

Impact of the Pandemic on the Tesla

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Introduction

The epidemic has had a significant impact on various industries, including Tesla. The automotive industry is one of the hardest hits due to its globally integrated supply chain, with production halted and sales at historic lows. In recent months, Tesla has demonstrated remarkable resiliency. New-vehicle sales in China, Europe, and the United States have increased year over year over the past few months, rebounding from the economic lows encountered in the spring of 2020. Nevertheless, despite hopeful indications of progress toward a vaccine, several dangers remain. We anticipate that sales in Europe and the United States will not return to pre-COVID levels until 2023. Meanwhile, China's recovery is accelerating, possibly approaching 30 million new car sales by 2025 (Finamore, 2020).

Instantaneously, the freeways, factories, and showrooms became silent. A year ago, introducing the "new coronavirus" devastated the car industry. In places such as Los Angeles, Chicago, and Atlanta, traffic decreased by more than 70 per cent due to the lockdown. Hundreds of thousands of people were laid off due to the halt in North American automobile manufacturing. However, there was no need for additional new cars in showrooms, as U.S. sales dropped 40 per cent in a month (Sheffi, 2021).

A cursory examination reveals the sector has returned to average one year later. Upon closer inspection, it is evident that nothing will be the same in the future. Tesla is moving online—the reconfiguration of factories to accommodate Covid-19 limitations. However, shortages remain a problem. Traffic is increasing, yet commuting is becoming easier as tens of thousands of workers work from home. In March of last year, Tesla began sending their office employees home because of the pandemic. Within weeks, factories were closed, resulting in skyrocketing unemployment rates.

How Covid Influenced Tesla and the Automotive Industry

Car Manufacturing

During the first curfew in March 2020, car production in Tesla and the rest of the world halted, and manufacturers were compelled to make their facilities Covid-secure before being allowed to return. Overall, automotive production by Tesla decreased by 29.3 per cent in 2020 to 920,928 units (Conway et al., 2021).

While production facilities were brought back online in 2021, supply chain difficulties such as Covid-19 and Brexit continued to contribute to a decline in output. Notably, the global shortage of computer chips produced considerable production challenges, as each modern automobile uses more than 3,000 chips (Khan et al., 2021)

New automobile sales

As March and April 2020 drew close and people anticipated an unclear economic future, the demand for new automobiles plummeted. Tesla's automobile sales plummeted by an astounding 80% in April, and while sales recovered later in the year and economies reopened, Tesla's annual new car sales dropped by around a fourth.

The situation scarcely improved in 2021, with global sales of new cars increasing by 1% over pandemic-ravaged 2020 and remaining 28.7% below pre-Covid levels due to many market-depressing problems (Lea, 2021).

