

Top Stories

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Data Point: *Snowblowers*

369,000

By *Carol Turner, Senior Analyst, Global Operations*

This is the estimate, by Power Systems Research, of the number of Snowblowers that will be produced in 2018 in the United States. In 2017, the production was 463,533.

With 38% of total units produced, MTD/Midwest Industries leads in the production of snowblowers in the US only. In second position is Husqvarna with 18%; third, is Ariens Company with 16%.

Engines used by OEM: **Ariens:** 2% Kohler (1484), 8% Subaru (5999), 22% Briggs & Stratton (16383) co-labeled Ariens and 68% LCT (50368) co-labeled Ariens; **Briggs & Stratton:** 100% Briggs & Stratton (64881); **Honda:** 100% Honda (18612); **Husqvarna:** 14% Briggs (11842) and 86% LCT (73047). (Some LCT are co-labeled Husqvarna); **MTD:** .003517% Loncin Group (621), 46% Powermore (81003) and 54% Zongshen Power (94944). Some engines are co-labeled by brand, and **Toro:** 3.5% Kohler (1593) and 96.5% Loncin Group (42756) co-labeled Toro.

Collectively, up to 45% of the production is exported worldwide.

From 2016-2017, production of snowblowers in the US remained basically flat, with a slight increase of 262 units. Production is expected to drop nearly 20.5% for 2017-2018. One reason for the decline is the closing of Sears stores and the elimination of some Craftsman products. Another factor is reduced snowfall in key areas of North America.

Expect production to gain up to 5% over the next few years as branding issues are settled. End users still like new innovative products that are more efficient than prior year models. Two-stage units are extremely popular and are available in four basic grades: Economy, Residential/Homeowner, Heavy Duty/Landowner, and Professional.

This information comes from two proprietary databases maintained by Power Systems Research: **EnginLink™** and **OE Link™. PSR**

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Truck Production Index

Q3 2018 Global Truck Production Slips

Power Systems Research St. Paul, MN (October 30, 2018)— The Power Systems Research Truck Production Index (PSR-TPI) dropped from 124 to 112, or 9.7%, for the three-month period ended Sept. 30, 2018, from Q2 2018.  The year-over-year (Q3 2017 to Q3 2018) gain for the PSR-TPI was, 110 to 112, or 1.8%.

Commercial vehicle demand in 2018, has been particularly strong in North America, Brazil, Russia and India while demand is expected to decline sharply in China after very strong sales in 2017. Demand in Japan/Korea is also in decline. Outside of China and Japan/Korea, medium and heavy commercial vehicle demand in the other regions is trending higher this year.

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 **CV Link™**, the proprietary database maintained by Power Systems Research. You can find details about CV Link™ at <https://www.powersys.com/products-services/powertrain-databases/cv-link>

Commercial vehicle demand globally in 2018, has been particularly strong in North America, Brazil, Russia and India while demand is expected to decline sharply in China after very strong sales in 2017. Demand in Japan/Korea is also in decline.

Outside of China and Japan/Korea, medium and heavy commercial vehicle demand in the other regions is trending higher this year. **PSR**

North America Report

By *Michael Aistrup*, Senior Analyst.

Tyler Weigert, Project Manager and Research Analyst contributed to this report



*Michael
Aistrup*

Battery Power Stars at GIE+Expo

LOUISVILLE, KY.--The GIE Expo held here Oct. 17-19 served as a forum for manufacturers of outdoor power equipment and engines, as well as landscaping professionals, to debut their latest product lineup.

The theme of the Expo was clearly the continuing rise of battery technologies.

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North America Report

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Talking to both equipment and engine OEMs, the consensus in the industry is that battery technology is exploding in growth.

The 2018 GIE+EXPO broke records again this year. The show held at the Kentucky Expo Center, set records in both attendance and number of exhibitors. More than 24,7000 people from around the world attended, representing a 3% increase over 2017. And with 1,000 exhibits, the indoor show and Outdoor Demonstration Area were larger than ever.

Battery Technology

Talking to both equipment and engine OEMs, the consensus in the industry is that battery technology is exploding in growth. Although it has cost the battery segment its advantage in weight and maneuverability, the introduction of 5aH and even 8aH batteries has largely overcome runtime concerns in the handheld segment.

Whereas the charge life of a trimmer or blower last year may have been capped at around 25-35 minutes, we saw several manufacturers debuting models that could last over two hours. The introduction of higher voltage batteries, ranging anywhere from 62V to 100V, has also helped overcome the power difference in handheld equipment. As one manufacturer put it, “This is an actual chainsaw now, not just a pruning saw.”

