ANALYSIS GROUP

Report on the Implications of Uber's Paying the National Living Wage on P1 Time

Oliver D. Hart, Ph.D.

Oliver Hart

Oliver Hart is the Lewis P. and Linda L. Geyser University Professor at Harvard University. He is an expert in contract theory, the theory of the firm, and corporate finance. For his pioneering work on contract theory and incomplete contracts, Professor Hart was awarded the Nobel Prize in Economics in 2016. His recent research has centered on models of corporate governance that can accommodate shareholder prioritization of nonfinancial criteria. With Analysis Group's support, Professor Hart has consulted to businesses and government entities, and provided expert testimony on contract and governance disputes in a variety of industries. As a testifying expert on behalf of Qualcomm in *Apple v. Qualcomm*, he provided guidance on the optimal structure of contracts and the importance of contract enforcement. Professor Hart is a past president of the American Law and Economics Association.

About Analysis Group

Analysis Group is one of the largest international economics consulting firms, with more than 1,000 professionals across 14 offices in North America, Europe, and Asia. Since 1981, we have provided expertise in economics, finance, health care analytics, and strategy to top law firms, Fortune Global 500 companies, and government agencies worldwide. Our internal experts, together with our network of affiliated experts from academia, industry, and government, offer our clients exceptional breadth and depth of expertise.

Disclosure

Support for this study was provided by Uber. The conclusions and opinions expressed are exclusively those of the author.

Table Of Contents

I. Introduction

1. I have been asked by Uber to prepare this paper based on what I see are the potential implications for Uber's business model of a more expansive obligation on Uber as it relates to working time. I have been provided with public information from Uber (*see* Appendix) and have been paid for my time to prepare this paper. I stress that the findings and opinions provided are my own, based on my expertise in economics and the theory of contracts.

2. Uber has been a modern business phenomenon since its founding in 2009.[1] It has transformed the traveling experience of hundreds of millions of people throughout the world and provided earning opportunities for millions of drivers.[2] Uber's high ridership is an indication of its social value, including as a complement for public transport.[3]

3. From almost its founding, Uber, along with other ride-sharing companies, has faced the question of whether its drivers are independent contractors or employees. Litigation about this matter continues in various jurisdictions, but in the U.K. the Supreme Court decided in 2021 that drivers are neither: rather they are "workers."[4] At the risk of over-simplification, someone is a worker if they are neither as subject to a boss's control as an employee nor as free to make decisions about their work as an independent contractor. Workers receive some of the benefits of employees (*e.g.*, a minimum wage, pension, holiday and sick pay) but not others (*e.g.*, parental leave, protection against unfair dismissal).[5]

4. The worker category is unique to the U.K., and, up to now, unique to Uber at any real scale. While Uber has accepted the worker category, a key issue remains to be resolved. As workers, drivers are entitled to the hourly national living wage (henceforth "NLW").[6] The question is, over what period should this wage be calculated? Should the clock start ticking when a driver turns on the Uber app or only when a driver is offered and accepts a ride? In this report, I will consider how a decision on this matter will affect the economic incentives of both drivers and Uber. I will describe examples of drivers making decisions on the margin, which are intended to capture the behavior of both full-time and casual drivers. I will conclude that compensating drivers once they turn on the app will undermine Uber's market design in a fundamental way that may have

---

1 *Employment Tribunals between Mr. Y Aslam, Mr. J Farrar, and Others and Uber B.V., Uber London Ltd., and Uber Britannia Ltd.*, Case Nos. 2202551/2015 and Others, Reserved Judgment of the Employment Tribunal, October 28, 2016 ("Employment Tribunal Judgment"), ¶ 1.

2 Uber had 131 million Monthly Active Platform Consumers and 5.4 million drivers and couriers in 2022. Uber Technologies, Inc., "Uber Announces Results for Fourth Quarter and Full Year 2022," February 8, 2023, pp. 2, 6.

3 Uber and Public First, "The Impact of Uber in the UK," p. 5.

4 *Uber BV and others v. Aslam and others*, 2021 UKSC 5, Judgment, February 19, 2021 ("Supreme Court Judgment"), ¶¶ 2, 39-40, 139.

5 U.K. Government, "Employment status," available at https://www.gov.uk/employment-status/print (accessed March 8, 2023).