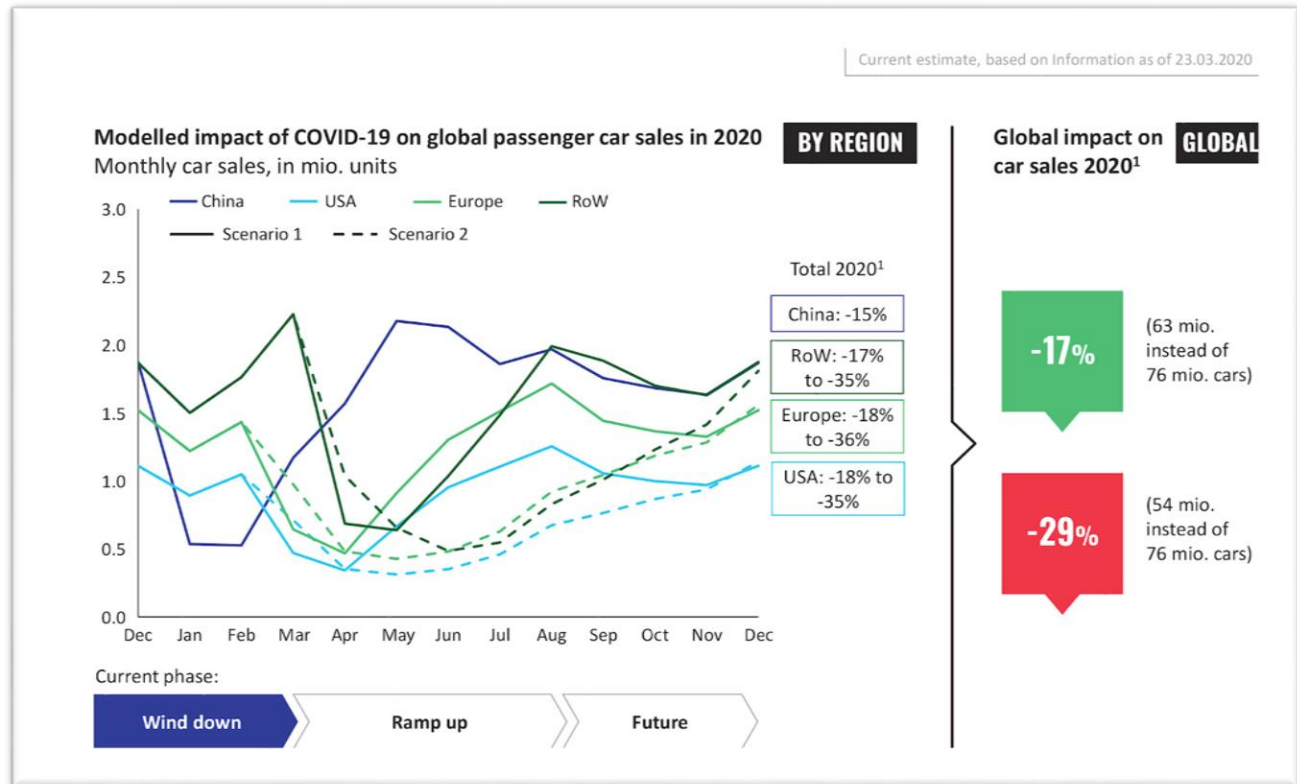


Figure 1 Car Sales during Covid-19

Used automobile sales

The public's economic anxieties and tight dealership cutbacks led to a 14.9% decline in the used car market in 2020, the worst performance since 2012, with 6,752,955 vehicles changing hands (Strittmatter and Lechner, 2020). There were signs of development in the summer of 2020 as limitations were loosened, but the market dropped dramatically in November and December as the second wave of restrictions was implemented.

In contrast to the sluggish growth of new car sales in 2021, used car sales exploded in the second quarter of 2021, with year-over-year gains of 108.6% and sales records set in May and June (Sheffi, 2021). However, the second part of the year saw a slight decline in sales as consumers noted growing used car costs that make it impossible to find vehicles for less than one thousand

pounds and additional lockdowns. "Nearly new" automobiles have risen dramatically thanks to a mixture of a pandemic, supply chain concerns, and a global scarcity of computer chips, leading to an overall decrease in car manufacturing in 2020 and 2021 (Ali et al., 2021).

The tremendous acceleration

As in other industries worldwide, the pandemic has accelerated automotive developments such as the digitalisation of processes and the drive towards electric vehicles. In reality, despite the decline in sales of new cars in 2021, the only positive news for Tesla was the rapid shift towards electric vehicles among consumers. Over one in six new automobile registrations were for plug-in automobiles in 2021, the most profitable year yet for the technology, with many more registered vehicles in 2021 than had been registered in the preceding four years combined (Nikitas et al., 2021).

Furthermore, supply chain difficulties have compelled Tesla to adopt a more honest and accessible chain in which components can be followed from beginning to end. Future supply chain dependability will be enhanced by these alterations, which continue alterations occur for more than a decade. The epidemic has been a terrible time for all segments of the automobile industry. However, when the world reopens in 2022, innovations that have sped over the past two years should ensure a swift recovery.