EGO, originally the third manufacturer to market battery-powered equipment, unveiled its commercial line of handheld equipment here this year, and we heard from several OEMs that they had finished development and would be releasing their commercial lines next year. Everybody that we spoke to, whether they were invested in battery technology or the continued dominance of engines, was certain that battery technology would eventually capture the entire handheld segment.

We also saw several pieces of battery-powered walk-behind equipment. The jury is still out on whether batteries will be able to completely capture this segment of the market. While runtime has improved to the point where a top-of-the-line battery walk-behind mower could cover most suburban yards (about an hour of charge life), power is still an issue. Where a standard gas-powered mower can pull the grass straight and cut it multiple times, leaving a fine mulch behind, battery-powered mowers have flat blades that cut the grass one time, leaving a less precise cut and larger piles of debris. Because of this single-cut feature, they also struggle to effectively mulch leaves.

The power issue has largely prevented the development of battery-powered two-stage snowblowers, but for those that clear their driveway regularly, the market for battery-powered single-stage snowblowers was described as “active and competitive.”

Because these issues of power can only be addressed by installing larger batteries in the current technology environment, making weight a concern, equipment and engine OEMs are split about whether the battery segment will continue growing or hit a plateau. We are not convinced ourselves that this segment will manage to balance weight and power before the cost of autonomous robotic lawnmowers falls enough to make those the more practical choice.

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North America Report

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Two manufacturers, Mean Green and GreenWorks, featured battery-powered zero-turn mowers. Mean Green's latest zero-turn model boasted a seven-hour charge life, while GreenWorks claimed a more modest four-hour charge life that could be supplemented by another two hours if it were charged over a one-hour lunch. Both claimed that when considering the travel time in a landscaper's day, each of their machines was more than capable of meeting a landscaper's daily professional needs.

Both engine OEMs and manufacturers of smaller battery-powered equipment were more skeptical of these claims, though. Their doubts center around the charge life claims, how the zero-turns would be able to support the weight of those batteries (on some models, it is the same battery as the Tesla Model 3), and whether a consumer would pay twice as much for a battery-powered zero-turn if they could get a gas model with a better power guarantee.

One engine OEM posed the question, "If you're a homeowner and you're going to spend all that money on a battery-powered zero-turn, why wouldn't you just go buy one of those robots?"

Mean Green will tell you their clients so far have been universities and municipalities that have an additional interest in going, or at least appearing, green. We agree with many of the people we spoke to that the ride-on segment will likely develop hybrid technology, much the same as automobiles, long before it goes fully electric.

New Engine Technology

Kawasaki's newest engine is built for commercial use. Two things define this engine: EFI, featuring integrated eGov system, and the Vortical air filtration for cleaner, longer lasting and more consistent power. 26 hp at 3,600 RPM's.

Kohler is expanding its Command PRO® commercial lineup with a new vertical-shaft engine launching in three displacements – 173cc, 200cc, and 224cc. The new KOHLER Command PRO engines (CV173, CV200 and CV224) for commercial walk-behind mowers bring a range of benefits to green-industry pros, highest torque on the 224cc model. The engines also integrate the company's exclusive Consistent-Cut Technology, which helps to maintain high engine speed in difficult mowing conditions to make quick work of tall, wet grass.

Briggs & Stratton featured an expanded residential engine lithium-ion battery starting options that offer consumers more options for easy, effortless starting. The new Integrated InStart embeds the lithium-ion battery into the engine and delivers starting for nearly an entire season with up to 150 starts on a full charge.

Kubota's latest engine, the D902-T-E4, is a 3-cylinder, 0.9-L (900 cc) displacement engine. Offers output of 18.5 kW (24.8 hp) at 2,800 rpm, maximum torque of 78 Nm (57.5 ft.-lbs.) at 2,000 rpm and for use in turf industry, as well as other applications including utility vehicles, mini excavators, mini-track loaders, trenchers and welders. EPA Tier 4 Final and EU Stage V compliant and does not

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North America Report

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require aftertreatment device such as diesel oxidation catalyst (DOC) because it falls below 19 kW (25 hp) threshold for emissions compliance

Zero-Turn Mowers

Altoz. The social media star of the show was the TRX, the industry's first tracked zero-turn mower. The TRX, introduced this fall by Minnesota-based equipment manufacturer Altoz, racked up 3.7 million video views on its Facebook page as of mid-December. Altoz, which made a splash several years ago at the GIE+EXPO by entering the commercial mowing market with zero-turns, is promoting the TRX as the best (and safest) option for commercial cutting on slopes or over wet and rough terrain, because of its rear-mounted tracks and torsional suspension system.

