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About Us

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中国語や日本語で読みたいという読者様のニーズに応えるために、アジアから中国語と日本語の記事を提供しています。中国語をご希望の方は**こちら**を、日本語をご希望の方は**こちら**をクリックしてください。

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Power Systems Research Webinar Series

Power Systems Research and HDMA Plan April Webinar

On Wednesday, April 21, 2021, representatives of Power Systems Research and the Heavy Duty Manufacturers Association will present a one-hour webinar discussing important industry trends and forecasts. Details regarding content and registration will be available closer to the event.

The webinar is another in a series of webinar presented by Power Systems Research with industry partners. Most recently, PSR joined with JCB Power Systems to present a free one-hour webinar discussing production forecasts and emissions details for the Construction Industry in Europe and North and South America. **Presentation materials available.**

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Truck Production Index

By *Chris Fisher, Senior Commercial Vehicle Analyst*
and *Jim Downey, Vice President - Global Data Products*

Q4 2020 Global Truck Production Jumps 35%

Read The Complete Report

Power Systems Research  The Power Systems Research Truck Production Index (PSR-TPI) increased from 109 to 147, or 35%, for the three-month period ended Dec. 31, 2020, from the Q3 2020. The year-over-year (fourth quarter of 2019 to the fourth quarter of 2020) gain for the PSR-TPI was, 121 to 147, or 21%.

The PSR-TPI measures truck production globally and across six regions: North America, China, Europe, South America, Japan & Korea and Emerging Markets.

This data comes from **OE Link™**, the proprietary database maintained by Power Systems

All Regions: With the exception of China, PSR expects all of the other regions to experience improvement in commercial vehicle demand this year and likely into 2022 as fleets look to replace their aging vehicles.

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Truck Production Index

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Commercial truck demand rebounded in Q4 2020 particularly in the class 8 segment. Order rates for class 8 came in stronger than expected which bodes well for production through at least H1 2021.



Chris Fisher



Jim Downey

Global Index: Overall, this year is expected to be an improvement in commercial vehicle demand compared with 2020. While the Coronavirus is expected to remain through much of this year, the negative impact on the global economy should not be as significant as it was in 2020.

North America: Commercial truck demand rebounded in Q4 2020 particularly in the class 8 segment. Order rates for class 8 came in stronger than expected which bodes well for production through at least H1 2021. Freight rates remain relatively high and this trend is expected to continue throughout the year. Congress passed another round of economic stimulus which will also bode well for commercial vehicle adoption. While COVID-19 continues to negatively impact the economy overall, PSR does not believe the effects will cause a significant slowdown in demand this year. **PSR**

North America Report

Economic Outlook: Much Stronger H2 2021 Expected



Yosyf Sheremeta

By Yosyf Sheremeta, PhD, Director of Product Management & Customer Experience

Read The Complete NA Economic Outlook Report

Now that the elections are over, if the long awaited infrastructure reform can be passed and fiscal policy keeps interest rates near zero, which government has promised to do for the near future, we should see a good platform for the economic recovery, and this allows us to look optimistically at 2021-2022.

Currently, we expect a slow but steady economic growth in 2021 with accelerating recovery trends taking place in the second half of the year. We believe the US has been able to manage and weather the storm quite nicely. While many industries struggled with the pandemic more than others, the overall economy in the US is in the slow and steady recovery mode. We continue to see a favorable fiscal policy and a stable economic situation in the US. At this time, we expect it will take at least until 2022-2023 before GDP surpasses its Q4 2019 peak.

The key factor and the foundation to the economic recovery is strong fiscal policy. Not only has the US Federal Reserve Bank slashed its interest rate to 0% since March 2020, it also promised to keep it at zero or near zero into 2021-2022.

We believe this is a critical factor as it re-assures both consumers and businesses of low interest rates and it helps drive demand for goods and services. To prove

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North America Report

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this point, take a look at US stock market: it hit its record high and it continues to stay at that level. The stock market may look overvalued at the moment, but that does not bother investors. As long as the interest rates remain low, there will be a room for new growth.

Inflation levels will be rising slightly in 2021 for consumer-oriented products, but that does not seem to influence economic recovery at the moment. Nevertheless, current conditions provide solid outlook and reassurance for future recovery and growth.

We do not expect any significant and rapid changes to the employment data in 2021; it will take another 18-24 months and a favorable economic situation to fully recover employment to the rate of 3.5%-4.5%.

Going forward, we expect the housing starts to remain strong and steady, which will directly help drive growth in segments like Construction, Industrial and L&G.