6 Employment Tribunal Judgment, ¶ 86. For simplicity, I use NLW to mean each worker's hourly minimum wage. I understand that certain workers—those under 23 or in apprenticeships—may be subject to a lower hourly minimum wage. U.K. Government, "National Minimum Wage and National Living Wage rates," available at https://www.gov.uk/national-minimum-wage-rates (accessed March 20, 2023).

undesirable consequences for drivers. Specifically, it is likely to lead to a situation where drivers, whether full-time or casual, will have less flexibility about when, where, and how they drive, about which trips they can reject, and about whether they can multi-app; this projection applies just as much to a 'full time' driver as it does for one who drives casually. These are all features of the current system that drivers, whether full-time or casual, greatly value.[7] Research shows that certain workers, and U.S. Uber drivers in particular, accept substantially lower wages to obtain flexibility, or, equivalently, demand much higher wages to forgo flexible work.[8] Drivers will likely also be monitored more closely. The result is that many of the very people that the change is designed to help are likely to end up being worse off.

II. Background

5. I understand that Uber divides someone's time working as a driver into four categories: P1 refers to time when the driver is logged onto the Uber app but has not yet accepted a ride (or has completed a ride but has not yet accepted another); P2 refers to time the driver takes to pick up a passenger after accepting a ride; P3 refers to time transporting a passenger, that is, when the passenger is actually in the car; and P4 refers to time driving back from a trip that has taken the driver to an area outside their normal region, where they are not licensed to pick up passengers.

6. Currently, in the U.K., Uber pays the NLW on P2 and P3 time but not on P1 and P4 time.[9] What this means is that every week Uber calculates a driver's total income net of expenses, divides this by the total number of P2 and P3 hours worked by the driver, and if the result is less than the NLW tops this up until the driver does receive this.[10]

---

[7] Uber and Public First, "The Impact of Uber in the UK," p. 5; Public First, "Good Work: Balancing Flexibility and Fairness in the Gig Economy." Chen *et al.* (2019) find that casual (low-hour) drivers do not capture a larger fraction of their payouts as surplus from the flexible arrangement offered by Uber than full-time (high-hour) drivers. Compared to less flexible taxi-style 8-hour shifted driving arrangements, Chen *et al.* (2019) find that even for full-time drivers, those working more than 37 hours per week, "[t]he ability to work split shifts and unconventional hour patterns in the Uber arrangement is still valuable for drivers in this group." (Chen, M. Keith, *et al.*, "The Value of Flexible Work: Evidence from Uber Drivers," *Journal of Political Economy* 127:6 (2019), pp. 2735-2794, at 2778-2779.)

[8] Mas and Pallais (2017) find that while most workers place limited value on flexibility, a large right tail would accept up to a 12 percent wage reduction for flexible scheduling. (Mas, Alexandre, and Amanda Pallais, "Valuing Alternative Work Arrangements," *American Economic Review* 107:12 (2017), pp. 3722-3759, at 3722, 3756-3757.) Surveys of Uber drivers and general consumers in the U.K. found 55 percent of surveyed Uber drivers valued flexibility, compared with 20 percent in the general public. (Public First, "Good Work: Balancing Flexibility and Fairness in the Gig Economy.") These results suggest that Uber's current driver pool has selected into flexible work arrangements because they value flexibility more than others. Chen *et al.* (2019) estimate U.S. Uber drivers in particular would have to be paid approximately 50 percent more for reduced flexibility, with the median driver requiring almost twice their base wages to switch to a shifting model. (Chen, M. Keith, *et al.*, "The Value of Flexible Work: Evidence from Uber Drivers," *Journal of Political Economy* 127:6 (2019), pp. 2735-2794, at 2791-2792.) Indeed, after Uber Eats couriers in Geneva were switched to a shifting model, more than 70 percent of couriers expressed a preference for the flexible model, with more than 60 percent of couriers who reported they were worse off specifically citing reduced flexibility; and roughly half said they would not continue in the long run under the new model. Stein, Alison, "Independent couriers' reaction to employee reclassification: learnings from Geneva," Uber Under the Hood (Medium), September 22, 2020.

[9] Uber Technologies, Inc., "Uber drivers in the UK to receive earnings guarantee, holiday pay and pensions," March 16, 2021.

[10] I understand that top-ups are exceedingly rare.

7. Since I understand that drivers rarely drive outside their normal region, I will ignore P4 time in what follows. So the question is, should the relevant calculation be net income divided by P2 and P3 time, as now, or should it be net income divided by P1 plus P2 plus P3 time. As a short-hand, I will describe the latter case as "P1 is compensable."

III. Analysis

A. Some basics

8. It is impossible to describe Uber's business model in a few sentences but here are some essential elements.[11] An Uber driver[12] can turn on the Uber app at any time of day or night or in any location, for as little or as long as they choose. At some point the driver may be offered a ride. The driver learns the location and rating of the passenger, the destination of the trip, and how much the driver will receive for the trip. The driver can then accept or reject the trip. If the trip is completed, the driver will receive the promised payment, plus a tip at the discretion of the passenger. The passenger makes their decision to request a ride based on an estimated time of arrival and a price proposed by Uber; this price will typically be higher than the price offered to the driver (when the suggested tip is quoted as a percentage, it is based on the passenger price).

