

Digital Platforms and Informal Work: Can Digital Platforms Play a Role in Providing Adequate Social Protection for Informal Labor? *

Batuhan Ersöz**

Abstract

The creation of new employment opportunities by digital platforms in sectors characterized by informal economic activities could result in these platforms being regarded as a means of regulating such activities. Within the scope of this study, the ability of digital platforms to regulate informal work is examined in the context of the relevant literature and different country examples, and its consequences for labor are discussed from a critical perspective. As a result of the study, it is seen that digital platforms have a limited impact in terms of regulating informal activities. More importantly, in the absence of a strong institutional structure, the productivity-maximizing structure of digital platforms adapts to the structural features of informal work. As a result, a structure where the operations of digital platforms are integrated into the risks associated with informal work in terms of labor and precariousness is reproduced exponentially is encountered.

JEL Codes: J81, J83, O33

Keywords: Digital Platforms, Informal Labor, Informality, Social Protection, Precarity

* This paper is an updated and extended version of the work presented as an abstract at the “23. Labor Economics and Industrial Relations Congress” hosted by Ordu University/Türkiye between 30.05.2024-01.06.2024.

** Tokat Gaziosmanpaşa University, Faculty of Health Sciences, batuhan.ersoz@gop.edu.tr, <https://orcid.org/0000-0002-1094-8220>

Dijital Platformlar ve Enformel Çalışma: Dijital Platformlar Enformel Çalışanlara Yeterli Sosyal Koruma Sağlanmasında Bir Rol Oynayabilir Mi?

Öz

Dijital platformların kayıt dışı ekonomik faaliyetlerin baskın olduğu sektörlerde yeni istihdam olanakları yaratması, bu faaliyetlerin düzenlenmesinde platformların bir araç olarak nitelendirilmelerine neden olabilmektedir. Bu çalışma kapsamında dijital platformların kayıt dışı çalışmayı düzenleme gücü, ilgili literatür ve farklı ülke örnekleri bağlamında incelenmekte ve emek açısından sonuçları eleştirel bir bakış açısıyla tartışılmaktadır. Çalışma sonucunda dijital platformların kayıt dışı faaliyetlerin düzenlenmesi açısından sınırlı bir etkiye sahip olduğu görülmektedir. Daha da önemlisi, güçlü bir kurumsal yapının yokluğunda dijital platformların verimliliği maksimize eden yapısının kayıt dışı çalışmanın yapısal özelliklerine uyum sağladığı görülmektedir. Sonuç olarak, dijital platformların faaliyetlerinin kayıt dışı çalışmanın emek ve güvencesizlik açısından taşıdığı risklerle bütünleştiği ve katlanarak yeniden üretildiği bir yapıyla karşılaşmaktadır.

JEL Kodları: J81, J83, O33

Anahtar Kelimeler: Dijital Platformlar, Enformel Emek, Kayıt Dışılık, Sosyal Koruma, Güvencesizlik

1. Introduction

Digitalization processes can offer opportunities for developing countries and create an impact on many aspects from upskilling to new employment options. Within this process of transformation, digital platforms both differentiate the traditional production relations and enable the establishment of new service areas. Moreover, digital platforms transform traditional production relations and enable new informal service areas (Colomb and Moreira de Souza, 2023). Additionally, they may provide opportunities for informal workers and may have the potential to transform the field of informal work itself (Nguimkeu and Okou, 2021; OECD, 2023).

However, evaluating digital platforms in this way may overlook how they reorganize production relations to meet global capital accumulation requirements. Digital platforms may also operate independently of these relations. As a matter of fact, the regulatory role of the state has been limited in many areas through neoliberal policies, and the organization of flexible production designed to maximize capital accumulation has become the norm by expanding on a global scale (Harvey, 2005; Jessop, 1994). Through their technological capacities, digital platforms can organize production relations independent of time and space, and in this process, they operationalize labor in the most flexible and efficient way, as with other elements of production (Eurofound, 2021; Vallas and Schor, 2020). Their role in production relations positions the effectiveness of digital platforms in regulating informal labor on a controversial ground.

The stratified structure of the informal economy raises questions about the effects of digital platforms on labor during the process of formalization. This study investigates how digital platforms influence informal labor relations and examines whether they contribute to formalization or reinforce informality in different regulatory contexts. In this context, the study critically analyses the relevant literature. The relation between formalization and digital platforms needs to be established through an analysis that includes the organization of production relations, geographical development degrees and institutional differences of the countries. Within this perspective, study reviews informal work and digital platforms as a set of relations in the capitalist production process. Consequently, the relation between informal work and digital platforms can be examined through applications and regulations at various levels of institutionalization and development.

The literature review examines how digital platforms are organized in cases where informal work is the norm, as well as in cases with a robust institutional setting. Therefore, the reflections of the digitalization process in working life and its effects on informal work were evaluated. Then, the transformative impact of digital platforms on informal work is discussed. Finally, the paper will review the consequences of digital

platforms' compliance with informal work. It will emphasize the reproduction of informality, which has moved to the digital sphere through platforms.

