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# Platform workers' earning capacity. A set of key variables.

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### 1. Introducing the issue.

The arrival of digital platforms and social relations intermediation through digital infrastructures constitute a structural change in society, economy, and labour markets.<sup>1</sup> However, the ongoing process outcomes are still uncertain and contradictory; from one side, new opportunities are emerging for the socio-economic empowerment of people, on the other one, new spaces are opening for the «marginal workforce» exploitation present in the system,<sup>2</sup> that is those categories of individuals which are located on the margins of the labour market: immigrants, young people, those over the 50s, people with low levels of education, etc.

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<sup>1</sup> Eurofound, *The digital age: Implications of automation, digitalization and platforms for work and employment. Challenges and prospects in the EU series*, Publications Office of the European Union, Luxembourg, 2021.

<sup>2</sup> Firinu A., Maestripieri L., *No-siders: uno studio sul lavoro marginale in Italia*, in Croce C., Prevete R., Zucca A. (eds.), *Porte girevoli. Contributi di ricerca e buone pratiche sul lavoro marginale e le nuove vulnerabilità sociali*, Fondazione Giangiacomo Feltrinelli, Milano, 2019. See also Scholz T., *Digital labor: The Internet as playground and factory*, Routledge, London, 2012.

The scientific literature of the sociological area has highlighted the unequal distribution of material opportunities coming from the platform economy among social groups, explaining that the positioning of people in digital labour markets continues to occur with individual socio-economic dispositions as indeed happens in the physical world and the traditional economy.<sup>3</sup> Those who possess large endowments of economic capital or human capital will be able to operate through platforms such as Airbnb, Booking, Superprof, OnlyFans, YouTube, etc., and to produce income outside of a hierarchical relationship of over-ordering and under-ordering.<sup>4</sup> Otherwise, those who are affected by «forms of capital» poverty<sup>5</sup> will only be able to move on behalf of labour-intensive platforms, such as those of food delivery, putting their time and energy at the disposal of others. The people included in the latter group continue to represent the weak part of a hierarchical relationship characterized by a marked structural asymmetry, yet the economic and regulatory treatment reserved for them is significantly lower than for workers employed in the traditional economy.

Compared to the latter set of work contexts and subjects, the inadequacy of the legal framework is evident both on the hermeneutic side,<sup>6</sup> just as on the controlled one.<sup>7</sup> For these reasons, concerning the countries of the north of the world, the international literature has defined the platformation of employment relations as a «process of neo-commodification»<sup>8</sup> which confines people to a state of legal under-protection and economic poverty.

The INAPP-plus investigation, held in the period March-July 2021, notes the quick work on digital platforms rising in the Italian context and a significant consolidation of the interest that people have for these forms of work.<sup>9</sup> Furthermore, the effect of the SARS-CoV-2 pandemic and the containment measures arranged to stem the spread of the virus have

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<sup>3</sup> Gil Garcia J., *Inequalities, limits and possibilities for the transformation of capital in the sharing economy*, in *Redes Com-Revista de Estudios para el Desarrollo Social de la Comunicación*, 15, 2017, 32-67; Schor J. B., *The Platform Economy. Consequences for labour, inequality and the environment*, in Neufeind M., O'Reilly J., Ranft F. (eds.), *Work in the digital age: challenges of the fourth industrial revolution Identifying the challenges for work in the digital age*, Rowman & Littlefield Publishing Group, Lanham, 2018.

<sup>4</sup> On this point, see Gil Garcia J., nt. (3), 42 ff.

<sup>5</sup> Bourdieu P., *Sul concetto di campo in sociologia*, in Cerulo M. (ed.), *Classici di Sociologia*, Armando editore, Roma, 2010.

<sup>6</sup> It is proof of that from the *vexata quaestio* widespread on a global scale. For an exhaustive review, even if now dated, see Pacella G., *Il lavoro tramite piattaforma digitale nella giurisprudenza dei paesi di civil law*, in *Labour & Law Issues*, 5, 1, 2019, 15-42.

<sup>7</sup> Regarding the impact of the digital intermediation of employment relationships on the legal system, see, *ex multis*, Treu T., *Rimedi, tutele e fattispecie riflessioni a partire dai lavori della gig economy*, in *Lavoro e Diritto*, 3, 4, 2017, 367-405; Papa V., *Post-industriale o pre-moderno? Economia digitale e lavoratori on-demand: nuovi paradigmi organizzativi e vecchie esigenze di tutela*, in *Diritto delle Relazioni Industriali*, 3, 2018; Weiss M., *La platform economy e le principali sfide per il diritto del lavoro*, in *Diritto delle Relazioni Industriali*, 3, 2018.

<sup>8</sup> Marčeta P., *Platform capitalism – towards the neo-commodification of labour?*, in Haidar J., Keune M. (eds.), *Work and Labour Relations in Global Platform Capitalism*, Edward Elgar, Cheltenham, 2021; De Stefano V., *Lavoro "su piattaforma" e lavoro non-standard in prospettiva internazionale e comparata*, in *Rivista Giuridica del Lavoro e della Previdenza Sociale*, 2, 2017.

<sup>9</sup> The survey notes a significant increase in those who have qualified this income from work as "essential" or "important", going from 49% in 2018 to 80% in 2021. People's interest in these forms of work always becomes more widespread, consistent, and stable. There are more and more people who dedicate themselves to these activities, the economic needs that people intend to satisfy through these activities become more and more consistent and, finally, the periods in which people dedicate themselves tend to lengthen, exclusively or secondary, to the platform work.

drastically redistributed the job offer between the traditional economy and the digital economy and accentuated the monopsony conformation of the labour market of labour-intensive digital platforms.<sup>10</sup> Therefore, it seems urgent to deepen knowledge of the *real* economic profile<sup>11</sup> of these forms of work and identify the factors that underlie the economic devaluation of work and the widespread economic dependence among platform workers.

In recent decades, the expansion of the area of self-employment and the socio-economic fragility within it have led to a shift in the focus of scientific research on the phenomenon of in-work poverty beyond the traditional boundaries of standard work, also involving the context (legal, economic and social) of the platform work intensive mainly composed of economically dependent self-employed workers and false self-employed workers, generally fragile, under-paid and paid in relation to the tasks performed.<sup>12</sup> Despite the concept of working poor and the in-work poverty rate<sup>13</sup> index is effectively inclusive of contextual factors exceeding the working and individual dimensions, the contractual framework and the economic treatment of workers can strengthen or, vice versa, dilute the socio-economic vulnerability of the individual and of the nucleus in which he is inserted.<sup>14</sup> The main causes of individual working poverty are the low level of remunerations and the reduced employment intensity, both in terms of hours worked and in terms of months of employment.

This contribution aims to provide some conceptual elements to assess the impact of the platform model on the economic profile of the quality of work,<sup>15</sup> the purpose is to identify those variables that play a key role in determining the earning capacity of platform workers, *ergo* a possible situation of poverty despite work. The reconstruction carried out here highlights the complex, mixed, and multidimensional nature of the economic profile of employment relationships through digital infrastructures. Moreover, some reasons for the widespread economic dependence among platform workers are also indirectly highlighted.

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<sup>10</sup> A monopsonistic conformation of the labour market occurs in a situation in which the job offer is concentrated towards a small number of companies and significantly increases the contractual asymmetry between the latter and the workers, generating repercussions on the working conditions of individuals, which are more evident in low-skilled production sectors and in negative macroeconomic situations in conjunction with which people's need for work tends to deepen. *See* § 3.1..

<sup>11</sup> Regarding quantities such as income, production and price, the adjective *real* is used as opposed to nominal measures in monetary terms, which provide a partial and, therefore, inaccurate representation of economic quantities. We use the adjective “*real*” to oppose it to the conception of the economic profile of working conditions limited to the amount of remuneration and instead assume a holistic perspective, also considering dimensions that are not purely economic but still incisive for workers’ earning capacity.