9. Note that drivers earn money only for completing trips; they are not paid directly for P1 time. However, presumably, the amount they expect to receive overall from completed trips must be enough to compensate drivers for P1 time since otherwise they would do something else.

10. It is interesting to ask why, from the beginning, Uber decided not to pay drivers explicitly for P1 time. After all, Uber could have offered drivers a deal whereby they are paid per hour while the app is on and they are waiting for a ride, and a further ride price when they are picking up or driving a passenger. There are important economic reasons for not doing things that way having to do with the foundational economic concept of "moral hazard":[13] paying drivers explicitly for P1 would affect when and where drivers work, how they drive, whether they multi-app, *etc*. We will discuss these later, but let us mention one reason now. Presumably, Uber wants to maximize the likelihood that a driver will accept an offered ride since Uber stands to make a profit from the completed ride (the price paid by the passenger exceeds the amount paid to the driver). This argues for backloading compensation. To see this, suppose that, during an hour when a driver is on the app, the driver is paid £2 for P1 time and £7 for a ride. Then the driver will accept a ride only if the cost of driving to the

---

11 The business model has evolved over time. I am describing what I understand to be the current model in the U.K.

12 To become an Uber driver, someone has to have a driving license, a private hire vehicle license, a car that meets certain requirements, and vehicle insurance; they must also attend an informational session. Uber Technologies, Inc., "Uber Requirements for Drivers in the UK," available at https://www.uber.com/gb/en/drive/requirements/ (accessed April 14, 2023); Employment Tribunal Judgment, ¶¶ 41-42, 44.

13 The concept of moral hazard in economics arises when an agent acts on behalf of a principal, but the principal cannot observe the agent's actions or characteristics. The 2016 Nobel Prize in Economics was awarded partly for work in this area. *See* The Royal Swedish Academy of Sciences, "Scientific Background on the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2016," available at https://www.nobelprize.org/uploads/2018/06/advanced-economicsciences2016.pdf, p. 1; Holmström, Bengt, "Pay for Performance and Beyond," *American Economic Review* 107:7 (July 2017), pp. 1753-1777, at 1756.

final destination (which includes fuel and depreciation costs, the personal cost of possibly ending up somewhere the driver does not want to be, and the opportunity cost of the time spent on the ride) is less than £7. In contrast, if Uber pays the driver zero for P1 time and £9 for the ride, Uber's costs are the same, conditional on a trip occurring, but the driver is more likely to accept the trip: they will do so if the cost of driving to the final destination is less than £9. To emphasize, this is good for Uber since Uber wants the driver to accept as many trips as possible.[14]

B. The consequences of the 2021 legal decision to classify drivers as workers

11. Since 2021, Uber's U.K. drivers have been classified as workers. As a result of this, drivers are, among other things, entitled to pension contributions, holiday pay and to be paid at least the NLW with respect to P2 and P3 time. These changes have increased the overall compensation of drivers and therefore also Uber's costs, but they have not changed Uber's compensation model, which is still to pay drivers for the trips they carry out.[15] That is, it remains optimal to backload compensation.

12. Before we go further, it is worth considering what effect an increase in driver compensation will have on the market for rides. On the one hand, Uber's costs rise, which will likely cause it to raise prices to passengers, thus reducing the demand for rides. On the other hand, more drivers will be willing to work for the higher compensation, which increases available supply, and may induce Uber to reduce the passenger ride price. The first effect will reduce the number of rides while the second effect will increase the number of rides. Which effect dominates, that is whether more or fewer rides will occur, is uncertain. To put it another way, as the recent literature on minimum wages has argued, an increase in worker compensation does not inevitably lead to lower output (number of rides taken); it can lead to an increase in output if the passenger demand for rides is very price-sensitive and the supply of driver hours is not very wage-sensitive.[16]

C. Paying the NLW for P1, P2 and P3 time

13. Let us now turn to the key question that this report is concerned with: what are the consequences of making P1 time compensable, that is, of making Uber pay the NLW for P1 time as well as P2 and P3 time?

14. We can gain some insight by continuing with the example. Suppose that it takes a driver on average 15 minutes on the app before they receive an offered ride (P1 time), and 45 minutes to pick up the passenger

---

[14] I have assumed that a ride always materializes but the logic generalizes to the case where a ride is uncertain. Suppose that a ride is offered to the driver half the time. Assume that Uber initially pays a driver £2 for P1 time and £14 for a trip (the driver's expected compensation is £2 + (1/2) × £14 = £9, as before). Then Uber could do better by paying the driver zero for P1 time and £18 for a trip. Uber's expected costs and the driver's expected income stay the same, but more trips are accepted, and so Uber's profit increases.

