

# THE HANSEN REPORT ON AUTOMOTIVE ELECTRONICS

## Editorial Notes

Dear Reader,

These are extraordinarily turbulent times. The Covid pandemic is still here. The resulting chip shortages are still severely limiting vehicle production. The Russian military is indiscriminately bombing civilians in Ukraine. And appallingly, the Chinese government is making common cause with the Russian, an apparent axis of anti-democratic autocracies. China, which has pronounced that its friendship with Russia has “no limits”, will likely provide economic support to help Russia weather sanctions. It is not far-fetched to think that Russia would return the favor by supporting China should the country invade Taiwan, something the Chinese have for years threatened to do.

Taiwan accounts for 92 % of the world's most sophisticated chips. TSMC, by far the island's largest chip supplier, makes more than 60 % of the less sophisticated chips used in cars, says IHS Markit. If China were to invade Taiwan and take control of its chip production, it would have the power to counter the world's sanctions.

China and the world's economies are so tightly knit that China may already be immune to sanctions, even without control of Taiwanese chip production. China accounts for nearly one-third of global manufacturing. It is the world's largest car market. General Motors and

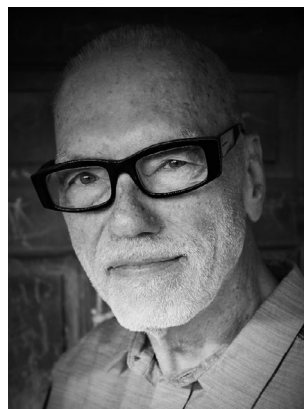
Volkswagen sell more than half their car output there. The country accounts for more than a third of BMW and Mercedes shipments. It would be nearly impossible for carmakers to walk away from business this significant, likewise for suppliers.

Carmakers and their suppliers, including the Chinese, have already begun a years-long effort to become less dependent on Taiwanese chip production. It's hard to know what else the industry can do short of limiting further investments in China, while praying that China doesn't follow Russia into war.

Sincerely, Yours



**Paul Hansen**  
Editor



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