<sup>12</sup> With respect to the topic check: Papa V., *The New Working (Poor) Class. Self-Employment and In-Work Poverty in the EU: a Supranational Regulatory Strategy*, in *Italian Labour Law e-Journal*, 14, 2, 2021; Papa V., *Working (e) Poor. Dualizzazione del mercato e lavoro autonomo povero nell’UE*, in *Rivista di Diritto della Sicurezza Sociale*, 1, 2021, 49 ff.

<sup>13</sup> Peña-Casas R., Ghailani D., Spasova S. and Vanhercke B., *In-work poverty in Europe. A study of national policies*, European Social Policy Network (ESPN), European Commission, Brussels, 2019.

<sup>14</sup> Carinci M. T., *I lavoratori delle piattaforme quali working poors*, in *Labour*, 6, 2021, 627-636.

<sup>15</sup> With respect to the topic discussed, *see* the contribution of Arcidiacono D., Pais I., Piccitto G., *La qualità del lavoro nella platform economy: da diritto a servizio*, in *Politiche Sociali*, 1, 2021. In this publication, the authors use the index developed by the international community to assess the quality of work in the context of an interpretative research design based on qualitative survey methodologies. The index in question makes up the OECD Job Quality Framework. Also check Cazes S., Hijzen A. and Saint-Martin A., *Measuring and Assessing Job Quality: The OECD Job Quality Framework*, in *OECD Social, Employment and Migration Working Papers*, OECD Publishing, Paris, 174, 2015.

This article opens with a literature review on the economic dimension of platform work aimed at identifying the gaps we intend to address. Some essential methodological notes are set out to understand the extraction process of our variables and the continuity of this exercise with the existing literature. Therefore, we are presenting the identified variables and some guidelines that could be potentially useful for future research on the topic.

## 2. Literature review and existing gaps.

The global scientific community has produced copious literature on platform work. Each disciplinary field has put in place its theoretical background, the conceptual categories of reference, as well as its analytical approaches and related research techniques. Great attention was paid to the economic profile of working conditions.

This paragraph collects an unsystematic review of the specialist literature on the subject and takes into consideration the scientific publications that mainly refer to two disciplinary fields that have sought, more than others, dialogue and mutual contamination: labour law and labour sociology. This review provides an overview of the debate on the topic and describes the continuity of the exercise conducted here concerning the existing literature.

The first aspect highlighted by the literature concerns the extreme heterogeneity that distinguishes the platform work phenomenon, also about the economic profile of working conditions and between different production areas,<sup>16</sup> both within the same area.<sup>17</sup> Some contributions found a substantial variety in the mechanisms for determining workers' rates which in some contexts are unilaterally stable by the platform<sup>18</sup>, while in other cases the workers maintain a certain margin of discretion.<sup>19</sup> Others have studied the relationship between paid and unpaid work in the deregulated markets of the platform economy and have explained that these two opposing dimensions are along a line of continuity.<sup>20</sup> Various scholars have found a different diffusion of the supplemental earner and the dependent earner between typologies of platform work,<sup>21</sup> others have highlighted the role of supplemental earners in the entrepreneurial strategies of platforms that can act as free

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<sup>16</sup> Arcidiacono D., Pais I., Piccitto G., nt. (15).

<sup>17</sup> Di Cataldo L., *Il mercato del food delivery nella città di Catania. Un caso di studio interdisciplinare: dalla composizione della categoria al rapporto di lavoro*, in *Professionalità studi*, 1, 2021, 86 ff.

<sup>18</sup> This happens in ride hailing app. and food delivery. See: Rosenblat A., *Uberland: How Algorithms are Rewriting the Rules of Work*, University of California Press, Berkeley, 2018; Ivanova M., Bronowicka J., Kocher E., Degner A., *The App as a Boss? Control and Autonomy in Application-Based Management*, in *Arbeit | Grenze | Fluss - Work in Progress interdisziplinärer Arbeitsforschung*, Frankfurt (Oder): Viadrina, 2, 2018; Di Cataldo L., nt. (17).

<sup>19</sup> Kuhn M. K., Maleki A., *Micro-entrepreneurs, Dependent Contractors, and Instaserfs: Understanding Online Labour Platform Workforces*, in *Academy of Management Perspectives*, 31, 3, 2017.

<sup>20</sup> Pulignano V. *Work in deregulated labour markets: a research agenda for precariousness*, in *ETUI Research Paper-Working Paper*, 3, 2019.

<sup>21</sup> Huws U., Spencer N., Syrdal D. S., Holts K., *Work in the European gig economy: Research results from the UK, Sweden, Germany, Austria, the Netherlands, Switzerland and Italy*, FEPS in cooperation with UNI Europa and the University of Hertfordshire, 2017, available at [https://uhra.herts.ac.uk/bitstream/handle/2299/19922/Huws\\_U\\_Spencer\\_N.H\\_Syrdal\\_D.S\\_Holt\\_K\\_2017\\_.pdf](https://uhra.herts.ac.uk/bitstream/handle/2299/19922/Huws_U_Spencer_N.H_Syrdal_D.S_Holt_K_2017_.pdf); Berg, J., Furrer, M., Harmon, E., Rani, U., & Silberman, M. S., *Digital labour platforms and the future of work. Towards Decent Work in the Online World*, International Labour Office, Geneva, 2018; Drahokoupil J., Piasna A., *Work in the Platform Economy: Beyond Lower Transaction Costs*, in *Intereconomics*, 52, 2017, 335-340.

riders.<sup>22</sup> Some studies, even if by now dated, have found modest levels of platform workers' remuneration.<sup>23</sup> Still, others have found and explained a progressive lowering of the compensations after a first phase in which the platforms, rich in venture capital, have offered excellent economic working conditions to gain market share and to win the monopoly race as if it were a lightning war<sup>24</sup>. Moreover, the contributions that have evidenced the volatility and uncertainty of the pricing schemes<sup>25</sup> and that have been associated it with the opacity of algorithmic-reputational processes<sup>26</sup> are important. Moreover, the proliferation of piecework pays systems<sup>27</sup> has been a subject of great attention. Some have especially associated this process with the computing capacity of new technologies.<sup>28</sup> Some have analysed work poverty in platform economy from a legal perspective focused on the single employment relationship<sup>29</sup>, instead others have shifted the focus to the macro level<sup>30</sup>. Recently, in light of the reform carried out by Just Eat on its business model in Italy, has emerged the problem of hourly labour fragmentation.<sup>31</sup> Moreover, the need to introduce a minimum wage has been widely supported<sup>32</sup> and has also highlighted the obstacles that the application to the platform work may encounter.<sup>33</sup>

To conclude it is interesting to take into consideration the theoretical proposal of Gil Garcia J.<sup>34</sup> to explain the unequal distribution of material opportunities deriving from the platform economy among social groups. According to this author, the platform economy is made up of variously convenient areas for the people. The possibility to access these areas depends on the individual socio-economic characteristics and, therefore, on the forms of capital available to each one. Taking up Bourdieu's forms of capital model, Gil Garcia explains that the conversion of a certain form of capital into income involves transformation costs. Those who carry out a capital-intensive platform activity will have to incur considerably lower transformation costs in comparison with those who carry out a platform

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<sup>22</sup> Schor J., *After the Gig: How the Sharing Economy Got Hijacked and How to Win It Back*, University of California Press, San Francisco, 2020.

<sup>23</sup> Fabo B., Karanovic J., Dukova K., *In search of an adequate European policy response to the platform economy*, in *Transfer: European Review of Labour and Research*, 23, 2, 2017, 163-175, <https://doi.org/10.1177/1024258916688861>; Berg J., Furrer M., Harmon E., Rani U., Six Silberman M., *Digital labour platforms and the future of work: Towards decent work in the online world*, International Labour Office, Geneva, 2018.

<sup>24</sup> van Doorn N., Chen Y. J., *Odds stacked against workers: datafied gamification on Chinese and American food delivery platforms*, in *Socio-Economic Review*, 19, 4, 2021, 1354 ff.

<sup>25</sup> *Ibidem*, 1324 and 1351-1352. See also Dow Schüll N., *Addiction by Design: Machine Gambling in Las Vegas*, Princeton University Press, Princeton, 2012.