[15] As discussed above, Uber will top-up driver payments if fares net of expenses do not reach the NLW for P2 and P3 time; however, this payment is still conditioned on completing a trip.

[16] *See, e.g.*, Manning, Alan, "The Elusive Employment Effect of the Minimum Wage," *Journal of Economic Perspectives* 35:1 (2021), pp. 3-26, at 4, 22-23, Figure 5; Flinn, Christopher J., "Minimum Wage Effects on Labor Market Outcomes under Search, Matching, and Endogenous Contact Rates," *Econometrica* 74:4 (July 2006), pp. 1013-1062, at 1013-1014, 1056-1057; Card, David, and Alan B. Krueger, "Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania," *The American Economic Review* 84:4 (September 1994), pp. 772-793, at 772, 790-792.

and complete the trip (P2 and P3 time). Assume that the driver's compensation is fully backloaded, and that they receive £9 for a completed trip. If we take the NLW to be £10 an hour,[17] the driver is earning £12 per P2 and P3 hour (£9 divided by ¾), which is above the NLW, but only £9 per P1, P2 and P3 hour, which is below the NLW. So if the law requires payment of the NLW for P1, P2 and P3 time, Uber will have to raise worker compensation. By our previous argument that backloading compensation is optimal, it would do so by increasing the driver ride price to £10.

15. To those who support the idea of a national living wage (probably many people), the idea of paying someone £9 for what is one hour's work (assuming P1 time is working time), given a national living wage of £10 per hour, seems wrong. They would favor an increase in the driver ride price to (at least) £10.[18] However, this example assumes that the characteristics of the ride and the behavior of the driver are fixed. In reality, this is not the case, and then matters become much murkier.

1. Drivers currently have the flexibility to choose when and where to work

16. One aspect of the Uber system that drivers report valuing greatly is the flexibility that it offers.[19] A driver can log on whenever they feel like driving and log off whenever they do not. They can work on whichever days, at whatever time of day, and for however long, they want. Drivers can drive full-time or casually, and can adjust this behavior freely. They can decide in which area to do most of their driving, perhaps staying close to home.

17. This flexibility allows many people to combine Uber driving with other responsibilities or demands, either professional or personal.[20] Indeed, surveys of U.K. Uber drivers found that Uber drivers are systematically more likely to have additional jobs or responsibilities than the general public.[21]

18. Requiring the NLW to be paid on P1 as well as P2 and P3 time could seriously jeopardize these arrangements.

---

[17] The hourly NLW is currently £9.50 but will rise to £10.42 on April 1, 2023. U.K. Government, "National Minimum Wage and National Living Wage rates," available at https://www.gov.uk/national-minimum-wage-rates (accessed March 20, 2023). For simplicity, I set aside expenses. It is enough to assume that each illustrative value—driver wages and opportunity costs and ride prices—is already net of expenses.

[18] Of course, they might be concerned that Uber will raise the passenger price, thus leading some passengers (probably poorer ones) to forego a ride.

[19] Berger *et al.* (2019) report that large shares of surveyed Uber drivers in London prefer Uber to traditional companies for the flexibility it provides (84 percent) and value this flexibility more than holiday pay and a guaranteed minimum wage (82 percent). Of the 80 percent of surveyed drivers who preferred flexible to fixed hours, the median would require a 25 percent pay increase to forgo this flexibility. Berger, Thor, *et al.*, "Uber Happy? Work and Well-being in the 'Gig Economy,'" *Economic Policy* 34:99 (2019), pp. 429-477, at 441. *See also*, Chen, M. Keith, *et al.*, "The Value of Flexible Work: Evidence from Uber Drivers," *Journal of Political Economy* 127:6 (2019), pp. 2735-2794, at 2791-2792; Uber and Public First, "The Impact of Uber in the UK," p. 5; Public First, "Good Work: Balancing Flexibility and Fairness in the Gig Economy."

[20] Public First, "Good Work: Balancing Flexibility and Fairness in the Gig Economy."

[21] Public First, "Good Work: Balancing Flexibility and Fairness in the Gig Economy." *See also*, Berger, Thor, *et al.*, "Uber Happy? Work and Well-being in the 'Gig Economy,'" *Economic Policy* 34:99 (2019), pp. 429-477, at 442, 444.

19. We can modify the above example to understand why. Consider a driver, Jack, who has just completed a ride and is located in Hackney at 2pm on a Wednesday afternoon. Jack is considering whether to stay on the Uber app or log off for an hour to go to the gym; the latter yields Jack pleasure that has a monetary equivalent of £8.[22] Assume the same sequence of events as before: Jack has to wait with his app on for 15 minutes before being offered a ride and all rides take 45 minutes from start to finish. However, suppose now that a passenger may not appear at all. To the extent that there is not much demand for rides in Hackney on Wednesdays at 2pm, let us say that a passenger appears only half the time.

