Los Angeles Auto Outlook

Comprehensive information on the LA County new vehicle market



SPECIAL REPORT

How Semiconductor Shortage Could Impact County New Vehicle Market

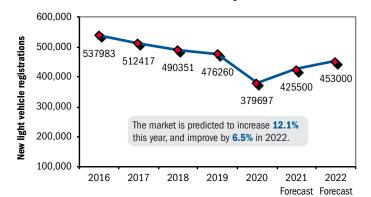
The chip shortage and other supply-related bottlenecks have turned the auto industry upside down. For most of the past 50 years, here's how it worked: key economic factors would dictate the level of demand in the marketplace, and the manufacturers would produce more than enough vehicles to accommodate demand. Most of the time, **supply exceeded demand**.

This was clearly not the case for the second half of this year, and likely lasting well into 2022. **Demand is significantly higher than supply** and sales levels will be determined based on how many vehicles can be produced. Pinpointing production volume is a complex puzzle impacted by several inter-related pieces: the chip shortage, COVID-induced labor cutbacks, tight supplies of other key components, and transportation logistics. Even if it was possible to accurately predict production, it's not feasible to directly link this to county new vehicle sales.

As a result, a different forecasting technique is needed. One that relies more on macro trends, and less on county economic factors. The most salient indicator to gauge the market is the seasonally adjusted annual rate of sales for the U.S. (SAAR). It's a top-line number, recognized across the industry, that is used as a barometer to formulate consensus on where the market is headed. The sidebar to the right presents an analysis that translates the anticipated SAAR into an equivalent level of registrations in the county. According to the baseline forecast, registrations will increase by 12.1% for all of this year, and are likely to improve in 2022.

There is a **silver lining** to the recent slowdown in sales. As discussed in the previous release of Auto Outlook, key pillars of demand for new vehicles are bullish. Affordability is strong, and consumers have an intense need and desire to purchase new vehicles. The supply-related issues will pull sales well below anticipated levels, but most of these purchases will occur in the future. When supply issues abate, pent up demand will give a boost to the market for an extended period.

Annual Trend in County Market



The graph shows annual new retail light vehicle registrations from 2016 thru 2020 and Auto Outlook's projections for all of 2021 and 2022. Source for historical data: AutoCount data from Experian.

Outlook for Los Angeles County new vehicle market



Forecast for county new retail registrations

	Forecast Scenarios					
Time Period	Baseline	Alternative Downside	Alternative Upside			
4Q 2021 regs.	83,995	76,595	91,395			
% change vs. 4Q '20	-18.2%	-25.4%	-11.0%			
2021 annual regs.	425,500	418,100	432,900			
% change vs. 2020	12.1%	10.1%	14.0%			
2022 annual regs.	453,000	408,900	485,400			
% change vs. 2021	6.5 %	-2.2%	12.1%			

Review of forecast methodology

- Demand will **not** be a primary driver for the county new vehicle market for perhaps the next 15 months.
- The level of sales will be dictated by production. A tangible indicator of how production will translate into county new vehicle registrations is the U.S. seasonally adjusted annual rate of sales (SAAR).
- The SAAR at the end of 3Q '21 was roughly 12.5 million units.
- Based on Auto Outlook's analysis of sales trends in the county market, a U.S. SAAR of 12.5m units in Q4 '21 would be equivalent to 83,995 new retail registrations in the county (shown as "Baseline" in above table).
- This would bring total registrations for all of 2021 to 425,500 units, up 12.1% from 2020.
- Most projections for U.S. new vehicle sales in 2022 are in the vicinity of 15.4 million units. This would be equivalent to county registrations of 453,000 units next year, a 6.5% increase from 2021.
- Due to the elevated uncertainty primarily related to the severity and duration of vehicle supply disruptions, the table above shows three different forecast scenarios: baseline, alternative downside, and alternative upside.