The TRX is available with 61- and 66-inch cutting deck widths, and the option of either Kohler Command Pro EFI 33-hp or Vanguard EFI 37-hp engines.

Briggs & Stratton. One product that drew a lot of visitors was the futuristic zero-turn prototype from Briggs & Stratton. Labeled as a 2025 release, this part-snowmobile part-mower trims the grass at 20mph. The seat, handlebar, and suspension design allow the user's body and knees to absorb some of the shock from undulations and additional speed. Also, modular decks allow for adding and removing blades to suit your needs.

PSR Analysis: PSR will continue to monitor battery developers as they increase power density to improve power without sacrificing their weight advantage. We will also be monitoring the way tariffs affect the affordability of battery-powered technology, as batteries for handheld and walk-behind equipment are largely produced in China. PSR will continue to expand its database and reach beyond internal combustion engines and engine-powered equipment as battery power grows. **PSR**

Brazil/South America Report

By *Fabio Ferraresi*, PSR Director, Business Development, South America

CE Sales Recovery Has Begun in Brazil



*Fabio
Ferraresi*

In its 30th anniversary event where PSR participated, Sobratema reported numbers of 40% higher sales of yellow line Construction Equipment in 2018 compared with 2017. Backhoes lead the growth with 51% growth followed by loaders with 42%, while Hydraulic Excavators will grow 30% in the same period.

Other equipment than the yellow line category, including cranes, portable compressors, handlers and others, is forecast

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Brazil/South America Report

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to grow 25%. With regards to 2019, according to Sobratema, there are mixed messages from players within the same segment and in different segments of the Construction business chain so there is no forecast made by the 30-year-old association.

Source: *PSR* | *Sobratema* | *M&T Magazine* [Read The Article](#)

PSR Analysis: We already see signs of recovery in Construction Equipment sales pulled by public investment in infrastructure and funding for machine acquisition for cities. Despite the conservative position of Sobratema that does not assume a forecast, PSR projects solid growth for 2019.

Colombia Transmilenio Bid Impacts SA Bus Market

The bid for 1,400 buses for the Bogota and Metropolitan region BRT (Bus Rapid Transportation) in the years of 2019 – 2020 results were announced in November, when Scania got 461 gas buses and Volvo got 700 Diesel – Euro V buses. It is expected that both lots will be produced in Brazil.

Source: *Diário do Transporte* [Read The Article](#)

PSR Analysis: Despite the small numbers compared to other regions, the volumes are significant for South America, Colombia investment and for Brazil production. The option for 40% gas fuel to reduce emissions shows a consolidated trend in Colombia, while Brazil is weighing EV more seriously for buses, but with no clear direction yet.

Brazil Finally Approves Rota 2030

The automotive policy for 12 years finally has been voted and approved by Parliament and sanctioned by the president. The efficiency targets have been defined in line with the previous program, Inovar Auto, of 11% improvement over 5 years. There is a target of 9% average weight reduction.

There is also direction for vehicle Inspection introduction and tax reorganization, charging less for more efficient vehicles and more for the fuel-wasters.

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

PSR Analysis: Despite the many statements about directions of incentives and benefits, there are just a few items on taxation. We could not expect more from a transitory government, and we look forward to seeing the directions the new government will give to auto-industry and other engine powered industries. We should see some news over the next 60-90 days. **PSR**

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Emission upgrades mean opportunity not only for engine industry, but also for other industries like battery and hydrogen.

China Report

By *Qin Fen*, 秦奋 PSR Business Development Manager-China. 业务拓展经理



Qin Fen

Shenzhen Enforces China National 6 Emission Standard

On Oct. 1, 2018, Shenzhen, China's southern city, has become the first in China to enforce China National 6 Emission standard on commercial vehicles less than 3.5 tons.

Sources: Xinhua Net – November 1, 2018 [Read The Article](#)

Human Settlements and Environment Commission of Shenzhen Municipality – October 17, 2018 [Read The Article](#)

PSR Analysis: Several other cities/provinces like Guangzhou, Nanjing, Shandong and Zhejiang, etc., are also moving toward CN 6 emission standard.

