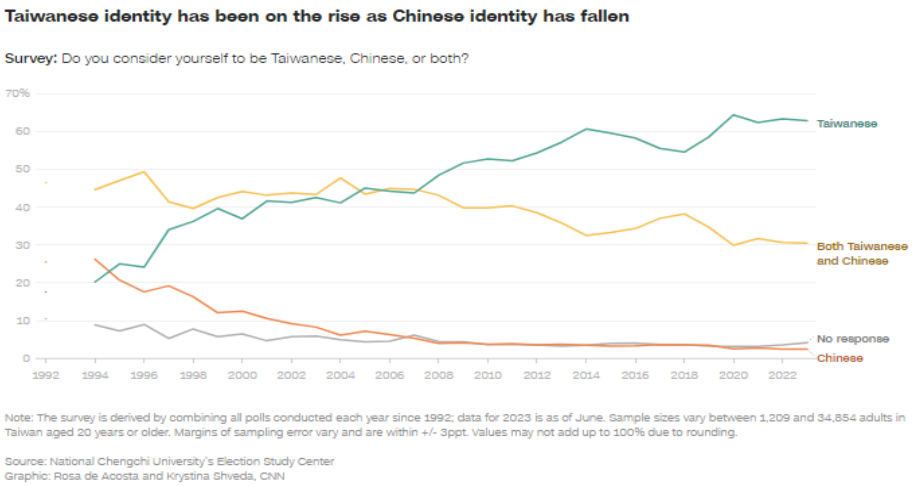
WHILE THE WORLD'S ATTENTION HAS BEEN FOCUSED ON UKRAINE AND GAZA THINGS HAVE BEEN HOTTING UP IN THE PACIFIC IN MORE WAYS THAN ONE.

This article focuses on two aspects. The rising military tension between the USA and China originating from the side of the USA and the ongoing technological arms race between the two powers.

The new president of Taiwan Lai Ching-te, upon assuming office added to the stance taken by his predecessor on China Taiwanese relations in his inaugural address: "*In Lai's first address to the public after taking his oath, he said that "the Republic of China, Taiwan, is a sovereign and independent nation with sovereignty resting in the people" and stressed that his government would make no concessions on its democracy and freedoms." "He called on Beijing to "stop its aggression against Taiwan" and strive to "maintain peace and stability in the Taiwan Strait and the region".* This drew an immediate military rebuke from China when its forces surrounded Taiwan repeating an earlier exercise called *Joint Sword-2024A.* And Lai was not only criticized by China: *"Lai's stance is a step back towards more confrontation, undoing much of Tsai's line," says Chao Chun-Shan, a Taiwan academic who advised Tsai and her three predecessors on China policy. He argues that it puts China's leader Xi Jin-ping in a dif-fi-cult spot.*

Most studies reveal that over the last 10 years, the majority of Taiwanese consider themselves Taiwanese with very few considering themselves Chinese. This being so we should conditionally support the Taiwanese people in their desire for sovereignty but with one strict condition. They break from US imperialism by expelling all US military personnel and advisers from Taiwan and its territories, and by refusing any military aid or weapons from the USA. Otherwise it will not be Taiwan that benefits from this independence but the USA.

Graph 1.



Despite winning the presidential election with 40.2% of the vote, the new president is hamstrung by the significant losses at local level endured by his party. His party the DPP "*lost control of Taiwan's 113-seat parliament. Taiwan's media reported the DPP won 51 seats to the KMT's 52, while the TPP got eight."* This is a warning to the ruling class in Taiwan. The economy is becoming not only more unequal but increasingly lopsided. Set aside the Chip Industry mainly controlled by TSMC and the rest of the economy is doing badly. And though Taiwan is now exporting more to the USA than China it remains very dependent on the Chinese market. *The island exported $24.6 billion worth of goods to the U.S. in the first*

three months, compared with $22.4 billion to mainland China, according to Taiwan's official data. Taiwan's economy barely grew last year and wages continue to fall behind prices especially that of food. This is the Achilles heel of the nationalist project in Taiwan. Assuming China continues to grow and standards of living rise while the opposite is happening in the USA as is also looking more likely, then clearly more Taiwanese will come to see their future linked to the prosperity of China. For the time being average wages are significantly higher in Taiwan than China. Adjusted for the lower cost of living in China, take home pay in Taiwan is still 20% higher but the gap is closing. Of course hitching Taiwan's wagon to the US donkey is positively Ukrainian.

