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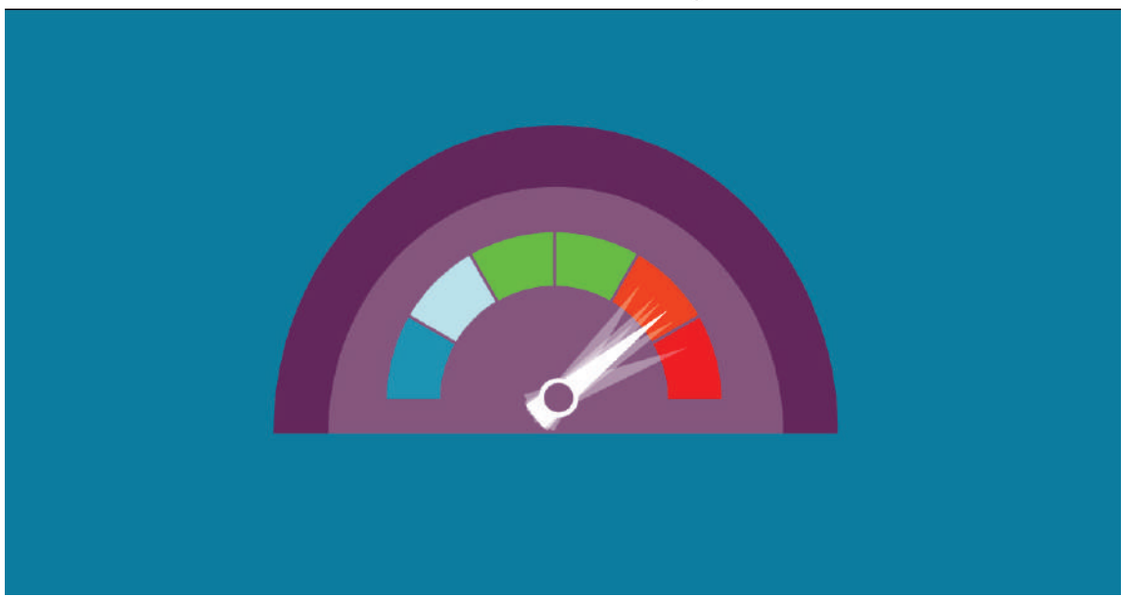
A World Overheating & the Roasted Economy



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ONDC: THE NEXT UPI

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A World Overheating & the Roasted Economy

March 2022 was the hottest March in India in 122 years! Then came the following month, which was also the third hottest April since 1901. Overall, 2022 will be the fifth hottest year on the planet.There's no getting around that any more. We're in the midst of a record-breaking heat wave. But, before we go any further, what exactly is a heatwave?

Let's turn to the Indian Meteorological Department's weather experts (IMD). A heatwave is described as a situation in which the air temperature is lethal to humans. Temperature thresholds over a region are used to define it quantitatively. If you live in the lowlands, for example, a heatwave is defined as when the highest temperature reaches 40°C. When the temperature deviates from the norm by more than 6.4°C.Without a doubt, this year's heatwave has been particularly intense. It has, however, arrived earlier than usual. On March 11, we declared a heat wave for the first time. Isn't that meant to be "springtime"? It didn't, however, come to a sudden end. The heatwaves are getting longer, if anything. According to one study, heat waves are lasting longer than ever before. For example, between 1981 and 1990, we went from 413 days to 575 days between 2001 and 2010, and 600 days between 2011 and 2020.

Blame it on global warming. Since the industrial revolution, the earth's temperature has climbed 1.2 degrees. Furthermore, increased human activity is causing global warming. The greenhouse gases that are accumulating in the atmosphere trap reflected sunlight from the earth's surface, causing the entire planet to heat up.

While India's emissions have remained below a particular threshold in the past, it is now the world's third-largest CO2 emitter. Each year, the country generates approximately 2.46 billion metric tonnes of carbon pollution. This equates to around 6.8% of total global emissions. Heatwaves in India are expected to endure considerably longer if we continue on this road.In May 2022 south-west Europe also saw massive and record-breaking heat waves. According to C3S data, daily maximum temperature anomalies in south-west Europe were at their greatest level since the 1980s.High temperatures in Antarctica, particularly in the Ross Ice Shelf, caused ice sheets to melt. According to the National Oceanic and Atmospheric Administration, the continent's sea ice extent was at its sixth lowest on record in May, while more than 40% of the United States is experiencing drought. This is primarily due to the heat and lack of rainfall brought on by the equatorial Pacific Ocean's La Nina phenomena, which is now in its record third year.

