

A Variegated Platform Capitalism? Algorithms, Labour Process and Institutions in Deliveroo in Bologna and Uber in Lisbon



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1 Introduction

There are few doubts that platformisation is inherently a global phenomenon. Despite being just the last episode of a longer process, the possibilities provided by digital technologies have brought global economic dynamics to an unprecedented level of inter-connectivity. Digital platforms have not only been able to *stick* across the different *global cities*, but they have also expanded across urban economies entangling both formal and informal sectors. It may be delivering pizza, driving passengers or domestic work, the algorithm management has been able to create an unprecedented labour process that seems to adapt to multiple contexts with very little differences. However, this does not mean that local specificities have disappeared. Existing empirical literature has also emphasised the crucial role of local factors in addressing business model, labour conditions, market dynamics and regulatory principles. Very little on the other hand has been written about how they co-operate to determine the normative dimension in which the labour process takes place and, ultimately, to what are the factors lying behind the uneven development of platform capitalism.

This paper aims to fill this gap by adopting the lens of *variegated platform capitalism*. Drawing from the contribution of Peck and Theodore on *variegated capitalism* we will provide a more nuanced view where the *uneven development* of platform capitalism is not simply a result of local resistance to global challenges but is of co-constitution/co-evolution dynamics happening among institutional and non-institutional actors at both global and local level. This approach will be empirically tested by adopting a *following the algorithm* methodology, which means conducting multi-situated research to look at how this transform across time, contexts and sectors.

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This implies a view on algorithms where this is not merely a technical object, neutrally corresponding to the necessities of platforms, but is itself a terrain of struggle that can be influenced by power relations, new regulations, and institutional behaviours. In this context, following the algorithm means investigating the way in which the labour process has transformed to understand the genesis of those changes, the logics governing them and their impact in terms of working conditions and workforce composition.

The cases considered here are those of Deliveroo in Bologna and Uber in Lisbon. They are two logistical platforms—transporting goods and people—operating in two southern European countries and in both cases have been exposed to regulation attempts. Yet we can find different outcomes that did not remain as local adaptations but became new standards at global level. By looking at both similarities and differences, while on one hand we will conclude that institution still matters, on the other we will insist on the necessity to move on a more nuanced view that gives relevance to the role played by co-constitutive and co-evolutive transurban dynamics in addressing the uneven development of platform capitalism.

2 Think Global, Work Local. Towards a Variegated Platformisation?

There are very few doubts that digital platforms are the protagonists of a «truly transnational phenomena» (Cuppini et al., 2022). They operate on an unprecedented scale, providing whatever goods and services, on site and on remote, across both *west and the rest*. As argued by Peck & Philips, platforms characterise the «conjuncture» we are living being «variegated and conjunctural form(ation), insinuated as it is into everyday life and various (de)regulatory settlements, while at the same time residing in the ethereal space of the “cloud”» (Peck & Philips, 2020). Critical scholars have also highlighted the relationship this formation has with long-term processes of neoliberal globalisation, perceiving it as both cause and consequence of a further acceleration of its extractivist tendencies (Srnicsek, 2016; Mezzadra & Neilson, 2019). Others have stressed the role of technological developments is often seen as the responsibility of a disruptive innovation that is making the platform the protagonist of a «digital globalization» (Baldwin, 2016; McKinsey & Company, 2016). Effectively, digital technologies such as the algorithms allow unprecedented organisation possibilities, i.e. to apply similar principles of «algorithmic management» in very different contexts (Stark & Pais, 2020). The global nature of platform capitalism is even more evident if we look at their ability to expand the notion of extraction beyond traditional working spaces, including the more general social cooperation happening at global level (Casilli, 2019; Mezzadra & Neilson, 2019).

At the same time, this does not mean that territorial context and institutions do not matter anymore. Empirical studies have in fact shown how even local institutions can play a key role in addressing platform development (Mazur & Serafin, 2023;

Muszynski, Pulignano, & Marà, 2022). The global mobilisation of riders and drivers have stimulated an intense law-making process on urban, national and international level that has diversified the labour process, market dynamics and the functioning of algorithms (Graham & Woodcock, 2018). Moreover, local context may also address contingent agency, fostering practices of counter-use of the algorithm or the availability of BOT able to circumvent algorithmic control (Shalini & Bathini, 2021; Sun & Chen, 2021). In other cases, the specificity of local context has also supported the development of digital platforms, as in the case of *Prop 22* where a mobilisation led by digital platforms has stopped the attempt to regulate the sectors conducted by California's government (Ovetz, 2022). These episodes show that local cultures and institutions have not been erased by the global spread of platforms but are still exercising their influence.

However, the existing literature has already focussed on the role of both global and local factors in addressing platform capitalism development. But what about the relationship between them? How do they influence each other? In which way do they operate in imprinting the trajectories of development? To answer these questions, it is firstly necessary to position the object of our research—the uneven development of platform capitalism—at an appropriate level of historical depth. We are not the first ones interrogating these questions. A significant stream of literature has in fact developed among those challenging the view of globalisation as a «strong discourse» (Fukuyama, 2006; Ohmae, 1995). More than a global capitalism, these authors have highlighted the emerging of a plural scenario, characterised by national capitalisms and welfare state models—typically USA, Germany, Britain and Japan—in constant competition with each other (Albert, 1991; Berger & Dore, 1996; Hall & Soskice, 2001). This view has been largely influential across the different disciplines, from political sciences to industrial relations (Baccaro & Howell, 2011; Meardi et al., 2009), challenging the mainstream view on the «end of history» and providing an *alternative plan* such as that of the variety of capitalism.