20. Make the further assumption that any passenger is willing to pay at most £12 for a ride (this is the value they receive from the trip), and that this is what Uber charges them.

21. Suppose first that P1 time is not covered and Uber offers Jack £9 for a ride, so that Jack's expected payment is (1/2) × £9 = £4.50. This is obviously less than the £8 Jack enjoys from going to the gym, and so he will not stay on the app.[23]

22. Since Uber makes £3 when a ride takes place, Uber could consider making rides in Hackney at 2pm on Wednesdays more attractive to drivers like Jack by raising the (anticipated) driver ride price. But note that Uber is presumably not willing to offer more than £12 since it does not want to make a loss. And even if Jack receives £12, his expected payment is only (1/2) × £12 = £6, which is less than the value of going to the gym. So Jack will still not stay on the app.

23. What is important to realize is that this is what economists call a socially efficient outcome.[24] Since the expected value of a trip—the value that the potential passenger receives, £12, multiplied by the probability that there is such a passenger, ½—is less than the value Jack receives from going to the gym (his opportunity cost), it is better for Jack to go to the gym during that hour rather than stay on the app.[25]

24. Suppose next P1 time *is* covered. Staying on the app now yields Jack £10 (the NLW) if a ride materializes (assume that he accepts it) but also £10 if it doesn't (he keeps his app on for the hour since after 15 minutes it is too late to go to the gym). The reason is that in both cases he is paid the NLW, which is £10. Since £10 exceeds £8, Jack decides to stay on the app and forego the gym. This is a socially *inefficient* outcome.

25. This simple example captures something very important. Paying a driver for P1 time will encourage drivers like Jack to be on the app at times and in places where such an activity is not socially productive. Jack

---

[22] That is, Jack is indifferent between going to the gym and receiving £8.

[23] Note that the decision is the same as if Jack were deciding whether to turn on the app to begin with. We are interested in how Jack behaves *on the margin*, a fundamental economic concept.

[24] A socially efficient outcome is one that maximizes the sum of the values or payoffs of all participants in the economy.

[25] This conclusion holds regardless of Jack's plans later in the day, *i.e.*, whether he intends to log back on to the Uber app after the gym or not.

will be inclined to be on the app in Hackney at 2pm on Wednesdays, rather than being available at peak times such as weekend evenings.

26. But note that this is not necessarily the end of the story. Uber can respond. And it may do so by abandoning its policy of letting drivers choose when and where to log on. Specifically, realizing that people like Jack will try to stay on the app in Hackney on Wednesday at 2pm, and that Uber will on average lose money from this (Uber earns £6 on average (a passenger pays £12, but only half the time), but pays Jack £10), Uber would have an incentive to bar access to the app at this time and place. The business model will change.

27. At first glance, the fact that Uber may change its business model may not seem a cause for concern. Does it matter that drivers like Jack cannot stay on the app in Hackney on Wednesdays at 2pm? The problem is that barring access to the app is a rigid response.

28. First, there could be another driver, Jill, whose next best activity only provides her the equivalent of £4 in value. It is socially efficient for Jill to be on the app on Wednesdays at 2pm in Hackney since the expected value of a trip—£6, the value that the potential passenger receives, £12, multiplied by the probability that there is such a passenger, ½—exceeds her opportunity cost, £4. Because Uber cannot distinguish between Jack-type drivers and Jill-type drivers (their opportunity costs are known only to them), its rigid response (barring access to the app) would result in a socially inefficient outcome, barring both Jack and Jill from access during times when, given her idiosyncratic opportunity cost, it is efficient for Jill to complete trips (but not Jack).

29. Second, suppose that on the coming Wednesday there is a special event in Hackney that Jack knows about since he lives there, but Uber does not. Given this event, there will be a demand for rides at 2pm. If the app is open, Jack can take advantage of his private information, making money for himself and Uber, and also providing a needed service to the public. Obviously, if Uber blocks the app, he cannot do this, resulting in a socially inefficient outcome.

30. In a famous 1945 paper, Hayek argued that one of the strengths of a market system compared to a centrally planned one is that prices will reflect, and participants can act on, local information (in Jack's case that he knows that there is a special event, in Jill's that she knows that she has a low opportunity cost); this is much harder to achieve under central planning since a company like Uber, or even a benevolent planner, does not have access to this information.[26] Our example is an illustration of the value of empowering people, in this case Jack and Jill, to act on the basis of what they know.[27]

---

[26] Hayek, F. A., "The Use of Knowledge in Society," *American Economic Review* 35:4 (1945), pp. 519-530, at 524.