2. Digitalization And Working Life: Work and Labor on Digital Platforms

The effectiveness of technological developments in social life increases each day, and many different sets of relations, definitions and concepts are becoming a part of daily routine. As Koray (2023, p. 211) emphasizes, the number of people using the internet globally grew from 2 billion in 2011 to 4.9 billion in 2021, while internet speeds increased twentyfold during this period. The digitalization process caused significant transformations in production relations, and the organization of working life was redefined on this axis (OECD, 2024). In this framework, one of the most crucial components of the digital transformation process is digital platform economies and the platform ecosystem that develops around them.

Szerb et al. (2022) describe the platform-based economy as emerging at the intersection of digital and entrepreneurial ecosystems. They identify four key pillars: digital technology entrepreneurship, digital citizenship, versatile digital platform structure and digital technology infrastructure. In the Digital Platform Economy Index based on these characteristics, the United States ranks first with 85 points, followed by the United Kingdom, the Netherlands, Canada and Sweden. (Szerb et al., 2022, pp. 20-21). In this context, digital platforms indicate a growing phenomenon. In the European Union, 28 million people work through digital platforms, and this number is expected to reach 43 million in 2025 (European Commission, 2021). It is also stated that this process has the potential to create various opportunities for developing countries (OECD, 2023). Technological advancements such as digital platforms, artificial intelligence, automation, and digitization are reshaping economic structures and transforming labor markets (Eurofound, 2021).

One of the most significant changes brought about by digitalization in the world of work is the blurring or even the disappearance of the connection between work and space (Graham et al., 2017, p. 136). Digital labor platforms constitute one of the most important instruments of the mentioned new forms of work and the de-spatialization of the phenomenon of “work”. Digital platforms connect labor supply with demand for specific business processes (Eurofound, 2021). Working in these networks can be described with different definitions such as ‘platform work’, ‘crowdwork’ and ‘gig work’. Digital platforms are organized in a wide range of sectors, from simple data entry services to specific sectors of the creative industries requiring high skills, care and delivery work. In this framework, platforms are categorized into two main categories: cloud-based and location-based (OECD, 2018; ILO 2021).

Working on digital platforms differs from traditional forms of work based on a few basic features. Firstly, payment processes on digital platforms are organized online. This transaction takes place in a triangular structure, with digital platforms acting as a bridge between employees and customers. The jobs defined around specific tasks on the platforms are completed within the framework of subcontracting relations in accordance with the instant demands of customers (Eurofound, 2018). Thus, as a third actor, digital platforms overcome trust issues between the two sides and connect supply and demand at various scales (Berg et al., 2020). However, the determining factor is the instantaneous demand-driven organization of platforms' intermediation "equally" for both actors (Fumagalli et al. 2024, p.335) and the social consequences of this relation resulting in the fragmentation of the employment structure. Secondly, in fulfilling this demand process, digital platforms eliminate time and space boundaries, enabling global labor competition (Vallas and Schor, 2020). Specialized in certain service areas, digital platforms make it possible to access idle production elements and focus on establishing a flexible production organization on a global scale (Warhurst and Hunt, 2019). Thirdly, jobs on digital platforms are often organized as a set of tasks where each work relation can be characterized as individual projects. Hence, there is often no direct employment process encountered (De Stefano, 2016; Duggan et al., 2020). Workers on digital platforms are not in formal employment relation with the platforms, and platforms are considered as an intermediary. As a result, the traditional employment pattern disappears in this process.

The transformation of employment relations is particularly crucial for digital platforms, and their organization leads to a 'non-standard' working life ranging from the determination of the legal status of work to the control of the labor process. In this context, production processes on digital platforms appear to be controversial for two reasons. First, digital platforms classify workers as 'independent contractors', excluding them from labor protections and employment benefits. Digital platforms often characterize themselves as intermediary between service supply and demand, and their position of intermediation leads to the concentration of risks regarding working life on individual actors (Webster, 2016; Duggan et al., 2020). Classifying these workers as independent entrepreneurs means that social protection mechanisms based on employment dependency become ineffective.

Digital platforms also significantly influence the organization of workflows and control labor processes. Platforms ensure coordination between actors through algorithmic management processes and aim to maximize the efficiency of production based on the data they systematically collect (Huang, 2023; Woodcock and Graham, 2020). This situation places the processes of working on platforms in a questionable position. The effectiveness of digital platforms in organizing work blurs the distinction between self-employment and dependent employment. In this process, the status of labor operating within the platforms can be evaluated on the basis of 'dependent self - employment' (Muehlberger, 2007; Williams and Lapeyre, 2017). As a matter of fact,

the transformation of employment relations is also recognized by the ILO, and the status of the workers is examined by taking into consideration the dependencies arising from different forms of contracts in determining the status of workers (ILO, 2023). Therefore, digital labor platforms remain in control of the labor process (Gandini, 2019), but on the other hand, they establish an individual framework by defining the risks related to working life through independent characteristics (Wood et al. 2019). In this context, digital platforms justify their business model by adopting a new entrepreneurial approach, creating a mechanism that restricts areas of labor solidarity and establishes new areas of global competition (Vallas, 2019, p.53; Veen et al. 2020).

