# National Research University Higher School of Economics

As a manuscript

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# The Role of Digital Labor Platforms in the Transformation of Employment: An Economic Sociology Approach

Thesis Summary

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# Statement of the research problem

The widespread adoption of digital platforms carries the potential for radical transformation of the economy and society [Zuboff 2022; Srnicek, 2019; Dijck, Poell, Waal, 2018; Kenney, Zysman, 2016], posing new challenges for the field of sociology [Radaev 2022]. Work as a primary form of social activity that ensures the material conditions of human existence is also affected by the platforms. Digital platforms represent a new mode of interaction among individuals in the labor process, characterized by unique forms of management and control. This significantly alters the conditions of work and employment for workers, while labor market regulation, labor rights protection, social security, and worker collective representation systems face new challenges.

The first specialized digital labor platforms emerged in the late 1990s as online marketplaces for freelancers<sup>1</sup>. However, they only gained significant public attention a decade later, in the late 2000s, when platform-based taxi and food delivery services began to rapidly expand. Platform workers themselves became easily observable on the streets of large cities. Since then, labor platforms have ceased to be perceived as niche solutions and are discussed as a paradigmatic model of work organization, as reflected in the popular term "uberization" [Huws 2016]. According to estimates, over the course of a decade, the number of labor platforms worldwide increased fivefold, from 142 in 2010 to over 777 in 2020 [Rani et al, 2021]. The total number of platform workers worldwide is estimated to be in the tens of millions<sup>2</sup>.

Labor platforms significantly differ from traditional organizations. They lack a managerial hierarchy and relationships of subordination, with workers assuming the roles of individually formally independent producers. The quantitative composition of the workforce is not clearly defined, and its boundaries are blurred, as dispersed workers operate independently in space and time. The work itself is intermittent and discrete, broken down into separate episodes. Workers are socially isolated from each other, with no channels of horizontal communication and no ties to a shared corporate culture.

Using advanced information systems, labor platforms digitally coordinate the activities of numerous individual workers who perform labor tasks (gigs) on-demand and on-call. The work of these workers can be conducted either remotely in an online environment (web-based work) or in familiar physical spaces (location-based work). Terms such as "platform work" or "platform-mediated work" as well as "gig economy" has emerged to describe these new phenomena in the labor market when casual work is facilitated through websites and mobile applications. Although digital platforms aim to position themselves as mere intermediaries between supply and demand,

<sup>&</sup>lt;sup>1</sup> The transformation of work and employment is not only driven by specialized labor platforms but virtually any type of digital platform [Kenney, Zysman 2019]. Expansive interpretations of platform work even encompass the unpaid activities of internet users [Terranova 2000]. However, in this study, we will focus on labor platforms, which serve as essential structural components of the labor market in the sense that they function as dedicated "spaces" specifically designed for the buying and selling of labor services, as well as the organization and execution of work.

<sup>&</sup>lt;sup>2</sup> In 2021, there were 163 million registered workers on only 351 remote work platforms, although the actual number of active workers was around 14 million [Kässi, Lehdonvirta, Stephany, 2021]. From 2016 to 2021, the annual growth in demand for freelancer services (the number of projects published on remote work platforms) was approximately 10% [Stephany et al., 2021].

they have a significant impact on organization of work, employment relations, and work practices. Due to their relatively short history, as well as the diversity of business models and platform architectures, the social effects of platformization are not always evident, are insufficiently studied, and vary in different national contexts.

According to the Center for Strategic Research (CSR), the total number of platform workers in Russia ranges from 2 to 5 million people, which constitutes approximately 2.6% to 6.6% of the economically active population<sup>3</sup>. According to estimates from the Institute for Social Policy at the National Research University Higher School of Economics (HSE), in 2022, there were around 1.7 million workers in Russia who identified platforms as their primary source of employment, and up to 15.5 million people engaged in episodic or regular gig work on platforms [Sinyavskaya et al. 2022]. Based on calculations by the Institute for Statistical Studies and Economics of Knowledge (ISSEK) at HSE, using a sample survey of the labor force by Rosstat, about 5% of all employed individuals (approximately 3.7 million people) in Russia engage in platform work at least once a week<sup>4</sup>. These trends align with the global pattern where platform employment, despite its continuous growth, still represents relatively modest proportions in most countries [Piasna, Zwysen, Drahokoupil 2022].

Nevertheless, the increased attention to platform employment is entirely justified. The gig economy epitomizes structural changes in the labor market and serves as an incubator for new organizational forms, representing a kind of "laboratory of capitalism" [Woodcock, Graham 2020]. Moreover, the economic and organizational experiments initiated by digital platforms are far from over, and the social and institutional experiments regarding the regulation of the gig economy are just beginning. These processes unfold differently in various institutional contexts. It is also important to note that the developments within the gig economy have the potential to impact other sectors and the overall climate of employment relations, including carrying the risks of normalizing precarious and unstable employment [Kalleberg, Vallas, 2017]. Overall, the platformization of labor markets implies technological, institutional, and sociocultural changes that require empirical study and deep theoretical understanding.

Therefore, the research problem lies in the fact that the development of digital labor platforms within the broader context of platformization of the economy and society contributes to a fundamental restructuring of the entire social system of labor relations. Hence, a deeper understanding is required of how the activities of digital platforms transform labor and employment within various national contexts, and what the social consequences of this process are.

#### Literature review

The digital gig economy is a logical continuation of the trends that have unfolded over the past few decades towards destandardization, flexibilization, and deregulation of labor markets

<sup>&</sup>lt;sup>3</sup> https://www.kommersant.ru/doc/5009303

<sup>4</sup> https://issek.hse.ru/news/797813349.html

[Crouch 2020; Standing 2014; Beck 2000; Kalleberg 2009], as well as the individualization of society [Bauman 2002]. Business strategies of outsourcing and externalization of work beyond the firm's boundaries and abandoning standard employment relationships are well-documented [Ashford, George, Blatt 2007; Cappelli 1999; Connelly, Gallagher 2006; Kalleberg, Reynolds, Marsden 2003]. Attention is also drawn to significant cultural shifts related to the transformation of the worker as a subject, increasingly seeking autonomy and self-expression [Inglehart 2018], as well as independent forms of work [Pink 2005].

Platform work is an important topic in the overall analysis of the "platform economy", "platform capitalism", and "platform society" [Zuboff 2022; Srnicek 2019; Boyer 2022; Dijck, Poell, Waal 2018; Lehdonvirta 2022; Kenney, Zysman 2016; Rahman, Thelen 2019], including a comparative perspective [Thelen 2018; Uzunca, Rigtering, Ozcan 2018]. Platforms are viewed as an innovative form of business [Parker, Alstyne, Choudary 2017] within the broader context of the digitalization of the economy [Bodrožić, S. Adler 2022; Fernández-Macías 2018]. Economists [Evans, Schmalensee 2016] and economic sociologists [Vallas, Schor 2020; Stark, Pais 2021] engage in theoretical analysis of digital platforms as a distinct form of economic coordination. Various typologies of digital platforms have been developed [De Groen et al. 2018; Howcroft, Bergvall-Kåreborn 2019; Kalleberg, Dunn 2016]. The overall assessment of the gig economy varies from enthusiasm for a new world of "free agents" and digital micro-entrepreneurs [Malone 2006; Sundararajan 2016] to a critical view of precarious "logged labor" [Huws 2016; Standing 2015], although increasing attention is paid to the heterogeneity of platform work [Cansoy et al. 2020].

Empirical research on platform employment has expanded. Firstly, there is a demand for research that addresses questions about its scale, socio-demographic and professional characteristics of workers, as well as key parameters of employment [Pesole et al. 2018; Piasna, Zwysen, Drahokoupi 2022; Rani et al. 2021]. Sociologists have focused on the work experience of platform workers, particularly in relation to issues of algorithmic management [Bucher, Schou, Waldkirch 2021; Ivanova et al. 2018; Newlands 2021; Rosenblat, Stark 2016; Wood et al. 2019; Woodcock 2020]. Legal scholars discuss the problematic legal status of platform workers and ways to integrate them into the system of employment and social security [Prassl, Risak 2017; De Stefano 2015]. Attention is increasing to issues of collective representation of platform workers' interests, forms of collective action, and the role of trade unions [Johnston, Land-Kazlauskas 2019; Bessa, Joyce 2022; Lei 2021]. Research is being conducted on specific sectors of the gig economy: taxi [Hall, Krueger 2018; Rani, Gobel, Dhir 2022; Rosenblat 2018; Wells, Attoh, Cullen 2021], delivery [Cant 2019; Drahokoupil, Piasna 2019; Shapiro 2018; Tassinari, Maccarrone 2020], online freelance work [Hong, Pavlou 2013; Horton, Kerr, Stanton 2017; Graham, Anwar 2019; Gandini, Pais, Beraldo 2016; Leung 2014], microtasking [Berg et al. 2018; Irani 2015; Lehdonvirta 2018; Tubaro, Casilli, Coville 2020], personal and domestic services [McDonald, Williams, Mayes 2021; Uysal 2022].

