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Algorithmic Wage-Setting in the Gig Economy: Transparency, Fairness, and the Limits of Algorithmic Accountability

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Abstract

Algorithmic wage-setting - the use of data-driven, automated systems to determine pay - has become one of the defining and most controversial features of the platform economy in recent years. This paper examines how algorithmic pricing mechanisms, originally designed as a neutral market instrument to optimize market efficiency, are transforming the structure of income, fairness, and accountability in digitally mediated labour markets. It argues that while algorithmic price and pay determination offers efficiency and flexibility for platforms and, at times, convenience for workers, it also raises complex legal and ethical questions about transparency, autonomy, and distributive justice. The paper takes a deliberately balanced approach, instead of framing platform workers as passive victims of automation, it situates algorithmic pay-setting within the broader interplay of innovation, regulatory design, and labour governance. The paper cautions against equating all algorithmic wage-setting with exploitation, noting that price differentiation is a long-recognized economic practice that becomes problematic only when it relies on opaque or discriminatory data inputs. Yet, the paper also notes that transparency, disclosure obligations must be balanced against operational feasibility and market dynamics. In its second part, the paper explores how existing and emerging regulatory frameworks respond to the challenges of this form of algorithmic management. In the European Union, the General Data Protection Regulation (GDPR), the Platform Work Directive (2024/2831), and the Artificial Intelligence Act (2024/1689) collectively establish a new regime of digital transparency and human oversight over automated decision-making. In particular, the article examines how these legal instruments codify and extend above all the right to explanation to platform workers, requiring platforms to provide meaningful information on how algorithms determine pay and ultimately force us to rethink the human factor in employment related decision-making.

Keywords: Dynamic and personalized pricing, algorithmic wage determination, automated decision-making, platform work regulation, transparency and accountability in AI and algorithmic management, digital labour rights and data governance

I.   Introduction

In recent years, algorithmic price-setting - the use of automated algorithms to determine prices for services, has become a defining feature of the gig-economy industries like ride-hailing, food delivery and logistics. Platforms such as Uber unilaterally set rates using opaque algorithms, leaving persons performing platform work in the dark about how their pay is calculated. Although price setting traditionally is not the subject of labour law, there is growing concern that algorithmic price setting cannot be understood as a form of neutral market instrument, because this practice indirectly influences income levels and income volatility for persons performing platform work. There is also growing concern around the adoption of these automated tools in conventional employment relationships in fields like health care, customer support, logistics, and retail.[2] These systems have an impact on the design of pay structures and even on the calculation of individual earnings. This trend raises complex issues at the intersection of technology, labour and employment law. In both the United States and Europe,

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scholars and policymakers are examining how this form of algorithmic, often AI based decision-making challenges existing legal frameworks on wages, raises issues with regard to fairness, transparency, accountability and more fundamentally forces us to rethink the role of the human involvement in employment related decision-making.

This paper is going to address the impact of algorithmic price setting on wages in the gig economy, as an example of automated, machine-based decision-making in the world of work. It starts with a conceptual overview of algorithmic pricing and its role in shaping platform work compensation, distinguishing between dynamic, personalized, and AI-driven models. It then examines the consequences of these practices for wage stability, fairness, and worker autonomy, situating them within the broader debates on labour rights, transparency, and algorithmic accountability. In its final part, the paper turns to regulatory responses, with a particular focus on recent transparency rights initiatives and the Colorado case-study, to highlight both the potential and the pitfalls of mandating algorithmic disclosure rights.

II. Algorithmic Pricing and the "Gig Wage" Dilemma

In more general terms, algorithmic pricing refers to the use of automated systems, often driven by artificial intelligence to set the rates for products, services, each task, often in real time. Two concepts must be distinguished however: dynamic pricing (or surge pricing), which adjusts fares based on real-time market conditions (high demand raises prices, for example) without targeting specific individuals, and personalized algorithmic pricing, which tailors prices to specific users based on browsing or purchase history of consumers. Although so-called personalized, discriminatory pricing has been common practice for decades in commerce, transportation, and tourism (e.g., pricing by airlines and hotels), it has not been widely adopted because the collection and analysis of the data required for pricing has been associated with significant costs in practice.[3] With the use of these automated systems and data-driven AI-algorithms platforms such as Uber for instance are able automatically and with a high degree of granularity define the so-called *reservation price* of services - that is, the maximum price a consumer is willing to pay at a given moment and under continuously changing factors and conditions.

Algorithmic pay or wage setting means the application of this logic to wages, namely that rather than earning a fee per task based on a fixed and predictable formula (such as time or distance), the fee for each order is defined dynamically based on various and continuously changing factors like time, distance, day of the week, weather conditions etc., factors that the worker could not necessarily control. Although this practice, has been used in several market sectors for many years, there are suspicions that some platforms also engage in *fine-grained personalized wage-setting* - effectively offering each worker just the minimum pay they are willing to take. Legal scholars have started conceptualizing these practices as "algorithmic wage discrimination"[4]. Professor Veena Dubal's research describes how ride-hail and delivery companies use data-driven algorithms to personalize and vary pay for each worker in real time, much like price discrimination in consumer markets. Rather than a stable wage, workers face "constantly fluctuating wages calculated using opaque and ever-changing formulas" based on factors like location, behaviour, demand, etc. Two drivers doing essentially the same job at the same time may be paid differently, with the system quietly adjusting pay to the minimum each individual is likely to accept. This algorithmic "gamblification" of wages - where pay feels as unpredictable as a casino game - undermines the core rationale of traditional labour law norms