However, the impact of digital platforms on different production processes is significant for both the actors on the platforms and those operating outside them (Kretschmer and Khashabi, 2020). To the extent that digital platforms reorganize labor relations in the sectors they operate in, it may also have consequences for the overall organization of the sector. This situation raises new debates especially in the fields of informal work, and it is expected that digital platforms will produce differentiated results in terms of informal economic activity. In this context, it is crucial to analyze the general features of informal work before evaluating the effects of digital platforms.

3. Informal Work Within the Framework of Structural Aspects and Digitalization

Informal economic relations, which generally refer to economic activities outside of the public regulations, have been crucial in explaining the economic activities of the global south since the 1970s (Bangasser, 2000). However, informal activities have also increasingly recognized as an important form of economic relations in the global north (Chen et al., 2022). In addition, informal economic activities can also include illegal activities, thus referring to an extremely wide range of economic relations (Portes, 2010, p.134). In this context, informal economic activities generally refer to unregulated, low-skilled, local resource-based and easily accessible activities within competitive markets (ILO, 1972, p.6). The informal economy has major consequences for productivity, economic growth, distribution, social protection, quality of public services and taxation (Lopez-Acevedo et al., 2023). Therefore, informality is an important macroeconomic regulation domain for countries.

Informal economic activities create unique sets of relations and organizational forms. On a global scale, 80% of enterprises and 60% of workers are engaged in economic activities involving informal relations (OECD, 2023). In this context, it is stated that the informal sector should be evaluated as a triangular system in terms of production, consumption and employment (Demir, 1993). The connection between the informal economy and consumption is observed at two points. The informal sector

consumes formal sector products and supplies affordable goods to lower-income groups, facilitating their economic reproduction. The impact of the informal sector in terms of production refers to the stages of integration into global production processes depending on different subcontract relations. Thus, in a production organization where costs are reduced by disintegration, the informal and formal sectors are constructed together (Chen, 2005). The position of the informal economy in global production relations is extremely important in terms of digital platforms, which are the main object of review in this study. To the extent that the informal economy is articulated with global capital accumulation mechanisms, it can be aligned with the efficiency-maximizing functioning of digital platforms. However, the consequences of this adaptation carry the risk of reproducing informality, raising the question of the "standardizing" power of digital platforms. This process will be elaborated in the last section of the study.

The analysis of the informal economy in terms of employment incorporates various elements regarding labor. First of all, the vast majority of informal workers are independent/self-employed (OECD, 2023). Independent work represents an essential category in informal work. Moreover, informal work includes many different categories of employment that are deeply intertwined and interrelated. From informal paid workers to informal employers, there is a wide range of differentiated and stratified informal employment profiles. This stratification is also accompanied by norms related to variables such as age and gender (Chen, 2008; Castells and Portes, 1989).

It is clear that the stratification in informal work will create differences in employment conditions and consequences. However, in general terms, informal work leads to the emergence of a precarious and fragile working life for labor. In an operation where formal regulations are not applicable, labor is undoubtedly precarious, underpaid, and deprived of social rights. Furthermore, the presence of an unregulated working life generates a broad range of problems varying from access problems to formal services such as inclusive financial services to exclusion from public services (Castells and Portes, 1989; ILO, 2019; OECD, 2023). In addition, although the global south is crucial for discussions on the informal economy, informal work is increasingly becoming an important social reality for the global north as well. However, unlike in the global south, this process is defined through features such as exclusion, stigmatization and illegality (Chen et al., 2022), in a sense referring to different aspects of "non-standard" work.

The structure of the informal economy raises many issues, such as working conditions, social protection and taxation. Policies to regulate and transform these areas into a formal structure are therefore required. In this context, the formalization of informal relations in terms of enterprises refers to operating under a certain registration and taxation framework. Securing the rights of workers under a social protection mechanism reflects the labor dimension of formalization (Unni, 2018, p.92). However, informal activities do not simply refer to production relations but contain economic reflections of the structural features of society. Informal activities constitute complex

social relations, involving various formal/informal actors and institutions. Many factors, ranging from deficiencies in incentive systems to institutional constraints, act as barriers to the reorganization of informal activities under formal regulations (Weber et al., 2021; Prasetyo, 2022, p.1171).

