REPORT OF THE BERKELEY RESEARCH GROUP (BRG)

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ANALYSIS OF VOTER SUPPORT OF PROPOSITION 22 IN CALIFORNIA AND LOS ANGELES COUNTY

Introduction

On November 3, 2020, California voters approved Proposition 22, the App-Based Drivers as Contractors and Labor Policies Initiative. The vote on the initiative was 58.63% in favor, 41.37% opposed, indicating that a substantial majority of voters supported the practice whereby app-based rideshare and food delivery drivers maintain their independent contractor status rather than being reclassified as employees.

At the request of the Chamber of Progress we conducted a quantitative analysis of Proposition 22 voting results, doing so for California as a whole and, more narrowly, for Los Angeles County. In this analysis we focused our attention on demographic characteristics of counties and cities, especially the racial composition of these entities.

We began our analysis by disaggregating the State of California into 58 counties and then conducted a quantitative analysis of voting for Proposition 22 in these counties. In statistical parlance, voting for Proposition 22 is the dependent variable or, in other words, the phenomenon we sought to explain. In doing so, we identified certain other variables, known as independent variables, that potentially explain voting for Proposition 22. These variables are the proportions of Black and Hispanic populations in these counties, the proportion of the female population in these counties, and the proportion of voters registered as Democrats in these counties. We then conducted the same type of analysis for

the most highly populated county in California, namely, Los Angeles County, doing so for all of the 88 cities in that County.[1]

The results of our analysis indicate that support for Proposition 22 was significantly higher in neighborhoods with greater Black **and** Hispanic populations, even after controlling for gender composition and registered voters' Democratic party affiliation. This key finding emerged from both the county level and city level analyses.

Specifically, for California counties, we found that when the proportion of the Hispanic population increases by 10% the share of voters who voted yes on Proposition 22 increases by 1.4%. When the proportion of the Black population increases by 10%, the share of voters who voted yes on Proposition 22 increases by an even more prominent 6.2%.

For the cities in Los Angeles County, we found that a 10% increase in the proportion of the Hispanic population increases the share of voters who voted yes on Proposition 22 by 1.1%. When the proportion of the Black population increases by 10%, the share of voters who voted yes on Proposition 22 increases by 2.6%.

The Findings in Greater Detail

Full explanations of the data sources we used for our analysis and complete statistical findings from this analysis are contained in Appendix 1 and Appendix 2 of this report.[2] Here we present highlights of these data sources and findings.

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[1] The methodology we used for this purpose is well known and is commonly referred to as regression analysis (or, more specifically, ordinary least squares regression analysis). In enables a researcher to analyze several factors – variables – simultaneously, in this instance voting for Proposition 22, percent Black population, percent Hispanic population, percent female population, and percent registered Democrat population. If we examined only two variables, say percent voting for Proposition 22 and percent Black population, then we would have conducted what is known as a correlation analysis in which we analyze the statistical relationship only between these two variables. If more than two variables are examined, as is the case here, then a regression analysis in effect yields several correlations.

[2] All data are as of 2020 except for the proportion of female population, which is as of 2019.

California

Among registered voters in California's 58 counties, 46.1% identified Democratic as their party affiliation, 24.2% identified Republican as their party affiliation, and 29.7% identified other party affiliations or indicated no party affiliation. Among residents of the State of California, 39.4% were Hispanic, 34.7% were white, 5.4% were black, 15.1% were Asian, and 5.4% were multiracial or in other categories. Women constituted a slightly higher proportion of California residents than men, specifically 50.3% vs. 49.7%.

Table 1 below shows the 10 most Hispanic counties in California. In these counties, Proposition 22 was supported by an average margin of 26.8% yes votes over no votes.