[27] Alternatives to fully barring access to the app, like rationing or shifting, cannot overcome this problem. Both responses constrain market participation and, with it, information. This constraint leads not only to inefficient levels of participation but also an inefficient *allocation* of participation privileges across drivers (*e.g.*, allocating a shift to Jack when, based on individual opportunity costs, it should go to Jill). Hayek, F. A., "The Use of Knowledge in Society," *American Economic Review* 35:4 (1945), pp. 519-530, at 526-530; Grossman, Sanford J., and Joseph E. Stiglitz, "Information and Competitive Price Systems," *American Economic Review* 66:2 (1976), pp. 246-253, at 246, 248-249, 252.

2. Drivers currently have the freedom to reject rides

31. Another aspect of the Uber system that drivers very much value is that they have the ability to reject rides that Uber offers them without consequence.[28] This option is valuable because an offered ride may be a long one and the driver may have something else to do coming up, or the ride may take the driver to an area where they do not want to be. But Uber may very well curb this flexibility if it is required to pay the NLW with respect to P1 time.

32. To see why, consider Jack again, but this time suppose that he is considering staying on the app at a time when the demand for rides will be high, say Saturday afternoon. Assume now that Jack's alternative activity to driving is not going to the gym but running errands. Arguably this is something that Jack can do as well with the app on as off.

33. Under the current system, where P1 time is not compensable, Jack has little incentive to stay on the app if he does not plan to accept a ride, since he only gets paid for completed trips. But if P1 time is included, Jack can make money by staying on the app, rejecting rides, and then turning off the app when he has finished his errands and is heading home for the day. Of course, such behavior is costly for Uber.

34. How might Uber react to this? One possibility is to no longer allow drivers to reject rides (or to severely limit the number of rejections): this would be a condition of the job. Jack could still run errands while his app is on and he is waiting for a ride (this is productive since he has nothing else to do while he is waiting), but he would be discouraged from staying on with the goal of making money by rejecting rides. However, taking away the ability of Jack to reject rides may be painful for him and make the job much less attractive: there are some rides that really are inconvenient for Jack and that he does not want to take. This is another example where Hayek's insight applies: disallowing Jack from rejecting rides is a rigid rule that does not incorporate Jack's idiosyncratic (and known only to him) preferences.

3. Drivers currently have the ability to multi-app

35. Currently, a driver in London can drive not just for Uber but for another company too, *e.g.*, Bolt. "Multi-apping," as this behavior is known, increases, from a driver's perspective, the probability and frequency with which a driver will receive ride requests, and is therefore a popular strategy for some drivers.[29] This is something that Uber does not mind now, just as Uber does not mind whether a driver chooses to be online or not. But things would likely be very different if P1 time becomes compensable.

---

[28] "If you're a driver or courier and you don't want to accept delivery or trip requests, you can simply decline the request, ignore it, or just go offline or log off. You are not under any obligation to accept a minimum number of trips or deliveries." Uber Technologies, Inc., "General Community Guidelines," available at https://www.uber.com/legal/en/document/?name=general-community-guidelines&country=great-britain&lang=en (accessed April 14, 2023). I understand that drivers did not have the ability to reject rides without consequence at the time of the Employment Tribunal Judgment in 2016, but this feature was introduced subsequently by Uber. Employment Tribunal Judgment, ¶¶ 51-53.

[29] Oxera, "The incidence of multi-apping among Uber drivers," April 22, 2022, at 2-4, 8, 11.

36. Suppose that Jack has both the Uber and Bolt apps open. Imagine that he receives and accepts a ride request from Bolt. Assume that Uber has instituted a policy whereby a driver has to accept an offered ride request for P1 time to be compensated (for the reasons given above). Then Jack could switch off the Uber app once he accepts the Bolt ride (so that he is not forced to reject an Uber ride while picking up or driving a Bolt passenger), and still be paid by Uber at the NLW rate for the P1 time he incurred on the Uber app. (If Uber has not instituted a no-rejection policy, Jack could keep the Uber app on while picking up or driving a Bolt passenger and be paid even more.)

37. To see the implications of this, return to the example where Jack is considering whether to go to the gym or keep himself available for driving. Assume again that he waits 15 minutes for a ride, which always materializes, but assume now that the ride comes from Uber or Bolt with equal probability. Suppose that the driver ride price is £10, equal to the NLW. Jack keeps both apps open and accepts the ride which, say, comes from Bolt. Even if Jack turns off the Uber app when he accepts the Bolt ride, he can claim £2.50 from Uber for the time spent on the Uber app, so that his total compensation is £12.50.