Digitalization processes, which have been effective in redesigning many elements of working life, could also be effective in formalizing informal work. As a matter of fact, it is emphasized that the opportunities offered by digitalization can be effective in a wide range of areas such as creating new business activities, enhancing the qualification of labor, and implementing inclusive and inequality-reducing policies (OECD, 2019; World Bank, 2024).

In terms of formalization, central governments' cost/benefit policies may be insufficient, whereas digital platforms can provide an organized structure due to their technological features. It is emphasized that digital platforms can be a tool for formalization, particularly by reducing self-employed workers' costs and increasing benefits based on flexibility (Lakemann and Lay, 2019, p. 4; Cruz, 2024; Surie, 2017). Thus, digital platforms can fill the institutional gaps of the informal economy, standardizing individual networks and operational processes (Surie, 2020). Digitalization also offers new survival strategies for informal workers in financial aspects (Keskinen et al., 2022; Grohmann et al., 2022). Thus, digitalization does not simply refer to operating in a registered and regulated field but emphasizes the power to change the structural characteristics of informal activities.

Digital platforms control and monitor all activities within them and can therefore have a much greater influence than public actors and civil society organizations in controlling relevant activities. This makes digital platforms a significant point of interest for policy-makers (Weber et al., 2021, p.1321). For example, OECD (2023) emphasizes the opportunities offered by digital platforms in terms of regulating informal activities and states that tracking financial transactions on platforms can be a tool for regulations in a wide range of frameworks from social security participation to taxation processes, as long as coordination of relevant parties is ensured. Within this context, financial tracking can be carried out through platforms (Rahayu et al., 2023), which will be effective in the financial inclusion of informal economic actors (Deléchat and Medina, 2021; Davidovic et al., 2021).

The impact of digital platforms on the formalization of different fields of activity not only creates an important area of focus for policy-making, but also opens up a field of debate. In the process of formalization, the relational structure of digital platforms and the structural dynamics of the informal economy need to be considered in relation to the global capitalist organization of production. Firstly, the institutionalization of informal activities emphasizes the joint action of digital platforms with different public actors. This process carries the risk of generating a contradictory proposition from the start, considering the existence of institutional problems where informal activities are

widespread. In this context, the need for a gradual institutionalization is particularly emphasized (Cruz et al., 2024, p.60; Nguimkeu and Okou, 2020, p.122). Secondly, the identification of economic activities' informal nature as a policy and registration problem ignores the articulation of informal work into global production networks. This necessitates a detailed evaluation of the relation between informal work and platforms within a framework that considers the position of both elements in the mechanism of capital accumulation.

4. Discussing Informal Work on the Axis of Digital Platforms: Institutionalization through Flexibilization

Although formal and informal work are considered in a dichotomic framework, these two forms of economic organization take place simultaneously in the social structure and demonstrate periodic and systemic fluidity (Lanamäki and Tuvikene, 2022). In addition, the use of digital technologies and digital platforms can also be effective in times of social crisis such as Covid-19 in terms of informal work. These technologies can provide an important source of income by occupying a key place in the survival strategies of those in the informal economy (Dutta et al., 2023; Octavia, 2022). Furthermore, the effectiveness of platforms in informal economic activities varies according to the service provided. Digital platforms have the capacity to evade regulatory constraints and provide services within an informal framework (Prasetyo, 2024). To this extent, platforms intersect with informal activities at various points ranging from transport and delivery services to accommodation services (Lakemann and Lay, 2019; Wiesböck, et al. 2023; Colomb and Moreira de Souza, 2023).

As in other domains of informal work, digital platforms are also associated with a process where formal and informal are combined (Zhao, 2019). Therefore, digital platforms cannot be directly identified as a 'savior' in terms of formalization. Within the scope of this sub-heading, first, the possibilities of institutionalization of digital platforms in accordance with the structural characteristics of the informal economy will be discussed. Then, the role of digital platforms in integrating the informal economy into global capitalist development will be emphasized. Lastly, the consequences of digital platforms' adaptation to informality will be evaluated.

4.1. Digital Platforms and Informality: Structural Features and Opportunities for Formalization

The relation between informal labor and digital platforms is questionable. At first, a contradictory structure emerges between the operational processes of digital

platforms and their institutionalization practices. In the service areas of platforms, the distinction between producers and consumers is blurred. Consequently, institutional regulations may be inadequate for intervening in these relations (Prasetyo, 2022, p.1170). As a matter of fact, the insufficiency of the current bureaucratic functioning to adapt to the pace of technological development and innovation may cause digital platforms to operate outside the existing regulations (Dassori and Annamaria, 2024, p. 275).

Digitalization demonstrates a heterogeneous appearance in terms of informal workers, and informal labor is also encountered among the traditionally employed through digitalization (Robles and McGee, 2016). The discourse on the regulatory power of digital platforms in informal work dynamics is shaped by the effectiveness of the platforms' institutional structures. However, problems related to informal work may still exist for digital platforms, and the issues related to social protection, employer-employee relations and taxation regarding informal work may also apply to digital platforms (Fumagalli et al., 2024). In fact, the problems encountered by digital platforms due to their institutional presence at the global level pose direct legal risks (Weber et al., 2021, p.1326).