Table 1 Top 10 Most Hispanic Counties in California

No	County	Hispanic	Yes Vote	No Vote	Margin
1	Imperial	85.2%	58.2%	41.8%	16.4%
2	Tulare	65.5%	67.5%	32.5%	34.9%
3	Merced	61.8%	62.4%	37.6%	24.8%
4	Colusa	61.7%	67.9%	32.1%	35.8%
5	San Benito	61.1%	56.5%	43.5%	13.1%
6	Monterey	60.4%	55.4%	44.6%	10.7%
7	Madera	59.6%	68.0%	32.0%	36.0%
8	Kings	56.8%	67.4%	32.6%	34.7%
9	Kern	54.9%	67.1%	32.9%	34.3%
10	San Bernardino	53.7%	63.7%	36.3%	27.5%
	Average of Top 10				26.8%
	Statewide				17.2%

Data Sources: 2020 Census (PL 94-171); California Secretary of State, Statement of Vote - General election November 3, 2020.

Table 2 below shows the 10 most Black counties in California. In these counties Proposition 22 was supported by an average margin of 20.7% yes votes over no votes.

Table 2 Top 10 Most Black Counties in California

No	County	Black	Yes Vote	No Vote	Margin
1	Solano	13.2%	58.0%	42.0%	16.0%
2	Alameda	9.5%	45.1%	54.9%	-9.8%
3	Sacramento	9.2%	62.7%	37.3%	25.4%
4	Contra Costa	8.4%	53.8%	46.2%	7.5%
5	San Bernardino	7.9%	63.7%	36.3%	27.5%
6	Los Angeles	7.6%	55.3%	44.7%	10.7%
7	San Joaquin	7.3%	62.7%	37.3%	25.5%
8	Lassen	6.9%	69.6%	30.4%	39.2%
9	Riverside	6.1%	65.4%	34.6%	30.8%
10	Kings	5.4%	67.4%	32.6%	34.7%
	Average of Top 10				20.7%
	Statewide				17.2%

Data Sources: 2020 Census (PL 94-171); California Secretary of State, Statement of Vote - General election November 3, 2020.

Our regression analysis findings indicate that, controlling for the gender composition and proportion of voters registered as Democrats, the share of voters who voted yes on Proposition 22 was significantly higher in counties with large proportions of Latino and/or Black populations. To illustrate, when the proportion of the Hispanic population increases by 10% the share of voters who voted yes on Proposition 22 increases by 1.4%. When the proportion of the Black population increases by 10%, the share of voters who voted yes on Proposition 22 increases by an even more prominent 6.2%.[3]

[3] The phrase "significantly higher" refers to statistical significance and typically means that a statistical finding is unlikely to have occurred by chance 95 out of 100 times. This is also known as the .05% probability level. The findings about the relationships between percentages of the Hispanic and Black populations in California counties and voting in favor or Proposition 22 are both significant at .05 level.

The proportion of women residents of California counties was also significantly related to voting in favor of Proposition 22. When the proportion of women in the population increases by 10%, the share of voters who voted yes on Proposition 22 increases by 7.4%. By contrast, when the proportion of registered Democrats in California counties increases by 10% the share of voters who voted yes on Proposition 22 **declines** by 7.7%.

To more fully understand these findings, assume that an "average" county in California has average shares of women, Hispanic and Black populations, and Democratic party registered voters. In this instance, our regression model predicts that 60.1% of voters in the county would have voted yes on Proposition 22.[4]

Going further, if the share of the Hispanic population of this "average" county was 10% higher than average but with everything else the same, our model predicts that support for Proposition 22 in this county would have been 61.4%, that is, 1.4% higher than previously. If the share of the Black population of this "average" county was 10% higher than average but with everything else the same, our model predicts that support for Proposition 22 in this county would have been 66.3%, that is, 6.2% higher than previously. And, if this "average" county had 10% higher shares of both the Hispanic and Black populations, support for Proposition 22 would have been 67.6%, that is, 7.5% higher than previously.