Will 2019 be a year of China National 6? Emission upgrades mean opportunity not only for engine industry, but also for other industries like battery and hydrogen. News and investments on those industries are ever growing. **PSR**

11月1日起深圳率先执行轻型汽车国六标准

2018年11月1日，中国的南方城市 - 深圳，率先在总重不超过3.5吨的轻型商用车上，实施了国六标准

新闻来源: 新华网广东频道 - 2018年10月9日 [阅读原文链接](#) 深圳人居环境委员会 - 2018年10月17日 [阅读原文链接](#)

PSR分析: 其他城市和省份，比如广州，南京，山东省，浙江省等省市，同样也开始着手实施国六标准。

2019年会是国六年吗？排放升级对于发动机行业，还有其他行业如电池和氢能行业，都意味着新的机会，这些行业的新闻和投资，每天都在增长。

佩赛迩

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Europe Report

By *Emiliano Marzoli*, PSR Business Development Manager-Europe



*Emiliano
Marzoli*

The Electric Bike Revolution Revs Up

MILAN— Once again, EICMA offered a wonderful show for all the 2-wheeler fans. The OEMs that participated at the exhibition, fought to present new models and many innovations, with plenty of electric motorbikes and scooters.

Triumph gave the green light to the event with a press conference, introducing new special models, such as the Bonneville T120 ACE, a British café racer pushed by the company's signature 1200cc twin engine.

The new Scrambler 1200 XE was the great news on the stand, and in the company's plan will help drive sales to the next level. Triumph has been thriving over the last few years, posting growing sales results. From June 2017 to May 2018, they sold 61,000 bikes worldwide.

On top of that, the British manufacturer showed the world its new Moto2™ bike for the 2019 world championship. It just sounded amazing. The recognition and visibility from the MotoGP™ franchise will give Triumph a further way to consolidate their position as one of the leading OEMs.

In a tradition that goes back many years, BMW used EICMA as its launching platform for many new models, in fact six new models this year! Following the success of the G 310 series, BMW unveiled at EICMA the new C 400 GT scooter. In the last two years, the 250 to 500 cc segment has seen a solid growth in demand in Europe and in emerging countries. It does not come as a surprise that BMW with other brands is investing in this category.

In the medium size bikes, the Bavarian company (although bike production is in Berlin) showed the new GS 850 GS Adventure. The new bike is powered by 853cc twin parallel engine, capable of 95 HP and 92 Nm of torque. Just like SUVs are the stars in the car world, on/off road bikes are extremely popular. The big sister R 1250 GS series is in fact the best-selling bike in Europe!

Finally, after 10 years after its debut, a completely new S 1000 RR was unveiled to the world. New engine, new suspension, lighter weight than the previous model and many driving aids make this bike friendlier. The power has been increased to 207 HP for Europe and 205 HP for the US. the motorcycle now comes with BMW ShiftCam Technology—an entirely new technology for BMW motorcycles which varies the valve timings and valve strokes on the intake side. A revised intake passage and a new

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Europe Report

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With a market share of some 31% in the first nine months of 2018, TRATON remains the leader in the truck market of the EU28+2 region (EU, Norway, Switzerland).

exhaust system that is 1.3 kg lighter likewise contribute to increased overall performance. While the superbike segment has suffered recently, this bike is a manifesto of BMW technological capabilities.

Adaptive suspensions, dynamic traction control, different driving modes, launch control ABS Pro and many more features put this bike at the leading edge of the industry. Best of all, it will be available in “M” specs, for even more extreme performances.

As you would expect, Ducati was also very active and popular. The Italian company brought 10 new models to EICMA. Queen of the stand was the new Panigale V4R. At the heart, we found a 998cc engine derived from the MotoGP™ inspired Desmosedici stradale. The engine meets the WSBK category requirements, and so the bike will serve as a base in the 2019 championship. New suspension, and race developed aerodynamics add to the package.

Around the 937cc engine Ducati developed four new bikes. The Hypermotard 950 and 950 SP and the Multistrada 950 and 950 S. While the first remains a very peculiar bike, the second is one of Ducati best-selling models. The larger Multistrada 1260 Enduro was also unveiled at EICMA, and it is set to fight against the likes of the BMW R 1250 GS, representing a key model for Ducati.

Electric Vehicles

EICMA 2019 represented a showcase for many electric vehicles. Energica, one of the most influential electric bike brands, introduced in Milan the new Ego Corsa. This bike will ride the circuits of the new born MotoE™ championship in 2019.

