REPORT OF THE BERKELEY RESEARCH GROUP (BRG)

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HOW WILL RECLASSIFICATION OF APP-BASED DRIVERS AS "EMPLOYEES," RATHER THAN "INDEPENDENT CONTRACTORS," AFFECT CONSUMERS IN CALIFORNIA?

EXECUTIVE SUMMARY

Our analysis of the market for ridesharing and delivery finds that adoption of the AB 5 employment model will have the following consequences:

- **an increased cost for consumers of rideshare services ranging from 25.9% to 100% in some markets – meaning that a typical $15 ride across town would cost between $19 and $30;**
- **an increased cost for food / grocery delivery services ranging from 35.2% to 100% in some markets – meaning that a typical delivery charge of $12 would cost between $16 and $24;**
- **a reduction of the customer base served to only those persons residing in the most densely populated areas of the state – meaning little or no service to most Californians living in rural or suburban areas of the state;**
- **a reduction of service days and times in these urban areas – meaning service availability during peak usage hours only (mostly commute times and weekend entertainment/nightlife periods for rideshare and standard dining times for food delivery); and**
- **an increase in wait times and a decrease in reliability for customers – meaning an average wait time for rideshare of 7 minutes may double to 14 minutes, and average wait time for food/grocery delivery of 40 minutes may double to 1 hour and 20 minutes, or more, except in the most densely populated service areas.**

These negative consumer impacts will, of course, have a significant negative impact on drivers. Our analysis indicates that drivers' average hourly compensation will be reduced from $19.55 per hour today to approximately $14.67 per hour under an employment model.

INTRODUCTION

Assembly Bill 5 (AB 5), which was enacted in September 2019, establishes a legal test that its author claims will require reclassification of app-based rideshare and food/grocery delivery drivers as employees rather than independent contractors. We conclude that reclassification, if required, will increase operating costs for the network platform companies leading to substantial price increases for consumers. Our research finds that there will be other negative consequences for consumers beyond the increased costs of rides and deliveries.

In analyzing the impact of AB 5 on California consumers, it is important to keep in mind the fact that these companies created a market for services that did not exist just 10 years ago. The continued existence of this market is not guaranteed, and the convenience, reliability, affordability, and even the availability, of ridesharing and food/grocery delivery services to those Californians who need them could cease to exist. Prospective customers have other transportation or delivery options, some of which may become less costly and more reliable than use of an app-based platform (e.g., use of one's own vehicle) as a result of AB 5's negative effects on consumers. It is the current ease, timeliness, reliability, safety, and acceptable price of the services that make use of the app a "better" option for many consumers and, therefore, makes the network platform companies viable businesses that offer income-earning opportunities to hundreds of thousands of Californians.

What the platform companies discovered was that there are many California drivers that, on occasion, are willing to pick up a passenger or make a delivery at almost any time of the day or night, and at almost any location, in order to earn supplemental income. This insight provides the critical ingredient that makes the apps work: the existence of many willing drivers ready and able to serve lots of willing consumers on a large scale.

Given these realities of the ridesharing and delivery businesses, we find that the success or failure of the network platform companies depends on two key factors:

(1) the continued willingness of consumers to pay the cost of the services offered by the app-based drivers, rather than use alternative modes of transportation or delivery;
(2) the continued willingness of hundreds of thousands of Californians to provide such services, mostly on a part-time basis, in exchange for the amounts customers are willing to pay for these services.

Reclassification of app-based drivers as employees will significantly and negatively affect both of these prerequisites for the companies' survival. This is because:

(1) the significantly higher costs associated with the AB 5 employment model will necessarily be passed on to consumers[1] in the form of higher fares and delivery charges, which will reduce consumer demand;
(2) the number of California residents working as drivers will be reduced by as much as 90% as (a) the companies seek to control labor costs and maximize labor productivity, and (b) drivers who only want to drive part-time or just occasionally drop out of the market; and
(3) the interaction of these two consequences will produce a downward spiral, further threatening drivers' income-earning opportunities and the companies' ability to operate.

As the number of drivers available for ridesharing or delivery declines, either the service areas that these drivers are able to cover will shrink correspondingly or consumer wait times will increase, making the services less convenient and less reliable, and therefore less valuable to the consumers, causing consumer demand to decline still more. With less revenue available to cover their fixed costs, the network platform companies will be under even greater pressure to raise consumer prices. The higher prices, in turn, will further reduce consumer demand, further reduce the companies' revenue, and prompt further increases in the prices charged to customers.