Los Angeles County

For more granular level of analysis, we applied the same analytical framework and quantitative methodology to the 88 cities within Los Angeles County.[5] In these cities, Proposition 22 won 55.1% of the vote. Among registered voters, 52.5% identified Democratic as their party affiliation, 17.0% identified Republican as their party affiliation, and 30.5% identified other party affiliations or indicated no party affiliation. Among residents of Los Angeles County, 46.7% were Hispanic, 26.6% were white, 7.6% were Black,

[4] For the 55 counties, the average shares are: female population (49.4%), Hispanic population (31.6%), Black population (2.8%), and Democratic party registered voters (39.3%).
[5] Unincorporated areas were excluded from the analysis.

14.9% were Asian, and 4.2% were multiracial or in other categories. Women constituted a slightly higher share of Los Angeles County residents than men, specifically 50.8% vs. 49.2%.

Table 3 below shows the 10 most Hispanic cities in Los Angeles County. In these cities, Proposition 22 was supported by an average margin of 8.9% yes votes over no votes.

Table 3 Top 10 Most Hispanic Cities in Los Angeles County

No	City	Hispanic	Yes Vote	No Vote	Margin
1	Maywood	97.1%	53.3%	46.7%	6.6%
2	Huntington Park	96.5%	54.4%	45.6%	8.9%
3	Bell Gardens	96.2%	54.0%	46.0%	7.9%
4	Cudahy	95.9%	53.6%	46.4%	7.2%
5	South Gate	94.9%	53.3%	46.7%	6.5%
6	Commerce	94.4%	54.0%	46.0%	7.9%
7	Bell	93.5%	55.3%	44.7%	10.5%
8	San Fernando	90.9%	54.7%	45.3%	9.4%
9	Irwindale	90.8%	56.5%	43.5%	13.1%
10	Pico Rivera	90.6%	55.4%	44.6%	10.7%
	Average of Top 10				8.9%
	Countywide				10.2%

Data Sources: 2020 Census (PL 94-171); California Secretary of State, Statement of Vote - General election November 3, 2020.

Table 4 below shows the 10 most Black cities in Los Angeles County. In these cities, Proposition 22 was supported by an average margin of 15.9% yes votes over no votes.

Table 4 Top 10 Most Black Cities in Los Angeles County

No	city	Black	Yes Vote	No Vote	Margin
1	Inglewood	37.9%	53.7%	46.3%	7.4%
2	Compton	25.4%	57.8%	42.2%	15.7%
3	Hawthorne	23.6%	56.1%	43.9%	12.2%
4	Carson	22.3%	58.0%	42.0%	16.0%
5	Gardena	21.3%	56.9%	43.1%	13.7%
6	Lancaster	20.5%	62.9%	37.1%	25.8%
7	Signal Hill	13.1%	57.6%	42.4%	15.3%
8	Palmdale	13.0%	60.5%	39.5%	21.1%
9	Bellflower	12.8%	60.0%	40.0%	20.0%
10	Long Beach	12.0%	56.1%	43.9%	12.2%
	Average of Top 10				15.9%
	Countywide				10.2%

Data Sources: 2020 Census (PL 94-171); California Secretary of State, Statement of Vote - General election November 3, 2020.

Our regression analysis findings indicate that, controlling for the gender composition and proportion of voters registered as Democrats, the share of voters who voted yes on Proposition 22 was significantly higher in cities with large proportions of Hispanic and/or Black populations. To illustrate, when the proportion of the Hispanic population increases by 10% the share of voters who voted yes on Proposition 22 increases by 1.1%. When the proportion of the Black population increases by 10%, the share of voters who voted yes on Proposition 22 increases by an even more prominent 2.6%. Both findings are statistically significant at the .05 probability level.

Unlike the finding from the California state analysis, the proportion of women residents of cities within Los Angeles County was not statistically significantly related to voting for Proposition 22. But as with the California state analysis, the proportion of registered Democrats in cities within Los Angeles County was significantly negatively related to voting for Proposition 22. A one percent increase in this proportion is associated with a **decline** of 7.4% in voting for Proposition 22.