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[3] Danyi Pál, 'A Mesterséges Intelligencia Árazásbeli Alkalmazásának Várható Hatásai' [2019] Marketking&Menedzsment 17., Esposito Fabrizio and Grochowski Mateusz, *Cambridge Handbook of Algorithmic Price Personalization an the Law* (Cambridge University Press 2025).
[4] Veena Dubal, 'On Algorithmic Wage Discrimination' (2023) Vol. 123 Columbia Law Review 1929.

of equal pay for equal work and transparent wage standards. As Dubal notes, it marks a "dramatic departure" from fairness norms: workers cannot discern how their wage is set, making it nearly impossible to challenge or negotiate.[5]

In theory, algorithmic pricing could be a *"win-win"* innovation. It spares individual platform workers from the complex task of pricing their services, and it efficiently matches supply to demand by incentivizing more work when and where needed. This can be especially useful in a self-employment model that often has an oversupply of workers relative to demand. However, as Dubal's research indicates this seems rather like a win-lose situation, where the house, that is the platform always wins. In fact, even if this pay model offers flexibility and it is transparent, meaning that workers see the fee they will get paid upfront (upfront pricing) unpredictability and opacity may often result in insecurity and mistrust.[6]

Empirical studies buttress these claims. An Oxford University study (2025) found that when Uber switched in 2023 from a transparent time-and-distance fare formula to a fully dynamic pricing system, passengers ended up paying more per ride while drivers' real incomes declined. Notably, during this period Uber substantially increased its commission cut (to an average of 29%–50% of the fare).[7] Another study from Columbia Business School posits a direct link between Uber's secretive dynamic pricing algorithms and the company's path to profitability, implying that these pricing strategies primarily boost the platform's earnings rather than drivers'.[8] Such findings suggest that algorithmic pricing may redistribute income toward the platform, undermining workers' earnings even as customers pay more.

While these critics are reasonable from a traditional labour law perspective, it is important to highlight few issues. First, *algorithmic price-setting* is essentially a form of price discrimination, long known in economics.[9] Importantly, price discrimination is not inherently illegal and harmful - it can simply be charging different prices based on willingness to pay. Therefore, it is important to distinguish this practice from unlawful wage discrimination: setting fares via real-time data and algorithms does not automatically violate any law, unless it deliberately incorporates sensitive personal characteristics or produces unjust outcomes prohibited by law. If, for example, an algorithm factored in a driver's personal attributes or protected traits (like gender, race, or ethnicity) or past behaviour on the platform (like rating, past trips, or acceptance behaviour) to set pay, that would raise ethical and legal issues. However, gig companies like Uber consistently deny using any individual-specific pricing or secretly manipulating commissions per driver.[10] To date, such claims are hard to prove; if workers allege covert

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[5] Veena Dubal, 'The House Always Wins: The Algorithmic Gamblification of Work' <https://tinyurl.com/2v2mww88>. Access date: 2025.10.11.

[6] Sarah O'Connor, 'Dynamic Wages Make Work a Gamble' *Financial Times* (5 0 2025) <https://tinyurl.com/ykcv2bzr> accessed 18 August 2025.

[7] Reuben Binns' and others, 'Not Even Nice Work If You Can Get It; A Longitudinal Study of Uber's Algorithmic Pay and Pricing' (2025).

[8] Len Sherman, 'How Uber Became a Cash-Generating Machine' *Medium* (23 0 2025) <https://tinyurl.com/4xv6tzfn> accessed 17 August 2025.

[9] Dennis Carlton W. and Jeffrey Perloff M., *Modern Piacelmélet* (Panem Kiadó, Budapest 2003). pp. 309-328., Pedro Brinca, Joao Ricardo Costa Filho and Luis Martinez F., 'The Economics of Price Personalization', *Algorithmic Price Personalization an the Law* (Cambridge University Press, Cambridge 2025). pp. 67-81.

[10] See Uber's argument on Upfront Fares for instance: „Upfront Fares are not personalized — our fares algorithms do not use information on an individual driver's personal characteristics (like their gender, race, or ethnicity) or past behaviour on our platform (like their rating, past trips, or acceptance behaviour) in formulating a fare offer for that driver. Promotions may be offered only to certain groups of drivers, and past behaviour may be used to determine eligibility." 'Understanding Upfront Fares' <https://medium.com/uber-under-the-hood/understanding-upfront-fares-7ab69c656101>. Access date:

personalized underpayment, the burden is on them (possibly via litigation discovery) to uncover evidence.[11]

Second, the studies highlighting these phenomena have methodological limitations: the Columbia study relied on data from a single experienced, full-time Uber driver.[12] It is important to point out that, according to leading European and US statistics the typical platform worker is part-time worker, doing this type of work marginally, sporadically and as a secondary source of income rather than depending on platform work as a primary job.[13] The Oxford study itself acknowledges it cannot conclusively prove causation—i.e., that earnings differences are caused solely by Uber's algorithmic pricing. Many other factors may have affected earnings in the period analysed in the study, such as the number and preferences of riders, traffic conditions, how many drivers were working at the same time and in what composition, and even how drivers changed their own behaviour in response to dynamic pricing (e.g., when or where they choose to accept trips).[14] In short, while algorithmic wage "discrimination" is