Platform work in Russia is developing within the broader context of the national economy and labor market. The Russian economic model has been a subject of analysis by both indigenous [Bessonova 2006; Glinkina 2017; Zhiharevich 2018; Kirdina 2014; Kordonsky 2007; Kosals 2006;

Yakovlev 2021] and foreign [Morris 2021; Szelényi, Mihályi 2019] authors. Digitalization of the Russian economy and society is another topic of interest [Abdrahmanova et al. 2022; Efendiev, Gogoleva, Balabanova 2020; Davydov 2020; Howells, Henry 2021; Østbø 2021]. The specifics of the Russian labor market and labor relations are reflected in literatures that cover various aspects, including small business and self-employment [Makarov 2022; Seleev, Pavlov 2016; Plyusnin 2018; Chepureko 2019; Yakovlev et al. 2007], specific professional and occupational groups [Abramov 2016], informal employment [Gimpelson, Kapelyushnikov 2013; Barsukova 2009; Morris 2012, 2019; Williams, Round, Rodgers 2013], non-standard and flexible employment [Balabanova, Molchanova 2022; Gimpelson, Kapelyushnikov 2006; Karabchuk 2010; Kleiman 2007; Kozina 2013; Popkova, Balabanova 2021], trade union movement, and labor protests [Bizyukov 2021; Clark 2003].

Russian researchers are relatively less engaged in the development of platform-related issues, both in terms of theory and empirical research. Economists and management scholars focus on platform business models [Kovalenko 2016; 2020; Shastitko, Markova 2017, 2020; Yablonsky 2013], while sociologists examine the social effects of platformization [Dobrinskaya 2021; Kontareva 2021; Radaev 2022], without delving deeply into the issues of platform work. Perhaps the most developed discussions on platform employment in Russia are among legal scholars, but these discussions are not based on systematic empirical evidence [Korshunova, Motsnaya 2022; Lyutov, Voytkovskaya 2020; Chesalina 2017; 2022]. Empirical research on platform employment in Russia is still in its early stages, and there is a significant lack of data on both the scale and structure [Sinyavskaya et al. 2022] as well as the situation in specific sectors [Abramov 2022; CSR 2021].

Despite the rapidly growing academic literature, the theoretical understanding and empirical research on platform work is not complete. As the gig economy continues to develop, there is a need for further accumulation of empirical evidence and the development of conceptualizations that reflect the diversity of its forms and consequences, taking into account its embeddedness in various socio-economic systems. This is particularly relevant for Russian sociology, which is weakly integrated into contemporary discussions and has not generated the necessary empirical basis on platform employment in Russia.

## Aim and tasks

The relevance of the topic and incomplete views on platform work determine the overall idea of this research. On the one hand, it is necessary to gain a deeper understanding of digital labor platforms as economic structures that largely define the conditions under which work is carried out. This entails answering the question of "what platforms do" and how they are integrated into socio-economic systems (models of capitalism) [Vallas, Schor 2020]. On the other hand, it is important to study the experiences of the workers (work practices, motivations, subjective well-being) in various sectors of the gig economy to better assess the contradictory consequences of platform employment. With some degree of conventionality, it can be said that in the first case, we are primarily dealing with a macro-sociological theoretical perspective, and in the second case,

we are focusing on empirical research at the micro-level, which mutually informs each other at each stage of analysis. In aggregate, this will help advance our understanding of the transformation of work and employment relations in the platform economy, which is necessary, among other things, for the development of a regulatory system capable of supporting innovations while simultaneously mitigating negative social outcomes.

The object of the dissertation research is digital labor platforms, and the subject of the research is their role in the transformation of work and employment in the contemporary economy.

The aim of the dissertation research is to develop a comprehensive understanding of the role of digital labor platforms as economic structures in the transformation of work and employment by elaborating and specifying theoretical concepts and conducting empirical analysis of platform workers' experiences.

Within the framework of the dissertation research, the following tasks are addressed by the author:

- 1. Development of a conceptual framework for analyzing digital labor platforms as organizational structures and socio-economic actors that contribute to the fundamental transformation of work, labor markets, and employment relations.
- 2. Development and underpinning of a typology of digital platforms based on organizational logics, forms of managerial control, and work autonomy.
- 3. Determination of the main features of the emerging model of platform employment (gig economy) in Russia.
- 4. Revelation of the complex interaction between formal and informal mechanisms of labor regulation in the gig economy (using Russia as an example).
- 5. Identification of the main trends in the development of particular segments of platform work as represented by the Russian-language online labor market.
- 6. Revelation of the heterogeneity in platform work in terms of employment types and worker motivations (using freelancers and taxi drivers as examples).
- 7. Examination of the temporal patterns of work organization in the gig economy and their impact on the subjective well-being of workers (using freelancers as an example).

Therefore, the stated objective is achieved within a logical framework that progresses from the general to the specific: first, a general theoretical approach is developed (tasks 1 and 2), then this approach is applied to the analysis of the emerging model of platform work in Russia (tasks 3 and 4), and finally, based on empirical data collected by the author, individual segments of the gig economy and various issues related to platform work are examined (tasks 5-7).

The dissertation research is presented as a collection of academic journal articles on the studied issues, united by a common idea and conceptual framework. Several empirical papers are co-authored, and the author of the dissertation has contributed to the development of platform-related topics.

# Theoretical and Methodological Foundations

Theoretical foundations of the research are established within the broad framework of economic sociology [Radaev, 2005; Smelser, Swedberg, 2005] and sociology of work [Vallas, 2012; Kalleberg, 2009; Kalleberg, Leicht, 2021], including attempts to integrate them within the field of economic sociology of work [Bandelj, 2009; Beamish, Biggart, 2006]. The dissertation research follows an approach that can be referred to as structural, in the sense that it focuses on the study of "work structures" [Kalleberg, Berg, 1987] and explores the influence of macrostructural factors [Kalleberg, 2012]<sup>5</sup>. The author assumes that social and economic structures largely shape human experiences, and agency is embedded in these structures [Seo, Creed, 2002]. The primary focus of the dissertation research is on how digital platforms, as a new organizational form, set specific conditions for work and shape labor relations, which, in turn, have important consequences for the material, social, and subjective well-being of workers. Structural conditions of platform employment are embodied in technologies, institutions, distribution of power, and cultural mechanisms [Vallas, Schor, 2020; Codagnone, Karatzogianni, Matthews, 2018; Stark, Pais, 2021]. An essential component of the research methodology is the historical and comparative perspective, which helps to reveal how organizational structures evolve over time and differ across spaces as part of larger socio-economic systems [Dobbin, 2016].

Various combinations of structural, historical, and comparative approaches to the analysis of work and employment are inherent in many theories and debates that the author draws upon, constructing the general conceptual framework of the dissertation research. Among them, it is important to mention neo-Schumpeterian theories of long waves [Peres, 2011; Freeman, Louçã, 2001; Bodrožić, S. Adler, 2022], post-Fordist theories [Humarayan, 2018; Vallas, 1999; Boyer, 2022; Vidal, 2011], Polanyian theories of social embeddedness [Krippner, Alvarez, 2007; Block, 2003; Grabher, König, 2020], neo-Marxist theories of the labor process [Konovalov, 2023; Gandini, 2019], political-economic theories of capitalism's diversity [Glinkina, 2017; Hall, Soskice 2001; Morgan, Campbell, Crouch, 2010; Thelen, 2018], and institutional theories of non-standard employment [Kalleberg, 2018; Ashford, George, Blatt, 2007]. In the dissertation research, the author does not strictly adhere to any specific theory but combines them to conceptualize various issues within the original research framework.