To more fully understand these findings, assume an "average" city in Los Angeles County that has average shares of female, Hispanic and Black populations, and Democratic party registered voters. In this instance our regression model predicts that 58.8% of voters in the city would have voted yes on Proposition 22.[6]

Going further, if the share of Hispanic population of this "average" city was 10% higher than average but with everything else the same, our model predicts that support for Proposition 22 in this city would have been 59.8%, that is, 1.1% higher than previously. If the share of the Black population of this "average" city was 10% higher than average but with everything else held the same, our model predicts that support for Proposition 22 in this city would have been 61.4%, that is, 2.6% higher than previously. And, if this "average" city had 10% higher shares of both the Hispanic and Black populations, support for Proposition 22 would have been 62.4%, that is, 3.7% higher than previously.

Conclusions

Proposition 22 was placed on the California ballot in 2020 and was voted on favorably by Californians on November 3rd of that year. The proposition was aimed at preserving the independent contractor status of certain types of contractors, mainly those who drive for ridesharing and food delivery companies.[7]

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[6] For the 88 cities, the average shares are: female population (51.2%), Hispanic population (44.2%), Black population (4.7%), and Democratic party registered voters (48.0%).

[7] Occupations and industries excluded from coverage under Proposition 22 appear to be much larger and more numerous that occupations and industries included under the proposition's coverage. For example, business and professional services are excluded, as are insurance companies and health care organizations and specialists (such as

Using two main data sources, we quantitatively analyzed how such factors as the racial and gender composition of California counties and cities (i.e., cities within Los Angeles County) as well as political party registration affected Proposition 22-related voting behavior. We found that voting for the proposition was significantly positively correlated with the proportion Hispanic, the proportion Black, and the proportion of women in California counties, and significantly negatively correlated with Democratic party affiliation of residents of these counties. Quite similar findings emerged from our analysis of Proposition 22-related voting in cities within the County of Los Angeles, except that the proportion of women residents of a city was insignificantly related to such voting. The extent to which Hispanics, Blacks, women and Democratic party registered voters may themselves work as drivers for rideshare, food delivery and/or other companies is unknown to the best of our knowledge, but in any event was not within the scope of our assignment in this matter.

doctors and nurses). Initially independent contractor journalists and writers were included under Proposition 22, but various media organizations, including newspapers, were successful in getting the California State legislature to exclude them from coverage. In the year or so since Proposition 22 was approved by California voters, it has come under various legal challenges that are working their way through the courts. Nonetheless, similar propositions have been initiated in several other U.S. states as well.

Appendix 1 – Details of Analysis

Methodology and Data

The approach selected for the current analysis is the ordinary least square regression. The regression equation is specified as:

% Yes vote = a + b1*% Hispanic + b2*% Black + b3*% Female + b4*% Democratic.

The two main source of data for this analysis are the California Secretary of State and U.S. Census Bureau. For the vote counts and registered voter characteristics, we used the data from the Statement of Vote and Report of Registration issued by the California Secretary of State. For the demographic information of counties and cities, we used 2020 Census Redistricting Data (PL 94-171) for racial composition and 2019 American Community Survey 5-Year Estimates published by U.S. Census Bureau for the gender composition.

California

Throughout California, Proposition 22 won 58.6% of the vote. Among the registered voters, 46.1% identified Democratic as their party affiliation, while 24.2% identified Republican as their party of choice, and 29.7% identified other parties or indicated no party preference (See Table 1).

Table 1 Characteristics of Voters in California

	Proposition 22 Vote			Party Affiliation			
	Yes	No	Total	Democratic	Republican	Other/No Preference	Total
California	58.6%	41.4%	100.0%	46.1%	24.2%	29.7%	100.0%

Data Sources: California Secretary of State, Statement of Vote - General election November 3, 2020; California Secretary of State – Report of Registration October 19, 2020.