<sup>26</sup> Rosenblat A., Stark L., *Algorithmic Labour and Information Asymmetries: A Case Study of Uber's Drivers*, in *International Journal of Communication*, 10, 2016, 3766.

<sup>27</sup> Pesole A., Urzì M.C., Brancati E., Fernández Macías F., Biagi F., González Vázquez I., *Platform Workers in Europe Evidence from the COLLEEM Survey*, EU Commission – JRC Science for Policy Report, Bruxelles, 2018.

<sup>28</sup> Alkhatib A., Bernstein M. S., Levi M., *Examining Crowd Work and Gig Work Through The Historical Lens of Piecework*, in *Proceedings of the 2017 CHI conference on human factors in computing systems*, 2017, 4599-4616.

<sup>29</sup> Carinci M. T., nt. (14).

<sup>30</sup> Bano F., *Quando lo sfruttamento è smart*, in *Lavoro e Diritto*, 2, 2021, 303-319.

<sup>31</sup> Carinci M. T., nt. (14).

<sup>32</sup> OECD, *OECD Employment Outlook 2019: The Future of Work*, OECD Publishing, Paris, 2019; Lane M., *Regulating platform work in the digital age*, in *Going Digital Toolkit Policy Note*, 1, 2020, available at <https://goingdigital.oecd.org/toolkitnotes/regulating-platform-work-in-the-digital-age.pdf>.

<sup>33</sup> OECD, nt. (32); Pigliarini G., *Il nodo (giuridico) del sistema di determinazione del compenso nell'accordo Assodelivery-UGL Rider*, in *Professionalità studi*, 1, 2021, 166-174.

<sup>34</sup> Gil Garcia J., nt. (3).

activity with a high intensity of human capital. In the same way, the latter will have to support lower costs of available capital transformation into income compared with those carrying out a labour-intensive activity. This situation will entail a worker's self-denial in terms of time and energy.<sup>35</sup> In addition, as mentioned in the introductory part of this paper, people employed in labour-intensive platforms pay a lower economic and regulatory treatment than those who work in the traditional sectors of the production system. Gil Garcia accurately describes this dynamic and the varying convenience of the production segments into which this new economy is divided using four variables: (i) *accessibility* indicates the ability to access the different areas of the platform economy, classified by the author as capital-intensive, human-capital-intensive and labour-intensive; (ii) *potential benefits* indicate those forms of capital that can be acquired by people through a particular work carried out on the platform and used to improve their performance in the market; (iii) *profitability* indicates the profitability of these segments, therefore the possibility of producing economic resources; (iv) *participation costs* indicate the time, economic costs, energy and risks required to generate a certain income by operating in the different segments.

From the survey of the literature exposed here, in our opinion emerges a significant void. Despite the amount of analysis on the economic dimension of work on digital platforms, it seems that the variables that play a key role in determining the platform workers' earning capacity have not yet been identified; much less have these variables been included within a theoretical framework useful for comparative studies, as well as the inter- and transdisciplinary analysis, regarding the economic profile of working conditions in the platform economy.

This article aims to provide a preliminary contribution to address this gap and to stimulate research on the subject starting from the variables that will be identified in these pages.

### **3. A set of key variables.**

The five variables presented in this study were identified through an unsystematic review of the literature of the sociological and legal area concerning the real economic profile of the working conditions in platform work.

Looking at this existing literature, we asked ourselves these questions: what do we know about the economic profile of working conditions? What factors influence the earning capacity of workers? Can we further systematize the evidence that has emerged from the debate in recent years? Can we identify a complex of variables that play a key role in platform workers' earning capacity?

Although the economic profile of the working conditions of platform workers is extremely heterogeneous, the study of the literature shows the existence of a set of mutually connected variables that are crucial for the earning capacity of any sub-category of platform workers. These variables, therefore, combine any form of work carried out on digital

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<sup>35</sup> *Ibidem*. On the process of converting forms of capital, see also Bourdieu (2015 [1986]). *Forme di Capitale*. In Santoro (a cura di). Armando editore, Roma, 111 ff.

platforms regardless of the nature – capital-intensive, human-capital-intensive or labour-intensive - of the activity carried out.

The key variables for the earning capacity of platform workers identified in this study are five: (i) Remuneration system; (ii) Potential benefits; (iii) Job opportunities assignment system; (iv) Labour fragmentation; (v) Participation costs.

These variables can be defined in three different ways in relation to the connotation of the relationship between the platform and the worker. The process can be subjected to the unilateral control of the platform or the worker according to their respective economic interests, or it can occur by consensus.

Any unilateral control by the “central actor”<sup>36</sup> who governs the digital infrastructure establishes the rules of the game and the criterion for organizing the workforce<sup>37</sup> manifests the asymmetry of power between the platform and the worker concerning the economic profile of the working conditions and allows the former to maximize the value captured on the overall value created with the exchanges that took place within the platform's digital ecosystem. Conversely, any unilateral control of the worker on the economic profile of his activity indicates the existence of an effective margin of organizational autonomy, at least about the profile considered. As an alternative to these two opposing hypotheses, the economic profile of the activity carried out by the platform worker could be defined in a consensual way between the parties to reconcile their specific needs. However, the variables considered can be determined, in part, unilaterally and, in another part, by consensus. It will be seen that the variables considered also undergo conditioning that develops at the macro level, such as the conformation that the labour market can assume and the macro-economic situation.

Regardless of the hetero-determined character of the central actor, self-determined by the worker or a hybrid that the process through which these variables are defined can take on, the earning capacity of the platform workers can be explained, conceptualized, and strengthened starting from the variables identified here and their mutual connections.

The individual variables will be illustrated in the following sub-paragraphs with a level of abstraction such as to preserve the consistency of the discussion concerning the many concrete cases of platform work in circulation.

### 3.1. Remuneration system.

The first of the key variables identified in this study about the economic profile of working conditions is the *remuneration system*. It is a mixed variable, which includes within it: (a) the

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<sup>36</sup> From now on the substantial term “central actor” will be used without further clarification. On this point, *check* Laczko P., Hullova D., Needham A., Rossiter A-M., Battisti M., *The role of a central actor in increasing platform stickiness and stakeholder profitability: Bridging the gap between value creation and value capture in the sharing economy*, in *Industrial Marketing Management*, 76, 2019, 214–230.

<sup>37</sup> *Consult*: Ivanova M., Bronowicka J., Kocher E., Degner A., nt. (18); Griesbach K., Reich A., Elliott-Negri L., Mikman R., *Algorithmic Control in Platform Food Delivery Work*, in *Socius: Sociological Research for a Dynamic World*, 5, 2019, 1–15.

criterion adopted for measuring the work and its consideration; (b) the amount of the remuneration; (c) the frequency with which the financial transfers by the platform take place.

The remuneration system is a crucial variable for the earning capacity of any platform worker and of any worker in general. The workers give particular importance to the three aspects that make up our variable, considering them when they choose the platform in which to operate.<sup>38</sup>

The work and its consideration can be measured using three macro-criterion: the time spent in the workplace, the performance of the work activity or the availability of the entrepreneur; the achievement of certain objectives that can be established with different forms and methods, for example with achievement thresholds or concerning a specific objective achievement, such as the realization of a project, the stipulation of a contract, the completion of a task, etc.; the number of tasks performed or the time spent in the material execution of the same.

The production paradigms<sup>39</sup> alternating in the course of the capitalist dynamic – mercantilism or pre-Fordism,<sup>40</sup> Fordism, Toyotism, Platformism - corresponds to a certain diffusion of the multiple criteria that can be adopted to measure work and its consideration, which changes in relation to the changes induced by technological innovation in terms of the spatial and temporal dimension of the work activity, as well as on the complexity and the breakdown of work performance, but it also changes in relation to the political weight assumed by the working class, the rights acquired and the ability these rights have to resist socio-technical transformations, which modify the interaction between technical elements (e.g. hardware, software, work equipment, work environments) and social elements (e.g. people, groups, practices, culture, etc.).<sup>41</sup>

The historical determination of labour law, fully developed during the twentieth century, manifests itself in having learned to conceive time as the main criterion for measuring work performance. However, the massive presence of digital technologies in the world of work and the “platform model” affirmation<sup>42</sup> push the progressive overcoming of the traditional space-time references of working activity and the corresponding marginalization of the classic time parameter.<sup>43</sup> The diffusion of the various forms of remote work that took place

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<sup>38</sup> Di Cataldo L., nt. (17).