The empirical base of the dissertation research is comprised of various sources of information. Firstly, the main body of quantitative and qualitative empirical data was collected as part of a continuous collaborative project on independent professionals (freelancers) participating in the platform-based online labor markets. This project was conducted jointly with D. Strebkov [Strebkov, Shevchuk 2022b]. In this dissertation research, primarily two data sets are used:

• Data from the "Freelancer Census," the world's largest online survey of self-employed professionals (freelancers). Over the course of four waves of the survey (2009, 2011, 2014, 2019), approximately 28.5 thousand individuals participated (8,613 participants in 2009, 7,179 in 2011, 10,574 in 2014, and 2,055 in 2019). This survey was conducted on the leading Russian-language platform for freelancers, FL.ru. Given that freelancers belong to hard-to-survey

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<sup>&</sup>lt;sup>5</sup> In some literature, such an approach is referred to as "new structuralism" [Vallas, Prener, 2012].

populations for whom constructing a probability sample is impossible, a venue-based sampling method was employed. Venue-based sampling is a form of localized time-location sampling and is commonly used for surveys of people who are geographically dispersed but utilize particular spaces for regular meetings and interactions [Kalton 2014; Lee et al. 2014; Yakovleva 2011]. For example, this approach has been successfully used in studies of day labor [Theodore et al. 2006; Valenzuela et al. 2006].

 Big data (digital traces) collected through web scraping on the online labor platform FL.ru: 241.6 thousand messages posted by 29.8 thousand unique users in 4,082 thousand contests from 2014 to 2018. Although such data was not initially intended for research purposes, they possess non-reactive characteristics and enable the analysis of the labor market in the digital age [Horton, Tambe, 2015; Lazer, Radford, 2017; Salganik, 2018].

Within the framework of this collective research project, two waves of surveys of clients (2010, 2020) were also conducted, with a total of over 1,500 respondents. "Big data" on 1,390,241 users registered on the FL.ru website from 2005 to 2014 were collected. Additionally, over a hundred interviews were conducted with freelancers and clients.

Secondly, under the author's supervision, empirical data is being collected in other sectors of the Russian gig economy, such as taxi, delivery, construction services, and microtasks. In this dissertation research, 26 interviews conducted in 2020-2021 with taxi drivers working through digital platforms in Moscow are used [Shevchuk et al., 2021].

Thirdly, the author has studied various publicly available documents, including user agreements and platform rules, legal acts and bills, as well as commentaries on them, posted on the Internet interviews with workers, platform representatives, government officials, and experts, and other relevant media materials related to the research topic.

# Academic novelty of the research

- A conceptual framework for the analysis of digital platforms as organizational structures and socio-economic actors has been developed. Within this framework, the role of digital platforms has been theoretically substantiated and specified by applying and developing economicsociological approaches. Digital platforms are conceptualized as organizational innovations, mediating firm, market infrastructures, private regulators, and institutional entrepreneurs.
- 2. An original typology of digital platforms has been developed, including ideal types of "labor marketplaces" and "shadow corporations." These types differ in organizational logic, forms of managerial control, and work autonomy.
- 3. Distinctive features of the emerging platform work model (gig economy) in Russia have been identified, reflecting the general traits of the national model of platform capitalism. These features include state control over digital platforms, sovereignty of the Russian platform economy, neoliberal legalization of platform work, and a narrowing scope for workers' collective actions.

- 4. A complex interplay between formal and informal regulatory mechanisms in platform work has been identified. Contradictory outcomes of the platformization process in Russia's informal labor markets have also been revealed, including relatively successful formalization/legalization in the taxi and delivery sectors and partial formalization/legalization in online (remote) work and personal services markets.
- 5. Based on the analysis of unique empirical data over a decade (2009-2019), the main trends in the development of the Russian-speaking online labor market have been identified. These trends include spatial decentralization, occupational and gender diversification, the involvement of older and more educated workers, the institutionalization of a freelancer career, platformization, and formalization. All these trends are conceptualized as the diffusion of innovative work model into the economy.
- 6. Based on empirical analysis of the interplay between various (including hybrid) forms of platform employment, work trajectories, and motivation (including work values) of workers (freelancers and taxi drivers), the internal structure of heterogeneity in platform employment has been revealed. This heterogeneity is driven by the absence of rigid organizational mechanisms that standardize work experiences, calling for a differentiated approach to assessing the social consequences of platform work for different categories of workers.
- 7. Based on empirical analysis, the role of digital platforms in the temporal organization of work (including unpaid or "invisible" work) has been identified. Platform temporality leads to a "always on" work mode and non-standard work schedules, which have a negative impact on the subjective well-being of workers (freelancers and taxi drivers).

# Statements to be defended

- 1. A comprehensive analysis of the role of digital labor platforms in the transformation of work and employment can be achieved through the application of a conceptual framework consisting of five interconnected categories, which sequentially address various aspects of platform operation. The digital platform, as a radical organizational innovation of the information age, is based on technologies capable of efficiently coordinating the activities of numerous dispersed agents without requiring their spatial, temporal, and organizational (in terms of formal corporate membership) co-presence. The platform, as a mediating firm extracts value from interactions between external economic agents and resources. The digital platform, as a market infrastructure, generates specific forms of (infrastructural) dependency of users. The digital platform, as a private regulator, unilaterally establishes the "rules of the game" and exercises algorithmic control over market participants, challenging existing regulatory mechanisms. The platform, as an institutional entrepreneur, actively engages in the political process with the aim of legalizing and legitimizing its activities, as well as a broader social reorganization of markets.
- 2. Two contrasting ideal types of labor platforms can be used to analyze the realities of platform work. The labor marketplace model is a digital platform where participants have a high degree

of autonomy in terms of communication, matching, and price setting. The platform monitors compliance with general rules without directly controlling the quality of the product and the work process. The shadow corporation model involves algorithmic control of key interaction parameters (matching, pricing) to satisfy mass demand for standardized services and guarantee the brand quality of these services. These two types of platforms produce different social effects and require different approaches to regulation, with more detailed and strict regulation in the latter case.

- 3. In Russia, the state plays major role, forming a kind of alliance with large domestic capital and consumers against labor. The government increases control over the economy and tax revenues, large platform firms enjoy lower labor costs, and consumers get cheap and convenient platform services. Labor platforms in Russia are part of giant sovereign platform ecosystems controlled by oligarchic business and the state. In key sectors of platform work, quasi-monopolies dominated by a single company are forming. In the hands of the state, digital platforms become a tool for legalizing informal employment without adequate attention to labor rights and worker social protection.
- 4. The development of digital platforms in Russia largely involved the platformization of informal labor markets. Shadow corporations, holding a monopoly over digital infrastructure, fairly successfully formalized and legalized employment in some sectors (such as taxi and delivery). However, labor marketplaces in other sectors (remote freelance work and personal services) only achieved partial formalization and instead embedded themselves into informal labor markets. This fact complicated the socio-economic organization and functioning of informal markets. Importantly, in Russia, the process of formalization and legalization of employment is weakly linked to improvements in the working conditions and living standards of platform workers. This limitation hampers the further prospects of platformization.
- 5. The development of the Russian-speaking online labor market is a case in point of the diffusion of innovation into the economy. Initially, an platform work model was adopted by a narrow group of pioneers with specific socio-demographic and professional characteristics, primarily young men with IT expertise who combined freelancing with standard jobs. Gradually, platform model spread to a broader range of workers; gender, age, and professional imbalances were reduced, and platform employment ultimately gained the status of a "normal" career. The institutionalization of platform work is reinforced by ongoing (albeit slow) processes of formalization and legalization of platform work, in which digital platforms play an active role.
- 6. The open and flexible nature of the platform-mediated work, which prevents the standardization of the composition of the workforce and workers' experiences, leads to extreme heterogeneity in platform employment in terms of engagement, work trajectories, and motivation. For different categories of workers, platform employment can be a desired lifestyle, a step toward entrepreneurship, an adaptation strategy in difficult life situations, or a stable enclave of precarity. This calls for a differentiated approach for assessing the social consequences of platform employment and implementing regulatory measures.

7. Digital platforms impose a distinct temporal regime on workers, structuring the work schedules of formally autonomous workers. Through a set of mechanisms (24/7 availability, high competition, reputation systems), platforms remove external constraints on work schedules, create strong incentives for "always-on" patterns at times convenient for clients and consumers, and generate a significant amount of "invisible" (unpaid) labor, such as searching for tasks (gigs). All of this leads to the widespread working at non-standard times (evenings, nights, weekends, and holidays), which negatively affects the social well-being of platform workers.

# The main findings of the research

#### Conceptual framework for the analysis of digital platforms

The conceptual framework for the analysis of digital platforms as organizational structures and socio-economic actors presented in this section was developed by the author in the article from the main list [Shevchuk 2023]. Specific elements of the theoretical approach and categories are also discussed in the papers [Shevchuk 2020; 2022; Shevchuk et al., 2021]. An overview of the historical context of the development of social labor relations, necessary for a deeper understanding of the phenomenon of platform employment, is provided in the papers [Shevchuk 2000; 2002; 2007].