Despite the merits Peck and Theodore (2007) recognise to this stream of literature, this does not mean that it does not present distortion and limitations. For example, the attempt to explore the rationality of economic actors has in some cases given emphasis to «excessively narrow, firm-centric and rational-action models of variation» (Peck & Theodore, 2007, p. 743). The introduction of geographical variability has almost uniquely been translated in national archetypes, where the coherence of national regulatory configurations is often assumed rather than empirically demonstrated. A very typical example is the dualism between the German ordoliberal model and the American neoliberal one, often perceived as the two-sides of the variety spectrum. The result is a privileged understanding of the variation of capitalism available in the North Atlantic, while the rest of the world—with the notable exception of Japan's Toyotism—has largely been neglected by these studies. The problem, however, is not simply the exclusion of the largest of the world, but it is that of underestimating the role of more radical path-altering changes dynamics.

There is enough then for Peck and Theodore (2007) to ask whether the variety approach is still an appropriate way to comprehend the uneven development of capitalism. While it seems useful to maintain a view where *institutions matter*, it

is necessary to expand the understanding of institutions we found in the variety approach. This, for example, by adopting a more varied and multiscalar view—briefly synthesised below (Table 1)—it seems necessary to develop a more dynamic understanding of capitalism where spaces and scales are also a construct of the cycles of values. What is called with the variegated hypothesis is a more nuanced analysis of temporality and spatiality of capitalist development including hybrid forms of restructuring that usually escape from formalised, system-centric analyses. In a nutshell, variegated capitalism means:

«moving beyond the routine pluralization of capitalism, and the alternating proliferation and pruning of a reified set of ‘models’, to probe the principles, sources and dimensions of capitalist variegation, understood as a more explicitly relational conception of variety. In other words, it means coming to terms with the causes and forms of capitalism’s dynamics polymorphism [...] holding together questions relating to the uneven development of capitalism and co-constitutive/co-evolving forms of institutional restructuring» (Peck & Theodore, 2007, pp. 760–764).

A possible support in understanding this dimension comes from the *transurban* approach developed by Cuppini, Frapporti and Pirone (2020) that one may therefore say being in line with the critiques moved by Peck and Theodore on the variety of capitalism. By investigating a long-term historical development of platform capitalist regime, they highlight how: «it is not possible to separate an analysis of industrialization processes, technical innovations and labour transformations from the environment in which they develop, the spatial configuration they create and interact with, that is to say (in this case) from the urban» (Cuppini et al., 2022). Moving from a world-ecology perspective, they stress how the global ubiquity of digital platforms does not come from nowhere it is part—and at the same time a result—of a common logic of accumulation: «from Venice to Amsterdam, from London to New York, cities used to represent the logistical and financial heart of the world-systems. These cities were laboratories of forms of coexistence and conflicts, miniaturised worlds». In looking at capitalist development through this lens they underline how logistics and platforms are then not simply economic factors but are «crucial vectors» for the continuous and ongoing mutations of the spatial dimension revealing «how local and situated peculiarities and frictions generate variations in the global operations of capital» (Cuppini et al., 2022).

3 Methodology: *Following the Algorithm Hypothesis*

How can the inputs coming from the abovementioned debate be methodologically translated? How can this hypothesis be empirically tested? How can these lenses be useful in understanding commonalities and differences of single case studies? To confront the ongoing stimulus coming from the ground and to adapt the research to different geographical contexts, we have opted for a methodological framework inspired by multi-sited ethnography. According to George Marcus (1995), when investigating an object of study, the multi-sited approach goes beyond the intensive

Table 1 Variety and variegated capitalism

	Varieties of capitalism	Variegated capitalism
Problematic	Understanding institutional variability among advanced capitalist economies	Explicating processes and forms of uneven development within, and beyond, late capitalism
Case study rationale	Comparative cases positioned relative to the privileged axis of FLME < - > CME	Individual cases selected according to their theoretically generative properties
Method	Tendency for parsimonious institutional political economy with strong rational-choice component; ideal-typical theorizing; reliance on secondary sources and game-theoretic procedures	Relatively ecumenical institutional/cultural political economy, elaborated through qualitative case studies; post-positivist theorizing; inclination to urban and regional analysis; rejection of methodological individualism
Privileged agents	Firms, business associations, and policy entrepreneurs	Agents generally afforded relatively weak analytical status, as bearers of prevailing modes of restructuring or nascent forms of resistance; agents embedded in constitutive network relations
Analytical gaze	Privileging of national institutional archetypes and relatively bounded national economies; emphasis on lead firms, dominant industries, and formal institutions	Emphasis on decisive moments of economic transformation and institutional restructuring; real-time analysis of regulatory projects and experiments in the organization of production; multi-scalarity
Temporal dynamics	Presumption of equilibrium within selected institutional fields (absent exogenous shocks); emphasis on relative stability, incremental change reinforcing institutional settlements, punctuated by occasional disruptions	Dynamic analysis, concern with endemic restructuring; presumption of disequilibrium and persistent crisis-proneness
Scalar dynamics	Methodological nationalism; presumption of high degrees of endogenous institutional coherence and a unified national-economic space; super-modularity registered at the national scale	Social construction and relativization of scale; potential for super-modularity and conjunctural effects at multiple spatial scales (eg, 'locality effects'); concern with multi-scalarity (eg, 'glocal' hybrids and cross-scalar networks)
Historical trajectory	Dual convergence or 'twin peaks'; static-comparative analysis of archetypal development models	Combined and uneven development; embrace of contingency; rejection of the necessity of either convergence or divergence; concern with path-shaping and path-altering change

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Table 1 (continued)

	Varieties of capitalism	Variegated capitalism
Typical levels of abstraction	Micro-analytic accounts of firm behavior embedded within meso-level institutional architectures	Meso-analytic interpretations of relatively concrete institutional conjunctures located within unevenly developed (capitalist) system
Normative project	Defense of European- and Japanese-style social democracy and corporatist regimes; concern to explicate non-neoliberal modes of development	Revealing internal contradictions of neoliberal globalization; identification and promotion of alternative (and/or progressive) forms of local development

Source Peck and Theodore (2007, p. 763)

analysis of a single location; rather, becomes pivotal *following* the object (which could be a person, an idea, an artefact, etc.) around a multiplicity of spaces. Our challenging proposal here is to *follow the algorithm*, that is, looking at its logic and the tensions emerging in the specific socio-institutional settlement contexts where digital platforms operate. The idea is that algorithms are not space-temporally *flat* and are not completely impermeable to (or, maybe, indifferent to) the context. We already know, in fact, how this can be crucially affected by local institutions and regulations, but also how this is able to circumvent them by multiplying—instead of reducing—informal spaces and dynamics. At the same time, this embodies its adaptation and is also able to transform local experiments into new global standards of labour process. In this perspective, the multi-sited approach does not only allow us to give operability to the variegated capitalism approach but allows us to investigate the crisps emerging among the extractive feature of platform work empirically investigated here.

