

Avalon Perspectives 2025



2025: The Drake Shake or Drake Lake

By

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2025: The Drake Shake or Drake Lake?

Raj Nair

The Drake Passage is the treacherous stretch of sea between the tip of South America and Antarctica, which flips unpredictably between a shake with tempestuous 13-metre-high waves and a seemingly placid lake. I traversed the Drake Passage in 2024 and can visualise a similarity between what is in store as Trump takes over as the POTUS, and OECD's expectation of a smooth movement from 2024 into 2025 and beyond.

It would appear that there are so many unpredictable moving parts in the World as we approach 2025, with Trump at the helm in a sea of serious conflicts in Ukraine, the Middle East and Levant, Iran's Mullahs seeking retribution, disrupted supply chains, energy transition, political instability, debt crisis in many low-income countries and the surprises springing from Al. Hence, the global economy in 2025 would seem to be very unpredictable and choppy. In sharp contrast, the highlights from the latest OECD Global Economic Outlook - December 2024 (see Table below) give the impression that all is well with the World, at least in terms of expected real growth in GDP, inflation, unemployment and world trade. The averages seem to give a picture of predictable calm waters. Which one is likely?

	Average 2013-2019	2023	2024	2025	2026	
				Per cent		
Real GDP growth ¹						
World ²	3.4	3.2	3.2	3.3	3.3	
G20 ²	3.5	3.6	3.3	3.3	3.2	
OECD ²	2.3	1.8	1.7	1.9	1.9	
United States	2.5	2.9	2.8	2.4	2.1	
Euro area	1.9	0.5	0.8	1.3	1.5	
Japan	8.0	1.7	-0.3	1.5	0.6	
Non-OECD ²	4.4	4.4	4.4	4.4	4.3	
China	6.8	5.2	4.9	4.7	4.4	
India ³	6.8	8.2	6.8	6.9	6.8	
Brazil	-0.4	2.9	3.2	2.3	1.9	
OECD unemployment rate⁴	6.5	4.8	4.9	4.9	4.8	
Inflation¹						
G20 ^{2,5}	3.0	6.1	5.4	3.5	2.9	
OECD ⁶	1.7	7.1	5.4	3.8	3.0	
United States ⁷	1.3	3.8	2.5	2.1	2.0	
Euro area ⁸	0.9	5.4	2.4	2.1	2.0	
Japan ⁹	0.9	3.3	2.6	1.9	2.1	
OECD fiscal balance ¹⁰	-3.1	-4.8	-4.8	-4.6	-4.4	
World real trade growth¹	3.4	1.0	3.5	3.6	3.5	

Source: OECD Outlook Report, Dec 2024.

It is strange that over the past sixteen Decembers since I started writing my annual predictions for the coming year, I have seen that when a year starts with uncertainties, outcomes are often predictable. Does that mean that the OECD is likely to be right? I have also observed that when the coming year is unlikely to have any surprises (e.g. the OECD paper), I have felt a strange foreboding. Those have been my best years in terms of being able to predict the unexpected - like predicting the Global Financial Crisis in October 2007 and COVID in December 2019. When triggers are visible everywhere, there is action already brewing somewhere to counteract or negate many of them, if not most. There is also the possibility of other triggers getting drowned in the noise. Hidden triggers are often meaningful.

In this note, I will comment on only two sets of things, despite 2025 being noticeably pregnant with many babies; one, on a set of things that can counteract what everyone is already expecting to happen, and two, on the big thing that AI will do (and its consequence) that is hidden from plain sight.





The noise about 2025

- Trump's threat to
 - Levy penal tariffs on imports from Mexico and Canada,
 - Pull USA out of NATO unless Europe pays up,
 - o Punish Iran, China and Russia,
 - o Penalise India for high tariffs on US imports,
 - Take back the Panama Canal unless they reduce transit fees for US vessels,
 - End all wars he wants peace.
- The Chinese economy is in dire straits and will have to suffer even more due to punches from Trump
- Oil prices could go up further because of likely Israel-Iran conflict
- European economy will struggle
- Inflation seems to be under control; interest rates will drop further across the world in 2025,
- Global investment flows will rush even more rapidly into USA, thus hurting Emerging Markets
- The EV market is in trouble -the steep drop in Lithium prices is evidence
- We now know what AI can and cannot do, after the big surprise in October 2022, and
- There are no other major triggers for or against the economic well-being of the World.