The proposed conceptual framework is based on five main categories that allow for a comprehensive analysis of the role of digital labor platforms in the modern economy (sSee Figure 1). Digital platforms are viewed as: 1) organizational innovation, 2) a new type of mediating firm, 3) market infrastructure, 4) private regulator, 5) institutional entrepreneur. Each category represents an independent research perspective that helps uncover specific aspects of the functioning of digital platforms. These categories are incorporated into the analysis sequentially, building upon one another and deepening the examination.

Digital platforms can be viewed as a radical organizational innovation within a new techno-economic paradigm based on information technologies [Bodrožić and S. Adler, 2022; Perez, 2016]. Digital platforms enable the efficient coordination of activities among numerous economic agents without requiring their physical, temporal, or organizational (in terms of formal membership) co-presence. The widespread adoption of portable computing devices (smartphones) with geopositioning capabilities, as well as the development of algorithmic management technologies (based on the analysis of big data oa user behavior), has allowed digital platforms to extend beyond occupational markets (such as programming and design) and meet the mass demand of the population (e.g., for taxi services and food delivery) on demand, just in time, and just in place through mobile applications. The techno-economic potential of platform solutions is not exhausted, as the development of the "internet of things" may lead to the creation of large sociotechnical systems where all people and things are interconnected. As an organizational innovation,

digital platforms have a disruptive character, reshaping markets and directly and indirectly influencing the scale, structure, and conditions of employment in many sectors<sup>6</sup>.

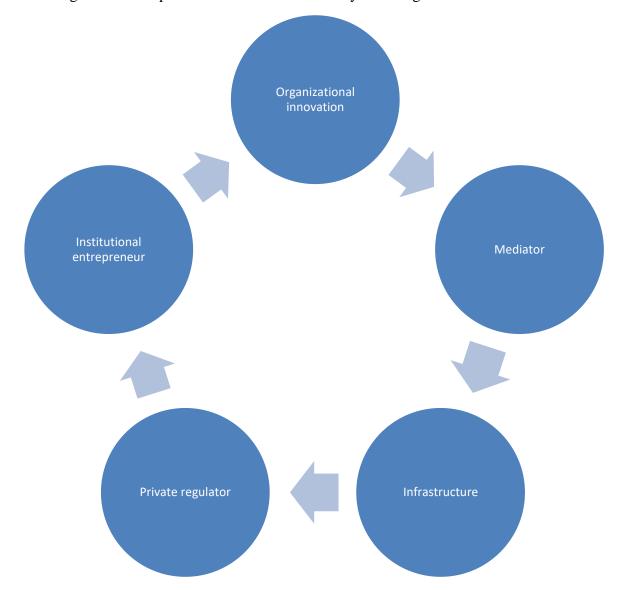


Figure 1. Conceptual Framework for the Analysis of Digital Labor Platforms

Digital platforms as a new business model act as mediators, not engaged in the production of goods and services or outsourcing them to subcontractors. Instead, they mediate, coordinate, and organize interactions between the direct producers and consumers within a unique system of triangular relationships. The platform model allows for benefiting from the use of assets and labor that are not part of the firm while creating value in an economic and social space (on the platform) organized by the firm but beyond it [Starke, Pais, 2021; Watkins, Stark, 2018]. Platform model represents a specific case of an "organization beyond the organization" [Ahrne, Aspers, Brunsson, 2015; Ahrne, Brunsson, 2011; Kirchner, Schüßler, 2019] or a "meta-organization" [Kretschmer et al., 2022]. Thus, in the platform model, value creation is distributed, but the appropriation of a

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<sup>&</sup>lt;sup>6</sup>For example, platforms like Airbnb not only impact the hotel industry but also the entire tourism sector and the real estate market. Similarly, companies like Uber influence not just the taxi segment but the entire transportation sector.

significant portion of value is centralized by platform firms [Gawer, 2022], which provide a degree of autonomy to participants but concentrate power [Vallas, Schor, 2020].

The platform model has significant implications for employment and social labor relations. A new category of platform-mediated workers emerges which boundaries are blurred [Kenney, Zysman, 2019]. <sup>7</sup>These platform-mediated workers do not have traditional employment relationships (such as being regular employees) or contractual relationships (like temporary workers) with the platform itself. Instead, they provide labor services to third-party clients and, in most cases, have the legal status of self-employed or independent contractors. As a result, there is a widening gap between the growing economic power and influence of platform firms and the diminishing scale of employment with social and labor guarantees.

Digital platforms are infrastructures, creating space, technical, and institutional possibilities for interactions between market participants. Digital platforms, as large-scale sociotechnical projects, possess important infrastructural properties: scale, ubiquity, and criticality of use [Plantin, De Seta, 2019]. Digital platforms are systemically significant and shape markets. As a result, it becomes challenging, if not impossible, for participants to take on roles such as a seller, buyer, worker, community member, or any other role outside of the platforms. Therefore, the infrastructuralization of platforms contributes to the formation of new forms of dependence in the platform economy. Despite arguments about increasing economic and work autonomy, we see the growing number of "dependent entrepreneurs" [Cutolo, Kenney, 2020], "dependent self-employed" [Shevchuk, 2010], and "dependent consumers" [Carolan, 2018] growing.

Powerful platform companies monopolize and privatize entire markets, acting as "digital landlords" who receive rent for providing access to conditions of production [Sadowski, 2020; Srnicek, 2021]. It is precisely because platforms occupy key infrastructure positions they gain unique opportunities to collect "big data" about all market participants, opening scope for "surveillance capitalism" [Zuboff, 2022].

Digital platforms, as private regulators of markets, unilaterally establish "rules of the game," control their enforcement, and resolve disputes among participants. Digital platforms not only compete with states for control over territorial labor markets but are capable of creating new transnational markets (as in the case of online labor markets), even extending to a planetary labor market [Graham, Anwar, 2019], because platform jurisdiction is personal (rather than territorial), extending to all registered users regardless of their location [Lehdonvirta, 2022]. The rule-making power of platforms is enshrined in a specific document - the "user agreement," which is a "non-contract" [Zuboff, 2022, p. 290], as it essentially lacks a contractual element and can be unilaterally changed by the platform without prior notice.

Digital platforms rely on algorithmic governance, which structures and directs interactions, automatically permitting and prohibiting certain actions, and incentivizing or penalizing specific

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<sup>&</sup>lt;sup>7</sup> Using the example of the global freelance marketplace Upwork, platforms structure employment as follows: the company itself employs only about 650 people, approximately 1,800 freelancers are engaged annually to carry out internal tasks and projects (often through their own platform). However, on the platform, there are over 12 million registered freelancers from more than 180 countries around the world. The extent to which they are actively engaged are not disclosed. See: https://investors.upwork.com/static-files/f9770045-d71e-48c5-a793-20ccde8be73f.

user behaviors [Aneesh, 2009; Kellogg, Valentine, Christin, 2020]. Unlike traditional approaches to market regulation aimed at creating transparent and stable "rules of the game," digital platforms deliberately introduce uncertainty, forming a kind of "invisible cage" - a form of control in which success criteria and the alteration of these criteria are unpredictable [Rahman, 2021]. Leveraging fundamental information asymmetry, platforms create momentary incentives to mobilize and maximize workers' efforts at a specific moment (on-demand), depending on market conditions and the platform's interests. As a result, governments face the complex task of developing approaches to "regulating the regulators" [Dunne, 2021].

Digital platforms act as institutional entrepreneurs to ensure the legality and legitimacy of their own activities. Legal and institutional changes are initially a crucial part of the business plan for platform companies [Pollman, Barry 2017]. In the early stages of development, platform companies may deliberately ignore and blatantly violate the law, counting on rapid growth and subsequent leniency from regulators toward economically and socially significant players who are too big and popular to be destroyed [Rahman, Thelen, 2019].

By engaging in "discursive work" [Gillespie, 2010], digital labor platforms utilize existing cultural resources, employing framing (specific categories of description) and theorization (representations of causal relationships) to legitimize platform employment and the gig economy. Digital platforms operate under the banner of the "sharing economy" and position themselves as intermediary technology companies (rather than employers or service providers to the public). Labor platforms promote ideas of a meritocratic world without boundaries, where every individual can unleash their talents from any corner of the planet; the image of a "free agent" enjoying flexibility and autonomy; the concept of convenient side gigs for students, homemakers, retirees; the assumption of a chance to return to work for the unemployed, and more [Codagnone, Karatzogianni, Matthews, 2018]. These rhetorical constructions are reinforced by selective and instrumental use of empirical data.