Across all market segments, we expect overall total OEM equipment production numbers to rebound in 2021 from 2020 loses. Cumulatively, OEM production in the US experienced a decline of 19.3% in 2020 vs. 2019. We expect the growth in 2021 of 7.9% vs 2019. This estimate is higher by 1.2% from the previous estimates in Q3 2020 at 6.7%. The key driver of the growth in 2021 will be strong fiscal policy and accelerated growth in H2 2021. At the same time, the recovery and growth will vary considerably among segments.

Currently, we do not see a return to significant economic activities and rapid increase in demand for products in most markets until H2 2021. At this time, we forecast year 2021 growth to be in low single digit positive vs 2020 at 7.9%, and we see an 8.8% additional gain in 2022 vs 2021. Overall, for all OEM Equipment sectors, we expect it will be 2023 or 2024 before the total volume units produced in North America reaches pre-pandemic levels of Q4 2019. **PSR**

Trucking News: Asking The Expert

By *Chris Fisher*, Senior Commercial Vehicle Analyst




*Chris
Fisher*

What is the current state of electric vehicle technology globally as well as the U.S.?

From a medium and heavy truck perspective, electric trucks are still in the early stages of testing and it will still be a few years before we know if the current technology will be effective. Transit or city buses are much further along in the process since these are largely not for profit vehicles and have more dedicated routes that allow for more consistent recharge.

China is probably the furthest along with electric bus adoption with almost half of all medium and heavy buses produced being electric. While electrified bus adoption in North America and Europe is not nearly as strong as China, demand is increasing.

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North America Report

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In North America, natural gas buses (CNG and Propane) are currently the alternative fuel of choice. However, government mandates will likely force bus electrification over the next decade or so.

What type of growth do you project and in what segments?

At this point, we believe the growth will be in the transit bus and pickup/delivery segments where charging infrastructure is more readily available. Since transit bus purchases are typically controlled by local and state governments, this will be a prime segment for electrification. Many of the large cities in the United States have committed to 100% adoption of electric transit buses. For example, Los Angeles plans to be all electric by 2030 while Seattle, New York and the state of California plan to have all electric transit buses by 2040.

Can you share your thoughts on the future of EVs?

We think the majority of the transit bus segment will ultimately be electrified as various government mandates will require the cities to be zero emission compliant. The future of medium and heavy commercial trucks is uncertain.

Electrified trucks are early in the testing phase and it will still be a few years before the testing is complete. At this point, the barriers to large scale adoption are great and unless electric vehicle purchases are required by the government, I don't see large scale adoption for at least a decade. Basically, there needs to be a strong motivation for-profit based companies to acquire electric trucks. Government incentives and regulation is currently the most likely driver of electric truck adoption.

What are the benefits and challenges of EV technology?

The advantages of electric vehicles include elimination of fuel cost and reduced maintenance cost since EV's have significantly fewer moving parts than the traditional commercial vehicle.

However, electric commercial vehicles will continue to compete with other technologies such as natural gas and possibly hydrogen fuel cells. Fuel economy improvements to the traditional engines could also impact electric vehicle adoption rates.

One of the biggest challenges is the lack of a nationwide charging infrastructure. This will limit adoption rates in the regional and long-haul truck segments. Other challenges for electric trucks include high up-front costs, battery weight, range anxiety and range reduction in cold weather. In the refuse truck segment, high up-front costs and duty cycle issues are cited as major barriers to adoption. **PSR**

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Production of Dumpers/Tenders in NA increased nearly 5.5% in 2019 over 2018, but production is expected to drop 6% in 2020 from 2019.

DATAPOINT: NA Dumpers/Tenders

1,559

By Carol Turner, Senior Analyst, Global Operations

The 1,559 units is the estimate by Power Systems Research of the number of Dumpers/Tenders to be produced in the U.S. in 2020.

This information comes from industry interviews and from two proprietary databases maintained by Power Systems Research: **EnginLink™**, which provides information on engines, and **OE Link™**, a database of equipment manufacturers.

Market Share: With 62.5% of total units produced, Country Home Products leads in production of Dumpers/Tenders in North America. In second position is Allen Engineering with 19.5%; third, Indy Equipment with 10.5%.

Trends: Production of Dumpers/Tenders in NA increased nearly 5.5% in 2019 over 2018, but production is expected to drop 6% in 2020 from 2019. The 2019 increase was based on the strong global economy along with the demand for new products in construction and mining related activities.

The 2020 decline was caused by product saturation in the market and was somewhat related to COVID-19 shutdowns, even though consumers/contractors were still purchasing products.