Los Angeles County New Vehicle Market Dashboard



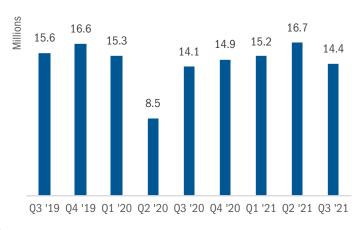






MARKET PERFORMANCE DURING PAST TWO YEARS

Los Angeles County
Quarterly Registrations
Seasonally Adjusted
Annual Rate, Converted
to Equivalent U.S. New
Vehicle Market SAAR
(millions of units)



Data Source: AutoCount data from Experian.

The graph on the left provides an easily recognizable way to gauge the strength of the county market. It shows quarterly registrations based on a seasonally adjusted annual rate. These figures are then indexed to SAAR sales figures for the U.S. new vehicle market. So just like in the national market, when the quarterly SAAR is above 17 million units, the county market is strong, 15 million is about average, and below 13 million is weak. Quarterly registrations in the county reached a U.S. equivalent level of 16.7 million units in the Second Quarter of 2021 and fell to 14.4 million in the Third Ouarter as inventories plummeted.



COUNTY MARKET VS. U.S.

YTD 2021 thru September % Change In New Retail Market vs. Year Earlier

Los Angeles County

UP 23.3%

U.S.

UP 18.2%

impact on new light vehicle registrations for most of the first nine months of this year. And up until that time, the county market posted a larger gain than the U.S. Registrations will trail year-earlier levels for the remainder

of the year, however.

Inventory issues had minimal

Source for county registrations: AutoCount data from Experian. U.S. figures estimated by Auto Outlook.

At Auto Outlook, we strive to provide sound and accurate analyses and forecasts based upon the data available to us. However, our forecasts are derived from third-party data and contain a number of assumptions made by Auto Outlook and its management, including, without limitation, the accuracy of the data compiled. As a result, Auto Outlook can make no representation or warranty with respect to the accuracy or completeness of the data we provide or the forecasts or projections that we make based upon such data. Auto Outlook expressly disclaims any such warranties, and undue reliance should not be placed on any such data, forecasts, projections, or predictions. Auto Outlook undertakes no obligation to update or revise any predictions or forecasts, whether as a result of any new data, the occurrence of future events, or otherwise.

Los Angeles County New Vehicle Market Dashboard



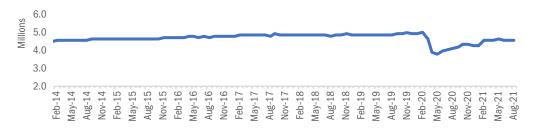






TRACKING ECONOMIC INDICATORS

Total Employment in Los Angeles County



Monthly Unemployment Rates in Los Angeles County

17.5%

JULY 2021

10.2%

AUGUST 2021

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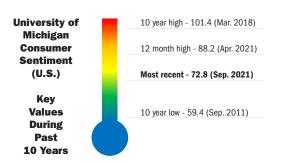
9.7%

Average Hourly Earnings for All Workers in County - Aug. 2021

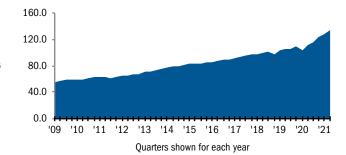




Up \$1.58 vs. year earlier Total employment in the county continued to drift slightly higher during the summer of 2021. The unemployment rate was 9.7% in August. Consumer sentiment has moved lower due to inflationary pressures and concerns about the pandemic. Household net worth has hit record highs, which should provide a boost to new vehicle sales when supply issues abate.



Household Net Worth Trillions of \$ (U.S.)

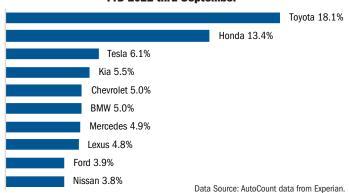


Sources: Bureau of Labor Statistics, University of Michigan, and Federal Reserve.