At this stage, the conceptual framework loops back to the idea that platforms represent a social innovation, and during the diffusion process, the most acute contradictions of the platform economy related to the business model of the mediating firm, its role as infrastructure, private regulator, and institutional entrepreneur must be resolved. In recent years, governments have significantly increased regulatory intervention in the platform economy [Cioffi, Kenney, Zysman, 2022]. This turning point can be conceptualized as a countermovement (following Polanyi), following another phase of market disembeddedness [Grabher, König, 2020]. From a neo-Schumpeterian perspective, the painful period of "creative destruction" initiated by radical technological innovations (including digital platforms) is coming to an end and should be followed by a balancing of the negative effects to begin a new phase of socially sustainable economic growth [Bodrožić and S. Adler, 2022; Perez 2016].

The development of digital platforms occurs in countries with different institutional environments and balances of social forces. As a result, different models of platform capitalism and the gig economy are formed [Boyer 2022; Thelen 2018; Uzunca, Rigtering, Ozcan 2018]. Within these models, the contradictions that have arisen during platformization, such as market monopolization, the use of big data, the legal status of platform workers, ensuring their labor rights,

the social protection system, and collective representation, are resolved differently. Three main ideal-typical scenarios are distinguished: digital oligarchy (dominance of large platform corporations), digital authoritarianism (state control over the economy and society through platforms), and digital democracy (control of civil society over business and the state) [Bodrožić, Adler, 2022. Boyer 2022].

The conceptual framework proposed by the author provides a comprehensive approach and can be productively used to analyze the activities of individual digital platforms, the functioning of specific platform markets, and the development of national models of the platform economy.

#### The typology of labor platforms

The presented typology of labor platforms was developed by the author in the article from the main list [Shevchuk 2020] with reference to earlier research [Shevchuk 2010a; 2020b]. Elements of this conceptualization have also been presented in several empirical studies by the author [Shevchuk et al. 2021; Shevchuk A., Strebkov D., Tyulyupo A. 2021a].

Existing typologies of digital platforms have a significant drawback: they rely on observable formal criteria (e.g., remote or local work, high or low skill levels of workers, etc.), ignoring the organizational logic. In contrast, we take the path of conceptualizing the nature and power of platform governance embodied in different institutional designs of platforms. Within the author's typology, two ideal types of labor platforms are distinguished, which have proven to be productive in analyzing specific issues of platform employment in other works by the author [Shevchuk 2022; Shevchuk et al. 2021]. The first type is the labor marketplace, a virtual location where counterparts have the opportunity to communicate, choose each other, discuss prices etc. Platform control primarily focus on the quality of the final product rather than the process of work. Based on their work history, formalized reputation, and presented portfolio, workers build a personal brand, actively search for tasks and projects, and compete with each other (based on price and quality). However, like all platforms, the marketplace remains an organized and structured space where interactions occur within rules established by a platform.

The second type of platforms represents a "shadow corporation" in which management control systems are disguised as market transactions. In this case, users (workers and consumers) lose control over key interaction parameters: matching and pricing are carried out by the platform. Workers act not on their own behalf (as on a marketplace) but on behalf of the platform (which is expressed, for example, in the uniforms of couriers and branding of vehicles). The main goal of such platforms is not to provide infrastructure for user interaction (as in the case of a marketplace) but to organize an uninterrupted flow of standardized services, the quality of which is also defined and guaranteed by the platform. In the case of shadow corporations, the digital platform (as an information system) can be seen as an element of the personnel management system, where external labor allows the company to flexibly (in real-time) adapt to changing demand and economize on maintaining its own workforce. This is a radical implementation of the well-known just in time management model, based on zero inventories (in this case, labor). A worker is

engaged by the corporation exactly when needed, and for exactly the duration (including literally a few minutes) when their labor is required.

Platforms for remote freelancers (e.g., Russian FL.ru) [Strebkov, Shevchuk 2022a], like platforms for personal and household services (YouDo), are more often organized as marketplaces. Examples of shadow corporations include ride-sharing services (Yandex.Taxi) [Shevchuk et al. 2021] and delivery services (Yandex.Food), as well as virtual call centers (LiveOps in the USA) [Shevchuk 2010a, 2010b; Yakubovich, Galperin, El Mansouri, 2018].

There are grounds to argue that these two different types of platforms not only differ fundamentally from each other but also have different historical roots. In other words, we are dealing with the digitization of two different organizational logics and, accordingly, different phenomena in the labor market. The historical precursor to digital marketplaces is physical spaces (e.g., a square, a corner, a bridge) known to people as places for short-term hiring and day labor [Valenzuela 2003]. Shadow corporations, on the other hand, operate more on the principle of the "putting-out system," a decentralized system of relatively large-scale production based on the labor of home-based workers [Diediriks et al. 1998: 106–107].

Usually, it is assumed that the decentralization of organizational structures inevitably leads to an increase in the autonomy of workers, and information and communication technologies only contribute to this process [Malone 2006]. In the case of shadow corporations, we observe a different picture: decentralization occurs while maintaining effective coordination and control. Thus, direct intra-organizational subordination is replaced by technological integration and algorithmic management, making it possible for mass production of standardized services.

In the end, we are dealing with a phenomenon - the loss of labor autonomy by workers in the absence of a formal hierarchy. From the perspective of labor autonomy, workers within shadow corporations cannot be classified as self-employed, yet they are not classical cases of wage employees either. Even before the widespread adoption of digital platforms, this category of workers, situated in a kind of gray area, was labeled as "dependent self-employed" or "dependent contractors" in the literature [Shevchuk 2010]. Today, the category of "platform dependence" is increasingly receiving attention in the literature [Cutolo, Kenney, 2020; Schor et al., 2020].

Therefore, the proposed author's typology deepens the analysis of labor platforms as organizational structures by conceptualizing the diversity of organizational models. It can be successfully used in conjunction with other typologies (such as the distinction between online and location-based labor platforms), revealing an additional dimension [Shevchuk 2022].

## The Russian model of platform employment

The analysis presented in this section on the formation of the Russian model of platform employment (gig economy) was conducted in the articles from the main list [Shevchuk 2022], following the spirit of comparative institutional analysis of capitalism models, as explored in other papers by the author [Shevchuk 2006; 2008; 2009]. The main findings of the research are as follows.

Several trends characterize the development of platform capitalism and the gig economy in Russia. In the United States and Europe, the largest labor platforms (such as Uber, Deliveroo, Upwork, Fiverr) are independent public companies with publicly traded shares on the stock market, whereas in Russia, labor platforms typically form part of gigantic platform ecosystems ("digital empires") owned by oligarchic businesses and the state. Moreover, the state is progressively increasing its influence through capital ownership, corporate governance, and informal political control.

If previously major players (such as Yandex, VK, and Sberbank) competed with each other in various markets, they have recently taken coordinated actions to divide spheres of influence, leading to the formation of quasi-monopolies. This means that only one platform company will act as a "private regulator," effectively determining the terms and level of labor compensation across the entire market. In Russia, in two key sectors of the gig economy (ride-hailing and food delivery from restaurants), Yandex is becoming such a company<sup>8</sup>. In the ride-hailing market, Yandex's market share increased from 27% in 2019 to 66% in 2021, and it may grow even larger in 2022 (after the departure of several competitors). After acquiring Delivery Club in 2022, Yandex's share of the food delivery market could reach 77%. Yandex also owns the microtasking crowdsourcing platform "Toloka," which holds a monopolistic position in its sector, as well as grocery delivery services and courier services.

In an increasingly interdependent "geotech world," digital technologies can be mobilized not only for international economic competition but also in geopolitical struggles. In many countries worldwide, the agenda of "digital sovereignty" is being emphasized, which can align the interests of national capital and state [Schmitz, Seidl 2022]. Russia's growing isolation during the implementation of extensive Western economic sanctions has made a significant contribution to the development of a "sovereign platform economy" in Russia and is likely to shape its development for years to come. Unlike global media platforms (social networks), foreign labor platforms have never been key players in the Russian market. Currently, almost all foreign labor platforms have either left or are planning to exit the Russian market. In Russia, domestic platforms can become part of the "resistance economy" [Yakovlev, 2021], once again mobilizing resources in response to external threats [Kordonsky, 2013].