This contribution considers the operations of food delivery and ride-hailing digital platforms in two cities, respectively Deliveroo in Bologna (Italy) and Uber in Lisbon (Portugal). We are aware of the risks about the comparison between different contexts, with different administrative and legislative arrangements: Bologna is the regional capital of Emilia-Romagna (an Italian region), while Lisbon is the Capital city of Portugal. However, both cities have in common at least a number of elements. To begin with, they do not hold direct competencies in the field of labour regulation, since it is under the State authority. Secondly, in Bologna and Lisbon the platform economy has experienced an imperious growth, with disruptive effects on the urban economy and the sectors concerned: food delivery and short-term house rental in Bologna; food delivery, ride-hailing and short-term house sectors in Lisbon. Third, over the past decade both cities have embarked on becoming major technology hubs: in this regard, Lisbon has become a favoured destination as the headquarters of major ICTs multinational companies, while Bologna since 2010 is the seat of one of the major technopole in Italy. The interest of the city of Bologna for becoming a major technological capital has been confirmed with the opening of its Data Center in mid-2022, hosting the supercomputer Atos employed by the European Center for Medium Range Weather Forecast. On the other hand, the platform labour process

of Uber and Deliveroo also presents differences and similarities. They differ in the level of engagement required by workers facing the costs of maintenance of a car, and, related, on the worker composition. However, we also see relevant similarities, in the functioning of algorithmic management and in the relationship they have with the urban context in which they operate. In a wide sense, they are both *logistical* platforms, transporting goods and people around the city as fast the algorithm can push them. Moreover, riders and drivers are two of the main subjectivities that distinguish them from the rest of platform workers for the ability to organise and (partially) achieve successful outcomes such as new regulations of the sector.

The data considered here comes from the semi-structured interviews conducted among workers of these platforms on the impact of digitalisation in the labour process. As represented in Table 2, in the case of Deliveroo in Bologna 15 interviews have been collected among workers with different characteristics. In the case of Uber in Lisbon, 15 interviews have been conducted with drivers (Table 3). In both cases the sample was chosen trying to be as representative as possible based on socio-demographic characteristics. In the following pages the two case studies will be presented highlighting the transformation occurring in the labour process, the factors determining it, the impact this has had on workforce composition and in working condition, enhancing the ability of platforms must adapt and transform possible obstacles into a new terrain of development.

4 Delivering the City of Food: The Case of Deliveroo in Bologna

Deliveroo in Bologna arrived in 2017, when the city was already known as the *City of Food*. This was the city brand adopted by the local government to carve out a space for Italy's traditional tourists offering an experience in one of the gastronomic capital of the country. This was successful in increasing the number of tourists in the city, but also in promoting local business, even financing a local food delivery Start-up named *Sgnam*.¹ Bologna is also well known for being the place of one of the oldest universities in the world and this brings thousands of students to the city each year. Considering the cultural attitude of the city, the growth of the local economy—the *Camera di Commercio* in Bologna has been calculated that Bologna has a bar and a restaurant each 37 inhabitants²—and the large availability of the student workforce, it is not surprising the rapid popularity Deliveroo has achieved in the city.

Initially, in fact, Deliveroo has recruited most of the workforce among students who are historically inclined to *gig jobs*: «with Deliveroo you could decide whether to work, so if you need to study you could decide to not go, which is something

¹ For more details see Marrone and Peterlongo (2020).

² Information retrieved from (Last Access 19/01/2023): https://bologna.repubblica.it/cronaca/2017/10/25/news/l_invasione_del_cibo_a_bologna_un_ristorante_o_un_bar_ogni_37_abitanti_del_centro-179237419/.

Table 2 Table of interviews for Deliveroo (Bologna)

Name	Age	Average income	Education	Nationality	Income source	Platform working experience (months)	Average working hours (monthly)	Employment relations
DeLBo_F_1	24	1.000	Professional	Italian	Main	12	360	Occasional employment (independent contractor)
DeLBo_F_2	26	N/A	Bachelor	Italian	Secondary	24	40	Occasional employment (independent contractor)
DeLBoM1	27	900	Bachelor	Italian	Secondary	36	100	Occasional employment (independent contractor)
DeLBo_M_2	27	400	Master's Degree	Italian	Secondary	24	80	Occasional employment (independent contractor)
DeLBo_M_3	26	N/A	Bachelor	Italian	Secondary	12	60	Occasional employment (independent contractor)
DeLBo_M_4	31	N/A	Master's Degree	Italian	Secondary	18	120	Occasional employment (independent contractor)

(continued)

Table 2 (continued)

Name	Age	Average income	Education	Nationality	Income source	Platform working experience (months)	Average working hours (monthly)	Employment relations
DeL_Bo_M_5	21	N/A	Secondary	Italian	Secondary	1	N/A	Occasional employment (independent contractor)
DeL_Bo_M_6	24	400	Bachelor	Italian	Secondary	12	80	Occasional employment (independent contractor)
DeL_Bo_M_7	26	500	Bachelor	Italian	Secondary	18	80	Occasional employment (independent contractor)
DeL_Bo_M_8	20	800	Secondary	Italian	Secondary	24	80	Occasional employment (independent contractor)
DeL_Bo_M_9	N/A	1,400	Professional	Pakistani	Primary	N/A	N/A	Registered self-employed (P.IVA)
DeL_Bo_M_10	N/A	600	N/A	Pakistani	Primary	N/A	N/A	Registered self-employed (P.IVA)