11.10.2025. As Uber explains their move to upfront fares addresses rather deep transactional uncertainty and power imbalances in rider marketplaces. This gives riders clarity and reduces surprise costs, while giving drivers a firm view of their earnings before they accept. It also enables tighter control over pricing, better matching of supply and demand, and the ability to reduce cancellations or rider drop-offs due to fare uncertainty. While Uber presents more clarity from the user/driver front end, much of the algorithmic logic (weighting of inputs, elasticity models, rider segmentation, price discovery mechanics) remains hidden. This opacity allows strategic manipulation (e.g. varying take rates) and makes it harder for drivers or regulators to challenge unfair pay settings.

[11] Enforcement bodies are targeting deceptive algorithmic practices. According to the recently published interim results and hypothetical use cases of the US Federal Trade Commission retailers and their third-party pricing intermediaries are probably using a wide range of personal data—including precise location, demographics, browser history, mouse movements, and abandoned carts—to set individualized prices and promotions for the same goods or services. https://tinyurl.com/mts9sx9v (Access date: 2025.09.30.) The FTC has also issued a Request for Information (RFI) seeking public comment on consumers' experiences with surveillance pricing and asks for comments whether gig workers or employees have been impacted by the use of surveillance pricing to determine their compensation. Note the dissenting statement of two Commissioners, Andrew N. Ferguson Joined by Commissioner Melissa Holyoak of releasing staff's preliminary impressions and hypothetical use cases before completing fact-gathering risks undermining the integrity of the Section 6(b) process, damaging trust, and discouraging full cooperation from order recipients https://tinyurl.com/2muh8m6t.

[12] „To understand how upfront pricing drove Uber's profit improvement, we undertook a detailed analysis of its impact on an experienced driver in a large metropolitan area who completed over 31,000 rideshare trips between 2018 and mid-February 2025, driving full-time, nearly exclusively for Uber." Sherman (n 8).

[13] According to US statistics, the dominant use-case of gig work is as a supplement to other employment or income, not a full-time replacement for traditional jobs. While the ranks of full-time gig workers have grown in recent years, they still represent a minority of gig participants. https://tinyurl.com/mjn6cr42 (Access date: 2025.10.19.), see also the statistics of the Pew Research Centre here: https://tinyurl.com/9wnxzey5 (Access date: 2025.10.19.) For leading European Statistics see especially Wouter Zwysen and Agnieszka Piasana, 'Juggling Online Gigs with Offline Jobs, How Local Labour Markets Are Driving the Growth in Internet and Platform Work Working Paper 2023.02. ETUI' <https://tinyurl.com/2dmr8th9 accessed 21 September 2025. p. 2. According to this survey only a small minority are main platform workers, working either more than 20 hours per week or earning more than 50 per cent of their annual income through platform work. The 2018 Collaborative Economy and Employment (Colleem) survey found that 1.4% of workers in the EU were main platform workers. Urzi Brancati, MC Pesole and E Fernandez-Macias, 'New Evidence on Platform Workers in Europe, European Commission, 2020' <https://tinyurl.com/jzjb5r32> accessed 10 December 2025. The more recent AMPWork Survey has also confirmed that the prevalence of main platform work is around 0.6% in Germany and 1.4% in Spain. Enrique Fernandez Macias and others, 'The Platformisation of Work, Evidence from the JRC Algorithmic Management and Platform Work Survey (AMPWork)' (Publications Office of the European Union 2023) <https://tinyurl.com/3bnu4xjw> accessed 12 October 2025., pp. 44.
[14] Reuben Binns' and others (n 7)., p. 9.

suspected, it remains challenging to pinpoint and legally characterize, opening - as we will see in the next section of this article - sometimes far-reaching debates on transparency and explainability rights for individuals to be able to obtain data to possibly substantiate the effect.

Third, information asymmetries and algorithmic opacity, are conditions inherent in the normal functioning of a market economy. In numerous competition-law judgments, the Court of Justice of the European Union has emphasized that uncertainty is an essential element of how markets operate.[15] A broader question is, however, how algorithmic management impacts the supposed entrepreneurial autonomy of persons performing platform work. In theory, independent contractors bear the risk of setting their prices and set the strategy of their business. In platform work, however, workers have little say in pricing – the algorithm defines it for them. Does this lack of price-setting autonomy mean workers are avoiding entrepreneurial risk, or does it indicate contentment with the platform's terms. In fact, true entrepreneurship entails more than freedom over pricing, it involves control over business strategy, client relationships, and risk management. Paradoxically, some platform workers may prefer not to worry about pricing (seeing it as a benefit that the app handles it), but that also means ceding a core aspect of independent business control to the platform. This ambiguity complicates the debate over the status of platform workers.