<sup>39</sup> Arcidiacono D., Borghi P., Ciarini A., *Platform work: from digital promises to labour challenges*, in *PACO - Partecipazione e Conflitto*, 12, 3, 2019, 611-628.

<sup>40</sup> It stands historically between the decline of the feudal system and the advent of the first industrial revolution. It is a form of organisation of simple production, which finds its basic nucleus in the artisan or domestic workshop.

<sup>41</sup> Regarding the concepts of sociomateriality and socio-technical system, the contribution of Leonardi, P. M., *Materiality, Sociomateriality, and Socio-Technical Systems: What Do These Terms Mean? How Are They Related? Do We Need Them?*, in Leonardi P.M., Nardi B. A., Kallinikos J. (eds.), *Materiality and Organizing: Social Interaction in a Technological World*, Oxford University Press, Oxford, 2012, 25-48. For the remuneration issue, see Alkhatib A., Bernstein M. S., Levi M., *Examining Crowd Work and Gig Work Through The Historical Lens of Piecemeal Work*, in *Proceedings of the 2017 CHI conference on human factors in computing systems*, 2017, 4599-4616.

<sup>42</sup> Arcidiacono D., *Gli ambigui sentieri del platform work: tra marginalizzazione e nuovi paradigmi produttivi*, in Croce C., Prevete R., Zucca A. (eds.), *Porte Girevoli. Lavoro marginale e nuove vulnerabilità*, Fondazione Feltrinelli, Milano, 2019.

<sup>43</sup> Fenoglio A., *Il tempo di lavoro nella New Automation Age: Un quadro in trasformazione*, in *Rivista Italiana di Diritto del Lavoro*, 1, 2018, 625-650; Martelloni F., *Metamorfosi del lavoro e polisemia del tempo: riconoscerlo, proteggerlo, remunerarlo*, in *Legal archive "Filippo Serafini": CLI*, 2, 2019, 249-266.

in the context of the third and fourth industrial revolutions – such as teleworking, the case in point of the quick mode of execution of work performance, platform work, etc. - involves the diffusion of organizational and remuneration practices based on an alternative criterion to the temporal one, such as the achievement of specific objectives, c.d. management by objectives, or the services performed.<sup>44</sup> Objective-oriented organizational and remuneration practices are gaining ground, not without difficulty, in the context of telework, while the management and remuneration practices of workers based on performance are already widespread in the platform economy and other forms of autonomous and poorly qualified remote work (e.g. private mail services).

A second aspect connected with the “remuneration system” variable concerns the amount of remuneration. The macroeconomic situation, the conformation of the labour market and the availability of workforce within it, but also the presence of dynamics that place workers in direct competition, are all factors influencing in various ways the amount of compensation offered by economic operators. For example, the labour market degeneration in a monopsony sense and the use of mechanisms for the sharing of earning opportunities that put workers in competition, which are a completely typical element of the algorithmic management of platforms, can carry a so-called pressure such as a race to the bottom on the remuneration paid to workers.

The monopsonistic conformation of the labour market has been drastically accentuated by the containment measures ordered by the scientific-health authorities to stem the spread of the Covid-19 virus since there has been a rapid and consistent redistribution of the job offer between the traditional economy and the digital economy, which has concentrated the less skilled and more fragile workers of the labour supply on the labour-intensive areas of the platform economy.<sup>45</sup> When these circumstances occur, the unilateral control of the platform on workers’ rates keeps the remuneration at a lower level than what could occur in a competitive labour market, especially in the low-skilled areas and in the negative macroeconomic situations which the people's need for work tends to spread and deepen.<sup>46</sup>

The mechanism set up by the central actor for the division of earning opportunities among platform workers also contributes to influencing the amount of compensation offered to workers. However, this aspect will be discussed below, in para 3.3. To avoid making the discussion redundant.

Another element that makes up the variable remuneration system is the frequency with which the remuneration is paid. The platforms can make transfers upon completion of the single service, otherwise the transfers can take place on a weekly, bi-weekly, or monthly basis. The frequency of remuneration generally occurs differently in relation to the criterion adopted by the platform to measure the remuneration of the work activity. Usually, in the context of piecework pay systems, the compensations are paid as soon as the work

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<sup>44</sup> Please check Oliva L., Maino F., Barazzetta E., *Smart worker e smart working places: lavorare oltre l'ufficio*, Centro di Ricerca e Documentazione Luigi Einaudi di Torino, 2019.

<sup>45</sup> The impact of the pandemic on the platform economy, on businesses and workers, has been widely documented in Chicchi F., Frapporti M., Marrone M., Pirone M., *Covid-19 impact on platform economy: a preliminary outlook*, in *PLUS Platform Labour in Urban Spaces*, July 2020.

<sup>46</sup> Dube A., Jacobs J., Naidu S., Suri S., *Monopsony in Online Labor Markets*, in *American Economic Review: Insights*, 2, 1, 2020, 33-46.

performed by the worker is completed or on a weekly or bi-weekly basis. In remuneration systems that adopt a temporal measurement criterion, the transfer usually takes place monthly. However, a platform may remunerate workers for the services performed and the transfer of the consideration takes place monthly.<sup>47</sup>

### 3.2. Potential benefits.

The *potential benefits* constitute the second variable we have identified. With this concept, Gil Garcia J.<sup>48</sup> indicates those «forms of capital» that people can acquire by doing some work on digital platforms and that can be used to improve their position in the market, successfully deal with intra-sectoral occupational transitions, increase their contractual power, and increase their economic performance. Potential benefits, therefore, are those resources that give power to social agents within specific fields in which they are active. This concept includes all those resources that make it possible to acquire an advantage within a certain relational context. The competencies, the follower, symbolic capital, and digital reputation are some examples of potential benefits in the specific *field* of the platform economy.<sup>49</sup>

The potential benefits concept, therefore, includes very different forms of capital. There are forms of capital that we can understand as “free” and others that, on the other hand, we can qualify as “constrained” as their production, recognition, and conservation are subject to the control of actors other than those who have matured them. The competencies, the follower, reputation in its traditional forms and symbolic capital represent free forms of capital since their production and conservation fall within the control sphere of the agent who matured them, and they can be easily used in different social relations within the same field. Otherwise, digital reputation represents a form of bound capital as the processes of construction, recognition and conservation fall under the unilateral control of the central actor and are governed by the “private discipline” established by the latter.<sup>50</sup> At present, there is no comprehensive legal discipline of the reputational profiling practices adopted by the platforms, nor is there an effective right to the portability and accruable of the digital reputation of workers since it encounters a series of potentially insurmountable material obstacles in the implementation phase.<sup>51</sup> Since they are forms of capital linked to the platform of origin, it seems correct to us to speak of “fixed” and “not usable” capital since it cannot be “transferred”, nor can it be “accumulated” by carrying out the same work activity for different platforms.

Digital reputation represents the main example of potential benefits in the context of the platform economy. The reputational profiling techniques adopted by the platforms towards the people who work within them and the forms that the digital reputation can take are

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<sup>47</sup> Di Cataldo L., nt. (17), 89.

<sup>48</sup> Gil Garcia J., nt. (3); Bourdieu P., nt. (35).

<sup>49</sup> Bourdieu P., nt. (5).

<sup>50</sup> Cf. Mutti A., *Reputazione*, in *Rassegna Italiana di Sociologia*, 4, 2007, 601-622; Cutolo D., Kenney M., Zysman J., *Platform-Dependent Entrepreneurs as Private Regulators in the Platform Economy*, in *BRIE Working Paper*, 5, 2019.

<sup>51</sup> Di Cataldo L., *Transferability and accumulation of digital reputation in platform work: a preliminary study*, in Benevides C., Veiga (eds.), *Contratos atípicos de emprego en la economía digital. Prospectiva luso-italo-brasiliana*, Iberojur, 2022.

extraordinarily varied, people analytics practices appear generally functional to the management of the volumes of work within the platform and the impossibility to transfer and/or accumulate this *reputational capital*<sup>52</sup> produces largely similar effects regardless of the specific type of platform or work activity.