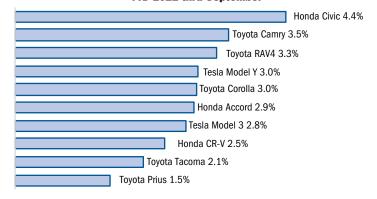
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TOP TEN RANKINGS IN COUNTY MARKET

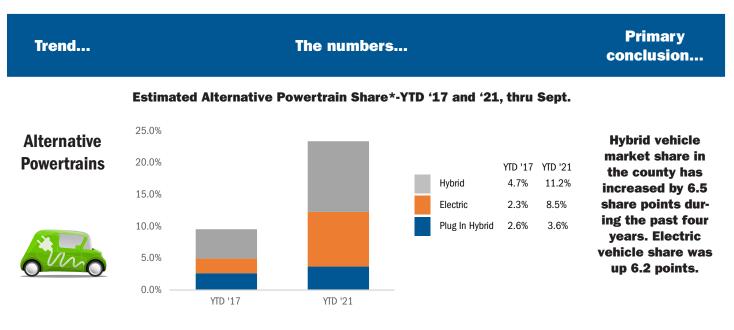
Market Share for Top Ten Selling Brands in County Market YTD 2021 thru September

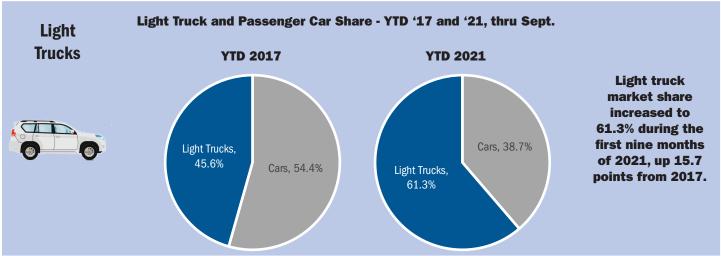


Market Share for Top Ten Selling Models in County Market YTD 2021 thru September

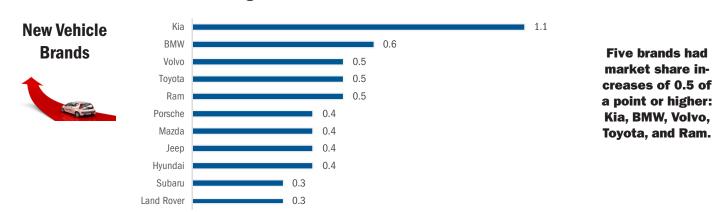


Three Long Term Trends in Los Angeles County New Vehicle Market





Brands with Largest Market Share Increases - YTD '17 to YTD '21

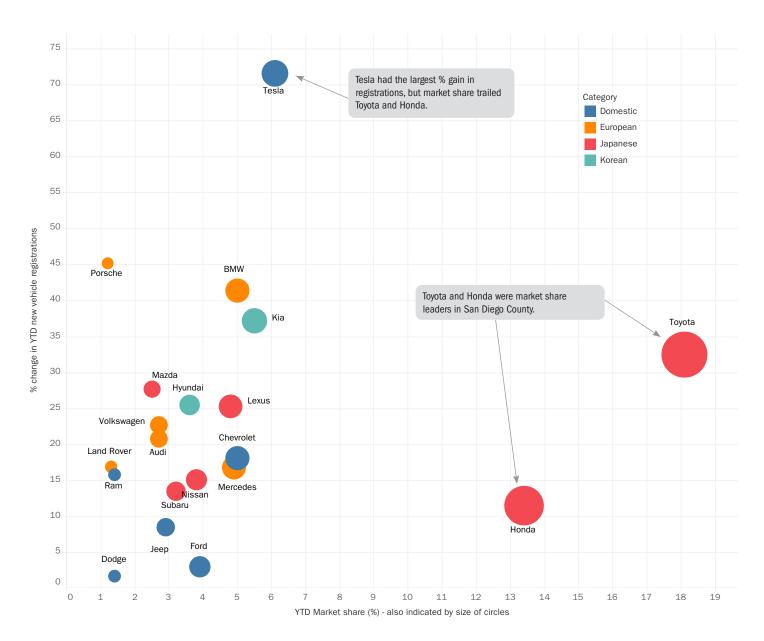


Data Source: AutoCount data from Experian. *Registrations by powertrain for vehicles equipped with multiple engine types were estimated by Auto Outlook. The estimates are based on model registrations compiled by Experian, and engine installation rates collected from other sources. The graph above showing largest market share increases excludes Tesla, since the Model 3 was introduced during 2017.

Tesla, Porsche, and BMW Had Largest Percentage Increases

The graph below presents a well-rounded view of brand sales results in the county market. It shows both the percentage change in registrations so far this year versus year earlier (vertical axis) and market share (horizontal axis, also denoted by relative size of the circles). Brand category (Domestic, European, Japanese, or Korean) is identified by color of the circles. Brands on the right side of the graph have higher market share, and those at the top have had larger percentage gains in registrations. Typically, brand sales performance is a function of such factors as new product cadence, marketing, incentives, and dealership sales performance. But during 2021, brand results have primarily been determined by vehicle supplies and availability.

Los Angeles County Market Share (YTD '21 thru September) and Percent Change in Registrations (YTD '21 thru Sept. vs. YTD '20) Top 20 Selling Brands



Data Source: AutoCount data from Experian.