III.   Algorithmic wage or price-setting as form of automated decision-making?

Algorithmic wage or price-setting on platforms is increasingly recognized as falling under the rules of automated decision-making in several EU instruments. Such practices likely fall under Article 22 of the GDPR[16], a driver or courier has the right not to be subject to a purely algorithmic pay determination that materially affects their income[17], unless the platform can justify it under a narrow exception[18] and provide safeguards[19]. While pricing or pay-setting algorithms are not explicitly mentioned in the GDPR text, they may incidentally fall in this category, for example, differential pricing decided by algorithms can "have a significant effect if, for instance, prohibitively high prices effectively bar individuals from certain goods or services."[20] It is a question however whether by analogy an automated pricing system that *indirectly* influences a worker's income (a core contractual term) or a self-employed service's price could "similarly significantly" affect an individual's livelihood and contractual earnings. Or alternatively this interpretation can only be accepted if it influences worker's pay on a

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[15] *9 June 2009 T-Mobile Netherlands and other Judgement, C-8/08 EU:C2009:343., 12 January 2023 HSBC Holdings and others Judgement C-883/19, EU:C2023:11., 29 July 2024 Banco BPN/BIC Portugues SA Judgement C-298/22, EU:C:2024:638.*

[16] Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation) [2016] OJ L 119/1.

[17] Article 22(1) grants individuals *"the right not to be subject to a decision based solely on automated processing, including profiling, which produces legal effects concerning him or her or similarly significantly affects him or her."*

[18] A platform can only legally make the automated decision if one of the Article 22(2) exceptions applies: (a) the decision is *"necessary for entering into, or performance of, a contract"* with the individual, (b) it is *"authorised by Union or Member State law"* that also safeguards the person's rights, or (c) the individual's *"explicit consent"* is obtained.

[19] Under Art. 22(3) of the GDPR even where an exception allows automated pay decisions, GDPR requires protective measures. At minimum, the affected individual must have *"the right to obtain human intervention on the part of the controller, to express his or her point of view and to contest the decision. Articles 13–15 GDPR compel controllers to inform individuals if they are subject to automated decision-making, and to provide information about "the logic involved" and "the significance and envisaged consequences" of such processing.*

[20] WP 29 Guidelines on Automated individual decision-making and Profiling for the purposes of Regulation 2016/679.

permanent basis or has a discriminatory impact on protected grounds. In fact, GDPR enforcement in some national jurisdictions has begun to tackle these issues, pressuring platforms toward more transparency. In several recent European jurisprudence automated pay determination and algorithmic pricing were recognized as decisions with "legal or similarly significant effects" under Article 22 GDPR when they affected a worker's ability to access work and thus earn income, or the amount of pay was directly determined by algorithmic pricing systems.[21] Among others courts increasingly demand transparency about factors and weightings variables influencing pay or ranking. Workers must receive "meaningful information" enabling them to challenge unfair algorithmic wage-setting.[22] Upfront pricing and dynamic pay systems are treated in these national jurisdictions as core earnings decisions, not mere technical processes.

The EU Platform Work Directive[23] (PWD) goes a step further than the GDPR by clearly defining under Article 2 (i) any "systems which are used to take or *support*, by electronic means, *decisions* that significantly affect persons performing platform work, such as for instance their *earnings, including the pricing of individual assignments* is specifically considered as a form of automated decision-making systems. Second - as this article will explain later - the PWD further develops and codifies the GDPR's transparency and human-intervention safeguards specifically for platform workers. As we will see, the determination of pay or the pricing of individual assignments is not a so called "no-go zone" where automated algorithmic decision-making cannot be used in platform work, but stricter rules on transparency, accountability and human oversight are applicable to this category. The PWD creates a clear mandate for national governments in the EU to ensure that by 2026, platform workers will receive clear information on how algorithms set their pay and allocate work, and will have accessible mechanisms to challenge and correct automated decisions.

According to Annex III of the EU AI Act "AI systems intended to be used *to make decisions affecting terms of work-related relationships*, the promotion or termination of work-related contractual relationships, to allocate tasks based on individual behaviour or personal traits or characteristics or to monitor and evaluate the performance and behaviour of persons in such relationships are considered as high-risk AI systems".[24] This description clearly encompasses algorithmic management tools on digital platforms. For example, an AI system that automatically assigns tasks or sets pay rates for a person performing platform work could be considered as making decisions that affect the "terms" of the work relationship (what jobs they get and how much they earn). Crucially, Recital 57 of the AI Act confirms that *"AI systems used*

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[21] Hiessl Christina, 'Case Law on Algorithmic Management at the Workplace: Cross European Comparative Analysis and Tentative Conclusions' (KU Leuven 2025) <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3982735> accessed 18 August 2025. The leading authority is the *Amsterdam Court of Appeal* in the Uber II and Ola judgments (2023), which held that "upfront pricing," batched matching, and earnings profile systems constituted automated decisions producing legal or similarly significant effects, as they directly affected drivers' access to work and income. The Court required Uber and Ola to provide "meaningful information" on the logic and weighting of variables influencing pay under Articles 15(1)(h) and 22(3) GDPR. (Hiessl 2025, pp. 37–45)

[22] The Greek Labour Inspectorate (2024) found *Wolt's* opaque algorithmic pay-determination system unlawful for failing to inform workers about the data and parameters determining their remuneration, a finding now under review by the *Athens Court of First Instance*. (Hiessl 2025, pp. 66–68) In Italy, both the *Data Protection Authority (Garante per la Protezione dei Dati Personali)* and national courts (notably *Bologna* and *Palermo*) ruled that Glovo's "System of Excellence" and Deliveroo's ranking algorithm violated transparency and non-discrimination principles under Articles 5, 13, and 22 GDPR by conditioning earning opportunities on opaque, behavior-based scoring (Hiessl 2025, pp. 52–60).