Militarily the ties between Taiwan and the USA deepen. The last count of overseas US bases now adds up to over 1000 equal to one base per million potholes on US roads or rust patches on their bridges. Most of these bases ring China. In the Pacific Ocean the US and Taiwanese Navies just happened to encounter one another and once they bumped into each other decided not to waste the opportunity and so embarked upon a joint exercise. *"I noted that it's reported that the U.S. and Taiwan vessels had 'unplanned encounters,'" Chinese foreign ministry spokesperson Wang Wenbin said at that day's regular press conference. "I want to stress that China is firmly opposed to the U.S.' military contact with Taiwan. This position is consistent and unequivocal."* And on the Taiwanese islands closest to the Chinese mainland there are so many US green berets they can be seen from space by any spy satellite.

In short the US continues to deepen and extend its offensive belt around China, and having provided hefty funds for Ukraine it now expects the EU to pick up the slack so it can focus on the Pacific. Tensions in the region are rising as the US keeps adding to its military capacity waiting for the time when its economy is less reliant industrially on the Chinese economy. Of course all its plans could be upset by the out of control Zionists, meaning an unplanned Middle Eastern regional war remains a possibility.

The Tech War.

The Electric Vehicle war has come to the fore recently diverting the focus on Chips and A.I. somewhat. And so it should as the global auto industry is much larger than say the Smartphone industry. Global revenue in 2022 for the auto industry amounted to $2,520 billion vs under $500 billion for the smartphone industry and $618 billion for the semi-conductor industry as a whole, according to Statista.

Up to 2018 the Chinese market provided a profit bonanza for US and German car companies. It then changed when the rise of indigenous Chinese car companies collided with a slowing car market in China putting the squeeze on foreign auto makers. For a number of reasons the fall in US auto sales in China is the poster child which better explains why tensions have risen between the US and China. In the period 2014-2018 for example, GM made more money in China than in the USA, before crashing.