[1] As noted below, the network platform companies we analyzed are not presently profitable and thus the increased labor costs cannot be absorbed.

Our analysis of the market for ridesharing and delivery finds that adoption of the AB 5 employment model will have the following consequences:

- a substantial increase in consumer costs for rideshare services of at least 25.9%, and up to 100% in some markets;
- a substantial increase in consumer costs for food delivery services of at least 35.2%, and up to 100% in some markets;
- a reduction of the customer base served to only those persons residing in mostly densely populated areas of the state, thereby excluding potential customers in rural, less densely populated suburban areas of the state;
- a reduction of service days and times in these urban areas to recognizable "peak" usage hours; and
- an increase in wait times (as much as two times current average wait times) and less reliability for customers.

Our analysis finds that significantly higher charges for both rideshare and delivery services will be necessary to maintain the current level of customer service, perhaps more than double current charges. There is no evidence that a viable market exists for such costly services in all parts of the state, thus leading to our conclusion that service areas, days, and times will be significantly impacted. These factors may lead consumers to abandon the app-based services in favor of other transportation options (e.g., their own cars) that they used prior to the introduction of the app-based services 10 years ago.

How Adoption of the AB 5 "Employment Model" by App-Based Platform Companies will Affect California Consumers

We conducted a detailed economic analysis of both the market for ridesharing and delivery services and the network platform companies' business models at the request of the organization sponsoring Proposition 22 (the "Protect App-Based Drivers and Services Act"), an initiative that will appear on the California General election ballot. This report summarizes our key findings regarding the impact of the AB 5 employment model on California consumers.

A. Impact on consumer prices/fares

In an effort to quantify the impact of a shift from driver independent contracting to employment, we created an analytical model to simulate the impact of the shift on five app-based transportation and delivery network companies: Uber, Lyft, DoorDash, Postmates, and Instacart. Due to the differences in the business models used by the app-based transportation network companies offering rideshare services (Uber and Lyft) and the delivery network companies offering food/grocery delivery services (DoorDash, Postmates, and Instacart), we simulated a model separately for each industry and then aggregated the measured impacts. For purposes of this consumer-focused analysis, the important assumptions we made in creating our model are as follows:

Operating expenses. The employment model will impose additional costs on app-based transportation and delivery network companies, including

- The cost of employee benefits (health insurance, etc.);
- Payroll costs (UI, Social Security, Medicare, etc.);
- Operating costs that the companies do not incur under the independent contracting model but will incur under the employment model (e.g., HR, supervision, regulatory compliance, etc.); and
- The cost of reimbursing employees for their vehicle operating expenses.[2]

In a recent news release, the United States Bureau of Labor Statistics (BLS) reported that the average cost of employee benefits constitutes 31.4% of employee compensation.[3] This, in turn, indicates that pay – wage and salaries – constitutes 68.6% of employee compensation. Because benefits are a component of employee compensation but not independent contractor compensation, the BLS data indicates that conversion to the employment model will increase driver costs by 45.8% (i.e., 31.4%/68.6%) if there is no adjustment to earnings. Consequently, we have used 45.8% in estimating the effect of the employment model on the cost of drivers to the companies.

[2] Under the independent contracting model, drivers are compensated for these costs from their share of the fare.

[3] Bureau of Labor Statistics (BLS), Employer Costs For Employee Compensation – September 2019 [USDL-19-2195], https://www.bls.gov/news.release/pdf/ecec.pdf, accessed on Feb 24, 2020.

We believe it is more realistic to assume that driver earnings will decline under the employment model because operating costs will be shifted from drivers to employers. As a result, the increase in driver costs will be less than 45.8% (even when taking account of mileage expenses).

Additionally, though, conversion to an employment model will increase the companies' operating costs in other ways beyond the increase in driver costs. The BLS data make no allowance for the increased costs of employee-related overhead. To illustrate, if a company's independent contractors become employees, the company will have to augment its human resources department, establish or expand its labor relations department, hire more labor law compliance experts, conduct periodic training programs for employee-drivers, and develop and maintain onboarding and termination protocols. The costs that these requirements will impose on a company may well be substantial.

Also, under the employment model, companies will have to add layers of supervisors and managers to their operations. From a company standpoint, a key advantage of the independent contractor model is that the drivers are largely self-managing. As independent contractors, they are highly motivated to study the market and time their availability so as to maximize their own income (and a company's revenue). If drivers shift from independent contractor status to employees, their personal interests and motivation will not necessarily be aligned with those of the companies for which they previously served as independent contractors. Therefore, additional supervision and management will become necessary, further increasing a company's operating expenses.