Impact on the Global Automotive Supply Chain

The global manufacturing sector is transforming. In the past few years, businesses have struggled with several factors, including evolving customer demands, growing A.I. and automation technology, and an unpredictable trade environment. In 2020, the environment for companies

became more difficult due to the COVID-19 epidemic, which disrupted global supply networks and production activities.

The most susceptible businesses rely primarily or exclusively on Chinese manufacturing for components and supplies. Due to rising pressure to decrease supply chain costs via offshoring and outsourcing, most corporations have been pushed to source products from this region. With these cost-cutting tactics, a disruption in the supply chain halts production immediately caused by a lack of necessary components.

For instance, the global automotive industry, which yearly imports well over \$34 billion in motor parts from China, was severely damaged (Srivastava et al., 2020). In addition, Tesla and several companies across the supply chain have already been pushed to make difficult choices, including reducing or halting manufacturing, resourcing products, and reassessing income.

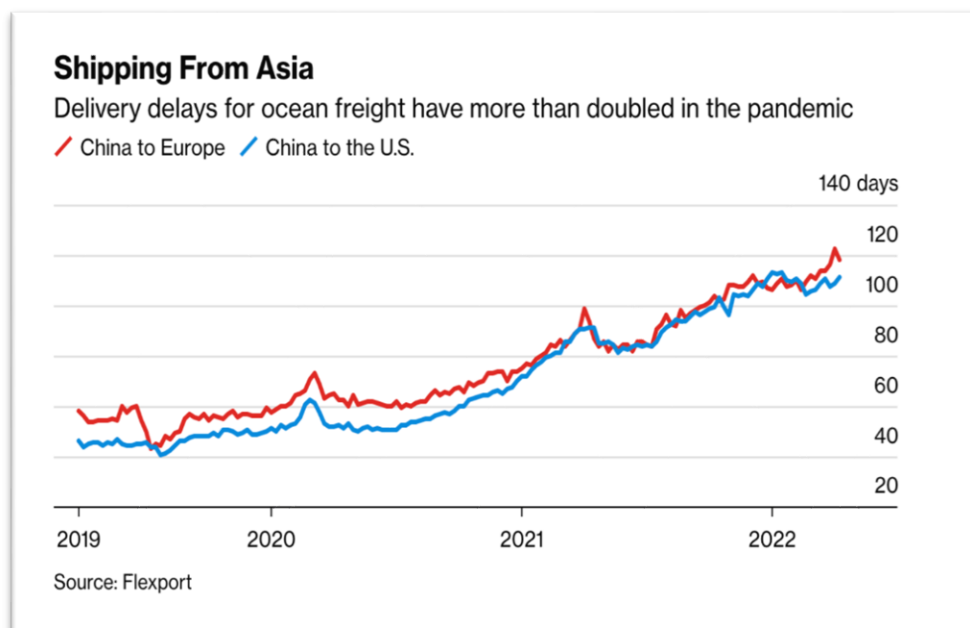


Figure 2 Shipping from Asia

Moreover, in the automotive industry and other sectors, this problem and its effects begin at the bottom of the distribution chain. The tool and die business, which is commonly advised to purchase tools built from low-cost nations such as China, has suffered 30- to 60-day production delays, and the length of the outbreak could cause the delays to increase (Danciu, 2020). As these delays propagate along the supply chain, Tesla will be unable to introduce new vehicles according to their current timelines.

Moreover, China is one of the leading markets for automobile sales. In February 2020, car sales plunged 80 per cent, which substantially influenced the sector's ability – from suppliers to automakers – to reach annual revenue projections. In addition, China's PMI, a gauge that evaluates the efficiency of the manufacturing sector, fell 15 points.

The primary line is to prepare for a significant impact on global manufacturing. Tesla has already implemented measures, but the worst is still to come. As the damage radiates throughout the supply chain, Tesla will not learn the actual effects of the pandemic until a period in the future.