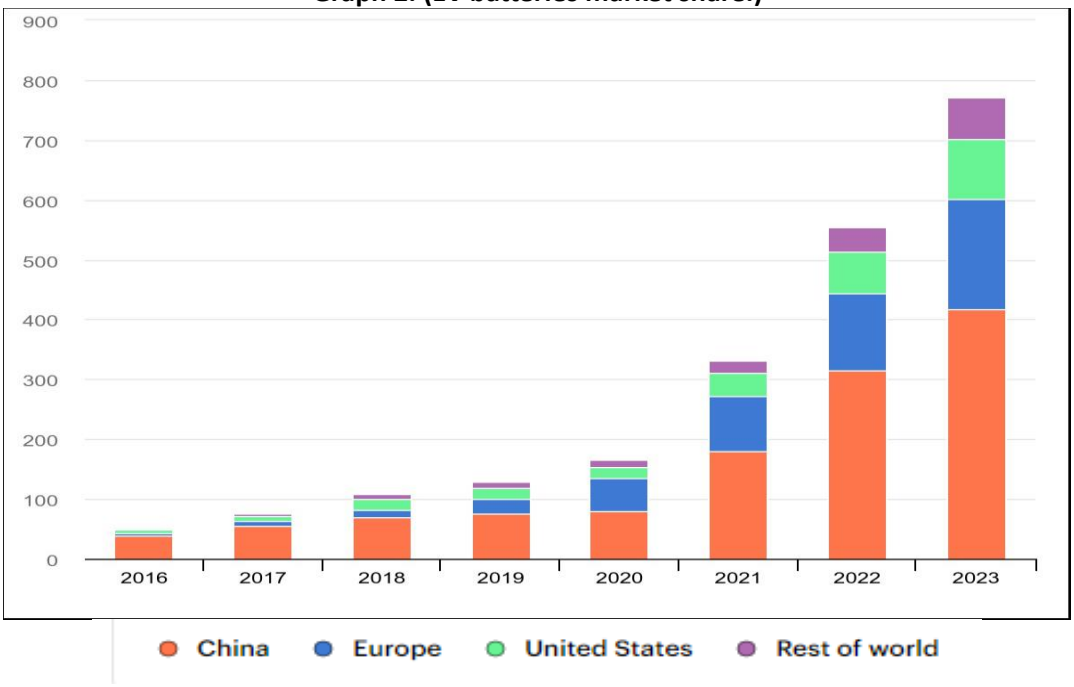
That was phase one of the squeeze on foreign auto makers. Phase two is the rise of China as the world's largest exporter of light vehicles putting the squeeze on world markets. This explains the response by the Biden administration in the form of elevated tariffs on Chinese Electric Vehicles: *"Most notable is the quadrupling of import tariffs on imported Chinese electric vehicles (EVs): from 27.5 to a whopping 102.5 per cent."*

Key to the success of Electric Vehicles is battery production and battery technology. In every way, the development of electric batteries is more consequential for the future of out planet than engineering more powerful semi-conductor chips. The former reduces energy consumption and therefore pollution

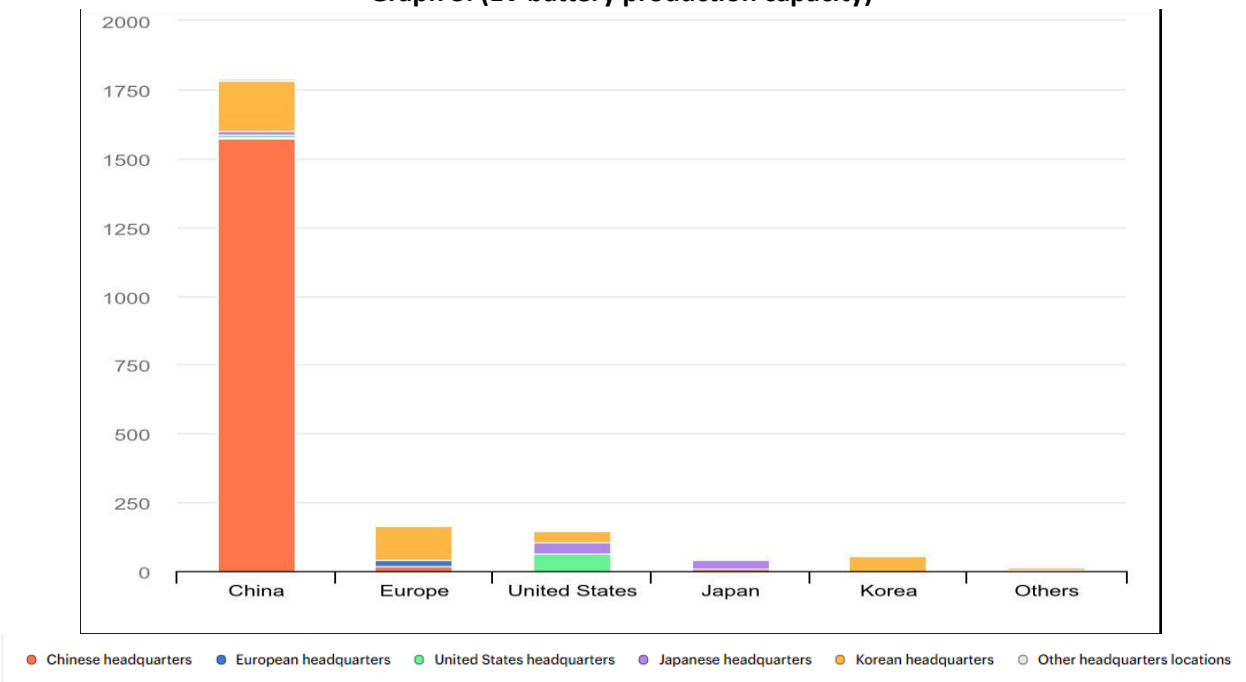
while the latter promotes green house gasses by increasing the consumption of electricity. And here the US lags far behind China both in the output of batteries and the technology behind them.