[23] Directive (EU) 2024/2831 of the European Parliament and of the Council of 23 October 2024 on improving working conditions in platform work and amending OJ L 2024/2831.

[24] Annex III 4. point b) of the AI Act

in employment, workers' management and access to self-employment" are covered, including throughout hiring, evaluation, promotion, retention or termination in work contexts. It specifically notes that this category meaningfully includes platform work (referring to "persons providing services through platforms"). Thus, an algorithmic pay-setting system on a platform is squarely within the AI Act's high-risk scope. Unlike the GDPR, which speaks of "automated decisions," the AI Act speaks of "AI systems" - broadly defined to include machine-learning models, expert systems etc. An algorithmic pricing engine would qualify as an AI system under the Act's definition (which covers software that generates outputs such as decisions or recommendations using machine-learning, statistical or knowledge-based approaches).[25]

However, when it comes to automated decision-making, we must distinguish between systems that make decisions based on pre-programmed algorithms, and those that use AI-based technologies (e.g., deep learning) and therefore generate outputs in a largely autonomous, for humans often incomprehensible manner. It is not clear to what extent algorithmic pricing in platform work entails the use of AI based systems. However, it is important to note that the operation of artificial intelligence-based systems differs fundamentally from that of traditional algorithmic systems. While in the latter case, humans predetermine the rules and decision-making logic, in the case of AI, experts only design the learning algorithm. This algorithm interacts with data to create complex neural networks that can be efficient at performing tasks - but often even the developers themselves do not understand exactly how the system arrives at a given result (the so-called 'black box' phenomenon). This raises the question to be analysed in the last section of this article of whether, in certain cases, a different standard of proof should be applied to automated decision-making than to human decision-making.

IV. Regulatory Responses: Wage Floors vs Algorithmic Accountability

In response to these challenges, policymakers and international bodies have proposed two main approaches, often in parallel: (1) extending traditional labour protections (like minimum wage and working time rules) to platform workers, and (2) regulating the algorithms and data practices (AI and automated systems) that govern platform work. The former - as already indicated in the previous chapter - directly intervenes in pay and hours, while the latter emphasizes transparency, accountability, and human oversight of algorithmic management.

A number of emerging regulations seek to secure baseline income for persons performing platform work akin to employees. For example, the International Labour Organization (ILO) in 2025 issued recommendations on ensuring decent work in the platform economy.[26] While this part of the ILO's possible future international agreement are largely aspirational, the ILO suggests that platform workers, after expenses, should earn at least a minimum wage equivalent to "other workers in a comparable situation".[27] It also recommends developing methods to compensate workers for periods of waiting-time for work, not just active tasks and to exclude from the calculation of minimum amounts of pay compensation for expenses or other costs, tips and other gratuities.[28] This aligns with proposals in some jurisdictions to count waiting time as working time and guarantee payment for it. The most prominent concrete

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[25] Compare with the definition of an AI-system in Article 3 (1) of the AI Act.

[26] 'Decent Work in the Platform Economy' (International Labour Conference 2025) <https://www.ilo.org/sites/default/files/2025-08/ILC114-V%283%29-%5BWORKQ-250714-001%5D-Web-EN.pdf> accessed 23 August 2025.

[27] ibid., Proposed Conclusions with a view to Recommendations point 51. „Members should, as appropriate, take measures to ensure that digital platform workers receive remuneration which is at least equivalent to the statutory or negotiated minimum wage that is applicable to other workers in a comparable situation."

[28] ibid. Proposed Conclusions with a view to Recommendations points 52. and 55.

example is New York City's 2023 law establishing a minimum pay rate for app-based food and grocery delivery workers.[29]

However, the extension of traditional labour law rules to platform work often overlooks some deeper challenges and complexities of how a rigid statutory minimum wage floor interacts with algorithmic pricing mechanisms that continuously adapt to consumers' reservation prices. In fact, it is not unlikely that a rigid minimum wage floor will push the price above some consumers reservation price thereby reducing overall demand. As a result, service providers may end up with fewer total earnings even if the unit price is higher and affect also those less fortunate and more price sensitive consumers as well, those who are not willing or even not capable to pay the higher price and are therefore excluded from the service. Indeed, early evidence shows that some platforms react with measures like geographic or temporal entry restrictions (e.g. requiring workers to sign up for shifts or capping the number of couriers who can work at once).[30] Often there is an initial boost in earnings when a minimum pay is introduced, but over time average incomes may fall if platforms cut opportunities or users order less due to higher costs. This suggests a potential contra productive effect: well-intentioned interventions might increase entry barriers and even lower aggregate earnings after market adjustments. Indeed, there is empirical research that underlines this hypothesis. A study analysing the impact of the Spanish "Riders' Law" (2021), which mandated employee status for food delivery couriers found contradictory outcomes: although more couriers gained the legal status of employees, the law coincided with higher unemployment among couriers, lower average wages, and a significant exclusion of formerly self-employed riders from the market.[31]

All in all, this cautions regulators and policy makers that overly rigid interventions – e.g. capping the number of workers, imposing flat minimum wages, counting all passive time as work, or other blunt constraints on dynamic pricing – might create a more predictable framework in the short term, but they risk distorting market signals, reducing flexibility, and even accelerating automation in the long term.