Brand Registrations Report													
Los Angeles County New Retail Car and							Light Truck Registrations						
	Thrid Quarter						Year to date thru September						
	Registrations			Mark	Market Share (%)			Registrations			Market Share (%)		
	30 '20	30 '21	% change	3Q '20	30 '21	Change	YTD '20	YTD '21	% change	YTD '20	YTD '21	Change	
TOTAL	101,206	106,340	5.1				276,976	341,505	23.3				
Cars	40,760	41,545	1.9	40.3	39.1	-1.2	116,710	132,232	13.3	42.1	38.7	-3.4	
Light Trucks	60,446	64,795	7.2	59.7	60.9	1.2	160,266	209,273	30.6	57.9	61.3	3.4	
Domestic Brands	22,788	23,649	3.8	22.5	22.2	-0.3	62,751	77,393	23.3	22.7	22.7	0.0	
European Brands	20,232	20,970	3.6	20.0	19.7	-0.3	55,901	68,980	23.4	20.2	20.2	0.0	
Japanese Brands	49,137	51,136	4.1	48.6	48.1	-0.5	134,343	163,053	21.4	48.5	47.7	-0.8	
Korean Brands	9,049	10,585	17.0	8.9	10.0	1.1	23,981	32,079	33.8	8.7	9.4	0.7	
Acura	974	1,228	26.1	1.0	1.2	0.2	2,674	3,420	27.9	1.0	1.0	0.0	
Alfa Romeo	482	406	-15.8	0.5	0.4	-0.1	1,545	1,458	-5.6	0.6	0.4	-0.2	
Audi	2,629	2,288	-13.0	2.6	2.2	-0.4	7,718	9,320	20.8	2.8	2.7	-0.1	
BMW	4,021	5,608	39.5	4.0	5.3	1.3	12,032	17,017	41.4	4.3	5.0	0.7	
Buick	216	181	-16.2	0.2	0.2	0.0	502	629	25.3	0.2	0.2	0.0	
Cadillac	433	485	12.0	0.4	0.5	0.1	1,233	1,804	46.3	0.4	0.5	0.1	
Chevrolet	5,150	4,763	-7.5	5.1	4.5	-0.6	14,547	17,181	18.1	5.3	5.0	-0.3	
Chrysler	165	107	-35.2	0.2	0.1	-0.1	483	723	49.7	0.2	0.2	0.0	
Dodge	1,551	1,231	-20.6	1.5	1.2	-0.3	4,553	4,632	1.7	1.6	1.4	-0.2	
FIAT	52	13	-75.0	0.1	0.0	-0.1	152	45	-70.4	0.1	0.0	-0.1	
Ford	4,771	3,334	-30.1	4.7	3.1	-1.6	12,830	13,212	3.0	4.6	3.9	-0.7	
Genesis	129	439	240.3	0.1	0.4	0.3		888	115.0	0.1	0.3	0.2	