Reputational profiling systems are extremely widespread in the platform economy as they are used to address the considerable problems of coordination between agents operating in digital ecosystems<sup>53</sup>: in some circumstances, the digital reputation appears functional to the consolidation trust links between the agents involved in the plurilateral intermediation of the platform, acting as a compensatory tool for the information asymmetries within the digital environment, which may be due to the large number of agents involved, their frequent change, the occasional and temporary nature of the interactions that take place between them; in other circumstances, the digital reputation appears functional to the hierarchical and unilateral coordination of the workforce, configuring itself as a tool available to the central actor to satisfy their control needs despite the material obstacles that they may encounter and regardless of the contractual framework of workers: the loss of firm's classic space-time references; the dispersion of workers on a global scale or, alternatively, within a large but more contained space such as the urban territory; the large number of workers to be managed and their frequent change; the reduction of visible interference on work activities in order to justify the use of autonomous-occasional contractual schemes and subtly conform the behaviour of workers to their expectations.<sup>54</sup>

If the reputational profiling techniques respond to the first of the functions described, the digital reputation of the workers will be visible to all the agents involved in the plurilateral intermediation of the platform to orientate the allocation of expectations efficiently, in the second hypothesis instead, the digital reputation will only be visible to the central actor.

In both these macro-sets of circumstances, digital reputation has a decisive effect on workers' earning capacity: primarily because the reputational capital has a decisive effect on the volumes of work which in the first circumstance will be assigned by the users of the platform, while in the second the volumes of work will be assigned by the central actor; secondly, since in both macro-sets of circumstances, the continuity of income from work during intra-sectoral occupational transitions depends on the discipline of the digital reputation recognition processes by platforms. In fact, when a worker decides to change platform the non-interoperability digital reputation implies a net interruption of the work volumes and of the income received. Equally when a worker decides to work on two platforms simultaneously the non-interoperability digital reputation implies the construction of two different reputation.

The usability limits of the reputational capital workers may encounter hinder the mobility of the labour factor within the market and contradict the conception of digital platforms as perfect markets. The construction of a new digital reputation, replacing the previous one or

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<sup>52</sup> Topo A., "Automatic management", *reputazione del lavoratore e tutela della riservatezza*, in *Lavoro e Diritto*, 3, 2018, 453-476.

<sup>53</sup> Marmo S., *L'uso della reputazione nelle applicazioni Internet. Un antico artefatto per un nuovo contesto sociale*, in *Sistemi intelligenti*, 1, 2007, 91-112.

<sup>54</sup> Ivanova M., Bronowicka J., Kocher E., Degner A., nt. (18); Bano F., nt. (30).

parallel to it, requires a considerable investment in time and energy, which can make the worker give up on making decisions and behaving that could improve their working conditions. These implications could make workers give up on moving to another platform in search of better working conditions within the market or starting a multi-client regime to overcome a previous situation of economic dependence. Therefore, the transferring or accumulating of one's reputational capital results in a transaction cost that hinders the mobility of the labour factor toward the most profitable jobs, towards the best working conditions present within the market.<sup>55</sup>

### 3.3. Job opportunities assignment system.

The third variable identified through our research is the “job opportunities assignment system”.

The literature has now fully highlighted the configuration of the platforms as competitive arenas for “zero-sum”, as ecosystems built to induce the people who work within them to contend with a finished good consisting of work shifts and/or tasks to be performed.<sup>56</sup>

As explained in the previous paragraph, reputational profiling techniques are a characteristic feature of «algorithmic organizations».<sup>57</sup> Regardless of the platform work, the techniques adopted for the construction of the reputational profile of the worker and the forms that the digital reputation can take, the reputational capital of the worker expresses the “person value in the digital market”<sup>58</sup> and represents the main criterion for the distribution of the work volumes within the infrastructure. In pure intermediation platforms, it guides the users of the platform in identifying the worker best suited to their needs; in platforms that sell a service in addition to mere intermediation through the employment of a workforce, digital reputation guides the processes of algorithmic management for the automated management of workers, starting with access to shifts and the assignment of work assignments to be executed.

The mechanism for assigning job opportunities can take on a hybrid function which is both rewarding and punitive, or this function can be neutral. It will be hybrid if the system is set up for booking work shifts and/or for assigning the tasks to be performed benefits those who have adjusted their behaviour with the expectations of the plat-firm and, at the

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<sup>55</sup> The discussion on transaction costs is resumed at the end of para 3.4.

<sup>56</sup> Without prejudice to the unavoidable peculiarities inherent in the myriad of organizational practices and sub-projects.

<sup>57</sup> Some contributions related to algorithmic management, the concept of reputational capital and the difficulties that the introduction of a legal framework for digital reputation may encounter: Origgi G., Pais I., *Digital Reputation in the Mutual Admiration Society*, in *Studi di Sociologia*, 2, 2018, 175-194; Griesbach K., Reich A., Elliott-Negri L., Mikman R., nt. (41); Pais I., Stark D., *Algorithmic Management in the Platform Economy*, in *Sociologica*, 14, 3, 2020, 47-72; Zappalà L., *Informatizzazione dei processi decisionali e diritto del lavoro: algoritmi, poteri datoriali e responsabilità del prestatore nell'era dell'intelligenza artificiale*, in S. Aleo (eds.), *Evoluzione scientifica e profili di responsabilità*, Pacini editore, Pisa, 2021, 363 ff.; See also Giardullo P., Miele F., *L'organizzazione algoritmica: tecnologia, performance e automazione*, in Marini D., Setiffi F. (eds.), *Una grammatica della digitalizzazione. Interpretare la metamorfosi di società, economia e organizzazioni*, Edizioni Angelo Guerini e Associati, Milano, 2020.

<sup>58</sup> European Parliament Resolution of 2017 June 15th on A European agenda for the collaborative economy.

same time, penalizes those who have it done to a lesser extent. The functions assumed by this mechanism will instead be neutral if the management of work shifts and/or the assignment of job opportunities occurs regardless of the compliance of the behaviour of the individual worker over time with the expectations of the platform company.

The mechanism hybrid nature predisposed to the division of job opportunities among platform workers can produce significant negative repercussions on workers' remuneration and significantly affect their earning capacity, both about those categories of workers, generally highly skilled, having the power to self-determine their rates and who receive the tasks to be performed directly by other parties involved in the intermediation of the platform, both about those categories of workers, generally low-skilled, whose remuneration is hetero-determined by the central actor and whose tasks of work are directly assigned by the latter. For the organization of the first group of workers, systems are frequently used that require them to compete for a contract and induce workers to adopt competitive strategies focused on reducing the cost of their work for the benefit of the final consumer.<sup>59</sup> For the second group of workers organization, on the other hand, the work assignments division takes place through a reputational profiling system that rewards those who meet company expectations and simultaneously penalizes those who do not, this mechanism can induce workers to the acceptance of the assignments for which excessively small sums are paid to avoid downgrading and preserve the stability of the volumes of work transmitted by the digital infrastructure.<sup>60</sup>

The hybrid function of the systems used for the earning opportunities distribution among the workers of the platform seems to be more widespread among the companies that have contractual schemes falling within the perimeter of self-employment and remuneration systems that are fully or largely focused on assignments performed. In such business models, the reward/punitive function of the mechanism in question compensates for the reduced conformational scope of the contract, which may be due to the margins of discretion formally recognized to the worker, for example, the freedom to self-determine the times and workloads, as well as the reduced conformational scope of the criterion adopted for the measurement of work which is frequently limited to the material execution of the main service. Therefore, the hybrid function of these mechanisms allows companies to keep the amounts of compensation paid to workers at minimum levels.

### **3.4. Labour fragmentation.**

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<sup>59</sup> This is the challenge mechanism, rather widespread in the forms of high-skilled platform work. Some examples are platforms 99Design e 4C Legal. The problem has been discussed by several authors: Ekbia H.R., Nardi B.A., *Heteromation, and other stories of computing and capitalism*, MIT Press, Cambridge, 2017; Arcidiacono D., Pais I., Piccitto G., nt. (15), 81.