For these reasons, we believe the companies' operating costs will increase by a larger percentage than what we have used in our analytical model. Consequently, our results are conservative, and the adverse consequences of the shift to the employment model on California consumers are likely to be greater than what our model indicates.

Because the network platform companies we analyzed are not presently profitable, they are not able to absorb these increased operating costs. Hence, the increased costs will necessarily lead to higher consumer costs as well as to a massive reduction in the size of the current labor force that provides these services to consumers – as much as 90% (e.g., elimination of 900,000 mostly

part-time and occasional drivers that will be replaced by about 100,000 mostly full-time drivers). This massive reduction leads to other negative consumer impacts, as indicated below.

Fares. Because the app-based transportation network companies offering rideshare and delivery network companies offering food/grocery delivery that are the focus of this analysis currently have do not earn profits that they can use to absorb the additional labor and operating costs, they will have to respond to the increase in labor and related costs with some combination of the following actions: (1) reduce driver compensation, (2) raise the prices they charge to their customers, and (3) eliminate unprofitable and/or less profitable services.

We assume that the companies will adjust driver compensation to reflect the transfer of financial responsibility for vehicle operating expenses from driver to company. According to our analysis, approximately 25% of the $19.55 average hourly driver compensation under the independent contracting model is intended to cover a driver's mileage expenses.[4] On this basis, we assume that drivers' average hourly compensation under the employment model will be reduced to approximately $14.67 (i.e., 75% of $19.55), just above the $14.00 minimum wage set to take effect in California in 2021.[5]

We believe there is limited opportunity for companies to recoup more of the increased operating costs that the employment model imposes by further reducing driver compensation. Accordingly, for purposes of our estimates, we assume that the companies will seek to offset these costs by raising the prices they charge customers for rides and deliveries.

Assuming that (1) total labor costs account for approximately 80% of the prices charged to rideshare customers, and (2) total labor costs equal the prices charged to food delivery customers as delivery charges (separate from the price of the food delivered), the aforementioned increase in

[4] Our estimate of the average hourly driver compensation, $19.55, was calculated by dividing payments to drivers made by the five app-based companies by the total number of hours worked by drivers during 2018. For rideshare companies, we estimated the mileage expense to be $5.70 per hour, or 23.0% of $19.55, assuming an average of 19 miles driven per hour by drivers and a mileage reimbursement rate of $0.30 per mile. For delivery network companies, we estimated the mileage expense to be $4.50 per hour, or 29.2% of $19.55, assuming an average of 15 miles driven per hour by drivers and the same mileage reimbursement rate of $0.30 per mile.

[5] https://www.dir.ca.gov/dlse/faq_minimumwage.htm.

labor costs will require at least a 25.9% increase in ride fares for app-based rideshare companies,[6] and at least a 35.2% increase in delivery charges for food delivery network companies,[7] in order to fully offset the higher costs

Uber recently estimated that under the employment model, consumers will see higher prices for services, depending on where they reside: 20-40% in urban areas and as much as 110%-120% in non-urban areas. Uber's urban estimate is in line with our analysis of the entire industry segment for which we estimate at least a 25.9% increase in rideshare prices. As for non-urban areas, we are not confident that customers will be willing to pay more than two times current prices for services. Rather, we believe the reduction in consumer demand at those prices will likely be so substantially that allocating labor to these uncertain markets will not be economically justified.

Elasticity of demand. Higher prices for rides and deliveries will reduce demand for the services these companies offer. Empirical research on the elasticity of demand for app-based driver services estimates this elasticity at -1.0 to -1.2.[8] These studies, however, dealt with *temporary* increases in prices that were much smaller than the permanent increases that will be required by the employment model. For this reason, we have assumed an elasticity at the top end of the range reported in the empirical literature, namely, -1.2, which we believe to be conservative.

Because of the reduction in consumer demand resulting from the higher ride fares and delivery charges, we estimate that there will be a statewide *31% reduction* in rideshare and food delivery service hours. How will the network platform companies respond to such a large reduction in the quantity of services they deliver to California consumers?