GMC	896	950	6.0	0.9	0.9	0.0	2,404	3,122	29.9	0.9	0.9	0.0	
Honda	14,758	14,515	-1.6	14.6	13.6	-1.0	41,085	45,818	11.5	14.8	13.4	-1.4	
Hyundai	3,742	3,912	4.5	3.7	3.7	0.0	9,827	12,332	25.5	3.5	3.6	0.1	
Infiniti	845	576	-31.8	0.8	0.5	-0.3	2,577	2,191	-15.0	0.9	0.6	-0.3	
Jaguar	291	179	-38.5	0.3	0.2	-0.1	874	597	-31.7	0.3	0.2	-0.1	
Jeep	3,449	2,938	-14.8	3.4	2.8	-0.6	9,026	9,792	8.5	3.3	2.9	-0.4	
Kia	5,178	6,234	20.4	5.1	5.9	0.8		18,859	37.2	5.0	5.5	0.5	
Land Rover	1,326	1,232	-7.1	1.3	1.2	-0.1	3,861	4,513	16.9	1.4	1.3	-0.1	
Lexus	4,941	5,260	6.5	4.9	4.9	0.0	13,081	16,392	25.3	4.7	4.8	0.1	
Lincoln	348	175	-49.7	0.3	0.2	-0.1	1,049	849	-19.1	0.4	0.2	-0.2	
Maserati	117	106	-9.4	0.1	0.1	0.0	342	340	-0.6	0.1	0.1	0.0	
Mazda	2,621	3,117	18.9	2.6	2.9	0.3		8,639	27.7	2.4	2.5	0.1	
Mercedes	5,479	4,876	-11.0	5.4	4.6	-0.8	14,359	16,778	16.8	5.2	4.9	-0.3	
MINI	519	415	-20.0	0.5	0.4	-0.1	•	1,381	5.7	0.5	0.4	-0.1	
Mitsubishi	165	321	94.5		0.3	0.1	,	831	50.5		0.2	0.0	
Nissan	3,790	4,118	8.7	3.7	3.9	0.2		13,093	15.1	4.1	3.8	-0.3	
Other	232	257	10.8	0.2	0.2	0.0	782	831	6.3	0.3	0.2	-0.1	
Porsche	1,170	1,322	13.0	1.2	1.2	0.0		4,201	45.2	1.0	1.2	0.2	
Ram	1,653	1,349	-18.4	1.6	1.3	-0.3	· ·	4,621	15.8	1.4	1.4	0.0	
Subaru	3,745	3,518	-6.1	3.7	3.3	-0.4	•	11,001	13.5	3.5	3.2	-0.3	
Tesla	4,156	8,136	95.8	4.1	7.7	3.6		20,828	71.6	4.4	6.1	1.7	
Toyota	17,298	18,483	6.9	17.1	17.4	0.3	· ·	61,668	32.5	16.8	18.1	1.3	
Volkswagen	2,865	3,018	5.3	2.8	2.8	0.0		9,128	22.7	2.7	2.7	0.0	
Volvo	1,049	1,250	19.2	1.0	1.2	0.2	2,599	3,371	29.7	0.9	1.0	0.1	
Source: AutoCount			10.2	1.0	1.2	0.2	2,000	0,011	20.1	0.0	1.0	0.1	

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