How Tesla and the Automobile Industry are Recovering

While the first repercussions of the COVID-19 issue caused a fall in sales and output, the auto industry is now roaring back to life. Long-term tendencies indicate that substantial changes are imminent. Despite concerns that supply chains could be dramatically redesigned not only because of COVID-19 but also because of geopolitical tensions, microprocessor shortages, and the blockade of the Suez Canal, supply chains are holding, while pressures imply that change will occur. For example, several car lines with 50 to 60 days now have only 10 to 15 days of supply. These supply pressures are not (yet) resulting in significantly higher pricing for consumers;

instead, the squeeze is being felt throughout the supply chain, with buyers receiving more automobiles for less money than they did ten or even five years ago.

As with automobile purchases, digitisation is pushing for increased industrial transparency. A few years ago, OEMs and suppliers at the top of the food chain had no idea how much information raw material suppliers had on their operations and inventory at the bottom of the food chain. Today, component tracking throughout the supply chain is more commonplace. This is also an acceleration of a tendency that started well before the COVID-19 epidemic.

Tesla believes that these trends will tend to increase in the industry, especially in electrification—and it expects this to be the case in the future. Moreover, over \$300 billion has been invested in ACES technology since 2010 by Tesla and other firms and funds outside of the conventional automotive industry. They believe in a bright future for mobility (Modi et al., 2018).

There was a considerable drop in investments in innovative and shared transportation (including e-hailing, micro-mobility, and car-sharing) in 2020 during the peak of the pandemic, while investments in autonomous driving plummeted even more dramatically. Connectivity (which covers industries such as entertainment and cybersecurity) investment increased, whereas electrification investment barely changed—before rising rapidly from the third to the fourth quarter of 2020.

As a result, mobility is likely to become increasingly digital, networked, and electric in the future. Sales of electric vehicles are expected to rise by 43% in 2020, thanks to environmentally conscious consumers (Jenn et al., 2020). This means that Tesla will have to dramatically adapt their organisational structure, for example, by expanding the number of software engineers compared to mechanical engineers. To put it another way, Tesla may have to retrain up to a quarter

of its present labour forces. These tendencies will significantly speed up as the industry recovers from the COVID-19 catastrophe.

The Future of Tesla and the Automobile Industry

Governments in several nations have taken steps to alleviate some of the automotive industry's financial troubles. Manufacturing had resumed by July as restrictions began to loosen, but sales had not recovered to pre-COVID levels. A noteworthy exception is China, where the vehicle sector has rebounded quickly. The economic downturn has left consumers around the world with poor confidence. While all of this was happening, Tesla's stock price surged to the point where it overtook Toyota as the world's most crucial automobile manufacturer (Li et al., 2021).

Tesla also anticipates governments to loosen emission rules when the economy improves, but this is not an option with which all governments are comfortable. On the other hand, countries in Europe that have been promoting electric cars for an extended period are less likely to reduce pollution restrictions. Moreover, businesses and banks have lowered interest rates to entice customers to buy cars. The Reserve Bank of India lowered vehicle interest rates, and the restriction on loans was extended by three months (Dev and Sengupta, 2020). The Bank of Canada also lowered interest rates by 1.5 per cent in a similar fashion. Sellers have offered discounts and lower loan rates in various sectors to entice purchasers (Gessaroli, 2022).

Some of the pandemic's effects may remain in the future. Tesla must be inventive, flexible, and imaginative to reestablish sustainable sales levels. Tesla may soon launch a substantial online sales campaign as more and more people embrace digital technology. A company's ability to gain market share in the coming years may depend on its ability to implement seamless digitisation

(Acciaro et al., 2020). Improved online accessibility and incorporation of on-screen car controls might be part of the push toward digitalisation, as could touch-free gas station purchases and maintenance.