Dumper/Tenders, commonly referred to as a Power Buggy, are sought after pieces of equipment, much faster than a conventional wheelbarrow and accelerates job site related activities. Expect production to increase up to 5% by 2025. **PSR**

Brazil/South America Report

By Fabio Ferraresi, Director Business Development South America

Ford Announces Shut Down of Plants in Brazil



*Fabio
Ferraresi*

Ford announced on Jan. 11 plans to shut down all car manufacturing operations in Brazil. Ford produced cars in Camaçari-BA, Taubaté-SP, and off-road vehicles (Troller) in Horizonte-CE. The company will keep selling vehicles, especially the Ford Ranger, produced in Argentina and other products from other locations, such as the Transit, Bronco and Escape. Because of this action, Ford Expects an impact of US\$ 4.1 billion in non-recurring expenses and a US\$ 2.5 billion cash impact.

Source: Press Release [Read The Article](#)

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South America Report

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PSR Analysis: Ford is reinforcing its strategy of becoming a Truck/LCV, SUV, and special models' producer rather than a manufacturer of cars. With regards to its regional strategy, Ford is placing its bets on producing in Argentina – it announced the investment of US\$ 580 million in December 2020 – rather than Brazil because of its long tradition of producing pick-ups in Argentina.

In the short-medium term, Brazilian dealers' results will be impacted, and the number of dealers should decrease significantly. At the same time, sales of Ford Ranger should decrease, reducing production in Argentina. Ford may be losing brand sales in Brazil as happened to some OEMs in Argentina when they stopped production in that country.

Prototypes of 100% Brazilian e-Truck Tested at Agrale

Agrale plans to soon start production of electric trucks with the FNM brand, a Brazilian OEM that operated from 1939 to 1979. These trucks will target urban distribution and will be produced at Unit 2 of Agrale, in Caxias do Sul-RS. The Trucks use the base of trucks Agrale completed with an electric propulsion system.

Source: *Agrale*, [Read The Article](#). [Read Another Article](#).

PSR Analysis: It is hard to say how many Electric Trucks will be sold under the FNM Brand and Agrale production and when they will be produced. However, the FNM brand appeal is echoing in the press and the electric propulsion for urban deliver seems to put Agrale in the right track. The cost of battery/vehicle and timing will be keys for success, as well as public bids that may sell a significant number of units.

Cost and infrastructure are the key challenges for electrical vehicles in Brazil. Additionally, Brazil has other alternatives such as BioFuel and/or Hydrogen from NG or Ethanol competing with electrical plug-in vehicles to attend future GHG emission legislation.

GM Resumes \$2 Billion Investment Program in Brazil

After freezing all investment last year due to the COVID-19 pandemic, GM is now resuming its investment program of 10 billion of Brazilian Reais, equivalent to US\$ 2 billion. The program funds new vehicles, infotainment systems, as well as modernization of the plants in Sao Paulo state.

Read The Article

PSR Analysis: GM has kept and amplified their market leadership position in Brazil. In 2020, they moved into second place. Their continuous investment on new products and productivity has been recognized by the market. **PSR**

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VW China has increased its share in the electric vehicle joint venture JAC Volkswagen to 75% and obtained joint venture management rights.

China Report

VW To Build \$3 Billion EV Plant in East China

By *Jack Hao*, Senior Research Manager - China



VW China has increased its share in the electric vehicle joint venture JAC Volkswagen to 75% and obtained joint venture management rights. At the same time, it has obtained a 26% stake in the EV battery maker Gotion High-Tech to support the future electrification of the group. The total investment of the above two projects is estimated to be about €2 billion.

Jack Hao The plant, which has an estimated investment of US\$3.06 billion (20 billion yuan) from both Volkswagen and JAC Motors, will be finished by the end of 2022, and its first vehicle will roll off the assembly line in 2023.

Volkswagen has set a goal of selling 1.5 million electric cars and plug-in hybrids a year in China by 2025.

Globally, it expects to sell 19 million electric cars based on its MEB platform by 2030. In China, its other two joint ventures, FAW-Volkswagen and SAIC Volkswagen, have built MEB plants with a combined annual capacity of 600,000 vehicles.

Source: *China Daily* [Read The Article](#)

PSR Analysis: The electric car will be the central strategy for VW China in the future. The main reason for this change comes from the new EV strategy of China. The National Development and Reform Commission (NDRC) has announced a step-by-step plan to liberalize the restrictions on the share ratio of auto joint ventures, allowing foreign-funded enterprises to hold more than 50% of the shares in the joint venture. The introduction of this policy undoubtedly affected the decision of Volkswagen Group.

Volkswagen has maintained a good reputation in China for years and this kind of change can help VW speed up the development of the EV market. The other purchase of the EV local cell company Gotion can help them to establish their independent key powertrain both from the technology and cost.

The cost of the EV cell is the biggest component to the EV company, which is a problem for EV products compared with the traditional passenger car. In order to keep down costs of the EV cell, Tesla change their cell supplier from Panasonic to the local supplier CATL, who is also the supplier of BYD. The investment of Gotion will help VW to speed up the process of EV strategy in China.