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Table 2 (continued)

Name	Age	Average income	Education	Nationality	Income source	Platform working experience (months)	Average working hours (monthly)	Employment relations
DeIBoMil	N/A	N/A	Professional	Pakistani	Primary	N/A	N/A	Registered self-employed (P.IVA)
DeI_Bo_M_12	22	N/A	Bachelor	Italian	Secondary	36	90	Occasional employment (independent contractor)

Table 3 Table of interviews for Uber (Lisbon)

Name	Age	Average income	Education	Nationality	Income source	Platform working experience (in months)	Average working hours (monthly)	Employment relations
Uber_M_Li_1	34	2.000	N/A	Portugues	Multitapping	30	240	TVDE owner
Uber_F_Li_2	N/A	800	N/A	Brazilian	N/A	N/A	160	TVDE employee
Uber_M_Li_3	N/A	800	N/A	Portugues	Multitapping	36	200	TVDE owner
Uber_M_Li_4	51	1500	N/A	Portogues	Multitapping and outside platform	N/A	180	Freelance/self employed
Uber_M_Li_5	39	N/A	N/A	Brazilian	Multitapping and outside platform	12	180	Freelance/self employed
Uber_M_Li_6	N/A	N/A	N/A	Brazilian	Multitapping	N/A	N/A	TVDE employee
Uber_M_Li_7	N/A	N/A	N/A	Brazilian	N/A	N/A	600	TVDE employee
Uber_M_Li_8	N/A	N/A	N/A	Portugues	Outside digital platforms	48	N/A	TVDE owner
Uber_M_Li_9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Uber_M_Li_10	40	1000	10 ano	Portugues/Soto mean	NO	36	200	TVDE employee
Uber_M_Li_11	42	N/A	Bachelor	Portugues	N/A	45	N/A	TVDE owner
Uber_M_Li_12	45	600 (post-covid)	N/A	Portugues	No	36	200	TVDE owner
Uber_M_Li_13	44	N/A	Bachelor	Portugues	Both outside and on other digital platforms	36	N/A	TVDE owner

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Table 3 (continued)

Name	Age	Average income	Education	Nationality	Income source	Platform working experience (in months)	Average working hours (monthly)	Employment relations
Uber_M_Li_14	28	N/A	Bachelor	Portugues	Both outside and on other digital platfbrms	14	240	TVDE owner
Uber_M_Li_L_5	38	N/A	Bachelor	Purtugues	On other similar platfbrms	54	N/A	TVDE owner

you can't do if you work in a restaurant for example" (Del_Bo_M_5)». To form their *fleet*—as the workforce is named in the platform language—they also initially provided an hourly wage «of nearly 7 euros per hour, but since there were very few orders, if you were lucky by not receiving orders you could also take them without setting a foot outside the house» (Del_Bo_M_2). A common opinion among long-lasting riders is that things have also changed quite a lot in these years in terms of salary, shift-duration, the distance of the delivery, the functioning of the bonus rewarding system, the time spent waiting in front of restaurant increased and, finally, the composition of the workforce, with migrant workers gradually taking the place of students. Working conditions seem to have worsened in relation to the expansion of Deliveroo in the city, incorporating new customers and restaurants to serve on one hand and reducing payment to workers on the other. More specifically, after introducing a bonus for each delivery, gradually the hourly wage disappeared in favour of a piecework payment system: «Initially they were not paying badly, it is after they started to dominate the city that things became unsustainable» (Del_Bo_M_2). From the workers' perspective then, the expansion of Deliveroo in the city did not correspond to better working conditions, but impoverished their wages and intensified the labour process. For example, by extending the delivery distance—initially limited to the city centre and now reaching the suburbs of the city—and expanding working shifts that have reached most of the day. The complications of the expansion of Deliveroo have also been stressed by women workers, who in many cases face the difficulty of biking in the middle of the night on unsafe streets: «I prefer to avoid deliveries when I see they are too far or in places of the city I don't like. Even if they are paid well, I don't care, I don't want to take the risk of delivering the pizza to someone living on the other side of the moon» (Del_Bo_F_2).

However, a crucial breaking point in the worsening of rider conditions has been the signing of a collective agreement between Deliveroo and the far-right union *UGL-Rider*. Paradoxically, this agreement was the attempt to circumvent the effects of the «Rider Law»—L. 128/2019 approved by the Italian parliament in November 2019—whose intent was that of promoting collective bargaining allowing the possibility to downsize working conditions. The network *RiderXiDiritti*—including both traditional and informal unions operating in the Italian food delivery sector—has accused this agreement to maintain the status quo, especially the self-employment status of workers and the piecework payment system, keep worsening wages and working conditions. Significantly, the initiative of the national government was influenced by the approval by the city council of Bologna of the *Bill of Rights of Digital Workers in Urban Context* (Bologna City Council, 2019). This has been one of the first agreements in this sector and emerged at local level with the city administration favouring a dialogue between Riders Union Bologna and the local delivery platform *Sgnam*. Nonetheless, its normative implementation was quite ineffective and only applied to those voluntarily signing the bill, therefore it did not apply to Deliveroo that never agreed to the initiative. Despite this, it had a great impact in making riders' demand visible, ensuring a wide media coverage and attracting the interest of national policymakers.

Nonetheless, the agreement did not simply maintain the status quo, but allowed Deliveroo to intensify its extractive tendencies. On the workers' side, this corresponded to even more intense and continuous performances and to an increase of platform demands. This is the case of a set of skills that have interestingly emerged only after excavating their working experiences. In almost all cases, riders perceive their work as «mechanical» (Del_Bo_M_8), requiring «any particular skills» (Del_Bo_M_11) which can be done by «almost everyone» (Del_Bo_M_3) or at least by all those «having a smartphone and a bike» (Del_Bo_M_11). It is just after excavating the interviews that have emerged the amount of (informal) skills demanded by the platform. For example, the knowledge of the city—the safest streets to take or the restaurants to avoid because they are usually very busy—how to repair a bike in case of an injury; or how to deal with customers and restaurants to avoid the risk of being fired: «If you have a problem, they provide very little support. You have a chat, but it is you who must deal with the customer or with the restaurant» (Del_Bo_M_1).