38. Note first that Jack ends up being paid more than the NLW; of course, this might be regarded as desirable and, other things equal, will make Jack happy. However, there are likely to be offsetting effects that will hurt Jack. One way Uber may respond is by restricting drivers to use only the Uber app (Bolt may respond similarly): in other words, they would sign drivers to Uber-exclusive contracts. Such a move may significantly reduce driver incomes. Second, to the extent that exclusive dealing contracts are hard to enforce—a driver can have two phones, one logged onto the Uber app and the other onto the Bolt app—Uber would have an incentive to monitor drivers more closely, something that they may not like; we discuss this further below. Third, to the extent that Uber's costs go up, Uber's demand for drivers may fall to the point where they will limit the number of drivers, *e.g.*, by raising the hurdle for being a driver. These repercussions may end up making drivers like Jack worse off, more than offsetting the initial increase of income from £10 to £12.50 in our example.

4. Drivers now have considerable freedom about how they drive

39. Currently, Uber drivers have considerable flexibility about how they drive, *e.g.*, their speed and the length of the break they take between rides (if any): Uber does not monitor them or impose restrictions on them.[30] There are few if any repercussions if a driver drives slowly, or takes a break, between finishing a trip and starting the next trip.

40. This is likely to change if P1 time becomes compensable. Suppose that Jack has just completed a trip from Hackney to Wandsworth. There is little demand for trips in the Wandsworth area at the time and so

[30] 21 percent of surveyed U.K. Uber drivers cited "[i]ndependence and autonomy" as one of their five most important aspects of a job, compared with 12 percent of the general population. Public First, "Good Work: Balancing Flexibility and Fairness in the Gig Economy."

he must head elsewhere for the next trip. If Jack is tired, he might park the car and rest for a few minutes. But Jack will be tempted to do this even if he is not tired once P1 is compensable (he will be paid for shirking).

41. Again, Uber is incentivized to respond, possibly by monitoring drivers to see what they are up to, limiting breaks, or dispatching drivers to specific areas.

5. Currently, drivers are not monitored but this may change

42. As we have noted, one of the attractions of being an Uber driver is that the job offers a great deal of flexibility. Drivers can choose when and where to work and also how to drive. Drivers have substantial autonomy.[31]

43. One of the consequences of making P1 time compensable is that this is likely to change. We have already discussed the fact that Uber would have an incentive to restrict log-on access (the Wednesday afternoon in Hackney example) or limit the number of rides a driver can reject. In addition, we saw that Uber would want to restrict multi-apping or shirking activities. One way to do this is to monitor drivers. At an extreme, Uber could insist that each driver must have a camera in their car, so that Uber can see whether they have another app on or are shirking (even then it will not be clear in the latter case whether a driver is taking a needed rest or just killing time).

44. There is a great deal of evidence that people do not like being supervised too closely.[32] Even conscientious workers find intrusiveness unpleasant. It is likely that drivers, the majority of whom strongly value autonomy, will feel the same way.

6. The changes to the system may deter the most productive drivers and encourage the least productive drivers

45. I have discussed the incentives Uber would have to change its business model if P1 time becomes compensable, and how this may lead to economic distortions. It is worth teasing out a further implication. The changes may disadvantage the most able, and advantage the least able, drivers, thus leading to a lower quality mix of drivers.

46. To understand this, consider first a driver who is well-informed about local conditions, including when and where there will be a demand for rides (they ascertain that there is a special event in Hackney). Such a driver can take advantage of this knowledge now, and profit from it. But they will be less able to do so if Uber

---

[31] Berger *et al*. (2019) found that "[t]he majority of surveyed drivers point to autonomy, scheduling flexibility, or improved work-life balance as reasons for joining the Uber platform." Berger, Thor, *et al.*, "Uber Happy? Work and Well-being in the 'Gig Economy,'" *Economic Policy* 34:99 (2019), pp. 429-477, at 434.

[32] Ball, Kirstie, "Electronic Monitoring and Surveillance in the Workplace. Literature review and policy recommendations," Publications Office of the European Union (2021), p. 4; Martin, Kristen, and R. Edward Freeman, "Some Problems with Employee Monitoring," *Journal of Business Ethics* 43 (2003), pp. 353-361, at 355-358.

institutes a blanket policy of not allowing access to the Uber app at certain times or in certain places. The knowledge that there is a special event in Hackney on Wednesday afternoon is useless if Uber has already decided to block access to the app in that location at that time.

47. A driver with these skills may also be productive in other activities, and may decide to pursue them rather than being an Uber driver.

48. In contrast, consider a less skilled driver who does not know much about local conditions, and who therefore spends on average a relatively long time waiting for a ride under the current system. For them, it may not be tempting to be an Uber driver now since they are not offered many trips. However, if P1 time is compensable, such a driver will be paid the NLW even while they are waiting: to put it bluntly, their ignorance is rewarded. Thus, Uber driving may now become an attractive occupation for them.