In Europe and the United States, the situation of platform workers quickly became the subject of intense academic and socio-political discussions. There have been proposals to recognize platform workers as employees of organizations or to develop a special "platform worker" status. Numerous lawsuits against platform companies have also been heard in courts [De Stefano, 2015; Prassl, Risak, 2017]. In Russia, public and academic discussions on this issue are still in their infancy. Driven mainly by fiscal interests, the Russian government independently promotes the most liberal regulation regime for the gig economy, advocating for the self-employed status to legitimize platform work. Significantly, this is still just a special tax regime and not a full-fledged category of Russian labor law. Russian courts tend to favor consumer claims against platforms but not worker claims. Russian trade unions lack genuine subjectivity [Bizyukov 2021],

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<sup>&</sup>lt;sup>8</sup> See: https://mobile-review.com/all/articles/analytics/dostavka-edy-ot-yandeksa-delivery-club-i-yandeks-eda-v-odnih-rukah.

and as the authoritarian nature of state power strengthens, the scope for self-organization and collective defense of their interests among platform workers narrows.

One can conclude that in contemporary Russia, the state is joining a sort of alliance between capital and consumers against labor, which is characteristic of platform capitalism [Rahman, Thelen 2019]. The state is increasing its control over the economy and tax revenues, large platform companies are using labor with lower costs, and consumers are getting cheap and convenient platform services. In the future, the state may use digital platforms as a tool for "panoptic control" over the economy and citizens, similar to what is happening in China [Boyer 2022].

Many of the described processes not only characterize the realm of platform employment but also reflect the general trajectory of capitalism's development in post-Soviet Russia. Therefore, as the economy and society become increasingly digitalized, there is a need to integrate the issues of platform capitalism into broader discussions about the development path of Russia [Kordonsky, 2007; Bessonova, 2006; Glinkina, 2017; Kirdina, 2014; Kosals, 2006; Yakovlev, 2021; Szelényi, Mihályi, 2019].

Overall, the social, institutional, and political-economic characteristics identified by the author in the formation of platform employment in Russia contribute to the development of comparative research on platform capitalism and the gig economy.

#### Formal and informal mechanisms of regulation of platform work

The analysis presented in this section about formal and informal mechanisms for regulating platform labor markets is covered in the articles from the main list [Shevchuk 2022; Shevchuk, Strebkov 2023], as well as other publications [Strebkov, Shevchuk 2022a; 2012; Strebkov, Shevchuk et al. 2012; Shevchuk, Strebkov 2022; 2018]. The main research findings are as follows.

In countries with developed market economies, the increasing platformization of labor markets is seen not only as a flexibilization or de-standardization of employment but also as a general disorganization, informalization, and subsequent precarization [De Stefano 2015; Rani, Gobel 2022]. Labor is being moved outside formal corporate structures, rigid bureaucratic rules, established mechanisms of regulation at the industry, regional, and national levels, often entering gray (extra-legal) areas.

However, when it comes to the informal economy, platforms tend to play an organizing (formalizing) role through the introduction of procedures, standards, and rules, enhanced by algorithmuc control and management. Formal requirements start with the need for registration on the platform, requiring specific documents and personal data. Standardization is reflected in the categorization of services, the standardization of labor procedures, and quality requirements. Personalized trust, previously available only through informal networks, is replaced by formal reputation systems open to all market participants, including ratings, assessments, and reviews. Flexible personal agreements are being replaced by strict contractual mechanisms, including those based on algorithmic matching of counterparties. Dispute resolution procedures are institutionalized, and the role of the arbitrator is transferred to the platforms. Payment is

increasingly made through electronic systems rather than in cash. Platforms accumulate big data about users and transactions, enabling tracking, accounting, and analysis. Importantly, the mere presence of a platform as a common "pseudo-employer" to which demands can be addressed can initiate the process of collective organization of workers to defend their interests [Ford, Honan 2019]. Various formalizing effects of digital platforms are documented in studies of countries with a large informal sector [Frey 2020; Randolph, Galperin, Khan 2019; Weber et al. 2021]. We observe similar effects in contemporary Russia.

While in the United States and Europe, companies like Uber primarily disrupted heavily regulated taxi services, in Russia, "digital aggregators" (such as Yandex) delivered a devastating blow to the shadow market of private transportation, resulting in the near disappearance of the so called "bombers" (gypsy cabs) from the streets of major cities.

The formalization of labor practices by platforms does not automatically remove them from the shadow economy in terms of legal regulation, taxation, and statistical accounting. Although there have always been opportunities for the legal formalization of individual labor activity in Russia, the majority of platform workers did not have an official legal status, did not sign contracts, and did not pay taxes. For example, over a decade (2008-2019), only about 12-15% of freelancers conducting transactions on online labor platforms regularly used official contracts [Shevchuk, Strebkov 2023]. According to a 2022 survey by the Higher School of Economics, among all respondents with experience in platform employment, only 32.7% stated that they work completely legal; 18.7% mentioned that they formalized only part of their work officially, 36.2% did not formalize their work through platforms at all, and another 12.4% were unable to answer [Sinyavskaya et al. 2022]. Taxi and food delivery platforms used an indirect hiring model through "proxies" or intermediaries: companies or individual entrepreneurs would sign partnership agreements with platforms and then hire workers either under subcontracting conditions or informally [Shevchuk et al., 2021]. This allowed platforms to avoid significant tax burdens and potential claims from regulatory authorities. Online labor platforms and other labor marketplaces were not interested in the formal legal status of workers at all.

Formalization also does not always lead to an improvement in working conditions and well-being. Formal sector employment in Russia can also be associated with low pay, poor working conditions, a lack of social guarantees, and low job satisfaction [Gimpelson, Kapelyushnikov 2013; Barsukova 2009]. Moreover, platform employment in Russia does not necessarily exacerbate precarity or worsen the quality of jobs; on the contrary, platform employment can be quite attractive to workers compared to alternative positions in the labor market [Shevchuk et al. 2021; Witte 2018]. For example, working as a food delivery courier is unlikely to be inferior in terms of overall job quality compared to work in fast-food restaurants or construction, and freelancers often do not lag behind their office counterparts in terms of material and subjective well-being [Strebkov, Shevchuk 2022]. Overall, the question of the relationship between the gig economy and precarization processes requires deeper consideration. The dominant narrative that platform employment generates precarity can be challenged because precarity is initially a good ground for the flourishing of the gig economy.

It can be concluded that in Russia, digital platforms have successfully integrated into informal labor markets, only partially contributing to their legalization, and seemingly not significantly changing the position of workers, resulting in a kind of "platformization of informality."

Since the early 2000s, the Russian government has systematically made efforts to reduce the shadow economy. Initially, the focus was on large corporations, then on medium and small businesses, and in recent years, the focus has shifted to informally employed individuals [Barsukova, Radaev, 2012; Chepurenko, 2019]. Since 2019, workers have been offered a simplified registration system for self-employment through a digital application with extremely low tax rates (4-6%). In contrast to previous attempts, this government initiative has been somewhat successful, with over 7 million people registered as self-employed to date.

In the absence of government and public attention to the specific social status of platform workers, it is not difficult to foresee one of the negative scenarios. In the initial stage, the government aims to establish accounting and taxation for the self-employed. Subsequently, the government may assign platforms the role of tax agents, independently calculating and collecting taxes from workers. Finally, after "whitening" the sector, the government may increase the tax burden on workers.

The strategy of legalizing platform employment in its current form may work successfully in the taxi and courier delivery sectors, where large platforms operate as shadow corporations [Shevchuk 2020]. These platforms can unilaterally impose their conditions on workers since the latter have few alternative opportunities for similar work outside the infrastructure created by the platforms. Given the growing monopolization of these sectors, it is quite likely that large platforms will eventually reclassify all their workers as self-employed and potentially be able to control workers' financial flows in the interests of the state.

A different situation exists in online labor markets and in the personal services sector (repairs, care, beauty, etc.), where, in addition to specialized platforms, workers have many other (including digital) channels for finding work: regular clients, social connections and recommendations, personal websites, social media, internet forums, messenger groups, and more [Strebkov, Shevchuk, 2022; Shevchuk, Strebkov 2018]. In these sectors, platforms mainly act as labor marketplaces, lacking monopolistic power and the corresponding control capabilities. Conversely, platforms themselves heavily depend on the number of users and transactions. Therefore, pressure on workers may lead to them leaving the platform. In these sectors, the prospects for legalization are more uncertain, and a significant scale of informal employment may persist.

In conclusion, this dissertation deepens the understanding of the complex interaction of formal and informal regulation mechanisms in platform labor markets by considering the specific features of the Russian economic system and the functioning of various types of labor platforms.