The intensification of extractive processes not only regarded workers' skills, but also their “capital” investments. In the case of Deliveroo this has regarded new and more efficient bikes, such as the electric bikes that have increasingly become common among Bologna's riders: «if you see many of us all have electric bikes. It is necessary if you want to work 8–9 or more hours per day like we do» (Del_Bo_M_10). The high competitiveness among Deliveroo riders makes the electric bike a necessity to maintain the *reputation* that—especially those more continuously operating—they have built. This means platform demands are even more significant for those relying the most on platform income, such as the migrant workforce. Furthermore, electric bikes are quite expensive, and for this reason: «we borrow money from friends, other Pakistani workers here. Even if they steal a bike, the only way to get it is to ask a friend and pay them back after delivering» (Del_Bo_M_11). This fragment clearly addresses how the extractivity platforms are responsible for is not strictly limited to labour exploitation but involve a wider range of social cooperation.

Another major change occurred in the Deliveroo labour process, however, was the introduction of the *free login*. This means that, similarly for what happens in Uber, riders can log in at weather time without having to respect a specific working shift. According to Deliveroo's explanation, this was due to technical reasons, as the *fleet* was significantly grown. However, looking at these changes simply as a matter of technical needs means having a very static view of capitalist development. The introduction of *free login* has also allowed Deliveroo to escape the risk of misclassification of their workers. The previous model for organising working shifts has often been taken as an indicator for labour courts to recognise riders as subordinated workers. It is not a case then if—similarly to what we have already seen in cities like London, Paris and Barcelona (Pirone et al., 2020)—this innovation came during the pandemic lock-down, making use of their position to remove one of the most evident indicators of subordination. This means that not only law-making institutions are those mattering, but a key role is also played by labour courts.

Interestingly, the introduction of *free login* has mostly been contested by those riders supporting the self-employment status. According to them, the previous model was a more meritocratic system: «I see that not all of us are serious, there should be

something that motivates you [...] for example when I see someone who is reaching the restaurant before me, I bike a bit faster to reach first and click on the smartphone the task has been accomplished» (Del_Bo_M_6). However, it needs to also be considered how the competitiveness in Deliveroo is not only the result of the ranking system, but also of the *dynamic fee* determining their payment. This consists in providing a piecework payment system that is not based anymore on a standard amount per delivery, but it is determined by an algorithm considering factors such as delivery rapidity or distance. For riders this means they «don't know how much we will be paid when we get the delivery» (Del_Bo_F_2) and requires workers to get confidence with this payment system before understanding how to properly behave:

«It is fundamental nowadays to know the kind of orders you need to accept and those it is better you refuse. For example, avoiding those restaurants that make you wait ages to take the delivery. In those cases, you may get 10€ or 20€ for a night shift which is pointless» (Del_Bo_M_7).

While the *free login* means that the ranking system does not influence their working shift as it used to be, this remains relevant in the labour process. Among workers there is a common understanding that ranking still influences the “quality” of the deliveries received, reserving those better paid to the most reliable workers. Moreover, Deliveroo communicates to their workers (at least some of them) the indicators determining their ranking, such as: availability (especially in the shifts that are considered busier, such as Saturday or Sunday night); reliability (those who do not respect the working shift are for example sanctioned); efficiency (average delivering time). Considering these three components, it is evident how flexibility is seriously undermined. As Del_Bo_F_2 argues during her interview:

«You need to work all weekends. Right now there are also many people, so if you skip one of them you may not get enough shifts or order to a decent pay the week after. This is why when I go to visit my boyfriend in Rimini – a city in the Emilia-Romagna coast – I keep delivering [...] they say you are free to do whatever you want... but then you also have to pay the consequences for your choice» (Del_Bo_F_1).

At the same time, those who are listed below in their ranking often end up shifting to another platform. In the case of Bologna, the number of Riders who pass from Deliveroo to Glovo or Uber Eats is perceived by workers to be very high. The motivation is that it is much easier to start from scratch than trying to recover your ranking:

«Last summer I decided to go for a trip with my bike from Bologna to Sicily and so I needed some money. So I went back to Deliveroo in May and June, but my statistics were very low since it was a while since I was not delivering and I had no shifts, no orders. In short, only with Deliveroo I could not gain enough money for my plan» (Del_Bo_M_8).

Despite this case, another change perceived in riders' behaviour has also been the decrease of *multi-apping* practices. With this we mean the possibility for riders to deliver for multiple platforms at the same time, somehow taking advantage of their position as self-employed. «No one does it anymore. Right now it means that you have to refuse too many orders because you are already delivering for a platform. The risk

is that you have a very low ranking in both platforms and this means you are screwed» (Del_Bo_M_1). However, this also means that the composition of the workforce has drastically changed in the last years according to the transformation of the labour process. Those more discontinuous, refusing orders, being too conflictual (as it was for most students) or, more simply, have found a better alternative, are now only rarely present in Deliveroo. This has followed labour process transformations, selecting a workforce more suitable for continuous delivery because it is more blackmailable:

«one aspect I would like to stress is that I have a wife and I have family back home. I need money, I spend for rent here as well. I need to support my family. So, I work as much as possible, 7 days a week without any break. I work in the afternoon then I go home for 2/2.5 hours and then back at 6 or 7 to work in Neptune Square and I start working again until 23 or midnight» (Del_Bo_M_9).