Alongside this incredible bike, capable of 200Nm of torque (this is more than some city cars!) is the concept Bolid-E (in Italian that means shooting star). While sharing components from the racing bike, it also features Bluetooth and NFC, a dedicated app and connectivity to Samsung Galaxy Watch 2. This is something different from the bikes above, like it or not.

Another electric Prototype was offered by Fantic. The Italian company showed the ECAB, the electric caballero in a green livery. The bike will be launched in 2020, since current battery technology is not satisfying Fantic requirements in terms of range and performance. But once that is sorted out, the bike will be ready for mass production.

But maybe the most anticipated and discussed electric bike was sitting on the stand of one of the icons of the Internal combustion engine, and loud rumble, Harley Davidson.

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Europe Report

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The LiveWire™ bike showed at EICMA is the final model and will be ready for sales in 2019. The LiveWire™ is powered by a permanent magnet electric motor that produces instant torque. The motor is located low in the motorcycle to lower the center of gravity and improve motorcycle handling at all speeds and make it easy to control when stopped. The LiveWire™ model is designed to produce a tone that increases in pitch and volume with speed (a critical aspect for any Harley).

Being in Italy, you would expect something from Piaggio. In fact amongst many models unveiled at the show, from the Aprilia, Guzzi and Piaggio brand, of course the Vespa added a special place, particularly with the brand new electric “Vespa Elettrica”. It is powered by a 2kW DC brushless motor (4kW peak) with 200 nm of torque! It can run for 100 km (200 in the “X” version). Full charge will take four hours, while the battery life is estimated between 50,000 and 70,000 km. Price is set at €6,390.

Sales of three wheelers are growing in Europe. They represent a safer alternative to normal scooters and motorcycles, particularly for commuters that use the vehicle to avoid traffic. Quadro has been one of the first brands to bet on this type of scooter and at EICMA they presented further innovations.

The Nuvion is the new 3-wheel scooter presented by Quadro and aimed at younger riders. It features a 300cc Euro-4 engine supplied by AEON and a dry weight of 200 kg, making it as light as a normal scooter. The Swiss company also brought the XQooder.

At the heart of the vehicle there is a 400cc engine, Euro-4 and a special electric tilt system to manage the chassis and reproduce a bike feeling despite the four wheels. Even though Quadro did not bring any electric vehicles, we were told during the show that we better keep our eyes open for EICMA 2019.

During the show many other electric vehicles and concept bikes were showed; should you need more details do not hesitate to get in touch. Sustainable mobility and electric vehicles are one of the top priorities of the motorcycle industry and this trend will continue stronger in coming years. **PSR**

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NVIDIA has abundant knowledge in the field of autonomous driving technology for passenger cars and seems to be a good partner for Isuzu.

Far East/Southeast Asia Report

By *Akihiro Komuro*, PSR Research Analyst, Far East and Southeast Asia
小室明大 極東および東南アジア PSRリサーチアナリスト

Far East: Japan



*Akihiro
Komuro*

Isuzu Developing Autonomous Driving for CVs with NVIDIA

Isuzu Motors, a Japanese major CV manufacturer, is working with NVIDIA, a leader in the field of autonomous driving software, to develop systems for commercial vehicles. The NVIDIA DRIVE™ is an autonomous driving car platform used by more than 200 companies around the world. Isuzu will address technical problems facing commercial vehicles and will have exclusive rights among Japanese auto manufacturers to the research.

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

PSR Analysis: The AI spatial recognition platform is responsible for the processing of information obtained by automobile cameras and sensors in real time in a precise manner. It is the most important technology for safety. Demand for such AI technology is rapidly increasing, and the speed at which automobile manufacturers acquire knowledge through their own research has not kept pace with increasing demand.

NVIDIA has abundant knowledge in the field of autonomous driving technology for passenger cars and seems to be a good partner for Isuzu. I believe, it will take more than five years to put this technology into practical use, and the first manufacturers who can commercialize this technology will have a great sales advantage. **PSR**

Far East > 日本:

自動運転を商用車に いすゞはエヌビディアと提携

いすゞ自動車は米エヌビディアと自動運転分野で共同開発に乗り出す。クルマの周囲の状況を捉える自動運転の核となるシステムで高いシェアを誇るエヌビディアと組み、商用車に特有の技術課題を解決する。日本の商用車メーカーの中で、いすゞが共同開発の成果を独占的に利用できるようになる。