Below is the data from the *International Energy Agency* comparing global production and capacity. It shows the US trails not only China but the EU as well: "*Nevertheless, the United States remains the smallest market of the three, with around 100 GWh in 2023, compared to 185 GWh in Europe and 415 GWh in China.*"

Graph 2. (EV batteries market share.)



Graph 3. (EV battery production capacity)



Graph 3 shows that China has built a production capacity greater than the rest of the world combined. However, despite this, it is actually South Korean companies who have penetrated foreign markets the most. "*Korean companies, for example, account for over 350 GWh in manufacturing capacity outside Korea, Japanese companies for 57 GWh outside Japan, and Chinese companies for just under 30 GWh outside China.*" As South Korea is an ally which the US dare not upset, Biden does not talk about them in the same tone with which he discusses China. While China is a dumpster South Korea is not.

Battery prices have fallen by over two thirds since 2015, driven by CATL and BYD the giant Chinese battery makers who together produce over 50% of global EV batteries. As I never tire of saying, CATL is the modern day equivalent of Standard Oil which once dominated the world oil industry. Unlike the oil industry however, as batteries are not a natural resource, the EV industry has not sought to carve up the world to monopolise oil estates as for example happened with the Persian Gulf region.

Not only have batteries become cheaper, but they also last longer. CATL has just announced a commercial vehicle battery guaranteed for 15 years. The case for EVs grows stronger not weaker despite the fossil fuel industry seeking to put off prospective buyers with misinformation.

The bug bear remains batteries embedded in cars which cannot be exchanged. These require individual charging points. And while manufacturers of both batteries and fast chargers boast about how they are reducing the time needed to charge a battery, the hard fact is that rapid charging degrades battery life thereby shortening its life span. Again, as I have repeatedly said, the failure by governments, including the 'hands on' Chinese government, to outlaw non-exchangeable batteries and force standardisation, has set the EV industry back a decade further damaging our world.

Where General Motors has gone, Apple is heading as its market share of the world's second biggest smartphone market continues to shrink: "*Apple's China market share slid to 15.7% in the first quarter of this year, compared to 19.7% a year earlier, according to data compiled by Counterpoint Research. Huawei, meanwhile, saw sales surge 70%, closing in its gap with Apple.*" The latest discount for iPhone 15 works out at $194 removing the premium iPhones enjoyed in the past.

Then there is the latest phone by Huawei - the Pura 70 series - which leaps over Apple in terms of its aesthetic beauty which is why it sold out in minutes. But, as with humans, it's under the skin what matters. It reveals further progress by China in its drive to replace foreign components. "*The Pura 70 series, powered by Huawei's in-house Kirin 9010 chip, uses NAND storage from Yangtze Memory Technologies Co., a teardown by TechInsights revealed. The technology is a generational improvement over the YMTC chips used in 2023 devices, though it may not be quite as advanced as the SK Hynix Inc. memory Huawei used in the Mate 60 series, TechInsights said.*" Huawei is powering ahead despite everything thrown at it by the USA, and is on its way to becoming the largest and most dominant tech company in world, in time surpassing Samsung.

