Proposition 22:
Analyzing the Impact on App-Based Drivers’ Earnings
PROPOSITION 22: ANALYZING THE IMPACT ON APP-BASED DRIVERS’ EARNINGS

Prepared by the Center for Economic Forecasting and Development with research costs covered by Lyft. All findings, conclusions, and opinions are solely and exclusively those of CEFD.

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The UC Riverside School of Business Center for Economic Forecasting and Development opened its doors in October 2015 and represents a major economic research initiative in one of California’s most vital growth regions. The Center produces a wide variety of research both independently and in collaboration with academic, business, and government partners. Research products include monthly employment analyses, quarterly regional economic forecasts, a quarterly business activity index, a white paper series, and a major regional economic forecast conference, hosted annually.

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Key Findings

On November 3rd, Californians will vote on Proposition 22 (Prop. 22), which seeks an earnings guarantee and benefits for app-based drivers. Specifically:

- A net earnings floor of:
  - 120% of the minimum wage, plus 30 cents per mile compensation for expenses
- A healthcare subsidy
- Insurance covering on-the-job injuries (equivalent to workers’ compensation).

This analysis calculates the value of the Prop. 22 earnings guarantee and benefits for app-based drivers, depending on hours driven. Scenarios are calculated for drivers who work 5, 15 or 30 hours per week.

If Prop. 22 passes:

- A worker driving an average of five hours per week would earn the equivalent of $25.61 per hour after accounting for expenses and wait time between rides
- A worker driving either 15 or 30 hours per week would earn the equivalent of $27.58 per hour, after accounting for expenses and wait time.

The remainder of this report details our calculations, which are summarized below.

### Estimate of Hourly Earnings Under Proposition 22

<table>
<thead>
<tr>
<th>Weekly Hours Driven</th>
<th>Scenario 1</th>
<th>Scenario 2</th>
<th>Scenario 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
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<td>$36.31</td>
<td>$36.31</td>
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<tr>
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<td>Prop 22 injury protection insurance</td>
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<td>Prop 22 healthcare stipend</td>
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<td>$1.97</td>
<td>$1.97</td>
</tr>
<tr>
<td><strong>Equivalent hourly earnings, after accounting for driver expenses and wait time</strong></td>
<td><strong>$25.61</strong></td>
<td><strong>$27.58</strong></td>
<td><strong>$27.58</strong></td>
</tr>
</tbody>
</table>
Background

There is little analysis of the impact of Prop. 22 on driver earnings. A rare exception is a blog post by the UC Berkeley Labor Center. The analysis suggests that, with the passage of the initiative, app-based driver earnings would be the equivalent of $5.64 per hour in California, after adjusting for expenses and wait times. We find major shortcomings in the Berkeley study, which lead it to significantly understate the impact of the initiative on driver earnings. This analysis provides a more data-driven basis for understanding the effect of the initiative. The Berkeley study uses a simple accounting framework in which the costs of driving on a per-hour basis are subtracted from drivers’ hourly earnings on app-based platforms. A similar approach is adopted in the following analysis, for the purpose of comparison.

Hourly Earnings Assumptions

The Berkeley study starts with an estimate of driver earnings in 2020 and assumes that California drivers will earn the minimum amount guaranteed under Prop. 22. The analysis is based on the State’s minimum wage of $13 per hour in 2020. Because the initiative guarantees that earnings will be 20% higher than the minimum, this leads the Berkeley authors to estimate that drivers would have earned $15.60 per hour this year, before accounting for driver expenses. In 2021, when the initiative would come into effect, the minimum wage in the state will be $14 per hour, which would adjust Berkeley’s starting point to $16.80 per hour.

But driver data provided by app-based driving companies show that app-based drivers earn more than $15.60 or even $16.80 per hour. For example, according to economists at Stanford University (in a paper cited by the Berkeley authors), from 2015 to 2017 the average Uber driver earned $21.07 per hour, a figure that already accounts for wait times. In Chicago, the authors estimate, drivers earn $23.81 per hour. These figures probably still underestimate the earnings of California drivers in 2020 for two reasons. First, workers in California have higher earnings to offset high living costs. Second, earnings have increased since the 2015-17 period.

In an analysis of Uber and Lyft drivers in Seattle, the School of Industrial and Labor Relations at Cornell University found that the median hourly earnings for drivers was $36.31 before accounting for expenses and wait times. As discussed below, the Cornell estimate is similar to the Stanford estimate, after adjusting for wait times.