<sup>60</sup> A concrete example can be found in the work performance assignment mechanism used by the food delivery platforms.

The labour fragmentation constitutes the fourth variable we have identified and represents a characteristic aspect of work in contemporary capitalism and specifically of platform work.

The labour can be fragmented in relation to the legal-contractual profile and/or to the salary profile or in relation to the hourly dimension of the employment relationship.

A legal-contractual fragmentation occurs in circumstances in which the central actor arranges for the stipulation of a new contract for each of the tasks assigned to the worker.<sup>61</sup>

The fragmentation of the remuneration profile consists, on the other hand, of a breakdown of the employment relationship concerning the mutual link between the components of the employment relationship represented by the exchange between the work performance and the economic consideration. In this case, the employment relationship is parcelled out and cleared of the pauses in which the labour activity does not generate surplus value for the capital, in this way there is a reduction of the legal concept of labour performance which overlaps the service purchased by the customer, resulting in a corresponding reduction in the economic consideration recognized by the platform to the worker. While maintaining the reference to food delivery, the platforms generally break down the activity carried out by the rider and qualify as actual work, such as the material execution of the work performance, only the time between the assignment of the service by the platform and the delivery of the product to the customer, therefore further temporal situations and any activities that are not directly included in the aforementioned interval do not meet the economic consideration by the platform.

Even in the context of employment relationships “long term”,<sup>62</sup> there is a fragmentation of the work activity into microtasks and a fragmentation of the salary into micro-compensations which involves, on the one hand, the emergence of unpaid work<sup>63</sup> intervals, on the other hand, the unsuitable remuneration received by the workers, which manifests itself in the non-proportionality for the quantity and quality of the work performed, such as for the hours of availability conferred by the worker to the platform, to the participation costs incurred by the worker (check § 3.5.) and in relation to the tasks performed by the latter outside the main job performance.<sup>64</sup>

To conclude, labour can also be fragmented in reference to the hourly dimension of the employment relationship with the provision of a predefined and insurmountable limit of weekly/monthly working hours. The phenomenon of hourly fragmentation of labour and the implications arising from it for the workers earning capacity have emerged strongly in the context of the reform of its employment model carried out by Just Eat with the signing of a company collective agreement, which provides for and integrates the application of the

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<sup>61</sup> What happened in Just Eat, checkpoint 2. contract model of 2019 and 2020.

<sup>62</sup> The performance is continuous because only through the continuous execution of the service it is possible to satisfy the interest of the creditor. The continuity, therefore, in the duration of contracts, lies in the cause of the contract that realizes the interest of the creditor. On this point, *check* Bavaro V., *Sul concetto giuridico di «tempo di lavoro» (a proposito di ciclo-fattorini)*, in *Labor*, 6, 2020, 675; *See also* Oppo G., *I contratti di durata*, in *Rivista del Diritto Commerciale e del diritto generale delle obbligazioni*, 5-6, 1943, available at <https://www.rivistadeldirittocommerciale.com/fascicoli/1943-numero-5-6/39951-i-contratti-di-durata> .

<sup>63</sup> Pulignano V., nt. (20).

<sup>64</sup> Di Cataldo L., nt. (17).

National Collective Labour Agreement for Logistics, Transport, Goods and Shipping, defining an innovative model for the regulation of subordinate work according to the profiles characteristic of the activity carried out by the riders, but also in the optics of a fair balance between the protection needs of workers and the needs of economic efficiency and productivity of companies. The agreement has introduced an hourly remuneration of € 8.50 based on the time spent on the availability of the platform,<sup>65</sup> which are bonuses, indemnities and a kilometre reimbursement, the operation conducted was criticized by authoritative labour law doctrine. However, the hourly dimension of the new contracts proposed to workers has been contested, which provides for a pre-established, rigid, and restricted number of hours of weekly work, which can be 10, 20 or 30 hours.<sup>66</sup>

For complete examination purposes, it seems useful to highlight the implications that this hourly fragmentation can produce on the economic profile of working conditions. The weekly working hours constitute an insurmountable limit for the earning capacity of the workers which is thus hinged within rigid, restricted, and predetermined limits. It will not be easy for Just Eat riders - especially for those who have been asked to request a contract of 10 or 20 hours per week - to reach a monthly sufficient salary to satisfy their life needs, a part of these workers will not be able to do it without working for other platforms in the sector as well and submitting to the treatment defined by the national collective agreement signed on 2020 September 15 between Assodelivery and UGL Riders which is applied in the majority of companies. Therefore, they will continue to be classified, also, as self-employed workers (according to Art. 2222 of the Italian Civil Code) and paid for the services performed.<sup>67</sup> The hourly labour fragmentation introduced by Just Eat risks neutralizing, or drastically reducing, the beneficial effects on the economic profile of the working conditions that could have resulted from the reform of the contractual classification of workers and the criterion for measuring the remuneration to be recognized to these latter.

### 3.5. Participation costs.

Participation costs are the last variable we take into consideration. It includes the time, economic costs, and energy that the worker must use to generate a certain income by carrying out a particular labour activity on digital platforms. We can also include in this concept the health and safety hazards that are specific in relation to the activity carried out.<sup>68</sup>

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<sup>65</sup> Company supplementary agreement between Takeaway.com Express Italy (Just Eat) e Filt CGIL, FIT-CISL, UIL Trasporti - Art. 14, Hourly Remuneration.

<sup>66</sup> Carinci M.T., nt. (14).

<sup>67</sup> Art. 11 - Minimum per delivery: «The parties agree that the Rider is guaranteed a minimum compensation for one or more deliveries, determined on the basis of the estimated time for carrying it out. This compensation is equivalent to € 10.00 (ten/00) gross per hour. If the time estimated by the Platform for the deliveries is less than one hour, the amount due will be re-parameterized proportionally to the estimated minutes for the deliveries completed (...)».

<sup>68</sup> For example, road accidents represent a very typical danger for those who perform their services while moving in urban traffic, such as Uber drivers or food delivery riders.

The participation cost are different within the platform economy, it changes based on several factors: the intensity of economic, human and labour capital the person must use to operate within the platform; the production characteristics area and work performance; the entrepreneurial practices adopted by the platforms and, above all, the particular configuration of the four variables described above; the adequacy of the legal framework with respect to the protection needs of the person working in the context of the digital economy.

In the context of the digital transformation of work, the transfer of the economic risk of the company to the workers is becoming more and more widespread. The possible performance of the work activity anytime and anywhere,<sup>69</sup> in an institutional context that is still unprepared to govern the reconfiguration of the socio-economic relationship between the factors of production induced by the most recent developments in technological innovation,<sup>70</sup> becomes the pretext for resorting to business practices (legal, salary and organizational) oriented towards a deconstruction of the employment status<sup>71</sup>. Some of these practices have already become structural in the context of digital labour platforms and could further spread to other remote work areas, such as in the context of agile working (so-called Italian smart working). As already mentioned in para 3.1., companies that make use of digital platforms often resort to employment contracts in fraud of the law - the phenomenon of so-called bogus self-employment –<sup>72</sup> and they usually pay workers for the tasks performed, transferring to them the uncertainties and risks deriving from market trends.

A second entrepreneurial practice, referred to as the balance of power restructuring between capital and labour in platform capitalism consists in placing the economic burdens deriving from the constant capital of the business activity on the workers.<sup>73</sup> In the forms of work that take place outside the company headquarters, a part of the constant capital is naturally dislocated on the worker: energy costs, stationery materials, work equipment and the costs associated with the latter. At present, no suitable measures have been put in place to compensate for the cost redistribution deriving from business activity and prevent a dangerous erosive effect on the real earnings perceived by platform workers who are already quite small.<sup>74</sup> For example, smart workers frequently support expenses previously in the charge of companies, in the same way Uber drivers or food delivery riders support significant expenses for the purchase and maintenance of work equipment, think of fuel costs, insurance and maintenance of means of transport.