And this applies even to A.I. chips or more correctly the neural type chips which Large Learning Models (LLMs) require. Reuters reported that Nvidia has been forced to slash the price of it's A.I. chip in China, the H20: "*Sources told Reuters that Nvidia's H20 for the Chinese market has experienced "weak demand," adding that there is an "abundant supply of the chip in the market." They said the H20 chips are being offered at 10% discount to Huawei's powerful Ascend 910B.*" Nvidia has had a monumental run as companies have swallowed up its chips despite their fantastic prices. But as China represents 17% of Nvidia's revenue this price war in China with Huawei and Baidu is bound to be a hiccup.

The other issue is Moore's Law, which many assume only applies to the increase in the density of transistors on the same sized chip. There is a second aspect to this Law and that is the cost per transistor. As etching gets finer, especially below 7nm costs shoot up. Today the cost of a single 3nm chip is as much as two 7nm chips and when stitched together the two 7nm chips have as many transistors as a 3nm chip. In terms of advantages each of the 7nm can be dedicated to different tasks improving the performance beyond that of a 3nm chip, but in terms of disadvantages, the power consumption of a 3nm chip is significantly lower. Despite less power being consumed per transistor, because of their greater density and proximity, thermal issues have arisen. Both the 3nm and 4 nm chips are subject to overheating at maximum clock speeds leading to thermal throttling . This is when over heating causes the clock speed to dial back. In fact Apple is trying to pretend this is the new normal saying users must expect its new phones to run hotter, which has implications of course for the longevity of these phones.

What does this mean for China. China is no longer chasing an accelerating target. Packing more transistors into the same space is a marketing tool rather than a cost effective solution. Many phone reviewers admit that a phone costing $400 running on a 7nm chip compared to a premium phone costing $1400 has a performance level within 10% of the more expensive phone. The difference is really only at the margins. And as consumers' budgets become more stretched, many are switching to cheaper phones. Despite the best efforts of the premium producers, smartphones are gradually becoming a commodity. As the table for Q1 below shows, the biggest growth registered by smartphone producers was *Transsion* followed by *Xiaomi* then *Others*. *Transsion* and *Others* tend to be the cheaper phones. Each quarter unlisted producers tend to add 1% to their market share. *Xiaomi* is in between due to its pricing policies. At the top end, both *Samsung* and *Apple's* growth and market share has declined (by 7%) despite a market which is growing at a rate of 10%. This is a trend I believe will continue.

Table 1.

Global smartphone shipments and annual growth
Canalys Smartphone Market Pulse: Q1 2024

Vendor	Q1 2024 shipments (million)	Q1 2024 market share	Q1 2023 shipments (million)	Q1 2023 market share	Annual growth
Samsung	60.0	20%	60.3	22%	-1%
Apple	48.7	16%	58.0	21%	-16%
Xiaomi	40.7	14%	30.5	11%	33%
TRANSSION	28.6	10%	15.4	6%	86%
OPPO	25.0	8%	26.6	10%	-6%
Others	93.3	31%	78.9	29%	18%
Total	**296.2**	**100%**	**269.8**	**100%**	**10%**

Note: Xiaomi estimates include sub-brand POCO, and OPPO includes OnePlus. TRANSSION includes Tecno, Infinix and iTel. Percentages may not add up to 100% due to rounding.
Source: Canalys Smartphone Analysis (sell-in shipments), April 2024

canalys

In space China is making giant leaps. Its systematic and consistent approach contrasts to the erratic and delayed launches under the auspices of NASA. Its growing space station is one example but possibly more consequential is its BeiDou navigation system which is now considered to be better and more

versatile than the US GPS system forcing the US to upgrade its own system. Ninety eight percent of users in China now use the BeiDou system and its popularity is being promoted abroad as part of the Belt and Braces programme.