In summary, according to analyses of Lyft and Uber data, the starting premise of the Berkeley analysis is flawed. Because Seattle has a high cost of living, like much of California, and the Cornell analysis is more up to date than the Stanford study, the Center assumes that the earnings of drivers in California in 2021 will approximate hourly earnings in Seattle, $36.31.

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1 http://laborcenter.berkeley.edu/the-uber-lyft-ballot-initiative-guarantees-only-5-64-an-hour/
3 https://digitalcommons.ilr.cornell.edu/cgi/viewcontent.cgi?article=1070&context=reports. See this paper for earnings estimates under different scenarios.
Driver Costs

The Berkeley study next identifies driver costs, for which it says drivers are uncompensated even under Prop. 22. It is important to note that Prop. 22 compensates for driver expenses. The key question is whether the initiative covers all driver costs, both in terms of expenses and wait times.

Unpaid Wait Time Assumptions

The Berkeley study says the primary source of driver “underpayment” is wait time. In app-based driving, time is categorized as follows:

- P1 is time spent with an app activated while a driver is not engaged in a ride or delivery
- P2 is the time from acceptance to pickup of a ride or delivery
- P3 is the time spent taking a passenger or delivery to destination.

The Berkeley study assumes that all P1 time is wait time. It cites an analysis by Fehr and Peers that finds that 33% of miles driven are P1 miles, that is, miles accrued while drivers are not engaged in a ride. The Berkeley authors convert this mileage estimate into time to conclude that one third of driver time is wait time. The Berkeley study counts this as an underpayment. When this “unpaid” waiting time is subtracted from the Berkeley hourly earnings estimate ($15.60 per hour), the Berkeley authors estimate that drivers earn only $10.45 an hour for the time they are driving to a pickup point or engaged in a ride (P2 and P3 hours).

https://drive.google.com/file/d/1FIUskVkj9IsAnWJQ6kLhAhNoVLjFdx3/view
There are several reasons why we disagree with the Berkeley study’s premise that P1 time is compensable, as explained below. The authors of the Berkeley study compare this P1 time to the time that supermarket cashiers spend waiting for a customer; cashiers are paid for such time. But a cashier, although on the clock, is under the control of the employer. He or she cannot leave the store or engage in any activity at liberty. This is not the case for an app-based driver. An app-based driver could choose to leave the app on while running errands, for example. An app-based driver could also have multiple driving apps activated and pick rides from across the platforms. Some P1 hours a driver registers on one app can appear as P2 and P3 hours (time engaged in a ride or delivery) on other apps. By contrast, a cashier cannot walk across the road during a paid shift and work for another supermarket.

The issue of commuting further complicates matters. Many app-based drivers commute to a part of a city, such as an airport, where they can maximize ride requests. When drivers leave home they may turn on one or more apps to see whether any rides can take them toward their preferred waiting area. If such opportunities exist, drivers can earn money during their commute. Otherwise, this P1 time should be classified as commuting time, and traditional employees are not reimbursed for commuting time.

We do not know how drivers spend P1 time. But assuming that all of it is spent waiting for a ride, as the Berkeley study does, defies credence. For example, in a survey, Lyft found that 55% of its drivers worked on at least one other app-based driving platform. The Cornell study of Seattle found that a third of driver time is spent signed into Lyft and Uber apps simultaneously. The study did not measure whether these drivers also worked for other app-based driving companies.

To adjust P1 hours for some of these likelihoods, the Cornell researchers removed duplicated P1 time across the Lyft and Uber platforms (that is, they do not double-count P1 time). The study also counts P1 time as wait time only if it is followed by the acceptance of a ride. To extend the discussion of commuting from above, consider that drivers heading home after a particular ride may leave on an app to see whether a ride emerges that will take them in the direction of home. If such an opportunity does not arise, this P1 time is not followed by a ride and can be considered part of a commute rather than time spent waiting for a ride.

When these adjustments to P1 hours are made, the Cornell study estimates that P1 time accounts for 28% of the median driver’s time, compared with 33% in the Berkeley study. The key difference between the Center’s estimate and the Berkeley estimate is the data in this analysis are grounded in actual driver time data, whereas the Berkeley time represents an inexact estimate based on miles driven.