The second regulatory approach that involves applying AI and data governance frameworks to platform work by enhancing transparency and feedback mechanisms offers an alternative path by empowering workers without eliminating the inherent efficiencies of platform models. For example, rather than mandating pay for every minute online, regulation that requires platforms to disclose key metrics ex ante such as real-time net earnings per hour, proportion of time spent waiting vs working, and the main parameters the algorithm uses to set pay. Such transparency, at least in theory, would allow workers to make informed decisions (e.g. which platform or time of day yields better pay) and exert market pressure, while preserving the "natural feedback" function of supply and demand. It also lays the groundwork for workers to assert other rights (complaints, collective bargaining) and for policymakers to monitor if intervention is needed.

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[29] Uniquely, this local regulation (applying even to self-employed delivery couriers) gives platforms two compliance options: either pay workers at least a set hourly minimum for all time logged in (including waiting + delivery time), or pay a higher per-minute rate but only for the active delivery time, excluding waiting. In effect, platforms can choose to compensate idle time or not, but if they don't, they must raise pay during active time sufficiently to ensure an average minimum hourly earning is methttps://tinyurl.com/36dahwpm (Access date: 2025.10.19.) In September 2025 the New York City Council expanded the minimum pay protections also to a further category of gig workers, app based grocery workers https://tinyurl.com/2efn8xtx

[30] https://tinyurl.com/4bfewvby (Access date: 2025.10.19.)

[31] Juan J Dolado, Álvaro Jáñez, and Felix Wellschmied, 'Riders on the Storm, Institute of Labour Economics' 1.

Notably, the EU has been active in this field. Three overlapping legal instruments stand out: the General Data Protection Regulation (GDPR)[32], the Platform Work Directive (PWD)[33], and the rules of the Artificial Intelligence Act (AI Act)[34] on high-risk AI systems. Each contains provisions to address the risks and possible harms of automated decision-making in employment-like contexts, focusing on transparency, accountability, and human oversight. Crucially, these rules apply regardless of whether a worker is an employee or self-employed, aiming to protect platform workers as data subjects and persons affected by algorithmic decision-making, not through employee status but through digital rights. Avoiding thereby the well-known and so far unresolved challenges of classification.

Without going into detail, there are several common trends from the aforementioned EU legislation, which, when transposed into labour law practice, effectively may force us to rethink the role of human involvement in labour law decision-making. Both the AI Act and the Platform Work Directive (PWD) set out conditions that must be met during the design phase (ex ante) and operational phase (ex post) of algorithmic and AI-based systems in order to ensure that they can be effectively monitored by competent natural persons.[35] During operation, this means, above all, that human supervisors must be able to monitor and interpret the system's outputs, override them if necessary, and intervene in the system's operation. According to the AI Act, *ex ante*, i.e. before the system is put into service, technical and organizational measures must be built into the systems that are, as far as possible, suitable for monitoring operation and reducing risks.[36] On the other hand, *ex post*, during the use of the system, it must be ensured that human supervisors are able to monitor, interpret, and, if necessary, override the system's output and intervene in its operation.[37] Articles 10-11 of the Platform Work Directive require regular impact assessments, at least every two years, of the impact of individual decisions on platform workers) and stipulate the presence of persons authorized to review automated decisions.[38] If, through the use of independent human control mechanisms, it is determined that the operation of the automated system leads to violations of the law or a high risk of discrimination, the platform is required to take corrective measures immediately. These may include modifying the system or, if necessary, discontinuing its use.[39]

Specifically for platform work, the PWD mandates that significant decisions cannot be left solely to algorithms. It creates a "no-go zone" for automated decisions that have "existential" impacts on workers, such as terminating a worker's account or "any other decision of equivalent detriment".[40] Such decisions must be made by a human, not by an AI based system. Moreover, for any important decision or algorithmic practice, platforms must provide understandable explanations to workers in advance. Workers are entitled to know, in plain terms, how their personal data (like ratings or acceptance rates) influence automated decisions and what the main criteria are or the grounds for decisions to refuse the payment for work

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[32] Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation) [2016] OJ L 119/1.
[33] Directive (EU) 2024/2831 of the European Parliament and of the Council of 23 October 2024 on improving working conditions in platform work and amending OJ L 2024/2831.
[34] Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence (Artificial Intelligence Act). Official Journal of the European Union, L 202, 12 July 2024, 1–204.
[35] Article 14 of the AI Act, Article 10. and 11 (1) of the PWD.
[36] Article 14 (1) of the AI Act.
[37] Article 14 (3) of the AI Act.
[38] Article 10 (1) of the PWD.
[39] Article 10 (3) of the PWD.
[40] Article 10 (5) of the PWD.

performed by them, as well as for any decision of equivalent or detrimental effect.[41] For example, if a driver will lose access to lucrative zones for falling below a 4.5 star rating or a 50% acceptance rate, this must be clearly communicated. Or if pay might be withheld due to some automated fraud flag, the specific reasons and thresholds should be explained. These requirements aim to make the "black box" of algorithmic management more transparent to those subject to it.