Major changes are taking place in the automobile industry every day. Some new players, such as Tesla, BYD and some other new players have seized the market opportunity and brought new challenges to traditional players.

We can see some change that have happened to Toyota and BMW in the China market. It looks like the competition has moved from the tradition fuel vehicle to the new energy vehicles. **PSR**

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China Report

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Qin Fen

Weichai Takes 60% Stake in Agricultural Equipment Maker

By Qin Fen, PSR Business Development Manager-China.

Weichai Holding Group Co., Ltd., a leading Chinese powertrain manufacturer, has acquired a controlling stake in Lovol, one of the country's major agricultural equipment makers.

Source: Xinhua News Agency [Read The Article](#)

PSR Analysis: People look up to leading companies in industry because often times they are not just leading the trend, they are also setting an example of weathering the storm during crisis.

Weichai Power is among the prominent ones that are leading the industry. By investing heavily in fuel cells, Weichai Power is setting the path for the heavy duty industry to the future; by acquiring and merging OEMs, Weichai Power is consolidating its customer base to brace for the incoming impact.

Emission upgrades, future powertrain challenges, not to mention increased competition in the industry, coupled with COVID-19 impact, if there is anyone survive any of these challenges, Weichai is definitely one of the few. **PSR**

中国报道

秦奋 - 业务拓展经理

持股60% 潍柴集团完成对雷沃重工的战略重组

2021年1月6日，潍柴集团在山东济南召开新闻发布会，山东重工集团、潍柴集团、中国重汽集团董事长谭旭光宣布：潍柴集团正式完成对雷沃重工的战略重组，双方将发挥资源协同优势，加快推进我国农业机械化、智能化，助力乡村振兴战略落地，引领中国农业装备迈向高端。

新闻来源: 新华社 [阅读原文链接](#)

PSR分析: 人们一般都会仰望行业的领头羊公司，因为这些公司不光引领潮流，更在以身作则，树立榜样，告诉人们如何度过危机。

毫无疑问，我们现在就身处危机之中，而这正是需要人们需要领导力的时候。潍柴动力当然就是其中引领行业公司之一。通过在燃料电池的重金投入，潍柴为整个重卡行业未来铺路；通过并购与合并OEM，潍柴巩固了已有的客户基础，做好了接下来行业冲击的准备。

排放升级、未来动力系统的挑战、更别说行业内激烈的竞争，加上新冠疫情的冲击，如果说有任何企业会在这些挑战当中生存下来的话，潍柴肯定是其中的一员，少之又少的一员。 **PSR**

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China Report

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Both Europe and China are investing in each other's market, Scania, MAN, Daimler and Volvo are all setting up new factories or strengthening ties with current partners in China.

Italy's CNH and China's FAW in Talks Over Truck Maker Iveco

By *Qin Fen*, PSR Business Development Manager-China.

CNH Industrial is in talks with China's FAW over the future of truck maker Iveco, the Italian-American group said recently after sources told Reuters it had revived previously aborted negotiations.

Source: *Reuters* [Read The Article](#)

PSR Analysis: Another positive development in the industry during such a gloomy crisis, FAW fits the merger success story I just mentioned about the few surviving companies. There are for sure many challenges ahead with the acquisition, particularly after the take-over, but there are so much to celebrate if the deal can be finalized.

Both Europe and China are investing in each other's market, Scania, MAN, Daimler and Volvo are all setting up new factories or strengthening ties with current partners in China.

And now we see FAW is putting their focus in the European market by engaging with Iveco. Both sides have seen potential growth on one another's market. European truck makers will bring along new concept and technology to China's market and likes of FAW will bring along cost saving and localization practices for its European counterparts

This is another sign that Chinese companies are moving more and more of their focus on the overseas markets, we will only see more of this coming in the future.

PSR

中国报道

秦奋 - 业务拓展经理

一汽再被传出欲收购依维柯 业务或将扩大至海外市场

2020年1月8日 — 当地时间1月6日，据路透社报道，凯斯纽荷兰工业公司 CNH Industrial(以下简称CNHI)当天表示，正与一汽集团就卡车制造商依维柯 (Iveco) 的去向进行谈判。此前报道称，双方已重启曾一度流产的收购计划。

新闻来源: [财经网](#) [阅读原文链接](#)

PSR分析: 在黯淡危机时刻，这真的是另一条让人振奋的消息。一汽毫无疑问是我刚刚提到的那几个通过并购会生存下来并且大获成功的几个公司之一。接下来的收购当然会面临很多挑战，特别是收购之后，但是如果成功，能庆祝的地方实在是太多了。