The digital platforms' ability to organize various services within the framework of temporal and spatial flexibility results in dynamic international activities. Therefore, taxation and employment relations, which are shaped by national regulations, raise issues. This phenomenon has led to a convergence of digital platforms and informal work. In this case, the characteristics of informal work are integrated into the dynamics of digital platforms, creating a more complex picture. The consequences for labor of an intertwined production process involving informal work and digital platforms will be discussed in detail within the scope of the final sub-heading.

Another structural feature of informal work is the organization of employment processes based on face-to-face relations (Alacovska, 2018; Alacovska and Gill, 2019). These connections have the potential to create a security mechanism for the sustainability of employment (Merkel, 2019). In this regard, the activities of digital platforms in highly informal sectors do not necessarily lead directly to formalization. After a certain period of work and trust establishment, individuals bypass platforms and interact directly with employers, falling back under the sphere of informal work (Haidinger et al., 2024, p. 185; Weber et al., 2021, p.1328). In addition, trust mechanisms based on bilateral bonds that are embedded in informal relations may disappear in the presence of digital platforms. In this setting, assurance mechanisms become individualized depending on the organization of the platforms (Lakemann and Lay, 2019, p.5; Hiriyyur, 2022, p.171). On the other hand, digital platforms can provide a reference for labor in sectors such as care services where mutual trust is important (Octavia, 2022). Consequently, the ability to work on digital platforms can serve as an

indicator of the workers' qualifications in sectors where informal relations are widespread.

In addition, informal work is not homogenous and involves various institutions and actors. Haidinger et al. (2024), who examined the regulation processes in domestic services and urban transport, emphasized that they reached different results in two different service fields and pointed out that the regulations targeting transport services are not effective when it comes to domestic services. While domestic services are arranged based on interpersonal relations, local governments and existing laws have a direct regulatory effect on urban transport. Secondly, platforms are less engaged in domestic labor processes than in transport services, whereas they are active in the labor process by having control and supervision over optimization in urban transport.

The impact of digitalization and digital platforms on the institutionalization of informal economic activities also points to an important technical infrastructure challenge. Regions where informal work is particularly prevalent are also the subject of digital divide debates. There is a direct relation between the effectiveness of platforms and the extension of technological capabilities. Platforms, which were first organized in the field of local services and communication, have gradually expanded their service organization in the following processes (Pirone, 2024, p.52). The inadequacy of digital opportunities in the formalization of informal work coexists with technical inadequacies in institutionalization, and although digital platforms are considered efficient for actors, informal economic actors' lack of digital resources and knowledge weakens this regulatory power (Kahraman Ersöz, 2023; Momanyi et al., 2024; World Bank, 2024, p.3; Hiriyur, 2022, p.172). For the actors organized through informal enterprises, digital options either remain inapplicable or are limited to areas such as payment systems (Cruz, 2024).

Difficulties in accessing digital resources indicate a significant problem area in the organization of the platforms. However, it does not refer to the position of informal work and digital platforms within production relations and the restructuring of capital accumulation on a global scale. Hence, analyzing digital platforms through production relations on a global scale can be effective in understanding their impact and integration processes in informal work.

4.2. Addressing Informal Work from the perspective of Capitalist Production: Digital Platforms and Differentiating Institutional Environments

Evaluating the activities of digital platforms only within the global scale is insufficient to understand the local characteristics. Therefore, examining digital platforms and how informal work is organized at different levels of development is particularly important. For the global south, the effectiveness of digital platforms

signifies formalization, whereas for the global north, it may indicate a process in which standard/traditional labor relations are fragmented and increasingly become more precarious (Pirone, 2024; Lanamäki and Tuvikene, 2022; Stehlin et al., 2020).

The way digital platforms' function has an impact on both formalization and informalization simultaneously. Especially the mechanism of the informal sphere prevents the establishment of standards. On the other hand, the structure of platforms that organize production relations can facilitate the establishment of standard norms (Pirone, 2024). However, it should be considered that the functioning and effectiveness of existing institutions and local laws will be effective in the emergence of these regulations.

Moreover, evaluating the regulation process only in terms of formal and informal dichotomy reveals an understanding that ignores relationality. However, to analyze the relation between platforms and informal work within the scope of regulations, it is crucial to examine the mechanisms of global production relations. Neoliberal development is deconstructing numerous phenomena and regulations related to formal working life in the global north. On the other hand, the dominant norm of production in the global south is mostly deregulated and informal, therefore requiring a different evaluation. It also leads to a future in which the deregulation of employment through platform working and digitalization is generalized (Ness, 2023). Thus, the elements that are the norm for the global south in working life are becoming the norm for the global north through non-standard work and subcontracting (Rani, 2020; Carré, 2020).