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[6] For rideshare companies, we estimated the average customer ride fare per hour to be $24.44 (i.e., $19.55 x 125.0%). Net labor compensation is $13.85 (i.e., $19.55 minus the mileage expense of $5.70, as shown in Footnote 3). Assuming a 45.8% increase in benefit cost, the additional net labor compensation is estimated to be $6.34 (i.e., $13.85 x 45.8%). With this amount added to the original fare, the new fare is $30.78 (i.e., $24.44 + $6.34) or 125.9% of the original fare of $24.44.

[7] For delivery network companies, we assumed that the delivery charge is equal to the labor cost incurred. Therefore, the average delivery charge is $19.55 per hour, which is equal to the average hourly driver compensation. Net labor compensation is $15.05 (i.e., $19.55 minus the mileage expense of $4.50, as shown in Footnote 3). Assuming a 45.8% increase in benefit cost, the additional net labor compensation is estimated to be is $6.89 (i.e., $15.05 x 45.8%). With this amount added to the original delivery charge, the new delivery charge is $26.44 (i.e., $19.55 + $6.89) or 135.2% of the original delivery charge of $19.55.

[8] *See,* James A. Parrott and Michael Reich, "Report for the New York City Taxi and Limousine Commission," The New School Center for New York City Affairs, July 2018, p. 50.

B. Reduction in Service Area

Under an employment model, the network platform companies will be compelled to tightly control their labor costs if they are ever to become profitable. This is typically achieved by limiting the number of employees, prohibiting employees from working with competitors (eliminating "multi-app" drivers), and by scheduling employee work to match consumer demand – as is traditionally done by most employers. For example, in retail trade, an employer generally knows from retail sales data when there are more shoppers in their stores on an hour-to-hour, day-to-day, week-to-week and month-to-month basis. With this knowledge, a retail trade employer can schedule employees to provide needed services to match customer volume/demand, such as by having fewer cashiers during mornings and late evenings and more cashiers on weekends and certain holidays. In this way, labor utilization is optimized and labor costs are contained. In this context, cashiers are not afforded the "flexibility" to choose to work or not work at any day or time of their preference. To allow them to do so would result in the employer's loss of control over labor costs.

Network platform companies will necessarily meet the economic requirement to maximize the value of labor costs under the employment model by deploying such labor as efficiently as possible – meaning a sharp reduction in the overall number of drivers, the close scheduling of driver work hours, mandating that drivers accept all fares or orders, and prohibiting drivers from working with multiple platforms at a time. Based on our modeling and analysis, we estimate that the number of drivers providing services, including full-time, part-time and occasional drivers, which currently exceeds one million annually, will be reduced by as much as 90%, leaving income-earning opportunities only for approximately 100,000 full-time or near full-time drivers. Stated another way, the forced conversion to the employment model will result in an annual loss of income-earning opportunities for about 900,000 Californians who now drive for these app-based companies in the course of a year.

Clearly, the combination of a substantial increase in the price of service and a very large reduction in the number of drivers providing such service will have severe negative consequences for California consumers, California drivers, and the California-based network platform companies. For consumers, our analysis indicates that not only will prices increase sharply; the

companies will also be compelled to reduce either the geographical areas their drivers serve or the number of drivers available to serve customers within a given geographical area, or both.

At present, the prices of both rideshare and delivery services are not uniform throughout California; indeed, they are not the same day-to-day or hour-to-hour. Therefore, from both theoretical and practical perspectives, the largest price increases will occur in areas of the state that are more sparsely populated and where consumer usage/demand is already lower. Such higher prices will further reduce demand in these areas.

Our analysis raises a key question: given the large increases in the companies' operating costs, the absence of profits to absorb these costs, and the sensitivity of consumers to the prices charged for ridesharing and delivery services, is it even possible for these companies to continue operating in such areas?

An Uber economist describes this dilemma as follows:

> These higher prices would of course reduce demand for trips, thereby shrinking the amount of available work for drivers, and constraining where Uber is able to provide a reliable service. We estimate reduced demand leading to 23-59% trip loss across our California markets, with the greatest impacts in sparse areas.[9]

Therefore, in our view, the best option available to those network platform companies that adopt the employment model will be to retrench the scope of their operations into the most urbanized parts of the state and attempt to maximize the value of their fixed labor costs by passing on the increased costs to consumers, in the form of higher fares, in those markets. Correspondingly, residents of non-urban parts of the state will experience a reduction or elimination of services that they have come to expect. Particularly hit hard will be disadvantaged communities historically informally redlined from private transportation and delivery options.