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China Report

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欧洲和中国现在都在投资对方的市场。斯堪尼亚、曼、戴姆勒和沃尔沃，或是设立新工厂，或是加强同现在合作伙伴的关系。现在我们又看到了一汽和依维柯接触，把重点放在了欧洲市场。中欧都看中了对对方市场的增长潜力，欧洲卡车制造商会把新理念和技术带到中国市场，而一汽这些厂商则会把成本节约和本土化的实践带向他们的欧洲同行。

这也是中国厂商越来越多地聚焦国际市场的表现，未来我们会看到更多这样的收购。毕竟，买买买，总不是一件坏事情，对吧？ **PSR**

Far East: Japan Report

By *Akihiro Komuro*, Research Analyst, Far East and Southeast Asia

Komatsu to Sell Electric Construction Equipment in Europe



*Akihiro
Komuro*

Komatsu plans to release a battery-powered compact excavator that emits no exhaust gas in Europe in 2022. The company will also promote the quietness of the product and expects to use it in residential areas. Hitachi Construction Machinery will also double orders for electric excavators in fiscal 2021 compared to the previous year. Following the trend in the automobile industry, competition in the field of electric construction machinery is now in full swing.

The compact excavator to be launched by Komatsu will use lithium-ion batteries that are lightweight and can operate for a long time. It uses a motor instead of an engine, making less noise and emitting no exhaust gas. The company will first market the product in Europe, where environmental regulations are strict, and then consider launching it in Japan. Komatsu began renting several small excavators powered by lead-acid batteries on a trial basis in Japan in April 2020.

At that time, they established the Electrification Development Center with about 100 people as a development department specializing in electrification. The center will also focus on the development of electrification of medium and large construction machinery to solve issues such as cost, output, and battery weight.

Source: *The Nikkei*

PSR Analysis: Construction machinery, which requires more power output than a passenger car, is also moving toward electrification in earnest. Komatsu, the industry leader, appears to be adopting a strategy of first launching electric construction equipment in the European market, which is known to have the strictest environmental regulations in the world, and then expanding to other regions, including Japan and North America, after gaining market recognition there.

Even manufacturers such as Hitachi Construction Machinery and Volvo are still in the development stage of electrification of small construction machinery. Unlike

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Far East Report

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automobiles, construction machinery requires more power, which is a different challenge from electrifying passenger cars.

Even if you want to recharge your battery in the middle of your work at a construction site, often there is no recharging infrastructure near the construction site, and this problem is a major challenge.

In the long run, the performance of the batteries will improve, but at this stage of their development, drive time is still an issue. In order to solve this problem, the demand for portable generators is likely to grow. Many construction equipment manufacturers, led by Komatsu, seem to think that three types of generators are realistic: battery-electric for small mini excavators, hybrid for medium and large excavators, and diesel-electric for larger mining equipment, where the generator is driven by a diesel engine to produce electricity.

The Chinese market is the only one in the world that is rapidly recovering from the COVID-19 shock, but this trend will not last long in my opinion. There is still no end in sight to the COVID-19 problem, but the virus will not wipe out all construction demand. In a way, the electrification of construction equipment is still in its infancy, but with environmental regulations set to become more stringent, electrification is inevitable for construction equipment. **PSR**

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コマツ、欧州で電動建機を販売 脱エンジンで攻勢

コマツは排ガスを出さない電池駆動の小型ショベルを2022年に欧州で発売する。静音性の高さも訴え、住宅地での利用を見込む。日立建機も電動のショベルの受注を2021年度は前年度の2倍に増やす。自動車に続いて建設機械の分野でも、開発競争が本格化してきた。コマツが売り出す小型ショベルは、軽量で長く稼働できるリチウムイオン電池を使う。エンジンの代わりにモーターを使い、騒音が少なく排ガスも出ない。まず建機の環境規制が厳しい欧州で売り出し、日本での投入も検討する。20年4月に日本で鉛蓄電池で動く小型ショベル数台を試験的にレンタルしている。電動化に特化した開発部署として、100人規模の「電動化開発センター」を2020年4月に設けた。中大型建機の電動化開発にも注力し、原価や出力、バッテリー重量などの課題を解決する。

出典: 日経 (一部筆者により元記事内容を改編しました)

PSR 分析: 乗用車よりも大きなパワー出力が必要な建機にも電動化に動きが本格化しつつある。業界リーダーであるコマツはまず、世界で最も環境規制が厳しいことで知られる欧州市場での電動建機を投入し、そこで市場の評価を得た後で、次に日本や北米を含む他のリージョンへ展開する戦略を取っているように見える。

日立建機やボルボなどのメーカーでもまだ小型建機の電動化は開発途上の段

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Hyundai Motor and Apple are negotiating a partnership in the field of self-driving EVs, reports the Korean newspaper Korea IT News.