Therefore, the fact that informal work has gradually become the norm in different geographies should be evaluated along with the historical structuring of global capitalist development. The necessity of capital accumulation to constantly re-organize the production mechanisms by maximizing the efficiency and flexibility of production makes it necessary to analyze the various appearances of informal work in this context. Discussions on traditional/standard work refer to the production relations in a specific geography within a specific period of capitalism, while the globalization of the accumulation mechanisms makes the relations in this field flexible for all geographies within the framework of their positions in different production networks (Ness, 2023; Harvey, 1990).

Such an approach emphasizes the fact that standard work, which defines full-time and secured employment under specific contracts (ILO, 2016), only develops due to labor-capital relations in a specific period of the capitalist system of production (Pirone, 2024, p.55). Although this concept emphasizes a specific period of capitalist development, it does not exclude the fact that there are certain rights that labor has

gained in the relevant period. In fact, the impact of digital platforms on 'precarization'¹ is consistent with this framework. On the other hand, for economies where informal work is the norm, precarity indicates an existing reality in employment relations. Nevertheless, digital platforms can still create employment vulnerabilities similar to those in the global north in regions where the informal economy is dominant (Anwar and Graham, 2021).

Considering digitalization and the impact of digital platforms on production relations from such a perspective, the approach of establishing certain protection mechanisms for labor becomes unrealistic. Neoliberal ideology that defines society through entrepreneurial individuals (Dardot and Laval, 2014) intersects with the capability of digital platforms to construct flexibilities leading to the institutionalization of informality (Kovács et al., 2017; Lanamäki and Tuvikene, 2022). Thus, digital platforms have a deepening effect by strengthening the capitalist production relations (Murillo et al., 2017). Marčeta (2021), who examines capitalist development and labor relations based on platforms, describes the process as the neo-commodification of labor due to the fragmentation of standard employment relations, resulting fragility in social protection and the data-oriented nature of management/control processes.

However, both the operations and the effectiveness of platforms are heterogeneous across countries, and the structural characteristics of each country affect these factors (OECD, 2023; Fairwork, 2021). Digital platforms initially operate in accordance with the legal frameworks of the countries where they start their operations, but as they internationalize, the legal structures of the countries they operate in become determinant (Pirone, 2024, p. 51). This situation causes the institutional and legal structures of different countries to be an important indicator. It is especially important in tracking the differences in terms of the global north and the global south. Countries with early and strong institutionalization provide different social protection mechanisms for labor depending on the strength of the existing legal regulations regarding the activities of the platforms. Indeed, the fact that individuals who have been active in platforms for more than a certain period of time can be covered by collective bargaining agreements in Denmark (Haidinger et al., 2024, p. 180) or the employment status of platform workers in Italy, Spain, France and Germany is considered within the framework of dependency relations (Dassori and Annamaria, 2024, p. 276) indicate important examples of integration into existing laws and institutional capacity. Moreover, this may involve not only integration into the existing legal structure, but also the emergence of new legal statuses and intermediate forms (Dassori and Annamaria, 2024, p.278).

¹ Precarization mainly refers to the decline in job security in the labor markets and the loss of effectiveness of social protection mechanisms in working life. Therefore, flexibilization practices in labor markets and precarization processes are strongly interrelated (Appay, 2010).

Furthermore, digital platforms are both affected by strict regulations and create a space to evade such regulations (Hunt and Samman, 2019). In fact, platforms can informalize some service fields through their ability to create lower capital requirements by dividing traditional organizations (Arditi, 2016). The transformation of the production process is particularly significant for the Western paradigm. Thus, this situation represents a shift in employment relations for Western economies, with the non-standard becoming the norm (Carré, 2020). The regulation of digital platforms also leads to the institutionalization of precarious employment to a certain extent. Developing employment statuses related to dependent self-employment in international classifications (ILO, 2023) constitutes an important example of precarization in this field.

However, a different picture emerges in developing countries where the institutional and legal framework is structurally weak (Prasetyo, 2024, p.2). When the impact of digital platforms in regulating informal economic activities is evaluated in line with the policymaking capacity of the governments (Ng'weno and Porteous, 2018), the regulatory framework and its reflection on social protection becomes challenging. Indeed, the framework that draws attention to national differences in platform activities and emphasizes universal social protection (Behrendt et al., 2019) is a reflection of the need for strong legal and institutional settings. The lack of legal foundation causes platforms to operate in a form of organization that offers employment opportunities without protection mechanisms. Thus, digital platforms deepen the structural problems of informal work by embracing them (Hiriyur, 2022). Moreover, although digital platforms are described as a potential tool for upskilling the labor force of the global south, it is also pointed out that the labor force operating in these countries is already qualified (ILO, 2018, p.88). Thus, digital platforms are able to adapt to existing employment and production relations. As a result, different dimensions of informality are reproduced.