ニュースソース: 日経新聞, 2018年10月23日 [記事を読む](#)

PSR 分析: 空間認知AIプラットフォームは、自動車のカメラとセンサーで得られた情報をリアルタイムで正確に処理する、安全のための最も重要な技術で

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Far East/Southeast Asia Report

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ある。こうしたAIテクノロジーの需要は急速に増しており、自動車メーカーが自前の研究だけで知見を獲得するスピードは、需要の増加に追い付いていない。エヌビディアはすでに乗用車の自動運転技術分野で豊富な知見を有しており、いすゞは最も適したパートナーと組んだと言えるだろう。私の予測では自動運転の実用化にはまだ少なくとも5年以上かかると見ている。この技術を実用化できたメーカーは、大きなセールスアドバンテージを得ることになるだろう。 **PSR**

Far East: South Korea

Manufacturers Invest Record \$7.4 Billion Abroad

Korean manufacturers investment in overseas markets for the establishment and expansion of factories in H1 2018 was a record US\$ 7.4 billion (about 748 million yen). At the same time, domestic capital investment was negative from the previous month for six consecutive months, from March to August. The high cost/low-efficiency economic structure accompanying the increase in corporate tax rate, rising labor cost, and various regulations has led the manufacturing industry to move abroad. Global protectionism, mainly in the United States, is also a factor in Korean manufacturing industry moving abroad.

Source: *The JoongAng Ilbo* [Read The Article](#)

PSR Analysis: The average occupancy rate of the manufacturing industry announced Nov. 11 by the Korea National Statistical Office was 72.8% (January to September), the lowest since 1998.

Both pillars of the domestic manufacturing industry--shipbuilding and automobiles--continue to be sluggish, and the unemployment rate of young people is high. Moreover, the labor union pressure is also very strong, it is difficult to find growth drivers for the economy.

Many Korean companies including Doosan and Hyundai are revitalizing overseas activities, however, the profits gained there are not returned to the domestic economy but are reinvested abroad. If the Korean economy is to improve, the revival of the manufacturing industry--the biggest driver of the domestic labor force--is essential. But the outlook is quite uncertain. **PSR**

Far East > 韓国:

韓国の製造業、海外投資7.4億ドルは過去最大

上半期に韓国の製造業が海外工場設立と増設などで海外に投資した金額は過去最大の7.4億ドル(約7億4800万円)だった。国内設備投資額が3月から8月まで6カ月連続前月比でマイナスであるのと対照的だ。法人税引き上げ、人件費上昇、各種規制などにもなう高コスト・低効率の経済構造は

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Yamaha Motor and Gogoro said they have begun a study towards collaboration in the electric vehicle (EV) business in the Taiwan market.

製造業の海外進出を促している。米国を中心にしたグローバル保護貿易主義も、韓国の製造業が海外に進出する要因に挙げられる。

ニュースソース: 中央日報, 2018年10月4日 [記事を読む](#)

PSR 分析: 韓国統計庁が11月11日に発表した製造業の平均稼働率は72.8% (1-9月)で、これは1998年以来最低だった。造船、自動車という国内製造業の2本柱がどちらも低迷を続けており、若年層の失業率も高いままだ。さらに労組の圧力も非常に強く、経済成長の原動力となる材料を見つけるのは困難である。斗山や現代をはじめ多くの韓国企業は海外でのアクティビティを活性化させているが、そこで得た利益は国内経済に還元されず更なる海外投資に回っている。今後韓国経済が上向くために、国内の労働力の最大の受け皿になっている製造業の復活は必須である。しかし、その見通しは非常に不透明だ。

PSR

Greater China: Taiwan Report

Yamaha, Gogoro Begin EV Business Collaborative Study


Yamaha Motor and Gogoro said they have begun a study towards collaboration in the electric vehicle (EV) business in the Taiwan market. This collaboration relates to Gogoro's development and manufacturing of electric scooters for Yamaha and sharing of the battery-swapping system. Signing a formal contract is anticipated this year.

Yamaha will design Yamaha-branded electric scooters based on Gogoro production vehicles, with production handled by Gogoro. Sales of new Yamaha electric scooters in the Taiwanese market will be carried out through the sales channels of local subsidiary Yamaha Motor Taiwan. Market launch of the first model is planned for the summer of 2019. Sumitomo Corporation, a business partner of both Gogoro and Yamaha Motor, is playing a key role in this collaboration.