Diving down into the atmosphere, we locate China's aerospace industry. China has produced its first narrow bodied jetliner - the Comac C919 - but this is not a true Chinese product. Instead it is a hybrid comprising western and Chinese components. It is likely less advanced than the new Russian equivalent - the MC-21 - probably the leading plane of its class. Of note is the failure by Chinese and Russian firms to co-operate in the face of entrenched Western competition with the proposed wide-bodied C929 jetliner. Although sanctions played a part, rumours also abound that the disparity between Chinese economic heft versus Russia's technology edge prevented profit and production sharing agreements being concluded. Ahh, the shortsighted self-serving interests of competitive capitalists.

From the sublime to the ordinary. Though the US leads in aerospace for the time being, but not against Russia, China dominates the waves, though not under it. Chinese ship builders out produce the US by a factor of 100 which is why China launches over 50% of the worlds tonnage while the US launches less than 1%. In terms of capacity which is more important than output during a period of war, China's is 230 times larger than the US. Indeed, one shipyard – *Jiangnan* - launches more ships than all the shipyards in the USA combined. This dependency on foreign shipyards has become an issue in Congress with senators expressing fears that the industry in the US would not be able to replace losses at sea were the US to go to war with China. In April the U.S. launched a Section 301 investigation to discover whether China was making waves by dumping ships. This a bit cheeky from a country which already in the 1970s already produced only 5% of all ships launched. Truly, the US is a paper tiger for never before has a hegemonic power perched itself on such a corroded and hollowed out industrial base.

The overall observation is that China is starting to lead if not dominate in more and more industries. And where it is not yet leading, the gap is closing fast. In two to three years for example, Huawei with its formidable R&D teams is likely to be self-sufficient and no longer dependent on foreign tech.

Finally, as an aside, in studying the Tech industry, its ruthless capitalistic practices have shone through. In a number of innovative industries workers above the age of 35 are being forced out because their employers believe they are too infused with the old and out of touch with the new. It's called *The Curse of 35*. It's true, competition blesses the capitalist class and curses the working class.

The fans of China or those who theorize that China is somehow not a raw and brutal capitalist country should take note, but they wont, because you see all of them are over 35 and they are infused not so much with old ideology but with wrong ideology, therefore unable to embrace change. And if this 35 trap door does not clinch it, then consider the following - it's the long-hours culture imposed on workers who are forced to work 9 to 9 six days a week. The Chinese call it 996 and it's a killer. No wonder more and more young workers are shaking off CCP exhortations to be patriotic workers and are instead opting for lying flat or "*tang ping*"

Large Learning Models is it hype or hypo?

Before proceeding a theoretical question arises. What will the effect of LLMs or A.I. as it is called colloquially be on the rate of profit? The answer lies in two parts. The first is how it affects unproductive workers and the second is how it affects productive workers. Unproductive workers do not produce

profits, instead they reduce profits because they are an expense to any business. They tend to be found in offices carrying out administrative, accounting, selling, marketing, personnel tasks and so on, not producing but engaging in the metabolism of circulating commodities. Their wages appear in the profit and loss accounts of any firm, that is to say their wages appear on the loss side of the account.

It follows that if the wages of unproductive workers is a deduction from profits, any reduction in the deduction from the profits brought forward will result in more net profits carried forward to the balance sheet. Accordingly, the capitalists have always sought to minimize the costs of unproductive labour. LLMS offer them a golden opportunity simply because LLMs are capable of taking on more complicated and varied tasks, aka the typical tasks performed by office workers. The result will be an immediate rise in the rate of profit, because while the mass of profits will be undisturbed, the costs which reduce it will be minimized.

The same cannot be said for productive workers, the workers who produce the revenue of the firm and therefore the gross profits of the firm. Should LLMs simply increase the productivity of these workers without reducing their number the mass of profits initially will remain unaffected even if the competition this sets in train results in lower prices. Thus while the volume of output may increase the value of the output may not. (I don't intend to deal with the reciprocal issue of cheaper prices feeding back into lower wages at a future date.)