#### The development of the Russian-language online labor market

The analysis presented in this section regarding the development of a distinct segment of the gig economy - the Russian-language online labor market - is contained in the article from the main list [Shevchuk, Strebkov 2023], conducted as part of a continious collaborative empirical project. The results of this project are also documented in other papers [Strebkov, Shevchuk 2022b; 2011; 2010; 2009; Strebkov, Shevchuk et al. 2012; Strebkov, Shevchuk, Spirina 2015, 2016; Shevchuk, Strebkov 2015, 2012]. The papers have also analyzed the transnational nature of the Russian-speaking remote work market [Aleksynska, Shevchuk, Strebkov 2021a; Shevchuk, Strebkov, Tyulyupo A. 2021b], educational and professional mismatches [Shevchuk, Strebkov, Davis 2015; Strebkov, Shevchuk 2015a], and gender inequality [Aleksynska, Shevchuk, Strebkov 2021b]. The main findings of this research are as follows.

The Russian-language online labor market has been functioning since the mid-2000s, transcending territorial (including state) boundaries, thanks to the activities of online platforms where freelancers and clients find each other. This market represents an example of grassroot economic integration (without the involvement of states) in the post-Soviet space. According to our estimates, in 2021, the total number of accounts registered on Russian-speaking remote work exchanges was approximately 18 million, and the number of active freelancers was around 1 million [Strebkov, Shevchuk 2022b]. Based on the analysis of unique survey data from the "Freelancers Census" over a decade (2009-2019), the following key trends have been identified:

Territorial decentralization in the remote work market has been characterized by a gradual increase in the proportion of freelancers and clients from abroad (from 25% to 29%), with a notable slowdown due to the political conflict between Russia and Ukraine since 2014. This process is most pronounced within Russia itself, where the share of residents from Moscow steadily declined (from 31% to 19%), alongside an increase in residents from other regions.

Occupational diversification means that workers from a broader range of occupations have gradually entered the market. The share of activities such as business services, engineering, multimedia has grown, while the proportion of IT specialists and designers, who were pioneers in the market, has noticeably decreased.

Gender balance alignment is manifested in a progressive feminization, with an increase in the proportion of women in a market initially dominated by men (from 34% to 43%). This trend is evident across all professional groups.

The involvement of older generations is confirmed by the increase in the average age (from 27 to 34 years), including a more than two-fold decrease in the youngest age group (up to 26 years), whose members were early adopters of the market (from 61% to 27%). There has also been an increase in the proportion of freelancers who are married and have children.

The growth in educational levels is supported by the increase in the proportion of freelancers with higher education (from 54% to 67%).

Career institutionalization is reflected in the rise of genuine freelancers, for whom freelancing is the primary source of income (from 45% to 66%), and an increase in the average years of experience working as a freelancer (from 2.5 to 4.8 years).

Platformization involves the strengthening of the role of digital platforms, as evidenced by various indicators, including a more frequent use of platforms for regular job searches (from 42% to 67%), an increase in registrations on multiple platforms, and the number of transactions through platforms.

Legalization is reflected in the relatively modest growth of the proportion of freelancers who regularly enter into written lagal contracts with clients (from 12% to 15%) and those who use formal contract procedures offered by platforms (up to 18%).

In aggregate, these trends reflect the process of diffusion of innovative work practices into the economy, during which self-employment and platform work are being adopted by increasingly broader groups of workers [Radaev, 2003; Rogers, 2003]. As a result, the freelance platform work model has become typical with the less specific characteristics of platform workers. Thus, the author's contribution lies in documenting empirically the spread and institutionalization of a new work model, which, alongside traditional options, is considered seriously by a wide range of participants in the Russian labor market.

#### Heterogeneity of platform work

The analysis of the heterogeneity of platform work, including hybrid careers and various forms of motivation, presented in this section, is included in the empirical articles by the author from the main list [Shevchuk et al. 2021; Shevchuk, Strebkov, Bögenhold 2023], as well as in other papaers [Strebkov, Shevchuk 2008; 2015b; 2017; Shevchuk, Strebkov 2016; 2017]. The main results of the research are as follows.

Low entry barriers, the absence of rigid organizational structures, and the flexibility of work modes generate the heterogeneity of platform work which was demonstrated in our research on freelancers [Strebkov, Shevchuk 2022]. This extreme heterogeneity in platform work can be observed in terms of socio-demographic and professional characteristics, work modes, career trajectories, and motivations. It contradicts generalizations made in various theories, including discussions about the mythical figure of a typical platform worker. Based on an analysis of various research perspectives, we propose a typology based on the criteria of voluntariness/coercion and stable/temporary employment status. Platform employment can be viewed as an embodiment of a desired lifestyle [Malone 2006; Pink 2005], a step toward entrepreneurship [Millán et al. 2015], a strategy of adaptation in hard times, or a stable enclave of precarity [Krauch 2020; Standing 2014; Fuchs 2010; Huws 2016]. We argue that these types, as described in the literature, coexist in real life, reflecting the structure of heterogeneity. Therefore, it is more productive to explore the diversity of labor practices as a distinguishing feature of platform employment [Cansoy et al., 2020].

In several studies, we have undertaken a quantitative analysis of the relationship between work trajectories (including hybrid ones) and various worker characteristics, including individual work values [Strebkov, Shevchuk 2015b; 2017; Shevchuk, Strebkov 2016; 2017; Shevchuk, Strebkov, Bögenhold 2023]. Using the concept of work values as "conceptions of desirable" [Kalleberg 1977; Ros et al., 1999] and the theory of person-job fit [Kalleberg 2007; Kristof-Brown, Zimmerman, and Johnson 2005], we have shown that specific employment forms and planned work trajectories are closely linked to specific sets of values (value profiles) among freelancers. These job-value matches reflect the structural opportunities and constraints that individuals face in terms of obtaining material and moral rewards in different forms of employment. For example, regression analysis revealed that, unlike moonlighters (freelancing alongside regular employment), genuine freelancers and hybrid entrepreneurs (freelancing entrepreneurship) prefer intrinsic values and neglect security values. Unlike genuine freelancers, social recognition is important for entrepreneurs and moonlighters, but comfort in work is not. Unlike entrepreneurs, genuine freelancers and moonlighters prefer work that aligns with their abilities.

An analysis of interviews with taxi drivers [Shevchuk et al. 2021] also suggests that drivers value many opportunities offered by platform employment: easy access to work, the absence of formal hierarchy, and flexibility in managing their labor efforts, time, and finances. This allows them to tailor their work to their individual preferences and life circumstances, maintaining a heterogeneous composition of platform workers with diverse social backgrounds, motivations, and labor practices.

This dissertation research contributes to the development of the understanding of heterogeneity as a systemic property of platform employment. More specifically, the author uncovers the structure of heterogeneity using the proposed typology and provides new empirical evidence of the diversity and interconnection of socio-demographic characteristics, work values, and work practices.

# The temporal organization of platform work

The temporal organization of freelance platform work, including both paid and unpaid "invisible labor," has been analyzed in empirical articles from the main list [Shevchuk, Strebkov, Davis 2019; Shevchuk, Strebkov, Tyulyupo 2021a], as well as in other papers [Shevchuk et al., 2021; Strebkov, Shevchuk 2019; Davis, Shevchuk, Strebkov 2014; Shevchuk, Strebkov, Davis 2018]. The key findings of the research are as follows.

Unlike regular employees, platform workers have greater work autonomy, including temporal flexibility. Flexible schedules and the desire to achieve a work-life balance are consistently cited as primary reasons that drive people to choose self-employment. In particular, our research has shown that the work schedules of freelancers are indeed much more diverse compared to the schedules of Russian wage workers. However, freelancers tend to work longer hours and during non-standard times (evenings and nights, weekends and holidays), which leads to a deterioration in their subjective well-being (including their sense of work-life balance, which

many of them initially sought) [Strebkov, Shevchuk 2019; 2022; Shevchuk, Strebkov, Davis 2019]. Similar results were obtained in interviews with taxi drivers working through digital platforms [Shevchuk et al., 2021]. This phenomenon is referred to as the "autonomy paradox," which suggests that in the modern economy, individuals with autonomy tend to intensify their work, ultimately worsening their well-being, rather than improving it [Pérez-Zapata et al., 2016].

Several factors, including those related to the self-employed, contribute to this situation: economic necessity, the cyclical nature of project work, dependence on clients, and the need to combine it with other forms of work. Digital platforms play a crucial role in the temporal organization of work and workers' lives.

Unlike most organizations, the gig economy operates 24/7, removing external structural constraints on individual work schedules. Platform workers are regularly required to monitor the availability of tasks in conditions of high competition, they need to promptly submit/accept requests. This has led researchers to speak about "logged labor" or "login employment", implying that workers must be constantly connected to digital platforms [Huws, 2016; Yakubovich, Galperin, El Mansouri, 2018]. Platforms also generate significant volumes of hidden, socially unrecognized, and unpaid "invisible labor," which is associated with workplace organization, skill development, personal branding, order tracking/finding, client communication, etc. Platforms, for example, stimulate responsiveness among workers, taking it into account within reputation systems, which create visibility for workers on the platform — a crucial condition for receiving tasks and, consequently, survival on the platform. Shadow corporations in the taxi and delivery sectors also directly encourage work during peak demand hours by increasing payment and offering various bonuses [Shevchuk et al., 2021].