階だ。やはり自動車とは異なり、より大きなパワーが求められる建機分野においては乗用車の電動化とは違った難しさがある。作業の途中で充電したくても、工事現場付近に充電インフラがない、この問題は大きな課題だ。長期的には電池自体の性能は向上していくだろうが、その発展が途上にある段階では、駆動時間が問題視される。これを解決するために、ポータブル発電機の需要が伸びることも考えられる。コマツを筆頭に多くの建機メーカーでは、小型のミニショベルはバッテリー電動、中・大型ショベルはハイブリッド、さらに大きな鉱山機械ではディーゼルエンジンで発電機を駆動して電気を作るディーゼルエレクトリック方式、という3種類が現実的と考えているようだ。中国市場は世界で唯一、COVID-19のショックから急速に回復しているが、この流れは長くは続かないと筆者は見ている。依然としてCOVID-19問題は終わりが見えないが、ウイルスが建設需要全てを消滅させることはない。いわば建機の電動化はまだ黎明期だが、環境規制は今後より厳しくなることが確実視されている状況の中で、電動化は建機にとっても避けられない。 **PSR**

Far East: South Korea Report

By *Akihiro Komuro*, Research Analyst, Far East and Southeast Asia

Hyundai and Apple in Talks To Develop Self-Driving EVs

Hyundai Motor and Apple are negotiating a partnership in the field of self-driving EVs, reports the Korean newspaper Korea IT News. Other media reported that Hyundai and Apple are aiming to launch a self-driving EV in 2027. Soon after this report, Hyundai announced that it was in early stage talks with Apple. (*The above is excerpted from Newsweek*)

Hyundai is playing a central role in the Apollo Project, the self-driving EV strategy of Chinese IT giant Baidu and is also actively mass-producing EVs.

As for batteries for EVs, Korea has sufficient knowledge about EVs, with Samsung Electronics producing for German manufacturers and LG Chemical supplying U.S. manufacturers, and with the development and production of large lithium-ion rechargeable batteries for automobiles in full swing from the late 2000s to early 2010.

Given the social situation in Korea, Apple's consideration to outsource EV production to Hyundai makes sense to those in the automotive industry. Apple is a so-called fabless company, which means that it plans and designs its products and leaves the production to outside companies. The fact that the iPhone is actually manufactured by Foxconn in Taiwan is a good example of this.

Considering the fact that Apple will not build its own production plant for EVs but will look for a company to outsource the production like it does for its existing products such as the iPhone, the rumor of collaboration with Hyundai has a lot of weight to it. (*The above is an excerpt from Kuruma News*)

Source: Newsweek, Kuruma-News (The original article was partially revised by the author.)

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PSR Analysis: As of today (Jan. 18) neither Hyundai nor Apple has made any official announcement on this matter, so we don't know the truth yet. However, since about 4-5 years ago, the automotive industry has been shifting from development by single manufacturers to collaboration with IT companies represented by sensor technology companies and mapping technology companies, and this story has been attracting a lot of attention because it is on a large scale among such trends.

The details of the collaboration have not been made public yet, but as the article explains, Apple's technology will be of great use to Hyundai, not only in the area of automated driving, but also in improving the convenience of the car interior.

For Apple, outsourcing the production of cars to Hyundai will not only reduce the cost of large capital investments, but it will also further enhance its international presence in the automotive industry by working with Hyundai, which has sales networks in many regions.

The question is whether the company will comprehensively manage the concept of self-driving EVs and turn it into "Apple Car" or whether it will remain at the level of providing some technology to Hyundai.

It is also interesting to see what kind of profit structure they will establish. Normally, the main source of profit for sensor and mapping companies working with automakers is licensing revenue per vehicle. Many ideas will be considered as to how to secure stable revenue.

For IT companies that provide technology to automakers, the author predicts that the trend of contracting in the form of so-called subscription fees will grow in the future, but for both IT companies and automakers, securing profits depends on the number of EVs sold in the big picture.

In the future, there will be a noticeable trend toward differentiation from other companies, not only in terms of cruising range and driving performance, but also in terms of convenience and comfort of living space.