However, should LLMs significantly reduce the number of workers, then to be sure, the mass of profits will suffer. This will be no different to any other example causing the technical composition of capital to rise, except that with LLMs there is greater scope to increase the technical composition of capital. On balance, because I believe that LLMs are better purposed for reducing the number of unproductive workers and therefore the ratio of unproductive to productive workers, the net effect on the rate of profit will be beneficial. This loss of better paid white collar workers is confirmed by Geoffrey Hinton sometimes called the father of A.I.: *"Geoffrey Hinton's concerns are deeply rooted in his extensive experience in the realm of AI. Having pioneered neural networks alongside Ronald J. Williams and David Rumelhart, Hinton possesses an unparalleled understanding of AI's transformative capabilities. His apprehension is shared by many experts who predict a bifurcation in the job market, where low-wage roles and high-wage, highly specialized positions become predominant,* ***and middle-income jobs face obsolescence****." (my emphasis) "One of Hinton's primary concerns is the concentration of wealth among the affluent, a trend likely to be exacerbated by AI. This sentiment is echoed by numerous experts who warn that without interventions like UBI, income disparities could grow significantly."*

Let us address Hinton's concerns about the cull of better paid white collar workers and even some semi-skilled blue collar workers. He proposes UBI (Universal Basic Income) to compensate. But UBI is no panacea, it will provide only a basic and boring lifestyle. It will represent a 300 to 400% reduction in standards of living, enough to pay for essentials including a cheap mobile contract but nothing beyond that. In many cases it will not cover mortgage payments resulting in the loss of homes.

What LLMs represent is a torsioning of the contradiction between the forces and relations of production. The forces here are provided by the introduction of LLMs, while the relations of production are provided by who owns and benefits from these forces. As Hinton puts it, it will aggravate the concentration of wealth. Of course the more widespread the introduction of A.I. the more it will exacerbate this contradiction. To this we can add this comes at a time when middle ground in politics is already eroded and with it the ballast which keeps *rule by consent* upright. Already the advanced capitalist countries are

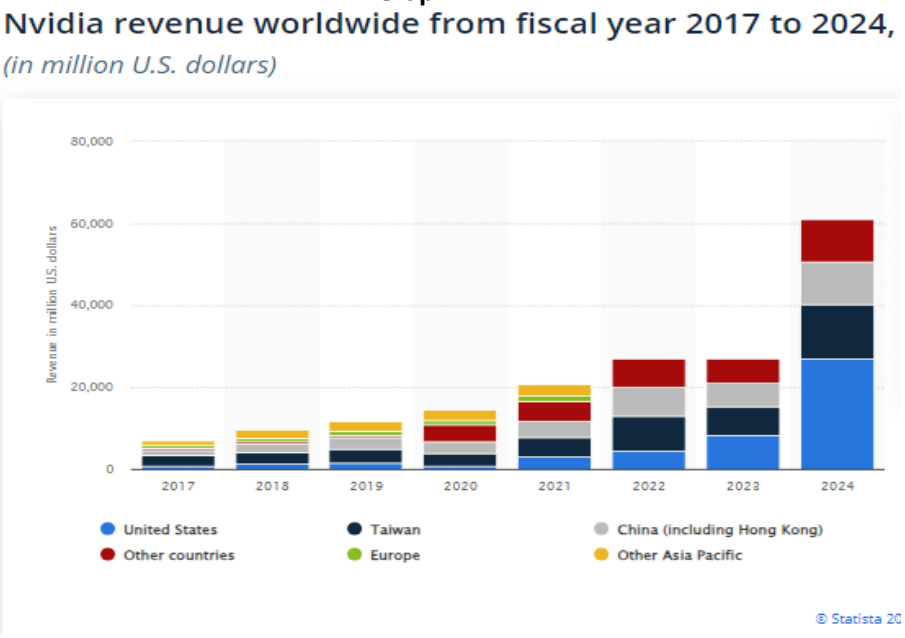
experiencing political instability and none more so than the USA. Thus politically speaking LLMs could not have come at a worse time for capital.