4.3. Digital Platforms as a Contradictory Compliance Mechanism in Informal Work

Considering the impact of the institutional framework in regulating informal economic activities (Devine, 2021), the problems in this field indicate a structural dimension. Moreover, the fact that digital platforms are both instruments and actors in capital accumulation means that they are directly influenced and adapted to the existing institutional framework. In addition, the transitivity between formal and informal relations creates a gray area for informal enterprises (Prasetyo, 2022). Especially when the regulations on formalization are conducted in a way that is disconnected from the sectoral reality or imposes major liabilities on workers, the workers themselves may prefer to continue their activities in the informal sphere (Golušin, 2020; Krishna, 2021).

In this case, rather than transforming the informal sphere, digital platforms can comply with and reinforce informal relations through their flexibility (Prasetyo, 2024).

Examining the regulations on formalization through the distinction between informal businesses and informal workers is particularly helpful in understanding the effects of the regulations on digital platforms regarding labor. Unni (2018) draws attention to the existence of two different approaches, the capital perspective and the labor perspective, in regulating and formalizing the relevant service fields. While the capital perspective in formalization involves being subject to regulations such as taxation and registered business activities while the labor perspective focuses on the regulations including different social protection mechanisms for labor. The predominant capital-based approach to regulating digital platforms raises questions about the inclusiveness and applicability of social protection practices. This process, defined as selective formalization, points to the regulation practices of digital platforms that are only beneficial for the platforms themselves and their customers, while the labor-related components continue unregulated and increase the exploitative dimensions (Van Doorn, 2020; Lanamäki and Tuvikene, 2022). Thus, the digital platforms' adaptation to informal work on an international level can indicate a different dimension of integration into global production.

The crucial aspect here is that the functions of digital platforms extend beyond a simple intermediation mechanism to establish a holistic production ecosystem that includes supervision, management and monitoring (Gurumurthy et al., 2019). Moreover, the “independent contractor” employment status, which constitutes the driving force of platforms in providing this ecosystem, is directly fed by legal uncertainties (Duggan and Jooss, 2023, p. 57). The relevant regulations only result in the integration of digital platforms into informal relations based on productivity, and regulations on social protection are excluded from the discussions. Thus, the control of the labor process, which is transferred to the digital sphere through platforms, is attached to the precariousness mechanisms of informal work itself.

Digital platforms' control of the production organization and labor process through algorithmic management involves the maximization of efficiency and flexibility (Duggan et al., 2020; Huang, 2023). This also applies to the informal economic activities' relation with digital platforms. Digital platforms ensure one-sided labor control through scoring systems, organization of work and demand preferences, and the platforms' management pressure is added to the problems of informal work regarding labor (Hiriyur, 2022; Muntaner, 2018; Rani and Furrer, 2021). Thus, digital platforms function in a way that refers to the technological face of piece-work production (Unni, 2018, p.100). Furthermore, the dominance of digital platforms over data causes information asymmetry for informal actors. Platform employees unconsciously approve the consent statements regarding the monitoring mechanisms presented to them (Krishna, 2021, p.81). The approval of the consent statements indicates a formalization

of one-sided benefit only under the conditions determined by the digital platforms themselves.

The informal economy includes different social groups, and the consequences of informal work differ according to the social positions occupied by these groups. The impact of digital platforms on the informal work of women and migrant labor should be evaluated in this context. Digital platforms can have a positive impact on women's participation in employment across various sectors of the informal economy, ranging from the creative industries to the agricultural production (Churchill and Craig, 2019; Gurumurthy et al., 2019; Sharma, 2023). However, the fact that informal work creates new employment opportunities for women may also intersect with precariousness and gender inequalities (Raman et al., 2023, p.19). In this regard, although it is important to consider digitalization as a means of increasing women's participation in the economy, regulatory policies are essential for women's employment on digital platforms (Gurumurthy et al., 2019). Moreover, the existing analyses' emphasis on employment participation does not exclude precariousness (Hunt and Samman, 2019; Hiriyyur, 2022).

Another important area of focus in terms of informal work is migration and migrant labor. Digital platforms are effective in the integration of informal migrants into the labor markets. Furthermore, platforms provide a way for migrants to participate in working life without bureaucratic requirements (Animento, 2024, p. 137). However, this results in a situation where the working conditions that put labor directly at risk are also visible to migrants (Van Doorn et al., 2023). This situation involves the risk of bringing along a structure where the problems experienced as a migrant workforce increase exponentially through platforms.