5 Intermediary Platform Capitalism: The Case of Uber in Lisbon

Uber started its operations in Portugal in 2014 and during the years it greatly expanded in the main cities, particularly in Lisbon, establishing itself as a dominant player in the urban mobility sector. The growing integration of Uber in Portugal is effectively revealed by the expression used by Giovanni Esposito (the Uber's former general manager southern Europe) to define the lusophone country: a «gold model», since—according to Uber's narrative—Portugal has been representing a market with a fair regulation for all the actors involved (drivers, customers, digital platforms, etc.). Since 2014, Uber drivers' fleet has increased exponentially, rising issues (as for other countries in Europe and the USA) relative to the unfair competition with the traditional taxi sector. An issue that has also happened in Italy, where protests from taxi driver unions have convinced the government to forbid Uber services in the Italian context. At least, until Uber has found an agreement with local companies that, as we will further see, establish a similar mechanism to those registered in Portugal. Furthermore, Lisbon has been integrated in the global network of Uber's technological centre, where the digital platform experiments new services which will be adopted in other cities. Besides the controversies related to the unfair competition, the platformisation of urban transportation also raised questions relative to several working-related dimensions, such as labour process, skills, and employment relationship.

The evolution of the urban transportation digital services during the years and the emerging working-related controversies pushed towards the creation of a specific normative setting in 2018: the Law 45/2018 (so-called *Lei da Uber*) enacted by Portuguese Parliament, a top-down regulation aimed to address the operations of digital platforms in the ride-hailing sector. It represented one of the first attempts in EU to regulate the platform economy, formalising the platformised urban transportation service as TVDE (*transporte individual e remunerado de passageiros em veículos descaracterizados a partir de plataforma eletrónica*). In a nutshell, a major

novelty introduced by the *Uber law* concerned the formalisation of a third actor acting as intermediary between TVDE digital platforms and TVDE drivers, namely the TVDE partner-companies (Table 4). However, the Law did not intervene specifically on the labour process organisation, employment status and labour protection since it delegated these issues to the already existing Labour Code. Instead, the *Uber law* has set up a general regime of operations of the TVDE actors, establishing several rules to be accomplished to work in the ride-hailing sector. Among the innovations provided by the law, four changes in labour process deserve particular attention for their implication: the introduction of a maximum limit of ten hours of connection to the application, within a twenty-four-hour period; a paid mandatory training course that drivers who want to work in this sector must attend; the obligation of a clean criminal record; the formalisation of the TVDE partner-company as intermediary actor between digital platforms and drivers, which are in charge of fulfilling social security and labour rights duties, since the driver enters into a working contract with them. These transformations also severely limit the possibility to autonomously organise through *free login*. Drivers employed in TVDE partner-companies, in fact, need to respect the agreement taken with the company, which often also regulates working shifts. Moreover, the provision of a maximum number of hours is not matched by a clear mechanism for monitoring and evaluating compliance with the limit. Thus, although the law provides for a minimum hourly wage for the service provider, it does not specify the amount. This definitional vagueness has led, in the concrete articulation of the work performance, to the non-compliance with the hourly ceiling, especially due to the decreasing profitability for TVDE drivers.³ The introduction of the paid mandatory training course and the clean criminal record represent a novelty that creates an entry barrier that may affect more marginalised people, who might not have the economic resources to attend the course.

According to the study of the AMT,⁴ the most widespread working relationship is the *autonomous* one (“*recibo verde*” formula), therefore with a low level of social protection and a trend towards *micro-entrepreneurship*. The peculiar threefold relationship between digital platforms-partner companies-drivers relevantly affects the labour process in that seems to create a hierarchy of platform work, as freelance or self-employed drivers (not owner of TVDE partner-company) experience a condition of *double dependence*: (i) from the algorithmic management of the platform and (ii) from the partner company. As a matter of fact, this latter can set minimum targets to be achieved, the time slots to be allocated to drivers, the fee (generally between 40 and 60%) to be deducted from each driver’s earnings. Moreover, the algorithmic management in the Portuguese case takes a peculiar form, due to the status and role of TVDE partner-companies. We can say that this management takes place on two levels: the evaluation of the driver through the ‘star rating’ system in the Uber app,

³ For more details about the controversies related to the Law 45/2018, see Amado and Moreira (2019).

⁴ AMT is the acronym of *Autoridade da Mobilidade e dos Transportes* (Transport and Mobility Authority), the regulatory and supervisory body for the transport sector in Portugal. The study is available at: https://www.amt-autoridade.pt/media/3455/parecer_19_gaj_dapp_10fev_imt.pdf. Accessed: 15/01/2023.

Table 4 List of TVDE digital platforms

Company name	App	License	Data
Bolt Support Services PT, unipessoal, Lda	Bolt	19/20 IS	27/12/2018
Uber BY -representação permanente em Portugal	Uber	42/2019	25/01/2019
Its my ride, Lde	Its my ride	107/2019	14/03/2019
Uteis and razoáveis, unipessoal, Lda	Vemja	114/2019	05/04/2019
Magnetikmolecule, Lda	Tazzi	144/2020	14/02/2020
Freenow Portugal unipessoal, Lda	Freenow	151/2020	02/06/2020
JDSM, unipessoal, Lda	Chofer	169/2020	15/10/2020
Klibber, Lda	libber	171/2021	14/01/2021
Rotas e peripécias—unipessoal, Lda	Mobiz	189/2021	14/06/2021
Tarine technology, Lda	Tarine	193/2021	19/07/2021
IXAT—ridesharing, Lda	Ixat	19/07/2021	08/03/2022
Move by leb, Lda	Leb	2011/2022	23/03/2022
Let's go move mobilidade urbana Lda	Let's go move	226/2022	11/04/2022

Source <https://www.imt-ip.pt/sites/IMTT/Portugues/Documents/TVDE-OperadoresPlataforma-ListaSite.pdf>

whereby customers rate the ride (and therefore the driver) on the basis of a rating between one and five stars; the management and control of the work and of the car fleet by the partner-companies through their specific apps. So, despite the initial positive potential regarding the proposal of a normative framework actually addressing the platform economy, during the years emerged a quite different situation. These controversies have been framed by scholars as *intermediary platform capitalism* (Allegretti et al., 2021), in order to emphasise the threefold relationships between digital platform—partner companies—drivers: this peculiar contractual chain actually confirmed the discharging of responsibilities by digital platforms, such as Uber and Bolt, regarding labour law and social security.

