is extremely difficult for other enterprises, especially small and medium-sized businesses (SMB), to compete with them in some areas. We are talking in particular about the use of statistics and algorithms in pricing, forecasting supply and demand, determining consumer preferences, and providing cheap or free services.

The inherent advantages of platforms can lead to unfair competition, a problem exacerbated by the lack of proper regulatory mechanisms. Meanwhile, such regulation is necessary to create uniform rules of the game, applicable equally to both traditional and platform businesses, especially with regard to social protection, working conditions, and dispute resolution procedures.

Digital platforms use the services of two categories of workers: the core staff, who are hired by the platform itself as contract employees, and those whose labor is mediated by the platform and performed on an ad hoc basis.

Based on a survey of 12,000 respondents, the ILO has, for the first time, compiled a large-scale and comprehensive picture of digital platform workers across industries and countries.

As our research showed, the typical digital platform worker is a man under the age of 35 who lives in an urban or suburban area. More than 60 percent of respondents on network platforms are highly educated. Contrary to accepted stereotypes, this also applies to the 20% of cab drivers and couriers working for aggregator companies. This is probably a consequence of employment problems, such as a lack of jobs in local labor markets that match workers' qualifications.

Overall, by industry, the average age of employees of network and localized platforms is less than 35 years. The main indicators are shown in the charts below.

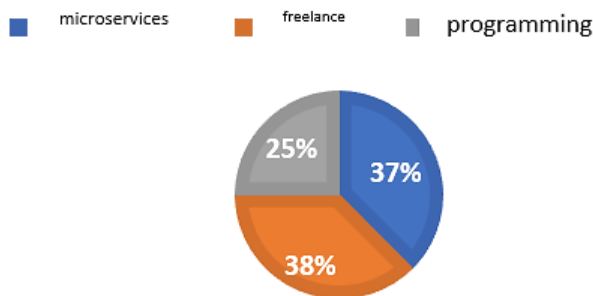


Fig. 3. Types of platforms

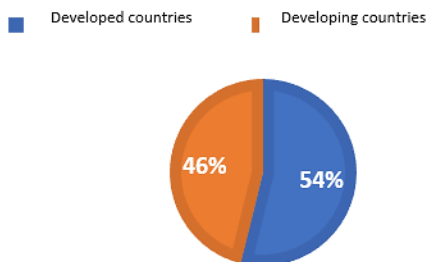


Fig. 4. Level of society development

For the majority of cab drivers (84%) and couriers (90%) working for aggregator companies, as well as for about a third of employees of network platforms, this job is the main source of income.

Most workers on both network (86%) and localized platforms (69%) expressed a desire to work more. Additional one-time orders cannot be obtained due to an oversupply of labor and a shortage of work. Many workers, especially in developing countries, cannot claim positions and well-paying jobs because of restrictions imposed by the platform or its clients. This has a very negative impact on the independence of workers, their access to work, and their earnings.

Flexible schedules, free choice of orders, the ability to work anywhere and anytime at your discretion - all this has made digital platforms popular. Besides, people come to the platforms for additional earnings or because they have no other employment opportunities [5].

However, working on digital platforms presents challenges in terms of working conditions. Workers face low wages and unstable earnings, the practice of wrongful termination of employment relations, poor labor protection, and social protection, the inaccessibility of multiple targeting (i.e. maintaining communication with more than one platform) [6]. In fact, the labor process and performance are determined by algorithmic management, and this severely limits the autonomy of workers. To earn a decent wage in such conditions, workers have to work overtime, which is detrimental to combining work and family life and can lead to stress.

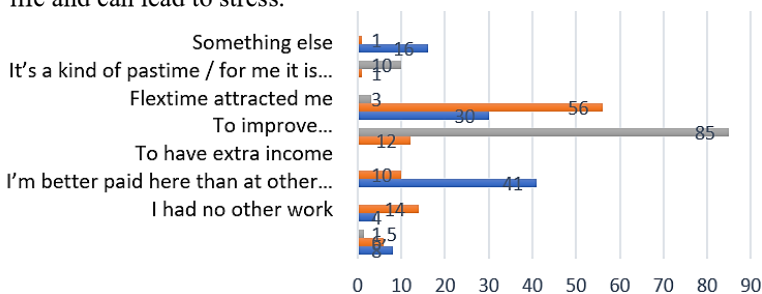


Fig. 5. Motives that attract workers to digital platforms

With the COVID-19 pandemic, weak social protections have undoubtedly endangered the lives of digital platform workers. Many workers, whose earnings depend entirely on commissioned work, cannot afford to isolate themselves because they are not entitled to paid sick leave or medical benefits. Seven out of every ten workers tested for the virus are not compensated and cannot take paid leave, and this is dangerous for themselves and those around them.

The majority of those working for both the aggregator companies and the traditional 32%, due to economic necessity, did not stop working throughout the crisis, despite the serious risk of becoming infected with COVID-19 [7].

In most countries, the crisis has sharply reduced the income of nine out of every ten cab drivers and seven out of every ten couriers, exacerbating the already bleak situation of digital platform workers during the COVID-19 pandemic.

The terms and rules are determined by digital platforms unilaterally. By and large, these terms are not limited in any way by the provisions of current labor protection legislation and can be adopted without any social dialogue: the platforms themselves determine the working conditions of employees.

According to ILO conventions and recommendations, every worker enjoys labor rights that are common to all. The regulation of digital platforms is a complex issue because it affects both labor law and other areas of decent work law. These are issues such as the hard-won universal labor rights, in particular the rights of workers on digital platforms to social protection and collective bargaining, fair use and better data protection, algorithmic reporting, and tax reform [8, 9, 10].

Everywhere in the world, new solutions and forms of relationship regulation are emerging. Given that digital platforms operate in the legal systems of different countries, international policy dialogue and coordination are of great importance here.

Social dialogue between all stakeholders, namely digital platforms, workers on those platforms, their representatives, and governments, can play a vital role in developing the most effective and inclusive approach to making the digital economy a powerful force for healthy competition and decent work for all.

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