49. In summary, the changes that stem from making P1 time compensable may reduce the quality of the pool of Uber drivers. This seems unlikely to be good either for Uber or the general public.

IV. Conclusions

50. I started this report by noting that Uber is a modern business phenomenon that, since its founding in 2009, has transformed transportation and improved the lives of both passengers and drivers around the world. Over the years Uber has made numerous adjustments to its business model, as it has learned how to do things better, and also in response to legal decisions. One thing that has not changed, however, is Uber's compensation model, which is to pay drivers only for trips completed.

51. In this report I have laid out some of the consequences of requiring Uber to pay drivers the national living wage computed with respect to P1 as well as P2 and P3 time. I have argued that, while this idea may have merit in principle, in practice it will undermine Uber's market design in a fundamental way that may have undesirable consequences, including for the very drivers that the change is presumably designed to help. As with all major changes, some of the consequences may also be unanticipated ("unknown unknowns"). Echoing part of the Hippocratic oath (first, do no harm), my conclusion is that it is risky to make a fundamental change to a system that is working so well in so many places.

V. Appendix

A. Documents Relied Upon

Articles, Books, and Publications:

Ball, Kirstie, "Electronic Monitoring and Surveillance in the Workplace. Literature review and policy recommendations," Publications Office of the European Union (2021).

Berger, Thor, *et al.*, "Uber Happy? Work and Well-being in the 'Gig Economy,'" *Economic Policy* 34:99 (2019), pp. 429-477.

Card, David, and Alan B. Krueger, "Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania," *The American Economic Review* 84:4 (September 1994), pp. 772-793.

Chen, M. Keith, *et al.*, "The Value of Flexible Work: Evidence from Uber Drivers," *Journal of Political Economy* 127:6 (2019), pp. 2735-2794.

Flinn, Christopher J., "Minimum Wage Effects on Labor Market Outcomes under Search, Matching, and Endogenous Contact Rates," *Econometrica* 74:4 (July 2006), pp. 1013-1062.

Grossman, Sanford J., and Joseph E. Stiglitz, "Information and Competitive Price Systems," *American Economic Review* 66:2 (1976), pp. 246-253.

Hayek, F. A., "The Use of Knowledge in Society," *American Economic Review* 35:4 (1945), pp. 519-530.

Holmström, Bengt, "Pay for Performance and Beyond," *American Economic Review* 107:7 (July 2017), pp. 1753-1777.

Manning, Alan, "The Elusive Employment Effect of the Minimum Wage," *Journal of Economic Perspectives* 35:1 (2021), pp. 3-26.

Martin, Kristen, and R. Edward Freeman, "Some Problems with Employee Monitoring," *Journal of Business Ethics* 43 (2003), pp. 353-361.

Mas, Alexandre, and Amanda Pallais, "Valuing Alternative Work Arrangements," *American Economic Review* 107:12 (2017), pp. 3722-3759.

Public First, "Good Work: Balancing Flexibility and Fairness in the Gig Economy."

Stein, Alison, "Independent couriers' reaction to employee reclassification: learnings from Geneva," Uber Under the Hood (Medium), September 22, 2020.

The Royal Swedish Academy of Sciences, "Scientific Background on the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2016," available at https://www.nobelprize.org/uploads/2018/06/advanced-economicsciences2016.pdf.

Uber and Public First, "The Impact of Uber in the UK."

Reports:

Oxera, "The incidence of multi-apping among Uber drivers," April 22, 2022.

Legal Documents:

Employment Tribunals between Mr. Y Aslam, Mr. J Farrar, and Others and Uber B.V., Uber London Ltd., and Uber Britannia Ltd., Case Nos. 2202551/2015 and Others, Reserved Judgment of the Employment Tribunal, October 28, 2016.

Uber BV and others v. Aslam and others, 2021 UKSC 5, Judgment, February 19, 2021.

Press Releases:

Uber Technologies, Inc., "Uber Announces Results for Fourth Quarter and Full Year 2022," February 8, 2023.

Uber Technologies, Inc., "Uber drivers in the UK to receive earnings guarantee, holiday pay and pensions," March 16, 2021.

Websites:

Uber Technologies, Inc., "General Community Guidelines," available at https://www.uber.com/legal/en/document/?name=general-community-guidelines&country=great-britain&lang=en (accessed April 14, 2023).

Uber Technologies, Inc., "Uber Requirements for Drivers in the UK," available at https://www.uber.com/gb/en/drive/requirements/ (accessed April 14, 2023).

U.K. Government, "Employment status," available at https://www.gov.uk/employment-status/print (accessed March 8, 2023).

U.K. Government, "National Minimum Wage and National Living Wage rates," available at https://www.gov.uk/national-minimum-wage-rates (accessed March 20, 2023).