So how widespread is this introduction? As yet the loss of jobs is not evident in corporate financial reports. Many experts project mass unemployment will take place in about two years' time as many of these systems are still too clunky and exhibit too many errors and hallucinations. For the time being where adopted, and according to E&Y by mid 2023 exactly one year after their introduction one third of their clients were using these systems, most of them are running them in parallel with the workers using them until such time management is confident these systems are robust and reliable. Once that occurs, only then will the mass redundancies take place. Yet another case of workers building the palaces and prisons on behalf of the capitalist class.

One way of assessing the potential adoption of these systems is to take a look at what is happening with Nvidia the key supplier of neural networking chipsets. This is what it reported: "*Record quarterly Data Center revenue of $22.6 billion, up 23% from Q4 and up 427% from a year ago.*" And this is its boast: "*The next industrial revolution has begun — companies and countries are partnering with NVIDIA to shift the trillion-dollar traditional data centers to accelerated computing and build a new type of data center — AI factories — to produce a new commodity: artificial intelligence," said Jensen Huang, founder and CEO of NVIDIA. "AI will bring significant productivity gains to nearly every industry and help companies be more cost- and energy-efficient, while expanding revenue opportunities."*

According to Nvidia's own data, investment in A.I. chips for data centers should hit $100 billion worldwide in 2024 of which at least 50% will end up in US corporate servers. In 2024 gross fixed investment by domestic Industry amounted to $833 billion. Of this amount about 40% is spent on equipment reducing the figure to $320 billion p.a.. Thus one in six dollars is being spent on Nvidia equipment currently and if we take complete servers and data centers as well as power sources, the figure is much bigger. Enough to make a difference especially when overall investment has been weak as this report from Stanford University makes clear.

Graph 4.



Finally it is important to draw a sharp distinction between bespoke LLMs and general LLMs such as CHATGPT. It is the bespoke systems tailored to individual corporations which will lead to the bulk of the redundancies. These are the systems trained primarily on individual corporate and organizational data, industry data and scientific data. These inputs will be robust providing robust outputs. In contrast the generalized systems use less reliable data, infringe copyrighted property, and are handicapped by bias as much more of their input is subjective.

In sum, while LLMs are revolutionary as they represent a leap forward in computing, they could also be politically revolutionary by further destabilizing already destabilized societies. I will not deal here with AGI or Artificial General Intelligence, the next step forward in computing, as its timeline is the subject of heated debate with Musk claiming it will appear in two years while Baidu say ten.

Conclusion.

China is playing for time; the US has run out of time. China needs time to develop technically, the US seeks to prevent it. In all cases and under every condition the US is the aggressor seeking to jealously guard its hegemony against a rising rival. For these reasons, and in the light of the US's barbaric responses over three quarters of a century beginning with the carpet bombing of German and Japanese cities then dropping nuclear bombs and on an on, the US will not hesitate to prepare and conduct a 1942 style Pearl River pre-emptive strike against China when it deems the time is right.

Of course the weather could frustrate its ambitions. This Summer is already heating up. Temperatures have exceeded 118°F (48°C) in Northern India, 112°F (44.5°C) in Miami while in Mexico monkeys are dying of the heat. One climate expert called the early and enduring 2024 Asian heatwave the most severe single weather outbreak in recorded history. This is a foretaste of what can be expected in the rest of the northern hemisphere as summer creeps closer taking a huge toll on people and property.

Thus the weather could end up tipping the scales, turning a potential war between nations into a war within the nation - the class war - because society is now irreconcilably fed up with a ruling class which has caused such carnage, which poses such a threat to humanity, and which offers such pitiful solutions.

Brian Green, 27th May 2024 (or two months before peak heat).