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

PSR Analysis: Japanese motorcycle manufacturers are responsible for approximately half of the global production, but there are delays in aspects of EV scooter development and its market formation.

Meanwhile, Taiwan is an advanced EV scooter country; Gogoro and KYMCO's IONEX are being actively promoted. Adoption of Gogoro's battery system for Yamaha, the world's second-largest OEM, is expected to shorten the development period. Gogoro accepts big orders in the form of production consignment and also expects to improve branding with collaboration with major OEMs.

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With the current EV scooter market size of about 50,000 units, it is almost impossible to allocate the huge development costs into this segment. While there are limited ways to lower development costs or increase sales volume, this collaboration between Yamaha and Gogoro may be a way to develop this market. **PSR**

中国 > 台湾

ヤマハ発動機とGogoroがEVにおける協業の検討を開始

ヤマハ発動機株式会社とGogoro Inc.は、このたび台湾市場におけるEVビジネスでの協業に向けた検討を開始しました。このたびの協業は電動二輪車の開発・製造委託およびバッテリー交換システムの共用に関するもので、年内の正式契約を予定しています。Gogoroの市販車をベースとしたヤマハブランドの電動スクーターのデザインをヤマハで行い、生産をGogoroに委託します。完成車両はヤマハの現地法人であるヤマハモーター台湾の販路を通じて台湾市場で販売します。第1弾モデルの投入は2019年夏頃を計画しています。なお、本件については両社のビジネスパートナーである住友商事株式会社の協力を得ています。

ニュースソース: Yamaha Press Release, 11 September 2018 [記事を読む](#)

PSR 分析: 日本の二輪車メーカーは世界の生産量のおよそ半数を担っているが、EVスクーターの開発と市場形成の側面においては出遅れている。一方台湾はEVスクーター先進国であり、GogoroやKYMCOのIONEXが積極的なプロモーションを行っている。世界第二位の二輪メーカーであるヤマハにとってはGogoroのバッテリーシステムを採用することで開発期間の短縮が期待でき、Gogoroにとっては大量の受注に加え、メジャーOEMとの協業によってブランディングの向上が期待できる。現在のEVスクーターの市場規模は約50,000台で、莫大な開発費をこのセグメントにだけ割り当てることはほぼ不可能だった。開発コストを抑えるか販売台数を増やすしか道はなかったのだが、ヤマハとGogoroの協業はこの市場を発展させる手段となるのかもしれない。 **PSR**

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India Report

By *Jinal Shah*, Regional Director, South Asia Operations



*Jinal
Shah*

Tata Motors Posts 22% Sales Increase

Tata Motors' Commercial Vehicles (CV) domestic sales grew in October 2018, hitting 39,420 units, up 22%, over October 2017. The increase was led by the continued acceptance of the BS-IV products. Cumulative sales for the fiscal year (April-October 2018) were 271,907 units, up 40% over the same period last year. **Read The Article**

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India Report

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PSR Analysis: The commercial vehicle industry has been firing on all cylinders for quite some time now. Every manufacturer has recorded significant growth –40%-70%– in its H1 2018 heavy-duty trucks sales. While it is understandable that the robust growth might not be sustainable for the full fiscal year, October numbers indicate that the growth is still at a high level.

In such a buoyant environment, CV market leader Tata Motors, which is engaged in an aggressive battle to win back lost ground in the heavy-duty truck segment, seems to be playing its cards well. To support this growth; freight rates have seen an uptick. This is also helped by higher spending on infrastructure projects. NHAI road contracts, awarded last year, are being executed in various parts of the country. Also, affordable housing and irrigation projects are contributing to the incremental demand for M&HCVs. With the upswing in infrastructure projects across the country, there is increasing demand for tippers which is likely to continue.

However, at end of the day, the CV industry is cyclical and being mindful of that, the CV growth momentum is likely to moderate in following months.

BS-IV Vehicle Sales Blocked After April 1, 2020

The Bharat stage emission standards are standards instituted by the government to regulate output of air pollutants from motor vehicles. The Bharat Stage VI (BS-VI) emission norm will become effective April 1, 2020, across the country. [Read The Article](#)

PSR Analysis: Automakers will get no grace period to sell their BS-IV stocks beyond March 31, 2020. This means OEMs may have to exhaust their stock of BS-IV vehicles before that date, while oil companies must ensure that BS-VI fuel is available across India.