Although the GDPR does not expressly establish a right to justification of decisions, however, a very recent judgment of the Court of Justice of the European Union (CJEU) has effectively recognized the right of data subjects to receive an explanation of the specific procedures and principles applied in automated decision-making.[42] While according to the CJEU companies are not forced to disclose full algorithms or complex technical details (nor trade secrets publicly), they cannot satisfy the requirement by simply providing a dense mathematical formula.[43] The explanation should be sufficient for the affected person to understand and potentially contest the decision.[44] Importantly, confidentiality or IP rights cannot be a blanket excuse – platforms may have to reveal information to courts or regulators for a balancing of interests.[45]

The Platform Work Directive[46] and AI Act[47] both codify a right to explanation, the PWD even extends it, the PWD covers *all* automated decisions that affect workers, not just those with legal or similarly significant effects.[48] Furthermore, any "decision to refuse the payment for work performed by the person performing platform work" is subject to stricter rules since digital labour platforms shall provide the person performing platform work not only with meaningful explanation but with "a written statement of the reasons" without undue delay and at the latest on the date on which it takes effect.[49] Given the complexity of AI models, it is questionable what exactly a meaningful notion of transparency or explanation should mean with regard to AI driven decision-making. A full disclosure of algorithmic logic does not seem realistic, nor mandated, especially in light of the European Court of Justice's decision cited above. Second, it is increasingly highlighted that AI-based decision-making cannot be explained, arguably nor is it necessary to be explained in the same way as human decision-making. As pointed out earlier it is important to distinguish between systems that operate on the basis of pre-programmed algorithms and systems that use artificial intelligence (e.g., deep learning). The latter largely produce their results autonomously, often in a way that is opaque to humans (the so-called black box phenomenon). The operation of artificial intelligence-based systems differs fundamentally from that of traditional algorithmic systems. While in the latter case, humans predetermine the rules and decision-making logic, in the case of AI, experts only design the learning algorithm. This algorithm interacts with data to create complex neural networks that are extremely efficient at performing tasks—but often even the developers themselves do not fully understand how the system arrives at a given result. Without expecting humans to literally understand every line of code or weighting in neural networks Orly Lobel advocates for "output-

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[41] Article 9. (1) b) iii and iv. points of the PWD.
[42] *Judgement of 27 February 2025 Dun&Bradstreet Austria GmbH C-203/22, EU:C2025:117.*,
[43] ibid.paragraph 59.
[44] ibid.paragraph 61, 63, 66.
[45] ibid.paragraph 76.
[46] Article 11. of the PWD.
[47] Article 86 of the AI Act.
[48] Article 11. (1) of the PWD.
[49] Article 11. (1) second sentence. of the PWD.

oriented transparency".[50] Even if she developed this for more general purpose algorithms, her claims may hold true also in the context of AI based algorithmic pricing. Rather than forcing the disclosure of the entire algorithm, the priority should be ensuring decisions are well-documented, traceable, and that stakeholders are informed of potential error sources and recourse options. The point is to maintain public and worker trust in AI systems by making their outcomes contestable and their key criteria visible, even if the algorithm's full internal logic remains a black box.

While these new rights and oversight duties are promising, according to general criticism simply having a human in the loop or an explanation on paper does not guarantee meaningful protection.[51] Human oversight can become a mere formality. If the person overseeing an algorithm only performs technical checks, lacking real authority or understanding to challenge the system, then the oversight is hollow. There is also the risk of automation bias, namely that human reviewers might trust the algorithm's output too readily, even if flawed, thus reinforcing errors or unfair outcomes. Furthermore, procedural rights like explanation or complaint mechanisms may exist only on paper. Platform workers might be reluctant to exercise these rights out of fear of retaliation (losing work opportunities or being deactivated) or scepticism about the efficacy of complaining. In other words, the power imbalance - workers' dependency on platforms for livelihood - can discourage challenges.

Despite these valid criticisms, we should not dismiss the structural value of the new data-driven governance rights and regimes. There is a difference between a rule's intent and the challenges of implementation, even if underused initially, data laws lay down important groundwork. The goal of procedural safeguards is not to have every worker understand an algorithmic or AI-based decision's full complexity, but to ensure that algorithmic decisions can be monitored and contested – a significant improvement over inscrutable "black box" practices. Enhancing general transparency in how wages are determined in the platform economy is fundamental to improving information asymmetries and trustworthiness. Transparency is a means to empower other rights: with more information, workers (or their representatives) can organize, litigate, or seek policy changes. The right to explanation, for example, can aid collective action and spur doctrinal development even if individual lawsuits are rare. Indeed, researchers Aloisi, Joppe, and Abraha point out[52] that scrutinizing algorithms can reveal imbalances of power – say, evidence that a platform's algorithm exercises significant control – which might bolster arguments that certain "independent" workers are actually in an employment relationship.[53] While fear of retaliation is genuine, the answer lies in strengthening institutional enforcement (e.g. labour inspectorates, worker organizations) to support individuals.

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[50] Orly Lobel, 'Technological Readiness versus Disruption: A Framework for Assessing Distinct Artificial Intelligence Policy Strategies' 74 Emory Law Journal 1055., pp. 1062. To use Lobel's analogy: when introducing a new drug, the goal is not for everyone to understand its molecular mechanism of action, but rather to provide information about the drug's mechanism of action and risks based on error rates.