It's now easy to sneer at all of this from the comfort of our air-conditioned chambers. However, there is a flaw in that approach. Even if you're in an air-conditioned room, it impacts everyone. Which causes more climatic dominoes to fall.Because, even if the heatwave does not reach you, the economic consequences will.

To understand the economic consequences Climate change impact assessment is necessary but, at best, a difficult task, given the uncertainty surrounding both the degree of future global warming and the resulting impact on world activity. The unknown is how technological advancement will react to global warming and potentially alter its trajectory. Any assessment must therefore include a very long-term perspective, much beyond what is often used by financial market players.

Agricultural Shortages

To begin with, the roasted economy is facing serious shortages in agriculture, with the government just banning wheat exports, the latest and most severe in a series of remedies to the shortfall created by a rapid rise in temperature in mid-March, a vital time for crop maturity. Yield losses are expected to be around 15-20%, and production is expected to be 6% lower than expected (111.32 million tonnes), with other reports claiming that the internal evaluation is lower (98 mt) and that the stalled public procurement might be half of the original target. Thefood subsidy scheme's heat proportions have been decreased, wheat allocations to 10 states under the food security law have been reduced, procurement dates have been prolonged, and quality criteria have been relaxed. Price pressures are always close following output deficits, and wheat prices have risen over 10% year-on-year against 8.4% food inflation in April, up from 7.7% in March; wheat flour or atta prices have also risen.

Overall, the supply-demand changes brought on by the extreme heat have an impact on aggregate output and consumption. Because a big portion of Indian labour is farm-based, low-earning, and has a high marginal propensity to consume, the macroeconomic implications are significant. The cumulative costs of such temperature variances are rarely discussed or recognised in public, although research conducted over extended periods show that rising temperatures have significant effects on crop yields, real incomes, and rural mortality rates. The unexpected export embargo has harmed India's reputation in this case, as well as denting the macroeconomic outlook and disturbing business planning, because the prime minister just said that Indian exports will assist ease global scarcities.

Energy Costs

Moving on to the costs of adaptation associated with rising cooling and, as a result, power demand. Air conditioner sales are on the upswing. However, in this case, an exponential increase in power demand has exacerbated an existing coal shortage, compelled the government to take emergency measures to restart imported coal-based power plants by importing expensive coal, prompted the NTPC to build a new coal-fired power plant, and facilitated the importation of expensive liquefied natural gas. In other words, despite India's excellent progress toward a long-term shift to clean and renewable energy sources, there has been an increase in the usage of coal. Coal accounts for These

costs will eventually be passed on to ordinary consumers in the form of higher electricity rates.

two-thirds of our electrical output, making it a major source of carbon emissions that contribute significantly to global warming.Then there are the disruptions and costs, which include rake shortages and passenger train cancellations to supplement coal transportation, halted business operations as a result of power being diverted from industries to residential units, long and unannounced outages, massive backup charges, and so on.

Working on a warmer planet

Even as adaptability diffuses recognition, the human and economic effects of severe heat sometimes go unnoticed and uncounted. However, when the expenses are calculated over a large population and over time, they are significant. The macroeconomic ramifications are also dire. Some of these are exemplified by the present heat wave.Because of their limited adaptation, the poorest are the most vulnerable. A huge proportion of India's low-educated, unskilled, less-skilled, and low-earning populace works outside (agricultural, mining and quarrying, construction) or in hot environments (manufacturing, hospitality, trade, transport and so on). Many self-employed persons, such as rickshaw-pullers and hawkers, are exposed to extreme heat. Heat-exposed work accounts for more than half of India's GDP, implying huge economic consequences.

Unsurprisingly, increased temperatures are linked to lower total commerce and manufacturing activity, according to a study by the Reserve Bank of India.

These are a few prices, although they are by no means exhaustive. However, highlighting these highlights the fact that such expenses and losses are not one-time occurrences, but rather occur on a regular basis. Furthermore, due to a large rise in India's average annual tem perature over the last two decades, these concerns are growing. They should also encourage consideration of potential future costs if, as the Intergovernmental Panel on Climate Change report (2022) states with high confidence for South Asia, heatwaves expand and temperatures rise.The report assesses that vulnerability, including India’s vulnerability, is high because of poverty, challenges to governance, limited access to basic services and resources, violent conflict and high levels of climate-sensitive livelihoods. In fact, studies projecting a persistent increase in temperature in India sans mitigatory actions find that living standards measured by per capita GDP could be lowered by 6.4% by 2100.

