

Anonymous submission

Introduction

As an organisation the IMI is working with the National Protective Security Authority to look at ways of educating and training the industry to improve both cyber security but also the human interface with the connected technology. This submission highlights the move towards electric vehicles and the advantages that it gives to China and the CCP commercially. The economic impact is coupled by the major security threat that comes from connected vehicles in general but more specifically from China.

Background

A lot of what has been taught in Business Schools around the world is having to be binned.

The concept of globalised supply chains based on the law of comparative cost producing economies of scale coupled with the concept of Just – In – Time production is gone. It is no longer the efficiency of the supply chain that gives you competitive advantage it is the security of supply that matters. It is not when you can get the raw materials it is whether you can get them at all that is raising concerns in motor industry board rooms in Europe and America.

When Henry Ford first opened the Rouge Plant in Dearborn, he had the foresight to ensure that he had a controlled and reliable supply chain of raw materials that was needed to build the Model T. He bought rubber plantations in Brazil, opened a steel works in Michigan and coal mines in Kentucky and Virginia. He also invested in rail roads to carry the output to his production facilities.

The UK Government's decision to down the BEV route for all new light vehicle sales initially by 2030 may have sounded very laudable at the time but failed to even consider the ramifications for the sector from either a cost or logistical perspective. It was in mid-October last year when BMW Chairman Oliver Zipse stated that the UK Government has moved too fast and too soon with its ambitions for new car sales to become fully electric by the end of the decade.

The challenge will come from China that controls up to 95% of the battery supply globally as well as the raw materials. Eighty percent of the world's cobalt comes from the Democratic Republic of the Congo, with other critical minerals coming from that continent. China's Belt and Road Strategy has led to major investment taking place in Africa and it is significant that the Xi Jinping regime gave debt forgiveness in August 2022 to 17 African countries on 23 major projects that amounted to \$3.4billion. Just like Henry Ford, China has made moves to guarantee its supply chain when it comes to BEVs. In the meantime, European manufacturers are searching to secure supplies and plan to get critical mineral supplies and open their own battery manufacturing facilities. The UK Government only set up our own Critical Minerals Intelligence Centre in July 2022 far too late to have any impact in what should have been a long-term strategy.

By comparison Chinese car manufacturers have supplies of vehicles and the demand for their domestically produced vehicles has grown. It is not a coincidence that the Chinese Government owned MG(SAIC) has concentrated on exporting into the West its sales last year grew by 134% in the UK. Producers such as Great Wall, BYD, Nio, & Xpeng are likely to

become increasingly well-known brands over the next three years. These of course do not include the imports from China in the form of BMW, Polestar and Tesla. Companies such as Volvo also have Chinese ownership. Steve Young of the ICPD is predicting an influx of an additional 300,000 vehicles will coming in annually from China within a couple of years.

The UK is seen by the Chinese manufacturers as an early and easy target. By initially pushing for 2030, five years before the rest of Europe it left the UK market vulnerable to being swamped by Chinese made cars. The fact that the headline timescale has been pushed back to 2035 is irrelevant as the next zero target of 22% BEV in 2024 and the £15k penalty per unit for failing to hit this is still in place.

One of the fundamental problems is that in an electric car the battery can be anywhere between 50 – 75% of the cost is in the battery. A combination of the lack of raw materials plus the Brexit legislation means that any cars produced in the UK are likely to be uneconomic. The EU has reduced its restrictions on mining to allow for the search for the critical minerals required in current battery technology. Japan has signed a trade agreement with the US to allow them access to the minerals in that country. Virtually every country is trying to fight against an overreliance on China, except the UK who is playing into their hands.

Having had over a hundred years of stripping the world of fossil fuels we are now going to strip it of critical minerals; alternative technologies including hydrogen need to be encouraged.

With the Ukraine war the UK has witnessed the weaponization of gas by Russia. With China about to blockade Taiwan which would restrict semi-conductor supply plus having the monopoly on battery supply the UK car industry will be left as a hostage unable to respond to the impact on the supply chain. On July 3rd, 2023, China stopped to export of Gallium ‘for national security reasons’ (which normally means something about Taiwan.) Gallium is a critical element in the manufacture of semiconductors.

Security Implications

- With the influx of Chinese EV’s that have connected capability this will also have major security issues with China potentially being able to control/adjust/stop/collect data from vehicles being driven in the UK.
- We know that at the moment connected vehicles can be stopped remotely. If this happened on a motor way at 70mph and the automatic braking system was applied to a vehicle the traffic would simply pile in the back. If this occurred at strategic points it could gridlock cities.
- The OEM’s are spending a great deal of money attempting to build in security by design, this is good if the manufacturer’s are benign. Even with regulation and strict homologation there is no way on stopping a car manufacturer having control of the vehicle. The challenge is that the car manufacturer may be in Shanghai and could stop 100,000 to 300,000 cars across Europe thus paralysing a country/continent.
- On July 14th the Parliament’s Intelligence and Security Committee said that China had penetrated ‘every sector’ of the UK economy.
- The access that China would have to both ‘big data’ as well as personal data through connected vehicles is a threat to UK security.

- Chinese connected EV's flooding the country could be the most effective Trojan Horse that the Chinese establishment has to impact the UK.
- Even more worrying is that the Ministry of Defence is buying Chinese made MGs presenting a direct risk to national security.

Current Example of the Use of this Technology

In Dec 2023 Tesla recalled 2 million vehicles over concerns about its Autopilot system. The recall was done online with the company being able to not only adjust how the car operated but was also able to monitor how the owner was driving.

This technology could easily be used by nation states, terror groups or criminal organisations.

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