Based on our field analysis emerged that, instead of improving the conditions of workers in the ride-hailing sector, the *Uber Law* has indeed crystallised the degrading conditions existing in other contexts. Moreover, a pivotal difference between partner-companies and drivers is that the former are provided with a different version of digital platforms' app that allows partner-company to have an exclusive communication channel with digital platforms. The app aimed at managerial control of drivers and car fleet and, through it, partner-companies can verify the status of drivers' licence, drivers' TVDE certificate, criminal records and the car's documentation. The working relationship can be either employee or self-employed/freelance. The interviews bring out the following situation:

«You can work at UBER [TVDE sector] in two ways. Or you work for yourself, you open a company, you buy a car. Or you can work as a partner. The partner often makes a person work for me, is registered in my company with everything right, with social security, employment

contract. So, this person, in my case, he/she wins 50% and I win 50%. So it's not hard to work for UBER, no. As long as you have the documentation, it's all right» (Uber_M_Li_5)

This means that the new regulation has made Uber's workforce particularly variegated. In the case of autonomous drivers not owner of a partner-company, the contractual conditions are based on negotiation with a TVDE partner-company; thus, there is not a standard solution but it varies depending on each case: «So this company works with two modalities. The first modality, which is where I thought I wasn't going to have a boss and come up with a risk business, is this: it retains 53% of your earnings, and requires you a weekly turnover of 600 euros, and 66 h online» (Uber_M_Li_7). Another possibility for drivers to work is to start his own partner-company. In this case, he has two options regarding the working tools: to buy the car fleet taking charge of all proper costs (insurance, maintenance etc.), or to rent them:

«The App is free. But for you to have access to the App you need to have the company, right? (...) You need an organized accounting, which is a monthly cost, don't you? You must have insurance.... You can't start the activity without spending 2,000 euros. There's no way, and I'm already going for the cheapest. Without buying a car you have to make a rental; you have to pay at least the two instalments of the rental. The renting already has the insurance, will save that money, but then you have to open the company, the accounting, the license of the company to work, and the driver's licence, right? In my case, my drivers, I paid for the training» (Uber_M_Li_8).

Within the TVDE ride-hailing ecosystem, TVDE drivers can connect simultaneously to any digital platform to work, without therefore inserting pre-emption constraints on the part of the platforms. It thus becomes possible for drivers to access multiple windows on the same market, thus reducing waiting times between rides. This phenomenon—that can be registered across the different platforms—has been defined *multi-apping* and, in the case of Uber in Lisbon, it is interesting to highlight how it is common among both freelancer drivers and TVDE partner companies. According to the literature, the non-binding nature of the relationship between drivers/partner-companies and Uber or other digital platforms has been used «as proof of the 'real self-employment nature' of the contractual relations between a provider and its drivers» (Allegretti et al., p. 89). But the supposed self-employment conditions must be questioned observing the concrete articulation of the labour process and of the work execution and the range of potential gain. For example, from the interviews emerged quite clearly how the burden of the costs may induce to not freely choose how much time to spend to work:

«I started with a rent of 612 euros, an insurance of 2100 euros annually, then I have the mandatory insurance for TVDE, I have my salary, I have my social security, I have an accountant. All this is around 1800 euros, with only one car, monthly. If you split 1800 euros for 22 days monthly, assuming you only want to work 5 days a week, we are talking about having to make almost 100 euros a day, not counting on the diesel that you spend to do so. It is very complicated these days to make 100 euros with only one car. When you increase your fleet you do not increase proportionally because you are only adding car and insurance and then dividing by each car all other expenses... company insurance, your salary, social security» (Uber_M_Li_14).

However, other drivers highlighted the flexibility afforded by working in this sector:

«Positives [characteristics] are enough, because it gives me freedom. For example, I am here, when I leave here, I grab the mobile, if I want to start working from this point I find myself and I let myself take where I want and then use the tools that the platforms give us, filter, to look only for trips to the area I want to go. For example, if I want to go from here to Mafra, I'll just take trips that way» (Uber_M_Li_1).

The Covid-19 pandemic provided a lens to investigate the flexibility of platform economy, as restrictive measures inevitably affected urban transportation digital platforms. Despite the limitation to urban mobility, their formal *lightness* allowed them to modify and extend the services offered. For example, Uber Portugal during the *lock-down* introduced—on an experimental basis and for a short time—the Uber Drop-Off service, i.e. the possibility of collection and delivery of essential goods, thus connecting supermarkets with the final consumer. It was, however, a B2B (Business to Business) service and not B2C (Business to Consumer), as it was the supermarkets that connected with the app to request the delivery of groceries to a customer's home. This Portuguese experiment—for which the drivers also played the role of porters—was then formalised into the UberConnect service, a service by which users can send and receive packages via the app.

If on one hand the irruption of the pandemic pushed Uber and the other digital platforms to expand the portfolio of services provided to *survive*, on the other hand worsened the issue of costs burdened by TVDE partner-companies and drivers. In other words, the already falling profitability rate of this sector has been incremented by the Covid-19 pandemic. For example,

«All the money I earn is going to pay the debts. I have a 293€ instalment of the car, 213€ of insurance because I paid monthly, and meanwhile the virus came and only worsened. Then, I have social security that are another 244 €, then I have the accountant who are another 160 €, then I have Vodafone that are over 60 and such, I mean, what I earn is to be paying this» (Uber_Li_M_12).