Tesla will probably continue to provide incentives like low financing rates and other deals to entice customers into purchasing cars now rather than later. People's tendency to keep a distance from one another may present an opportunity for more research into self-driving cars. In addition, Tesla should upgrade and invest in supply chains, utilising machine learning techniques and extensive data analysis to guarantee that supply chain management does not decline (Li et al., 2020). That real disruption, such as those caused by COVID-19, may be contained, and production can be resumed rapidly.

Even though R&D halted during this time, the lessons learned from the epidemic will lay the groundwork for new research and practices that might establish new standards of excellence in the coming years. Along with integrated digitisation, increased interest in electric vehicles, and work-from-home regulations, the future may bring fundamental changes to the current supply chain network and the automobile industry as a whole.

References

- Acciaro, M., Renken, K. and El Khadiri, N., 2020. Technological change and logistics development in European ports. *European Port Cities in Transition*, pp.73-88.
- Ali, M.H., Suleiman, N., Khalid, N., Tan, K.H., Tseng, M.L. and Kumar, M., 2021. Supply chain resilience reactive strategies for food SMEs in coping to COVID-19 crisis. *Trends in food science & technology*, 109, pp.94-102.
- Conway, G., Joshi, A., Leach, F., García, A. and Senecal, P.K., 2021. A review of current and future powertrain technologies and trends in 2020. *Transportation Engineering*, 5, p.100080.
- Danciu, V., 2020. The Global Value Chain in Coronavirus Era: An Impact Approach. *Romanian Economic Journal*, (76).
- Dev, S.M. and Sengupta, R., 2020. Covid-19: Impact on the Indian economy. Indira Gandhi Institute of Development Research, Mumbai April.
- Finamore, B.A., 2020. China's Quest for Global Clean Energy Leadership. *Istituto Affari Internazionali (IAI)*.
- Gessaroli, J., 2022. The Unintended Consequences of Central Bank-Induced Low Interest Rates.
- Jenn, A., Lee, J.H., Hardman, S. and Tal, G., 2020. An in-depth examination of electric vehicle incentives: Consumer heterogeneity and changing response over time. *Transportation Research Part A: Policy and Practice*, 132, pp.97-109.
- Khan, S.M., Mann, A. and Peterson, D., 2021. The semiconductor supply chain: Assessing national competitiveness. *Center for Security and Emerging Technology*.
- Lea, R., 2021. Economic prospects: an upbeat assessment from the Bank. *Arbuthnot Banking Group*, 10.

- Li, Y., Lin, J. and Xu, S., 2021, September. Analysis of Tesla's Business Model: A Comparison with Toyota. In 2021 International Conference on Financial Management and Economic Transition (FMET 2021) (pp. 30-39). Atlantis Press.
- Li, X., Wang, B., Liu, C., Freiheit, T. and Epureanu, B.I., 2020. Intelligent manufacturing systems in COVID-19 pandemic and beyond: framework and impact assessment. Chinese Journal of Mechanical Engineering, 33(1), pp.1-5.
- Modi, S., Spubler, A. and Jin, J., 2018. Impact of Automated, Connected, Electric, and Shared (ACES) Vehicles on Design, Materials, Manufacturing and Business Models. Center for Automotive Research: Ann Arbor, MI, USA.
- Nikitas, A., Tsigdinos, S., Karolemeas, C., Kourmpa, E. and Bakogiannis, E., 2021. Cycling in the era of COVID-19: Lessons learnt and best practice policy recommendations for a more bike-centric future. Sustainability, 13(9), p.4620.
- Sheffi, Y., 2021. What everyone gets wrong about the never-ending COVID-19 supply chain crisis. MIT Sloan Management Review, 63(1), pp.1-5.
- Srivastava, A., Meena, A.K., Srivastava, K., Gupta, V. and Kaushal, K., 2020. Socio Economic Impact of COVID-A Review. Asian Journal of Research in Chemistry, 13(6), pp.497-501.
- Strittmatter, A. and Lechner, M., 2020. Sorting in the used-car market after the Volkswagen emission scandal. Journal of Environmental Economics and Management, 101, p.102305.