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<sup>69</sup> Eurofound and the International Labour Office, *Working anytime, anywhere: The effects on the world of work*, Publications Office of the European Union and the International Labour Office, Luxembourg-Geneva, 2017, available at <http://eurofound.link/ef1658>.

<sup>70</sup> In Marx K., *Das Kapital. Kritik der politischen Ökonomie, Erster Band. Buch I: Der Produktionsprozess des Kapitals*, Otto Meissner, Hamburg, 1867, the Author explains the role of technological innovation in the configuration and reconfiguration of production relations. Check also Bolchini P., *L'innovazione in Marx e Shumpeter*, in *Quaderni di storia dell'economia politica*, 2, 1/2, 1984, 41-64.

<sup>71</sup> Srnicek N., *Platform Capitalism*, Polity Press, United Kingdom, 2016, p. 14 ff.

<sup>72</sup> Aloisi A., De Stefano V., *European Legal framework for digital labour platforms*, Publications Office of the European Union, Luxembourg, 2018.

<sup>73</sup> Constant capital indicates the entrepreneur's expenditure on raw materials and the cost of depreciation on fixed capital. In essence, it represents the sum of all the non-labour costs incurred by the capitalists to produce the goods.

<sup>74</sup> Todoli-Signes A., *The "gig economy": employee, self-employed or the need for a special employment regulation?*, in *Transfer*, 23, 2, 2017, 193-205.

Through these business practices, economic operators significantly reduce the cost of labour, they can keep prices for final consumers within minimum levels and they are also able to effort wide-ranging exogenous shocks.<sup>75</sup>

As anticipated, participation costs are influenced by the other four variables identified in this study. As mentioned in part, the amount of remuneration and the criterion adopted by the platform to measure the consideration to be paid for carrying out a specific job can increase the time and effort required to generate a certain income. Furthermore, the criterion for measuring the remuneration of the work activity can involve a perennial condition of economic uncertainty and increase the exposure of the worker to the specific health and safety hazards for a given activity, as are the dangers for safety road in the case of riders. Workers paid by the piece have irregular economic income and tend to speed up the execution of individual services to maximize the income received over a certain period, implementing opportunistic behaviours even to the detriment of their well-being and safety, such as self-exploitation conducts and the violation of the rules of the highway code.<sup>76</sup>

Also the *potential benefits* and the usability of the same, therefore, the transferability and accumulation of the capital forms acquired through the platform work, can affect the participation costs since the volumes of work that will be assigned to the worker by the users depend on them, the transferability and accumulation of the forms of capital acquired through the platform work can affect the participation costs since the volumes of work that will be assigned to the worker by the users of the platform (i.e. Booking, Superprof) or by the platform itself (i.e. food delivery).

Likewise, the mechanism in charge of the earning opportunities allocation among the workers connected to the platform can influence the costs of participation. This can occur because, as already explained above in para. 3.2., the hybrid, reward and punitive logic of this mechanism can favour the maintenance of the remuneration paid to workers at a minimum levels and consequently increase, the time required to generate a certain income, but it can also increase any risks to the health and safety of the worker related to the material execution of the work performance; moreover, the system for the earning opportunities allocation may require the completion of activities that involve a waste of time, energy and economic costs, even if they are outside the main work performance and which do not meet an economic consideration by the client (it may coincide with the central actor or be one of the users involved in the plurilateral intermediation of the platform). We know for example that riders are sometimes required to move within the work area covered by the delivery service to facilitate operation of the performance assignment mechanism, which also takes into consideration the satellite location of the worker (so-called geo-location), and with the undeclared aim of improving the efficiency and quality of the overall service sold by the platform.

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<sup>75</sup> Chicchi F., Frapporti M., Marrone M., Pirone M., nt. (45).

<sup>76</sup> On this topic see: Papakostopoulos V., Nathanel D., *The Complex Interrelationship of Work-Related Factors Underlying Risky Driving Behavior of Food Delivery Riders in Athens, Greece*, in *Safety and health at work*, 12, 2, 2021, 147-153; Kudasz F., Liddle M., Makowski K., Schmitz-Felten E., *Delivery and dispatch riders' safety and health: a European review of good practice guidelines*, European Agency for Safety and Health at Work, Luxembourg, 2011; Christie N., Ward H., *The health and safety risks for people who drive for work in the gig economy*, in *Journal of Transport & Health*, 3, 2019, 115-127.

Even the work fragmentation can affect the participation costs incurred by the worker since it makes discontinuous income increasing the organizational efforts and the bureaucratic requirements placed on the workers. For these reasons, in our opinion, when we discuss the effects of the platform model on transaction costs, we need to talk about a *restoration* process rather than a simple *decrease*<sup>77</sup> since the digital infrastructure reduces those transaction costs that hinder the activity of the central actor but, on the other hand, creates new transaction costs for the workers that can be an indirect and undesirable effect of the reduction of the former, as in the case of complex bureaucratic formalities that have been transferred from the company to the workers<sup>78</sup> or, alternatively, a direct and desired effect of the functioning of the digital infrastructure, as in the case of the immobility of digital reputation of the platform worker (check *supra* 3.2.).

#### 4. Some conclusions.

The digital transformation represents a new test for the quality of work<sup>79</sup> and could result in a further increase in poverty despite labour, economic dependence and, therefore, inequalities in our society.

This article proves the economic profile of the platform workers' working conditions is a complex issue, marked by multiple variables, and dimensions, as well as by the reciprocal connections existing between them.

The five variables identified through this study as decisive for the earning capacity of these workers express some of the many challenges imposed by the digital intermediation of employment relationships on the legal system, and on the regulatory side.

The *remuneration system* variable indicates the extent, frequency and criterion adopted for measuring the economic transfers arranged by the central actor for the benefit of the workers. Regarding the remuneration system, central issues arise for labour law, relating to the remuneration institution and the quantum of the remuneration of which, above all, compliance with the standards defined by collective bargaining, as well as the proportionality to the quantity and quality of the work performed. Certainly, these are known problems, which refer to the debate concerning the possibility of introducing a legal minimum wage and the effects that this measure could produce.

The *potential benefits* indicate those forms of capital that the platform worker can acquire during his business and that can be used to strengthen his position in the market. An emerging problem regarding the potential benefits concerns the usability by workers of these forms of capital - discussed here with particular referred to the reputational profiling techniques widespread within the platform economy and the reputational capital of the worker - and the effects produced on the real economic profile of working conditions; these forms of capital influence the volumes of work assigned to the worker, the ability to

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<sup>77</sup> Cf. Del Prato F., Stagnaro C., *Take it easy, rider! Perché la flessibilità dei lavoretti è un valore e non un limite*, in *IBL Briefing Paper*, 167, 2018.

<sup>78</sup> Ichino P., *Diritto del lavoro e innovazione tecnologica*, in *Rivista Italiana di Diritto del Lavoro*, 4, 2017, 525-563.

<sup>79</sup> Arcidiacono D., Pais I., Piccitto G., nt. (15).

successfully deal with employment transitions and can also incentivize/dissuade work in a multi-client regime, consequently affecting the spread of economic dependence between the platform workers.

As regards the mechanism set up for the earning opportunities distribution among workers, they were discussed two distinct operating hypotheses and their implications. These mechanisms can take on a hybrid connotation, that is at the same time rewarding and punitive, or, otherwise, they can take on a neutral one.

When the mechanism is based on a competitive criterion for the distribution of a finished good, and so the resources allocation to workers who have been judged as “best” entails a subtraction of the same from those who have a “worst” assessment, it will be defined hybrid. Such a system can create a stable and effective confirmative pressure on the behaviour of workers that will depend on the person's need for work, aligning them with company expectations, and exerting downward pressure on workers' remuneration. Workers who have the power to self-determine their rates and who receive the tasks to be performed directly by their customers will be induced to the exasperated contraction of the same to acquire a competitive advantage over their competitors, while workers with opposite characteristics will be forced to an indiscriminate acceptance of the positions proposed by the central actor, even if completely inconvenient in economic terms, for fear of incurring a reduction in future earning opportunities.