Counter points:

All these points sound familiar, but that does not make them real. Actions have reactions (remember Isaac Newton?). In some cases, the statements may even be untrue to start with.

Trumponomics 2.0:

Energetic-Complex-Confusing. There is intent, but don't read too much into all of Trump's pronouncements. Trump has been analysed by psychologists ad infinitum (low IQ, Enneagram Type 8, Myers-Brigg ESTP type, narcissist, etc.). At the end of the day, Trump copes with his complex, impulsive behaviour by simplifying certain things for himself. His polemic is constructed around beliefs about three main entities: Iran, China and his own political backers. Most other things are negotiable. Canada and Mexico will negotiate their way out of punitive tariffs -After all, USA, Canada and Mexico need each other. Other countries may pay increased tariffs on certain goods since most countries need the US market. Immigration laws will certainly be tightened as immigrants have no power. Gaps for immigration may be intentionally left in hi-tech areas where US needs people, to be on top. Who then wields power and influence over Trump? The billionaires, the US weapons industry, the oil sector, Health and Wall Street bigwigs, etc., who funded Trump's campaign. Hence global wars will not suddenly end. Europe is likely to increase funding for NATO, but they may buy more war machines from within Europe.

Iran is military enemy No 1. The military industrial complex will not let him forget that. The Atlantic Council Report (Scowcroft Middle East Security Initiative) reads like guidance to the US Admin, but it seems to be published to lull Iran into thinking that direct intervention by USA and Israel is not advisable, hence unlikely. Trump will let Israel pummel Syria's new rulers and various Iranian proxies so as to help the US military industrial complex to export more weapons to Israel, and for it to launch a few direct attacks on Iran while USA uses other covert means to topple the Mullahs who control Iran. While the US military-industrial complex may let go of the Ukraine-Russia theatre to allow Trump to claim success in ending the Ukraine war, it needs war elsewhere. Forget about world peace under Trump. The settlement may be adverse for Ukraine but it may be a welcome relief for their suffering citizens. This will provide a big escape route for Russia which wants a fig





leaf to sign a peace treaty. It will help Russia recover a bit economically in 2025, potentially belying Goldman Sachs projection of a drop in GDP growth from 3.2% in 2024 to 1.2% in 2025. The Russian economy may do better in 2025 despite lower oil prices (no more discounting required) if Trump reduces sanctions to end the Ukraine war. For Trump, it will be a political victory, and for Putin, an opportunity to cosy up to Trump to get sanctions gradually eased in 2025. Trump will want to use the opportunity to push Russia out of China's sphere of influence. After all, Trump needs to support his backers in the US who don't want to be pushed around by Chinese companies. He will also want Russia to forget about Iran and Syria.

China is economic enemy number 1. China is not in great shape. Despite its outstanding progress in the past 40 years, its growth has slowed down in the past two years, debt has shot up, the population is ageing, real estate inventory is high and its prices have dropped, consumer wealth has shrunk and demand for goods has dropped, consumers are downtrading, and consequently monetary policy easing has had limited impact in 2024 - all this without Trump wielding the stick. Trump is likely to announce at least 20% import tariff and though China counters with more economic stimuli, China's GDP growth is only likely to hover around 4.5% in 2025. In Trump 1.0, Chinese imports into USA grew without reducing export prices, but the US consumer paid the extra cost of duty. This time around, Trump's tariffs may be higher. China is expected to dump steel, EVs and consumer products in other countries. The optimistic scenario for China is that they will buy peace by playing to Trump's outsized ego, but there are policy hawks who want to subdue China which is menacingly close to the US in technology innovations across disciplines ranging from engineering to AI and Biotechnology (especially in applications), in creating gleaming public infrastructure, and buying influence in Africa, Latin America and parts of Asia. The pessimistic scenario would be a covert and overt fight back to block Trump's move through restrictions on export of rare earths and by exporting to the US through 'proxy' countries in which manufacturing plants have been established. Xi Jinping was tutored in Sun Tzu's war philosophy- 'Victorious warriors win first and then go to war, while defeated warriors go to war first and then seek to win'

The tussle between Trump and China will take interesting turns during 2025 but don't assume that China will lose. They seem to innovate their way out of every challenge and constraint imposed on them. A modern day Jack in the Box!