Analysis of big data on communication between freelancers and clients within contests on a online labor platform, for example, yielded the following results [Shevchuk, Strebkov, Tyulyupo 2021a]. In 2% of contests, a freelancer's response to a posted project followed within one minute, and in more than half of the cases, it occurred within the first 10 minutes. On average, freelancers respond to client messages five times faster than clients respond to freelancer messages. Posting contests at non-standard times (evenings, nights, weekends, and holidays) leads to increased activity among freelancers during these times. Residents of time zones different from the centers of economic activity, which have the highest demand for freelancers' services, are particularly vulnerable [Karasova, Momzikova 2019]. Moving a freelancer's place of residence one time zone to the east of Moscow results in a 14-minute increase in their activity during non-standard hours (from 6 pm to 9 am). This fact highlights the temporal stratification of the online labor market, which, contrary to common notions of a "flat world" [Friedman, 2007], does not level the playing field for residents of regions with different levels of socio-economic development but, instead, reinforces the advantages of metropolitan residents.

By avoiding the dominant "tyranny of the clock" in organizations, platform workers face the "tyranny of the app" [Lehdonvirta, 2018]. Therefore, it is essential to distinguish between the flexibility of schedules as a result of worker preferences and the flexibility imposed by platforms based on demand and on call requirements. The interviews with platform workers (freelancers and taxi drivers) indicate that workers not only normalize the practice of overwork and nonstandard

hours but also often unreflexively perceive their schedules as quite free and flexible, under their control [Strebkov, Shevchuk 2022; Shevchuk et al., 2021]. It can be concluded that objectively and subjectively, they find themselves in a kind of "flexibility trap" [Strebkov, Shevchuk 2019].

Noteworthy, algorithmic management potentially offers opportunities for more humane work design, which could become one of the essential directions of social control over platforms. For example, under public pressure in many countries, including Russia, ride-hailing platforms introduced algorithmic restrictions on the number of continuous working hours [Shevchuk et al., 2021].

Thus, based on the analysis of a wide range of empirical data, the author has identified the characteristics and social consequences of the temporal organization of work in the gig economy, which contributes to a deeper understanding of the boundaries of work autonomy and the work-life balance in the platform economy.

#### Main conclusions

The dissertation research contributes to a deeper understanding of the transformation of labor markets, employment, and social labor relations under the influence of digital labor platforms by developing theoretical approaches and accumulating new empirical knowledge. The analysis of the Russian case helps clarify the relationship between the general and specific aspects of the emergence and functioning of the gig economy. In aggregate, the dissertation research contributes to the understanding of platform work as a fundamentally new social system for organizing labor.

The author's overall contribution can be summarized as follows:

- Within the framework of a comprehensive economic sociology approach to the study of
  platform employment (the gig economy), the author has developed a theoretical toolkit that
  includes an original conceptual framework for analyzing digital platforms as organizational
  structures and socio-economic actors, as well as an author's typology of labor platforms.
- Using the developed theoretical toolkit, the author has identified the institutional and
  politico-economic features of the emerging Russian model of the gig economy, taking into
  account the special role of the state and the complex interaction between formal and
  informal regulatory mechanisms in various sectors, which have a contradictory impact on
  the socio-economic condition of platform workers.
- Based on the analysis of empirical data collected by the author, the process of the formation
  and development of the Russian-language online labor market as a distinct segment of the
  gig economy has been revealed. This process has led to the widespread adoption and
  normalization (legalization and legitimization) of innovative work practices, which contain
  a specific set of social contradictions.

The author acknowledges the limitations of the study related to the choice of theoretical approach and the incompleteness of empirical analysis in terms of coverage of various sectors and issues within the gig economy. In theoretical terms, the research relies on institutional and

political-economic approaches, which emphasize the structural conditions of platform employment at the expense of examining the agency of platform workers. In empirical terms, the study primarily focuses on examining the experiences of independent professionals (freelancers) participating in online labor markets, along with a limited sample of taxi drivers.

The practical significance of this research lies in the fact that the author's theoretical developments and the results of empirical analysis on the platformization of labor markets in Russia can be utilized by research centers, government agencies, business associations, and labor unions when developing approaches to regulating platform employment in line with the principles of informed socio-economic policy. The dissertation can also be used in educational courses on economic sociology, sociology of work and employment, social-economic development of Russia, and are of practical interest to participants of platform markets (firms, workers, consumers).

# Approbation of research findings

The contents of the dissertation research have been discussed multiple times at seminars of the Laboratory for the Studies in Economic Sociology (2023, 2019, 2018, 2012, 2009, 2008). The research results have also been presented at over 40 Russian and international academic conferences, congresses, and seminars, including: the April International Academic Conference on Economic and Social Development (2010, 2011, 2012, 2014, 2016, 2017, 2018), the Russian Sociological Congress (2008), the Grushin Sociological Conference (2018, 2017, 2021, 2022, 2023), the Russian Academic Conference in Memory of Yuri Levada (2014, 2018), the International Academic and Practical Conference in Memory of A.O. Kryshtanovsky (2011), the International Academic Conference "Foresight and Science and Technology and Innovation Policy" (2021), the International Conference "The Future with Marx" (2019), the International Conference "Labor Studies" (2019), American Sociological Association Annual Meeting (2013, 2014, 2015, 2016), Reshaping Work Conference (2020), BEYOND 4.0 scientific conference (2021), Platform Economy Seminar Series (2021), the seminar of the Laboratory for Labor Market Studies at HSE University (2010), etc.

# **List of publications**

The main results of the dissertation research have been published in 16 articles with a total volume of 25 author's sheets, and the author's personal contribution amounts to 17 author's sheets. All articles have been published in journals indexed in WoS, Scopus, or included in the HSE Journal Lists A, B, C, or D. Among them, 8 articles are in Q1-Q2 WoS or Scopus journals, and there are 6 single-authored articles.

# The defense is carried out based on the following publications (main list):

- 1. Shevchuk, A. V. (2020). From Factory to Platform: Autonomy and Control in the Digital Economy. Sociology of Power, 32(1), 30-54. (in Russian). (Шевчук А. В. (2020). От фабрики к платформе: автономия и контроль в цифровой экономике // Социология власти. Т. 32. № 1. С. 30-54).
- 2. Shevchuk, A. V. (2023). Theorizing Digital Platforms: A Conceptual Framework for the Gig Economy. Economic Sociology, (5). (in Russian). Шевчук А. В. (2023). Теоретизируя цифровые платформы: концептуальная схема для гиг-экономики // Экономическая социология. №5.).
- 3. Shevchuk, A. V. (2022). Labor and Power in the Russian Model of Platform Capitalism. Sociology of Power, (4), 128-155. (in Russian). (Шевчук А.В. (2022). Труд и власть в российской модели платформенного капитализма // Социология власти. 2022. №4. С. 128-155.).
- 4. Shevchuk, A. V., Chizhova, D. A., Demina, D. E., & Chugunkova, V. A. (2021). Taxi Drivers' Labor under Algorithmic Management. Monitoring of Public Opinion: Economic and Social Changes, 2021(3), 356-381. (in Russian). (Шевчук А. В., Чижова Д. А., Демина Д. Е., Чугункова В. А. (2021). Труд водителей такси в условиях алгоритмического управления // Мониторинг общественного мнения: Экономические и социальные перемены. 2021. № 3. С. 356-381).
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- 7. Shevchuk A., Strebkov D., Davis S. N. (2019). The Autonomy Paradox: How Night Work Undermines Subjective Well-Being of Internet-Based Freelancers // Industrial and Labor Relations Review. Vol. 72. No. 1. P. 75-100.
- 8. Shevchuk A., Strebkov D., Tyulyupo A. (2021a). Always on across time zones: Invisible schedules in the online gig economy // New Technology, Work and Employment. Vol. 36. No. 1. P. 94-113.

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- 9. Shevchuk, A. V. (2010a). Boundaries of Autonomy: The Phenomenon of "Dependent" Self-Employment. Sociological Journal, 3, 35-51. (in Russian). (Шевчук А. В. (2010a). Границы автономии: феномен «зависимой» самозанятости // Социологический журнал. № 3. С. 35-51).
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