The fourth variable, labour fragmentation, emerges from the excessive extension of the margins granted by the legal system to the private autonomy of companies.<sup>80</sup> These margins allow a multidimensional breakdown of the employment relationship, which may concern the legal-contractual and/or remuneration profile or the internal temporality of the employment relationship. Each of these declinations of the fragmentation of work affects, albeit in various ways, the economic profile of working conditions. For example, the appearance of unpaid work windows may occur within the employment relationship, or the earning capacity of the workers may arise within a predetermined, restricted, and rigid number of hours per week.

The participation costs associated with carrying out a particular work activity represent the last variable taken into consideration and are closely connected with the configuration of the other four variables. Regarding those participation costs that are subject to a clear economic quantification, these are costs deriving from the increasingly widespread practice in the various forms of remote work that we are learning to know, of transferring the economic risk of the company borne by workers through recourse to piecework pay systems and with the displacement of the economic burdens of constant capital. Such entrepreneurial practices can be understood as a direct expression of the reconfiguration of the power relationship between the factors of production resulting from the most recent applications of technological innovation to employment relationships, an already structural phenomenon in platform work that could also expand to telework with the risk of a significant reduction in the real earning capacity of workers.

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<sup>80</sup> Baccaro L., Howell C., *Trajectories of neoliberal transformations*, Cambridge University Press, Cambridge, 2017.

## 5. Next lines of research.

The complexity of the proposed framework excludes that the real economic profile of working conditions can be effectively improved through a single intervention concentrated on the purely economic component, such as the introduction of a *minimum wage*, instead diversified, multidimensional interventions are needed and complementary.

The inclusive digitization promotion requires an inevitable institutional adaptation<sup>81</sup> and, therefore, a careful reflection on the “need for permanence and renewal of the legal institutions of capitalism in the contemporary evolutionary scenario”,<sup>82</sup> which - at least with reference to the topic discussed here - could be tackled starting from the set of variables proposed by us. Acting effectively on the economic profile of the working conditions of platform workers means: (i) reducing the risk of falling into working poverty, through the introduction of a legal minimum wage, downsizing the private autonomy of contractors in terms of paperwork and remuneration, as well as through measures that prevent the transfer of business risk to workers and/or that compensate for the material effects of these products;<sup>83</sup> (ii) mitigating the spread of economic dependence by facilitating work in a multi-client regime, starting with the introduction of a legal framework of the dynamics of construction, recognition and conservation of the reputational capital of workers that ensures its usability;<sup>84</sup> (iii) introducing suitable institutions to support workers during intra-sectoral occupational transitions.<sup>85</sup>

By adequately facing these intervention objectives the “trap effect” could be reduced<sup>86</sup> inherent in these new-born forms of work and transform them, instead, acting as a springboard for a progressive social and work integration of people, especially concerning vulnerable categories placed on the margins of the labour market.<sup>87</sup>

Although the scientific and political debate has been going on for more than five years now, the macro-issues concerning work on digital platforms are still on the table today. The labour markets of the platform economy continue to procrastinate in a state of profound deregulation and a considerable part of the internal processes of digital infrastructures continue to take place opaque and be entrusted to the “private regulation” of economic operators. We also see this situation in relation to location-based and labour-intensive platform work which undoubtedly represents the most well-known, regulated, and unionized portion of the phenomenon. Therefore, there is still an urgent need for profitable synergies

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<sup>81</sup> Neufeind M., Ranft F., O'Railly J., nt. (3), 543.

<sup>82</sup> Lyon-Caen G., *Permanenza e rinnovamento del diritto del lavoro in una economia globalizzata*, in *Lavoro e Diritto*, 2, 2004, 257-265.

<sup>83</sup> Todoli-Signes A., nt. (74); Bano F., *Il lavoro povero nell'economia digitale*, in *Lavoro e Diritto*, 1, 2019, 129-148.

<sup>84</sup> Aloisi A., De Stefano V., nt. (72); Di Cataldo L., nt. (51);

<sup>85</sup> Casano L., *Contributo all'analisi giuridica dei mercati transizionali del lavoro*, Adapt University Press, Bologna, 2020.

<sup>86</sup> We talk about the “trap effect” because these forms of work, on the one hand, allow people to overcome a condition of extreme economic and social fragility but, on the other, do not allow them to accrue income and skills that are indispensable for relocating to the labour market.

<sup>87</sup> Gil Garcia J., nt. (3); Lam L., Triandafylidou A., *An unlikely stepping stone? Exploring how platform work shapes newcomer migrant integration*, in *Transitions: Journal of Transient Migration*, 5, 1, 2021, 11-29.

between the academic world and legal professionals engaged in various capacities in the attempt to govern the ongoing metamorphosis, through legislative processes, the industrial relations system, and the administration of justice.

From this perspective, scientific research should aim at proposing reconstructions of economic and work processes mediated by digital infrastructures that highlight the distance present between social facts, for example the concrete types of work that have emerged in the context of digital transformation, and the multilevel system, that is the complex of legal institutions of capitalism responsible for the reconciliation between opposing needs such as the protection of the person who works and the economic interest of companies.<sup>88</sup> Regarding the wide examination in these pages, it is necessary to understand how a possible condition of legal under-protection can translate into a condition of economic dependence, uncertainty and poverty<sup>89</sup> so marked as to jeopardize the enjoyment of full citizenship<sup>90</sup> to resolve and prevent any «cumulative disadvantage situations».<sup>91</sup>

With the hope of providing a further stimulus to the formation of the synergies, we propose some research guidelines starting from the variables identified in this study. Certainly, future research should experiment with methodologies and techniques that make it possible to evaluate the impact of the production paradigm embodied by digital platforms on the quality of labour front and the economic profile of working conditions, taking into consideration both the multidimensional and complex character of this profile, both the irreducible polymorphism of the platform model and the forms of work present within it.

In this sense, it could be useful to elaborate a theoretical framework, which inserts the set of variables presented on this occasion. A theoretical framework could allow the analysis of the economic profile of the working conditions in a comparative key – making comparisons both between platforms of the same sector, both between platforms that are located in different areas of the platform economy (capital-intensive, human-capital-intensive, labour-intensive) – as well as in an inter- and trans-disciplinary key,<sup>92</sup> cultivating the relationships of complementarity, integration and interaction between different disciplinary fields that share research themes and objectives. Such a framework should certainly pay more attention to the mutual connections between the variables considered, as well as to the implications that the connotation of the relationship between the platform and the worker could have on the determination of the variables presented by us and, consequently, on the economic profile. working conditions.

The second line of research, mainly policy-oriented, could aim at identifying the emerging problems in relation to the five variables proposed by us and the corresponding regulatory

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<sup>88</sup> Perulli A., *Lavoro e tecnica ai tempi di Uber*, in *Rivista Giuridica del Lavoro e della Previdenza Sociale*, 2, 2017;

<sup>89</sup> Bano F., nt. (83).

<sup>90</sup> Marchi G., “*Working, yet poor*”: *la povertà tra bassi salari e instabilità lavorativa*, in *Sociologia del lavoro*, 161, 2021, 54-72.

<sup>91</sup> Arcidiacono D., Pais I., Piccitto G., nt. (15).

<sup>92</sup> Piaget J., *L'épistémologie des relations interdisciplinaires*, in CERI-Centre pour la Recherche et l'Innovation dans l'Enseignement (eds.), *L'interdisciplinarité: problèmes d'enseignement et de recherche dans les universités. Séminaire sur l'interdisciplinarité dans l'Université organisé par le CERI avec la collaboration du Ministère Français de l'Éducation nationale à l'Université de Nice (France) du 7 au 12 septembre 1970*, OCDE, Paris, 1972; Nicolescu B., *Transdisciplinarity - Past, Present and Future*, CETRANS – Centro de Educacao Transdisciplinar, 2006.

deficiencies, to favour the design of diversified and coherent regulatory interventions, suitable for strengthening the people to generate income by operating on digital platforms.

These seem to be the methodological and cognitive challenges for the social sciences engaged in the attempt to compose a reconstruction of the processes underlying the economic devaluation of labour in the context of contemporary capitalism and to elaborate appropriate legal solutions.