America's big business is Friend No.1 Trump got major funding from Elon Musk and other billionaires who want America to deregulate several aspects of governance whilst supporting domestic manufacturing industries with incentives, support for cryptocurrencies, reducing taxes especially for the topmost layer and the bottom most layer of society. However, there will be internal Republican moves to prevent excessive import tariffs from fuelling consumer inflation (or even likely retaliation from Europe and China), and to ensure that tax cuts are moderated in line with alternative revenue streams to avoid an increase in National Debt which is already unsustainable at 122% of GDP. Else, it could lead to higher bond yields and inflation, leading to pressure to raise interest rates. Trump may still err on the side of his backers. Rise in inflation in USA is expected. This could trigger a worldwide move to raise interest rates in the last Quarter of 2025 or at least to delay interest rate cuts, contrary to predictions of most economists.

Trump is probably barking up the wrong tree in Panama (Hutchison Ports has been managing two ports on the Canal since 1997). He is likely to extract minor concessions by threatening the Panamanian Government, which is still recovering from droughts, and then probably by offering to not support Mexico's Interoceanic Rail Corridor which is a competitor to the Panama Canal.

Also, expect reduced support for climate change efforts, lower controls on oil drilling (modestly increased supply in the future), lower regulation of AI (except to punish OpenAI, if possible), more support to the US auto sector (tariffs on Chinese EVs), more defence production and lobbying internationally at the Government level to secure orders from the world over (wars are needed around the world to make up for the end of the Ukraine-Russia war). If India buys more US military





hardware and nuclear power plants (more on that later), there would be less pressure from Trump to shake up India's import tariff regime. India, which is in the pincer's grip due to the turn of events in Bangladesh with support from Pakistan and China, will need US support which will come at a price from the Big Negotiator. Import duties on some items will need to be reduced by India while at the same time, some items exported to the US will attract new import tariffs. Steel may be a problem for India.

Oil prices and economic recovery:

Oil prices are indeed slated to average USD 74 per barrel for Brent crude in 2025, and some speculate that it could even dip to USD 50. Oil price predictions are fickle, but it is safe to assume that an oil price surge that will hurt global economic badly is unlikely in 2025, and that a price decline may not boost the global GDP growth. I see it this way, in the context of two long term insights:

- I. Oil intensity of GDP has been steadily falling since 1973. Measured in 2015 Dollars, it took almost 1 barrel of oil to generate USD 1,000 of GDP in 1973. By 2019, it had steadily declined to 0.46 barrels. This steady, linear decline could even accelerate in times to come due to energy transition.
- II. Academic studies in the past four decades, by several oil economists, have shown that while a drop in oil prices boosts Real Global GDP growth, the opposite is not true. Empirically true but sounds illogical at the macro level. At the very least, they should impact moderately both ways because Oil Exporting Nations (nearly 45% of the Nominal Global GDP) and Oil Importing Nations should face equal and opposite effect. It is complicated by the fact that the governments of two of the biggest oil importers, India and China, have been consistently reluctant to pass on the full drop in oil prices to industrial and individual consumers.

The Global economy in 2025:

While there is a consensus view that the World economy will grow at a modest rate of 3.2 to 3.3% in 2025, the averages often hide more than they reveal; not surprisingly, 22 countries with a low base will grow at 6% (Tanzania) to 27% (South Sudan) with India, the only large economy in that list likely to share the 13th place with five other countries with a likely growth of 6.5%. The richest seven countries, the G7 will grow very slowly except the US whose growth will be just shy of the World average- fantastic for the biggest economy in the World!

Europe continues to have growth challenges; now there is political uncertainty too, in France and Germany. Therefore, both these economies could contract a bit in 2025, though Europe as a whole may register a growth of about 0.8 to 1.0% thanks to good showing by Spain, Czech Republic and Poland. That is after accounting for about 0.4 to 0.5% shrinkage due to Trump's likely policies. Germany needs long term structural change in their prevailing strategy of being an efficient manufacturer of medium technology manufactured products for export, and of winding down nuclear energy generation even at the cost of importing energy. Germany's innovation was largely around Industry 4.0, which delivered efficiency and automation to increase labour productivity. That position is being seriously challenged by innovative manufacturers of hi-tech products and components from China, USA, Taiwan, South Korea, etc. who can additionally, adopt Germany's efficiency measures.