Thus, the pandemic determined an acceleration of the contradictions of the TVDE sector along the entire value and contractual chain, involving each actor in the ground, but affecting particularly drivers and partner-companies. These contradictions contributed to the activation of mobilisations and protests, resulting in the paralysation of the activity, with a fundamental role played by the main transport union FECTRANS/STRUP. The mobilisation phase was successful since the Portuguese Parliament started a debate to amend the *Uber Law*, resulted in the “*Livro verde do trabalho*” (Green Paper on Work), aimed at including a proper definition of platform worker and evaluating the actual role of digital platforms. In this regard, the AMT indicated some elements that allow framing the TVDE work as a *de facto* wage-earner work,⁵ such as: the effective control over the business model and the transport operation, unilaterally determining the rates and types of services; a system

⁵ For more details, see: Leonardi and Pirina (2020), Tomassoni and Pirina (2021), Allegretti et al. (2021).

for evaluating the performances; and the existence of a system of rewards and sanctions. The debate that occurred in the past two years determined several amendments to the article 12 of the Portuguese Labour Code about the presumption of employment relationship, that were accepted in December 2022. Among the topical elements introduced there is the fact that, in case the Labour Court detects the presence of an employment relationship, this one will be established directly between drivers and digital platforms.⁶

6 Final Remarks

In this chapter we have shown how platformisation, despite being a global phenomenon, does not apply everywhere in the same way but tends to produce uneven developments. Digital platforms are often described as a way in which capitalism is soaring, employing digital technologies and financial capitals to overcome social and political limits. Here we tried to demonstrate how they actually keep hitting the ground, adapting to local specificities that influence their developments. In a few words, platformisation is not the Hegelian spirit of history, is not about flattening the world or erasing local specificities or undermining the efficacy of institutions, institutions still matter and are able to address the evolutionary patterns of platform capitalism. At the same time, the national varieties that have dominated the debate during the 90 s do not provide adequate lens to understand the complex dynamics of platformisation. On one hand this is because institutions mean a more articulated dimension including cities, provinces or neighbourhoods, and a more nuanced view that also include workers mobilisation or urban alliances; on the other they are not simply resisting to global change, they are directly involved in processes that do not have clear borders. This ambivalence is what lies behind the “variegated platform capitalism”, a view where local and global, urban and transurban factors co-participate in defining a co-evolutionary pattern of development. The result is then a striped and uneven scenario where borders and trajectories of platform capitalism developments are continuously influenced by the intervention of both social and political actors.

Platform labour process clearly presents this feature. On one hand this presents common logics of exploitation across the different sectors and contexts. Few examples can be the use of a ranking system to establish processes of labour intensification, the use of self-employment status to avoid labour regulation or the ability to extract value from the data social actors produce while operating. At the same time, on the other hand, the degree of control, the spread of misbehaviour practices or the composition of the workforce vary according to the specificities of the context in which they operate. More specifically, the more the platform has penetrated in the

⁶ The norm will come into force from April 2023. For further details, see: <https://www.jornaldenegocios.pt/economia/emprego/lei-laboral/detalhe/plataformas-digitais-deputados-aprovam-presuncao-de-contratos-de-trabalho-e-incluem-tvde>. Accessed: 15/01/2023.

city, which means it has involved a number of actors in their operating network, the more able it is to control labour processes, to influence individual behaviours and to organise social cooperation in the city. To reach this rent position, however, it is necessary to overcome legal obstacles or to adapt to local specificities such as the urban structure or the local economic scenario. In a nutshell, platforms' variegation is what gives them the ability to both define operating standards at global level and to adapt their strategy of development to the specificities of local context. The most clear example of this is Uber, who operate in a sector much more regulated than that of food delivery, with established industrial relations and a more solid union representation. These institutional factors are what make Uber the most adapting platform we have explored, an ability resulting in the development of a more articulated organisational model such as that we have seen for Lisbon.

Another key point of the variegated platform hypothesis is that local and global factors do not stand on their own, but mutually influence themselves. This means that the strategies platforms develop in local context under specific circumstances may still hold a transurban potential. This is the case of Deliveroo which unsurprisingly is also the most contested platform by workers. The introduction of free login at continental level, more than just an adaptation to local specificities, corresponds to a longer term anti-union strategy that is finalised to undermine workers mobilisation. However, the fact that Bologna has been one of the first cities where this was experimented—due to the result achieved by the mobilisation of workers—did not impede free login to expand at European level. This means that in platform capitalism dynamics are more complex than a simple local resistance to global path of change, but an outcome workers may obtain in a single context may easily become a global path of change.

This is finally a key point of the variegation hypothesis. Differently from the critique the variety of capitalism tradition has brought to 90 s neoliberal globalisation, the variegated hypothesis opens space to new battlegrounds and to new social actors. A key example comes from the different approaches to regulation we have seen in Lisbon and Bologna: in the first case platform economy companies establish a *good dialogue* with political authorities, that see this economy as a driver of development; in the second case the concrete impacts on social and economic dimensions have been circumvented by the behaviour of Deliveroo. From another perspective, we may say that while the Italian regulation emerged from below, which is from the initiative of local union and city administrations, Law 45/2018 has been a result of a top-down normative path conducted by the Portuguese central government. However, what is key to be noticed is how these *adaptations* never remain localised, but emerged as Transurban factors generally influencing the functioning of algorithms. This means that they are still embedded in social dynamics that can be influenced not only by national governments or traditional actors, but also by grassroots and innovative regulational experiences. In this view, the variegated approach is able to provide not only the lens to read the uneven development of platform capitalism, but also the necessary tool to intervene on its most predatory consequences.

We then encourage further research in this direction, meaning looking at the relationship between global and local factors in a more nuanced way. Firstly, this means

investigating co-evolutive factors beyond traditional borders of the nation-state or of economic sectors. This means taking seriously the ability of platform capitalism to continuously redesign borders between local and global, virtual and real, formal and informal, by focussing on those processes that are able to re-assemble such dimensions. This means that secondly—but not less importantly—further study in this perspective needs to expand their view to the role played by non-conventional (such as informal unions or grassroots urban movements). Their mobilisations have in fact revealed the relevance of both institutional and non-institutional actors, motivating us to pay attention to the co-constitutive dynamics and their ability to generate the transurban vectors responsible for the *uneven* development of platform capitalism.

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