How will Apple, the IT giant, increase its presence in the automotive industry, and how will Hyundai, Korea's leading automaker, perfect Apple's technology in the form of an automobile? The moves of both companies will create a stir in the future of EVs. **PSR**

極東 > 韓国レポート:

現代自動車とアップル、自動運転EVで提携へ協議中

現代自動車とアップルは自動運転EV分野での提携で正式合意する予定だ。韓国紙コリアITニュースが10日伝えた。先週、現代とアップルが2027年に自動運転EVの発表を目指していると別のメディアが報道。これを受け、現代自はアップルと初期段階の協議をしていると発表していた。(以上、Newsweekから抜粋)

現代は、中国のIT大手バイドゥ(百度)が進める自動運転EV戦略「アポロ計画」で中心的な役割を果たしている。また、EVなど電動化についても積極的に量産している状況だ。EV開発で重要な電池については、韓国はドイツメーカー向

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けにサムスン電子、米国メーカー向けにLG化学と、2000年代後半から2010年初頭にかけて本格化した自動車向け大型リチウムイオン二次電池の開発・生産が盛んで、EVに対する十分な知見がある。こうした韓国での社会状況を踏まえると、アップルが現代にEV生産を委託するという話は、自動車業界関係者にとって納得がいくところだ。そもそも、アップルは商品の企画と設計をおこない、生産は外部企業に任せる、いわゆるファブレス企業である。iPhoneを実際に生産しているのは台湾のフォックスコンであることはその好例だ。アップルとしてはEVについても自社生産工場を建設せず、iPhoneなど既存商品と同様に生産の外注先を探すという図式を考えると、今回のヒュンダイとの連携の噂に真実味がある。(以上、くるまのニュースから抜粋)

出典: ニュースウィーク、くるまのニュース (一部筆者により元記事内容を改編しました)

PSR 分析: 今日1月18日の時点では現代、アップル両社ともこの件についての正式な発表はしていないため、まだ真相は分からない。だが、4-5年ほど前から自動車業界は単独メーカーの開発から、センサー技術関連企業やマッピング技術関連企業などの代表されるIT企業との連携にシフトしており、この話はそうした潮流のなかでも大きな規模であるために報道は注目されている。

連携の詳細についてはまだ公開されていないため不明だが、記事の中でも説明されているように、現代にとってはアップルが持つ技術は自動運転分野だけではなく車内空間の利便性を高めるうえでも大いに役立つ。アップルにとっては自動車生産を現代に委託することで大規模な設備投資費を抑制できるだけでなく、多くの地域に販売網を持つ現代と協力することで、自動車業界における国際的なプレゼンスをさらに高められる。

アップルがどこまで自動車にコミットするのかが重要な関心事だ。自動運転EVのコンセプトを包括的に管理して「Apple Car」としていくのか、あるいは現代へ一部の技術提供をするレベルに留まるのか。どのような収益体制を構築するのもか気になる。通常、センサー企業やマッピング企業が自動車メーカーと組んで利益を上げるためには、1台当たりのいわばライセンス収益が主となるが、自動車そのものの販売台数がCOVID-19や他の多くの理由によって伸びにくい状況で、どのように安定的な収益を確保していくか、様々な案が検討されているだろう。自動車メーカーに技術を提供するIT企業にとっては、いわゆるサブスクリプションフィーのかたちで契約するトレンドが今後伸びていくと筆者は予測しているが、IT企業にとっても自動車メーカーにとっても、利益の確保は大局的にはEVの販売台数に依存する。

他社との差別化をどのように図るか、それは航続距離や運動性能だけでなく、利便性や居住空間の快適さなどの利便性が求められていく傾向が今後は顕著になっていこう。IT業界における巨人であるアップルがどのようなかたちで自動車業界におけるプレゼンスを高めていくのか、現代という韓国を代表する自動車メーカーがアップルの技術をどのように自動車のかたちに完成させていくのか、両社の動きは今後のEVの在り方に一石を投じる。 **PSR**

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India Report

By *Aditya Kondejkar*, Research Analyst – South Asia Operations.



*Aditya
Kondejkar*

Semiconductor Shortage Forces Automobile Production Cuts

Officials at Volkswagen, Ford, Fiat Chrysler, Toyota and Nissan all say they have been hit by the shortage and have been forced to delay production of some models in order to keep other factories running.

A widening global shortage of semiconductors for auto parts is forcing major auto companies to halt or slow vehicle production just as they were recovering from pandemic-related factory shutdowns.

"This is absolutely an industry issue," Toyota spokesman Scott Vazin said in an email. "We are evaluating the supply constraint of semiconductors and developing countermeasures to minimize the impact to production."

Industry officials say semiconductor companies diverted production to consumer electronics during the worst of the COVID-19 slowdown in auto sales last spring. Global automakers were forced to close plants to prevent the spread of the virus. When automakers recovered, there weren't enough chips.

The shortage in chips required in increasingly automated cars is the latest example of how the semiconductor industry's ebbs and flows can have ripple effects in products.

Source: AP via Auto.com from the India Times [Read the Article](#)

PSR Analysis: The world's largest carmakers face a potentially crippling shortage of semiconductors as chipmakers reserve supplies for tech groups producing smartphones, tablets, and gaming devices. India is no exception. Even Indian OEMs have started facing the heat of the global semiconductor shortage.