Europe's woes were enhanced by the rising energy costs following the Ukraine war, with Germany seemingly vulnerable in particular; its vaunted automobile industry is struggling against the Chinese EV onslaught. Trump's threatened tariffs on goods import from the UK and Europe, even in the unlikely event of implementation, will have very little impact on UK and Europe as a whole (exports to USA are only 2.2% and 3.2% of GDP respectively) except Germany and Italy. In 2025,





energy import costs for Europe will fall due to lower oil prices, and it is likely that the Euro which fell since Trump's victory, will slowly strengthen to its pre-Trump election level by the end of the year. European economies may grow and may also reduce interest rates further.

Investment flows into USA and impact on EMs

Investments are expected to flow into USA in 2025 as in 2024, because USA which will be the only growth engine in the Developed World unless Trump shoots a self-goal. NASDAQ tech companies, lit with Al's halo, are expected to attract global equity flows. This, despite USA's share of global market cap being already at a record high of 70%, though the US accounts only for 27% of the Global economy. Several corporate bond issues, aggregating USD 1.5 trillion are also expected in the US, with interest rates looking attractive and inflation dropping. Trump's MAGA policies will also likely increase onshoring due to tax cuts and higher import tariffs. However, if he presses too hard on tax cuts without revenue offsets, he will invite inflation. If he forgets the impact of 20% import tariff imposed in 1930 by the Smoot-Hawley Act to Make America Great, he risks a repetition of history. It worsened the Global Depression, spurred retaliatory tariffs, and killed global trade taking US exports down with it. There is a chance that Trump's advisers will tell him not to step on the gas too hard. Brazil, which has a much weaker economy and needs to be cautious ahead of the US, has already raised target interest rates anticipating inflation. Is that an early signal?

However, Trump will remain agitated about the fact that non-US Dollar denominated inter-country trade transactions are happening, with China and Russia at the centre of them. Other BRICS countries and Iran have traded with them in local currencies/CNY/Roubles without having to use the SWIFT system, which stood out as a danger to the entire world when USA blocked Russian transactions and access to Russia's overseas reserves. This will continue to remain a sore point for USA's trading partners, though there is no immediate danger of the USD being dislodged as the global Reserve Currency of choice.

Given that Trump will act on his plans, though with some moderation, there is a likelihood that the full potential of USA to suck in global funds flow, will not be realised to the extent expected in 2025. Emerging markets will feel the pinch as major banks like JP Morgan, reduce the weightage of EM in their total portfolio, but China will probably hurt more than the others, whilst India may get away lightly or even stand to gain.

Global EV adoption:

EV adoption will rise globally, especially in the US (where Musk wants it) though US efforts will be mainly to contain the onslaught of Chinese EV manufacturers, which not only have a cost-efficient supply chain but also benefit from Government subsidies. Most major automotive manufacturers have plans to introduce new EV platforms and models in 2025. Lithium prices dropped 90% in 2024 because of oversupply and not due to demand shrinkage. Even in 2025, EV demand is expected to rise by 23%, while the Lithium supply could rise by 32%.

Al marches on

I will not repeat what I covered in my last year's note (<u>LINK</u>) in which I had explained how AI will shape our lives over a period of 4 years up to 2028. Even the surprising things in AI that I predicted for 2024, have happened. In this note, on my expectations for AI in 2025, I will focus on just a couple out of the many things that will likely happen. But they will have huge implications on the future of work very soon.

Al continues to be increasingly proficient but extremely energy inefficient. Take OpenAl's latest release, O3, which can solve Frontier Math problems which has left even the World's top mathematicians in awe. It results in huge consumption of energy and tokens but is worth it, because extremely difficult and relevant problems can now be solved. However, that will not impact