This means the current fleet of BS-IV cars, two-wheelers and trucks will be retained for the next 12-13 months, and factory inventories will begin dropping after December 2019 as the dealership pipeline prepares for BS-VI vehicles. The silver lining is that there is no ambiguity about the road ahead. **PSR**

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This trade show is a purely local event and only part of it (about 30%) was dedicated to engine powered devices. However, it shows the trends in the Russian power tool and small machinery market.

Russia Report

By *Maxim Sakov*, Market Consultant, Russia

European Lawn & Garden Sales Are Dropping



*Maxim
Sakov*

MOSCOW—The 2018 MITEX International Tool Expo here was the venue for tools (both electric and engine powered), small gen-sets, lawn and garden devices and small AG machinery such as 2-wheel tractors.

The fair was held Nov. 6-9 at the Moscow Expocenter. It was organized by Euroexpo Moscow and sponsored by Stihl Group of Companies, in Germany. The show occupied 19,800 square meters, and there were 420 participants from 20 countries. The largest delegations (besides Russian) came from Germany and China.

This trade show is a purely local event and only part of it (about 30%) was dedicated to engine powered devices. However, it shows the trends in the Russian power tool and small machinery market.

Big European companies such as Stihl hold a significant share of the Russian Lawn&Garden market. Despite the high price of the products, these companies take advantage of their high-quality products and established good reputation. However, their share is dropping because the Russian Ruble is declining against the Euro. Asian producers such as Daewoo, Hyundai and others have a small market share, but it's stable.

Most of the market is split between local players and Chinese manufacturers. Traditionally, local players were Russian manufacturers, working for military orders and making small machinery and power tools as side products. For example, Tula Machinery Plant, KADVI, etc. However, with the increase of military production, these OEMs either suspended this side production, or separated it.

At the same time, we are seeing new producers of this machinery, like Interskol, Lynx company, Benzotech and others. Initially the companies just placed orders on Chinese plants. Then, the next step is to create their own brand (like Tselina) and implement their own standards, while still ordering machinery in China.

The next step is for the companies to set their own production in Russia and gradually switch from Chinese orders to local product under same brands. With a known brand and a developed service base, the task of developing sales has become easier. Thus, the share of local product on the market

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Russia Report

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is going up with decrease of Chinese machines. One problem in localizing products is the absence of Russian small engines.

Currently, OEMs use Western, Japanese and Chinese engines. Most popular of them are Briggs&Stratton, Honda, Robin Subaru and Chinese Lifan, Longsin and some others. Russian producers made their own engines few years ago (above mentioned Tulamash, KADVI and Ufa motor Plant), but this production has been suspended.

Ford Sollers JV Supplies Auto Parts to Europe

The Ford Sollers JV has started to supply 21 automotive parts for the Ford Focus to European dealers. The estimated export volume is 120,000 items per year, which is expected to completely cover EU dealer demand for certain parts. The parts list includes plastic interior details and bumper parts.

The total number of named components supplied to Europe by Ford Sollers is close to 100. The JV also makes components for the Ford EcoSport.

Read The Article

PSR Analysis: Ford is integrating its Russian JV into the world supply chain. Today, the supplied components are not critical, but the growing trend is clearly visible.

Russian OEMs Opening Uzbekistan Market

KAMAZ To Open JV: [Read The Article](#)

RM-Terex Delivers Construction Machines: [Read The Article](#)

Chetra Plans Local Assembly of Dozers: [Read The Article](#)

PSR Analysis: Following the October visit of Russian officials to Uzbekistan, co-operation agreements were reached. Now, the movement of Russian machinery makers into the Uzbekistan market has support from the highest levels. Construction machinery is a main export to Uzbekistan. During the seven months of 2018, it has grown 3.6 times versus same period in 2017.

KAMAZ is the largest Russian truck maker. RM-Terex is a JV between Russian Machines holding and Terex. Its main applications are excavators, graders and loaders. Promtractor (brand Chetra) is Russian major manufacturer of crawlers.

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Russia Report

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Government To Offer Funding for Equipment Purchases

The Russian government is preparing a decree which would compensate Russian construction machinery OEMs for 15% of the final machinery price. After the decree becomes effective, OEMs can provide discounts to customers. The discounts will be reimbursed from State budgets. The size of compensation in certain regions (Siberia, Far East, Crimea, Kaliningrad) will be even higher, as much as 20%. **Read The Article**

PSR Analysis: Similar measures were taken few years ago for AG machinery OEMs, and these have shown positive effects. Now, it has been decided to expand this experience to construction machinery. **PSR**

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