[51] Veena Dubal, 'Data Laws at Work' (2025) 134 The Yale Law Journal Forum 405.; Sandra Fredman and others, 'Fair Work for Platform Workers: Lessons from the EU Directive and Beyond' [2025] Industrial Law Journal dwaf018.

[52] Antonio Aloisi, Joppe Anne and Abraha Halefom, 'From "general" to "Context-Specific" Data Protection for Workers: Insights from the EU Rules on Platforms, Algorithmic Management and AI Systems' (2025) <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5273823> accessed 17 August 2025.

[53] In fact, data from algorithmic systems could serve as proof of the "subordination" or "control" criteria in misclassification cases (the very *Article 5* "indications of control" that the Platform Work Directive uses to presume an employment relationship). Thus, algorithmic transparency might indirectly support workers' status claims or enforcement of rights.

The debate on transparency in algorithmic management finds an important test case in the Colorado Transportation Network Transparency Act (TNC Act)[54], which entered into force in February 2025. This case demonstrates how far transparency and disclosure obligations can be stretched in practice - and how contested their legitimacy remains. The Act mandates unprecedented disclosures by transportation network companies, including (i) pre-trip disclosure to drivers of the total fare paid by passengers and the share received by the driver *excluding* tips and taxes or other compulsory deductions, (ii) parallel disclosure to passengers of the driver's actual earnings on a trip, (iii) pre-ride aggregated estimates of mileage and time, and (iv) monthly reporting obligations including mileage deduction calculations. The TNC Act goes beyond conventional labour or consumer law disclosure, dictating not only *what* must be disclosed but also *when*, *where*, and even *in what font size* it must appear. Uber challenged these requirements, claiming they amounted to compelled speech that forces the company to "shout the State's message" by highlighting driver pay in large fonts and specific formats, thereby implying Uber underpays drivers.[55] Uber's challenge highlights several structural problems. First, such forms of excessive transparency can become contra productive: disclosures that oversimplify complex fare structures risk misleading workers and consumers more than empowering them. Second, compelled disclosure in prescriptive formats may clash with constitutional protections of commercial speech, especially where the mandated message is incomplete, controversial, or burdensome. Third, the operational fragmentation that would result if multiple states adopt divergent transparency rules underscores the need for harmonized, proportionate regulation rather than state-specific "app redesigns" that risk distorting safety and usability.

The District Court denied Uber's motion for a preliminary injunction, holding that the company had not shown a clear likelihood of success on the merits, though acknowledging the serious First Amendment questions raised. This ruling illustrates the tension between expanding transparency rights for workers and consumers and the constitutional and practical limits of compelled disclosures in digital labour markets. Requiring meaningful, contextual, and contestable information about algorithmic pay-setting remains essential, but regulators should avoid crossing into micromanagement of interface design or forced value judgments about platform–worker relations. The Colorado litigation reveals the fragility of transparency rights when they are stretched beyond their epistemic purpose and into the terrain of compelled advocacy.

Unlike traditional transparency rules (e.g. food labelling, ex post disclosure of receipts, in-app dashboards, and weekly earnings reports) the practice of telling consumers exactly how much of their payment the worker receives lacks coherence with broader market practice. Consumers typically do not know what proportion of their payment a hairdresser, plumber, or electrician retains after deducting costs, nor are such disclosures mandated in those sectors. Singling out platform workers for such disclosures risks creating a discriminatory double standard in service markets, where one group of self-employed providers must justify their income split in real time while others are spared. Moreover, such disclosures may distort consumer behaviour - for example, by discouraging tipping or by shifting reputational blame onto platforms for cost structures partly imposed by regulators themselves (such as mandatory insurance fees). Rather than empowering rational choice, these measures may amplify misunderstanding and moral outrage without necessarily improving efficiency.

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[54] SB24-075, "TNC Act".

[55] *Uber Technologies, Inc v Colorado Department of Labor and Employment, No 1:23-cv-02761, (D Colo Mar 27, 2024)*.

V.   Conclusions

Algorithmic wage-setting lies at the intersection of efficiency, fairness, and accountability. This paper argued that while algorithmic pricing mechanisms introduce new forms of opacity and asymmetry into the world of work, they also represent a rational evolution of data-driven management in increasingly digital labour markets. The challenge, therefore, is not to reject algorithmic decision-making as inherently exploitative, but to ensure that its design and deployment remain subject to proportionate transparency, effective oversight, and meaningful human intervention.

A balanced regulatory approach must acknowledge the dual nature of algorithmic pay-setting: it can optimize allocation and enhance responsiveness in volatile markets, yet it also risks undermining predictability and trust if left unchecked. Extending traditional wage protection instruments to platform work without accounting for algorithmic and market dynamics may generate unintended consequences, such as reduced demand, restricted access, or accelerated automation. Conversely, overemphasizing transparency without attention to proportionality can burden innovation and create legal uncertainty, as illustrated by the Colorado case.

Regulatory frameworks like the GDPR, the Platform Work Directive, and the AI Act already provide a foundation for this equilibrium by combining data governance with labour protection, thereby moving beyond rigid classification debates toward functionally grounded rights of explanation and contestation. These measures seek not to freeze technological development but to render it intelligible and contestable. Effective and sustainable regulation must balance innovation with legitimacy, protecting the integrity of markets and the dignity of work without presupposing antagonism between the two.