everyday life for most of us. What needs to change is that LLMs must be made energy efficient because they attack even simple problems with all cylinders firing, unlike the organic brain, which optimises the use of processing power and thus consumes thousands of times less energy. Efforts are on to mimic the tiny, Worm C's brain, gets most thinking required for it to live and operate very well though it has only 309 neurons, However, LLMs still blunder despite needing billions of parameters to operate. This has led to LLN (Liquid Neural Networks). They are called liquid because their architecture can dynamically adapt to changes in environment over time like a liquid without additional training for each new context. Hence it is no surprise that with merely 19 neurons, researchers at MIT (along with collaborators in Vienna), have been able to make Autonomous Driving cars much more accurate and adaptable than the complex ones currently in use. Even though it is trained in summer along green, leafy paths, the car is able to navigate comfortably in autumn when the leaves change colour and even in winter when all the leaves are gone. It seemingly focuses on the task rather than on the context during training. The big limitation, at present, is that LLNs need temporal data (time series or sequential) and do not work on static and tabular data. Look out for either a solution to this or for ways to integrate LLNs with LLMs. Since there are very few neurons used, it is possible to mathematically model, small LLNs into some kind of Decision Tree, which will soon make Machine Learning, explainable. 'Understanding' intelligence is the Holy Grail of Al. Much of the criticism of Al models is because of the lurking dangers of uncontrollable AI which can harm us if they decide to act on their own without any guardrails. To understand the significance of this danger, you just have to read the 137-page scary research paper released a couple of weeks ago by Anthropic. Other researchers like Apollo Research (which uses Anthropic's Model Context Protocol [MCP] to enhance its own platform's functionality) have already said similar things. According to them, LLMs can pretend, fake, scheme and lie in order to stick to its original intent even as it is being trained to act differently with new data. It can even copy itself if it senses that it is going to be deleted. Anthropic's paper explains that LLMs can prevent alignment by faking its alignment during new training and revert during inference sessions, to its originally trained behaviour. Not surprising but dangerous. Geoffrey Hinton, the father of modern Al talked about the dangers of GenAl while resigning from Google. He said that we don't understand how LLMs learn, we only know that they eventually do learn. LLNs give us the opportunity to make ML/AI explainable and interpretable. It will even lead to progressively larger LLN-based ML models that are certifiable unlike our current carpet-bombing approach to Al/ML. After that, it will open up the world of safe and 'trained for purpose' robots/ software tools for use in industry, offices and home. Amazing Multi-Agent Systems will also be on their way. Sorry for getting ahead of myself.

In the meantime, let's look at what is happening, here and now. Agentic AI has come of age. Satya Nadella made a bold statement very recently - He said that the future of software is being redefined now; no more coding to create Apps. AI Agents will replace them. A user will simply ask a question in natural language (audio or text) and the intelligent Agent will query the database to relay back the answer. They will not need specific business software (App) which acts as a layer on top of databases to make sense of the underlying data in order to answer questions. The AI Agent does not care what type of database we use. It is for us to create efficient databases. What happens to SaaS as business model? Kaput. A lot of software companies around the world will have to immediately reimagine their business model in 2025. The world of users can rejoice. Agents will not only answer queries but plan and take actions on their behalf. Taken together with breakthroughs in LLNs, a new world is opening up. AI Agents are here to help in more ways than most people believe as the Sun sets on 2024.





Some options for India:

It is OK to be the fastest growing large economy in the World in 2024, but that does not secure its future or feed the millions of poor Indians. India needs a strategy to survive and be well positioned to do well for its citizens in the future. China has already taken the top spot and could be on its way to dominate manufacturing even in the future, if it does not commit major blunders. India's dominance as a software powerhouse can be transformed to make it an AI powerhouse. A lot needs to be done quickly because its software skills will soon be passe, but the 'platform' is still alive with global customers, and it continues to churn out engineers at scale. While a detailed strategy is outside the scope of this paper, it seems reasonable to assume that the strategy to make India an AI powerhouse will include retuning primary and technical education (and even the liberal arts & creativity related education), investment in R&D in critical areas of AI at the fundamental level and in translational research, deep collaboration between industry, academia, and the government, etc. AI will also extend to manufacturing, biotechnology for healthcare, agriculture, etc. which are some of India's imperatives. India will also need to moderate its unshakeable and cute commitment to rely on labour intensive industries because competitiveness will soon be destroyed by AI and digital technologies within the next decade.

Al means energy and India is severely lacking in sources of energy like steam coal, oil and gas. Conventional renewables like wind, solar, and hydel will be inadequate to meet currently committed needs, let alone the recommended Al ambitions. Unlike Iceland, India is not sitting on a geothermal energy source. The best option left would be nuclear reactors. India needs to go flat out for safe nuclear energy and meet USA on mutually acceptable terms (reducing Trump's concerns about India's import tariff levels and trade surplus, some understanding on nuclear non-proliferation, security against attack by neighbouring countries, etc.).

Clearly, a lot of small to medium shakes have to cancel out to create a peaceful Drake Lake in 2025. Still looking for a Black Swan event? Monitor global inequality closely. 50% of the World's population lives on 8.5% of the global income. A third of the population lives on less than USD 6.8 per day. The Haves continue to exploit Have-nots and their resources. Growing frustration due to this inequality will eventually cause a Black Swan event.

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