Also, the assumption that P1 time accounts for 28% of driver time probably overestimates the actual time drivers spend waiting, for the reasons mentioned above. In other words, the Cornell study cannot account for the possibility that P1 time on Lyft and Uber’s services may be P2 or P3 time on another company’s platform (that is, time spent driving for another delivery company). It also doesn’t account for P1 time spent performing activities other than waiting for a ride while an app is on (that is, running an errand). There is no way of knowing how P1 time is spent, so this analysis errs on the side of caution and assumes that all of it is spent waiting. Although this is unrealistic, it is intended to represent the upper bound of the time drivers would actually spend waiting for a ride. Because, according to our P1 time estimate, drivers are paid for 72% of the time they are logged into an app, we multiply 0.72 by $36.31 to adjust driver earnings for wait time. This has the effect of reducing driver earnings by $10.17 cents per hour, to $26.14. This earnings estimate is similar to the Stanford study’s, which adjusts for wait time as described above.
Compensation for Expenses

Under Prop. 22, drivers can receive compensation of 30 cents for each P2 and P3 mile driven, to cover the cost of maintenance, gas and repairs incurred during a ride. However, we do not include this compensation here because, based on driver earnings outlined in the Cornell analysis, the median driver earns more than the net earnings floor guaranteed under the provisions of Prop. 22.

Berkeley asks the question whether 30 cents fairly covers drivers’ costs, asserting that the IRS tax deduction rate of 58 cents per mile is more appropriate. However, the IRS figure stands in stark contrast to estimates of driving costs by AAA, which estimates the cost of driving a mile to range from 17 to 23 cents, depending on vehicle size. The IRS estimate is higher than the AAA estimate because the IRS does not adjust for vehicle size. Because the IRS figure is intended to cover costs of the entire fleet of vehicles in the U.S., it is an upward-biased figure to account for larger vehicles. This means the IRS deduction is more generous for small vehicles. In Cornell’s Seattle study, 72% of Lyft and Uber vehicles in the city were a Toyota, Hyundai, Honda or Nissan, that is, relatively fuel-efficient.

Because the IRS deduction does not reflect the actual cost incurred for the typical app-based vehicle, the Center uses the AAA estimate for a medium-size sedan (the AAA estimate of 18.45 cents per mile is rounded to 19 cents). This means each P1 mile driven in an hour (3.3 miles) is multiplied by 19 cents to account for driver expenses incurred during waiting times (63 cents per hour). This amount is subtracted from hourly earnings. The costs of vehicle ownership should also not be included. Because the median app-based driver does not drive for an app-based service on a full-time basis and drives fewer than 10 hours per week, it is unrealistic to think that the median app-based driver buys a vehicle to drive on these platforms.

This analysis also subtract from hourly earnings the costs associated with driving P2 and P3 miles. The estimate of P2 and P3 miles per hour, 10.3 miles, is multiplied by the cost of driving a mile (19 cents). Note that drivers can also still deduct the IRS rate of 58 cents per mile from their taxes, even if they receive the 30 cents compensation as part of Prop. 22.

Once these calculations are made, hourly earnings are adjusted from $26.14 to $23.53.

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Accident Insurance and Healthcare Subsidies

Finally, under the provisions of Prop. 22, app-based driving companies will provide drivers with occupational accident insurance. The Berkeley study estimates these subsidies at 20 cents per mile driven. This seems reasonable. Therefore, for this analysis, this figure is multiplied by the median P2 and P3 miles driven in an hour (10.3) to calculate the value of subsidies drivers receive for accident insurance, and is added to a driver’s hourly earnings.

Drivers also receive subsidies for health insurance. The subsidy does not begin until drivers have worked at least 15 hours per week in a quarter, when they receive a subsidy of 41% of the cost of a Covered California Bronze Plan. The value of the subsidy increases and reaches a maximum when drivers have worked 25 hours a week, when they receive a subsidy of 82% of the premium cost. In terms of the value of this benefit, the statewide average for the cost of a Covered California Bronze Plan is $289 per month. For this analysis, to calculate the amount of the stipend for 15 hours a week, $289 is multiplied by 0.41, to get 41% of the monthly premium. This is then divided by the hours worked in a month (15 hours per week multiplied by 4) to calculate the hourly value of the stipend. This amount is added to a driver’s hourly earnings. The Center performs a similar calculation for drivers working 30 hours per week, whose health benefit would kick in at 25 hours.

In combination, occupational accident insurance and the healthcare stipend increase driver hourly earnings from $23.53 to $25.61 for those driving five hours a week and to $27.58 for those driving 15 or 30 hours a week.

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