Bosch, a key supplier to most Indian automakers, said the steep escalation of demand in the consumer electronics industry driven by safety and hygiene sentiments, coupled with the rise of 5G connectivity, has led to a surge in global demand for semiconductors.

The situation is so acute that Ford India, which uses the Chennai base to export cars, has been compelled to shut the plant for a week. Mahindra & Mahindra are expecting this shortage to hit their car, truck, and tractor business for the entire quarter. Maruti Suzuki has revised its tentative production plan from 5.5 lakh units estimated in November to 4.97 lakh units in January.

We anticipate the shortage of semiconductors will exist for the coming 4-5 months. Though it will hamper monthly production, it will have only a moderate impact on the year's production.

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India Report

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The Russian automotive sector is expanding and has a good chance to meet existing payable demand, reports industry minister Mr. Manturov.

To tackle this issue, automakers might divert the chips to top-selling segments of the market, including pickup trucks and SUVs, which will further impact the segments' product mix. But If the chip shortage lasts, production cuts could reduce the inventory of vehicles for sale in the country and other markets. That comes when the industry shifted to BSVI and started to replenish inventory lost when factories shut down last spring to stop the spread of novel coronavirus. **PSR**

Russia Report

By *Maxim Sakov*, Market Consultant, Russia

Russian Auto Production Catching Up with Demand



*Maxim
Sakov*

The Russian automotive sector is expanding and has a good chance to meet existing payable demand, reports industry minister Mr. Manturov. He said the domestic market has taken fourth place in Europe by volume for the first time.

Car sales have been growing the last three months, and dealers are talking about a shortage of inventory. If the production does not recover until Spring, the market will be short, they say. But the minister said OEMs will handle this challenge easily. "They have been waiting a long time for the market to grow due to postponed demand. Now, production is slightly behind the demand because it depends on a long supply chain of component makers at many levels in Russia and abroad. For 11 months of 2020 production has fallen by 19.5%, and sales go down by 9.8%", noted the minister.

Owing to State support exceeding 55 billion Rubles (US\$ 733 million) in 2020, an additional 250K vehicles were sold. "We'll keep supporting programs for 2021, at least for Q1 and Q2," said Manturov.

At full capacities, OEM production will catch up with demand. Usually, OEMs have a vacation in January. But now the companies are working without stop. Domestic industry has a good chance to fill up the demand. This sector looks better than UK, Germany and Spain. **Read The Report**

PSR Analysis: It appears that the quarantine lockdown has affected the Russian automotive industry. But the impact is lower than expected. On the other hand, State measures have supported demand. With all of this, we have a good chance for segment growth this year. **PSR**

Hyundai Purchases General Motors Plant in St Petersburg

Hyundai has closed its purchase of the GM plant in St Petersburg, but the production start date has not been determined. The announcement was made during a company press-conference.

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Financial details and company plans related to the production site were not disclosed.

Hyundai can shift to the new site the production of the models, currently made on Autotor plant in Kaliningrad.

Hyundai's plant in Shushars (former GM plant) has a long-term profile, so it is looking at a 5-8 year period. It's too early to speak about any specific models and volumes, the company representative said." He said the company will be ready to present a production program in July 2021.

Read The Article

PSR Analysis: This event follows the general trend where US automakers are being replaced by Asian competitors in the Russian market. The Russian Government has strict requirements for global companies planning to access the domestic market regarding local production and technologies transfer. Sanctions also area a factor in this situation. **PSR**

UAZ To Sell its Patriot SUV in USA Under the Brand Name "Bremach Taos"

UAZ plans to sell is Patriot SUV under the Bremach Taos brand in the US. It will be sold by a branch of Italian Company Bremach, which specializes in AWD special cars. Patriot is being upgraded to meet the standards required on US public roads.

Assembly is planned to be performed in California. The base cost of the SUV is expected to be about US\$ 26,000. US modifications of the car will include an automatic transmission and 4-cylinder of 2.7 liter and 150hp. It will have 5-year general warranty and 10-year warranty on engine.

Bremach is already started accepting orders for the Russian SUV with a cash advance. The company also intends to introduce a UAZ Pickup to the US market (Bremach Brio). Its cost will be almost US\$ 28,000.

Read The Article

PSR Analysis: In Russia, the UAZ Patriot costs about half the price, about US\$ 13K. This car is famous for its excellent off-road qualities (compared to Mercedes Unimog), general reliability, and low cost of ownership. However, there are many complaints about the lack of comfort, low on-highway speed and stability, and a large number of minor defects.

People say that "UAZ is always wounded but never killed". Hopefully, its Italian partner can improve the assembly quality of the car, based on its generous mark-up. In this case, the project has a good chance for success, similar to Russian Ural bikes, which are in good demand in the USA. **PSR**

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