According to the 2020 Census, 39.4% of state residents were Hispanic, 34.7% were white, 5.4% were black, 15.1% were Asian, and 5.4% were multiracial or other. Women represented a slightly higher share of population, 50.3%, while 49.7% were men (See Table 2).

Table 2 Population Demographics of California

	Ethnicity						Gender		
	Hispanic	White	Black	Asian	Others	Total	Male	Female	Total
California	39.4%	34.7%	5.4%	15.1%	5.4%	100.0%	49.7%	50.3%	100.0%

Data Sources: 2020 Census (PL 94-171); 2019 American Community Survey 5-Year Estimates.

Counties in California

Our regression result (Table 3) shows that, controlling for the gender composition and share of voters registered as Democrats, the share of voters who voted yes on proposition 22 was higher in the counties with large Hispanic and/or Black population shares. When the share of Hispanic population increases by one percent, the share of voters who voted yes on proposition 22 increases by 0.14%. For Black population share, the increase was more even prominent at 0.62%. Both the shares of Hispanic and Black populations were highly statistically significant at 0.05 probability level. The share of female population also increased the share of vote in support. The share of registered voters as Democrats was a negative influence.

Table 3 Regression Result for California Counties

Variable	Coefficient	
Intercept	0.4790	***
% Female	0.7395	***
% Hispanic	0.1353	***
% Black	0.6153	***
% Democratic	-0.7710	***
Observations	58	
R^2	0.8814	

*** p<0.01

Los Angeles County

For more granular level analysis, we conducted the same analysis for the 88 cities in Los Angeles County.[1]

Throughout the cities in Los Angeles County, Proposition 22 won 55.1% of the vote. Among the registered voters, 52.5% identified Democratic as their party affiliation, while 17.0% identified Republican as their party of choice, and 30.5% identified other parties or indicated no party preference (See Table 4).

Table 4: Voter Characteristic in Cities in Los Angeles County

	Proposition 22 Vote			**Party Affiliation**			
	Yes	**No**	**Total**	**Democratic**	**Republican**	**Other/No Preference**	**Total**
Los Angeles County	55.1%	44.9%	100.0%	52.5%	17.0%	30.5%	100.0%

Data Sources: California Secretary of State, Statement of Vote - General election November 3, 2020; California Secretary of State – Report of Registration October 19, 2020.

[1] Unincorporated areas were excluded from the analysis.

According to the 2020 Census, 46.7% of the county's residents were Hispanic, 26.6% were white, 7.6% were black, 14.9% were Asian, and 4.2% were multiracial or other. Women represented a slightly higher share of population, 50.8%, while 49.2% were men (Table 5).

Table 5 Population Demographics in Cities in Los Angeles County

	Ethnicity						Gender		
	Hispanic	White	Black	Asian	Others	Total	Male	Female	Total
California	46.7%	26.6%	7.6%	14.9%	4.2%	100.0%	49.2%	50.8%	100.0%

Data Sources: 2020 Census (PL 94-171); 2019 American Community Survey 5-Year Estimates.

Cities in Los Angeles County

Our regression result (Table 6) shows that, controlling for the gender composition and share of voters registered as Democrats, the share of voters who voted yes on proposition 22 was higher in the cities with large Hispanic and/or Black population shares. When the share of Hispanic population increases by one percent, the share of voters who voted yes on proposition 22 increases by 0.11%. For Black population share, the increase was more even prominent at 0.26%. Both the shares of Hispanic and Black populations were highly statistically significant at 0.05 probability level. The share of female population was not statistically significant at the city level, while the share of voters registered as democrats was once again a strong negative influence.

Table 6 Regression Result for Cities in Los Angeles County

Variable	Coefficient	
Intercept	0.9006	***
% Female	-0.0330	
% Hispanic	0.1055	***
% Black	0.2621	***
% Democratic	-0.7392	***
Observations	88	
R^2	0.8459	

*** $p<0.01$