C. Reduction in Service Days and Times

These network platform companies have excellent data concerning the peaks and valleys in demand, by locale. Here again, the necessity of maximizing the value of labor will cause these

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[9] Alison Stein, "Analysis on Impacts of Driver Reclassification," Uber Under the Hood (blog), Medium, May 28, 2020, https://medium.com/uber-under-the-hood/analysis-on-impacts-of-driver-reclassification-2f2639a7f902.

companies to schedule their employees to meet peak demand. For example, rideshare services may peak during weekday rush hours but wane during midday. On weekends, people may use the service more during the evening or even late evening.[10] With this information, the rideshare companies can deploy their labor resources (i.e., employee drivers) during these peak times. Doing so improves the customer experience in terms of reliability and reduced wait times and maximizes the compensated time of the employee driver due to less idle time. However, a key consequence of this efficient utilization and deployment of labor is to reduce the number of drivers scheduled to work non-peak hours.

D. Increase in Wait Times

An alternative to reducing the number of geographic areas served by the companies is to continue to serve some of these areas but reduce the number of drivers within each area that are available to provide such service to customers. Adopting this strategy, however, will increase consumer wait times[11] and thereby erode one of the key attractions of app-based driver services to customers.

Even during peak hours, we expect wait times to increase because of the huge reduction in the number of drivers available to provide services at all times. As previously stated, it is the willingness of hundreds of thousands of Californians to occasionally use the apps to provide rideshare and delivery service on an unprecedented scale that presently allows a customer to conclude that the price is worth the service provided. If you can reasonably expect a driver to pick you up in 5 – 10 minutes and deliver you to your destination for a reasonable price, then the app is valuable to you. Similarly, if you can get food or groceries delivered in a reasonable time, you may choose to avoid a trip to the restaurant or grocery store. However, if the wait time is doubled,

[10] Rik Williams, "How are Californians using Uber during the pandemic?" Uber Under the Hood (blog), Medium, Aug., 2020, https://medium.com/uber-under-the-hood/how-are-californians-using-uber-during-the-pandemic-d7a77a136d9f

[11] Theoretically, if the number of drivers within a given area is reduced by half the necessary coverage area per driver doubles and the expected distance between a customer and the nearest driver becomes 1.41 times as long as the original distance (1.41 = the square root of 2).

tripled, or worse yet, unreliable and unpredictable, then the service is no longer valuable at any price.[12]

Even if the companies choose to shrink their service areas, we believe that some increase in wait times is inevitable because the employment model clearly does not give these companies the same flexibility in serving their markets that is provided by the independent contractor driver arrangement. With fewer drivers available to serve customers at any given time, wait times for customers will increase. Further, and as we have explained, all of these effects are interconnected. Therefore, an increase in wait times will negatively affect consumer demand, which in turn affects service prices and driver earnings.

CONCLUSION

We conclude that given the economic imperative to achieve profitability, the network platform companies will be compelled to pass on to California consumers as much of the increased labor costs as possible, reduce services to "peak" time periods when consumer demand and driver availability (through scheduling of work shifts) are optimal, and eliminate services in parts of the state that are unprofitable. Our research also suggests that even such drastic actions as these undertaken by the network platform companies may not allow the companies to achieve profitability from their California operations, thus threatening the availability of the services Californians have come to rely upon.

AUTHORS OF THE REPORT

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[12] *See*, Jonathan Hall, John Horton and Daniel Knoepfle, "Pricing Efficiently in Designed Markets: The Case of Ride-Sharing," New York University, 2019 at p. 39. ("…shorter wait times are preferred to longer wait times by all would-be passengers.")

employee compensation, performance management, constructive discharge, wages and hour, and independent contractor versus employee status. In these areas, Dr. Lewin has often designed and analyzed data obtained from survey questionnaires, interview protocols, and observational studies. He has also consulted widely on human resource management issues and practices with companies in the U.S. and abroad.

Dr. Lewin has published 25 books and more than 100 scholarly and professional journal articles on numerous aspects of human resource management and employment relations. He is a Fellow and recent member of the Board of Directors of the National Academy of Human Resources and served as faculty director of the UCLA Anderson School's Advanced Program in Human Resource Management. Formerly on the faculty of the Columbia University Graduate School of Business, Dr. Lewin joined the UCLA Anderson School in 1990.

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Dr. Hamm holds a BA from Dartmouth College and a PhD in economics from the University of Michigan. He is a member of the American Economic Association and the American Law and Economics Association; a fellow of the National Academy for Public Administration; and a director of the Grameen Foundation, an international not-for-profit organization that develops innovative, sustainable solutions to fight global poverty and hunger.

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