Digital platforms also facilitate operating outside of previously established regulations in the field they serve. Platforms have the potential to rapidly provide employment and income, especially for marginalized groups (Wiesböck et al., 2023, p.263). Thus, digital platforms create a space for informal activities due to lack of necessary licensing controls or lack of supervision of relevant services (Heredia et al., 2020, p.54). In this framework, it is noted that working areas that have historically been informal in nature continue to maintain this characteristic with digital platforms (Wiesböck et al., 2023, p.267). Consequently, digital platforms reinforce precarity by reproducing informality instead of regulating it. Moreover, the fact that the informal economy can quickly engage with the illegal sphere also complicates the relation between digital platforms and informal work. Digitalization can easily adapt to the illegal dimensions of informal work, and digital platforms can become an instrument in organizing these activities (Paquet-Clouston, 2021; Rangaswamy, 2019).

When the relation between digital platforms and informal work is evaluated from such a perspective, it is seen that their impact on workers' access to decent work is limited and even controversial. However, digital platforms are not completely ineffective in regulating informal work, and cases where digital platforms establish

limited standards and provide limited financial inclusion have been mentioned (Krishna, 2021, Hiriyur, 2022; Unni, 2018; Lakemann and Lay, 2019). Informal work often refers to a highly insecure work life where precariousness is defacto present in the work environment, which is highly challenging for labor. In this context, digital platforms can offer slight improvements in terms of daily practices (Hunt and Samman, 2019, p.20). Moreover, digitalization processes create new struggle areas for labor, and informal workers can both have new organizational practices and construct different resistance mechanisms against the supervision, control, and operations of platforms (Anwar and Graham, 2020; Hiriyur, 2022).

5. Conclusion

The presence of digital technologies and the effectiveness of platforms in informal work processes can lead to the expansion of market opportunities and increase income generation. However, this process does not directly result in formalization when considered along with the structural features of the global south, where informal work is dominant. Moreover, the complex structure of informal relations, which includes many different layers, actors and institutions, may result in the diversification of regulatory processes in this field. As a result, regulations may be designed to take into account market needs, and labor-protective regulations may remain excluded from the agenda. When the effectiveness of platforms at the global level is analyzed in terms of the disintegration of production relations, a clearer picture emerges for both developed and developing countries where the informal economy is an important indicator. Digital platforms have a significant role in making capital accumulation more flexible, especially in countries with a strong institutional structure, and their activities can disrupt existing labor relations. However, for developing countries with weaker institutional structures, digital platforms offer limited and relative standardization, as well as the risk of adapting existing informalities to their operations.

Digital platforms simultaneously and flexibly accommodate formal and informal relations at the global level. Therefore, while the formalization of some areas becomes possible within the framework of the activities of digital platforms, the informalization of some areas also becomes inevitable. However, formalization in this area also indicates a mechanism where risks are directly individualized. The regulatory power of digital platforms has a limited effect, and these regulations can only proceed through the precariousness of the existing field. Thus, regulations carry the risk of becoming merely a matter of registry and the organizational structure intended to maximize flexibility poses the risk of the institutionalization of precariousness in a sense. Discussions on social protection can disappear in formalization debates. Considering digitalization and digital platforms from this perspective raises questions on the regulatory nature of digital platforms in informal work. It also draws attention to the existence of a strong

institutional structure and states' efficiency. The fact that the informal economy is embedded in a weak institutional structure places the activities of digital platforms on a contradictory ground to provide protective consequences for labor. Moreover, the digital divide still represents an important structural challenge for developing countries where informal economic activities remain dominant.

Within this context, platforms should not be characterized as a regulatory/standardizing force, but rather as an economic area to be regulated, as in different dimensions of informality. Without a strong institutional structure, digital platforms sustain informality and even benefit from it. On the other hand, unlike informal work, digital platforms do not operate without any regulation; rather, they exploit legal gaps. In this context, it is crucial to redesign existing social protection legislations and establish new employment regulations that reflect changing working practices. This can only be achieved through local and international legal regulations.

Although exceeding the scope of this study, another significant dimension of regulations and policy interventions in working life is the labor struggles in this sphere. Therefore, the activities of social actors should also be considered when evaluating the effectiveness of these regulations. Additionally, in regions where informality is widespread, policies regulating digital platforms should be introduced simultaneously with policies aimed at reducing informality. Furthermore, it is essential that regulations are based on a social protection framework and organized with a robust supervision mechanism. Clarifying employment relations and addressing the legal basis of the activities of digital platforms at the international and even the transnational level in line with the global mobility of platforms can have an impact on the development of protection mechanisms. Otherwise, the activities of digital platforms deepen the effects of existing informal relations on labor and carry the risk of reproducing them through digitalization.

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DISCLOSURE STATEMENTS:

Research and Publication Ethics Statement: This study has been prepared in accordance with the rules of scientific research and publication ethics.

Contribution rates of the authors: First Author (%100).

Conflicts of Interest: Author states that there is no conflict of interest.

Research Support and Acknowledgements: This research was not supported by any institution. I would like to express my sincere gratitude to the two anonymous reviewers for their valuable comments and suggestions.

Ethics Committee Approval: Ethics committee approval was not obtained because human subjects were not used in the research described in the paper.