That may seem far away, but the macroeconomic ramifications, which include inflation, income-consumption effects, disruptions, and future uncertainty, are severe enough to dissuade investments, particularly in vulnerable sectors, as the current hot conditions demonstrate. It will be easier to notice the socio-political spillovers related to displacement, forced migration, and other coping methods if we consider that, in addition to salaries and nature of labour, geographical location exacerbates the unequal distribution of human and economic costs. These will simply increase the expense of living.

-Divyanshi

The Oil Story

Lets face it, oil dominates the global markets. Its supply, demand, production, trade, extraction are all activities that affect the world on macro and micro levels. A country could have the perfect balance of macro level supply and demand in avenues of employment, resource allocation, wealth and it would still have the possibility of having its currency fall if its oil demands aren't met. A slight change in the prices of a barrel of oil can have disastrous effect on the pockets of a country's citizens. Case in point, India. She has seen tremendous turbulence in oil prices in the past one year coupled with a consistent rise in the same and everyone reading this article has borne the brunt of the unnaturally high prices. We had written about OPEC and its future in our September Issue of the Newsletter. This article examines why oil is such an important factor of the stability and overall existence of the global economy.

A historical background

The earliest known oil drills were made in 347 AD. Fast froward a few thousand years and a Scottish chemist James Young discovers petroleum seepage and some experiments later the worlds first commercial oil refinery is born. One thing led to another and soon the world was running on oil and oil based products. Cars, lamps, machines, tanks and ships all saw the incorporation of the same to function because oil burned and gave way to previously unseen levels of energy that got work done fast and without much effort. Romania was the first registered country in the world oil production statistics, with other nations following soon after. Today, a 100 countries produce oil, 15 of which comprise 76.7% of the world's global exports of crude oil. Saudi Arabia dominates the market, with Russia, USA, Canada and Iraq following closely behind.

The industry at the moment

Two years ago, when COVID 19 hit the world, the industry took an unprecedented hit. Demand dropped drastically but the supply levels did not fall with it. As a result, the industry saw some harsh repercussions. OPEC vs Russia was the highlight of news outlets for months and with neither backing off, what followed was nothing short of a completely avoidable global fiasco. And now again, oil is at an all time high. And while at the time the oil giants were professing their production prowess, they have fallen short to deliver on those claims when it was required the most. The effect can be most prominently seen in the record high petrol prices our nation has been enduring for months now. While in India, the high petrol prices can be attributed to GST as well, the underlying cost has shot up as well. Elsewhere in the world, countries like the USA and the UK are also seeing exorbitant rates, reinforcing the fact that the oil industry is experiencing a good time, at least when it comes to revenue.

And now that the lockdowns have disappeared, even though the threat has not, the industry is seeing activity at record high levels. Where before the supply could

not match the demand, the demand is now outweighing the supply by miles. An excerpt from a Bank of America research note reads "Oil demand has recovered swiftly over the past year, even with several Covid waves making their way around the world. In fact, demand in [the last three months of] 2021 was likely within 1 million barrels per day of pre-pandemic levels." Goldman Sachs predicts the price of a barrel of oil to rise even further, touching $140/barrel in the coming months.

The Russia-Ukraine war may have started to disappear from the annals of news today but the conflict has only added fuel to the fire that is rampaging the households of billions in the world. To put it into numbers, Russia accounts for 10% of the global oil production, exporting over 45% of what is produced. So when Russia declared war on Ukraine and dropped its export levels, the rest of the oil producing countries were left to cover the shortfall. And as was already seen, they once again could not deliver on the aforementioned claims. So while there is no immediate threat of oil reserves running out, what we have already is not being utilised and harnessed.

A Changing Landscape

Threats to the oil industry are always imminent, always looming. While at the end we may say that we never saw it coming but the truth remains that it has been decades that experts have been warning us of the disastrous effects oil has on the environment, right from the drilling to the final point of consumption. It does not affect just one singular ecosystem or a part of it, it affects all facets of our existing ecosystems, be it acid rain, groundwater contamination, Carbon dioxide and monoxide emission, soil contamination the list goes on. Technically, the oil industry is a threat to the environment and the world but in our capitalist society, we are subject to listen to the opposite.While the threat of global warming and climate change were treated flippantly, recent trends in awareness and global movements have made the oil producers rethink their long term strategies and acknowledge the fact that climate change is in fact real and all hands must be on deck to repair the environment.

The rise of Electric Vehicles is yet another advancing boulder for the industry. EVs are expensive no doubt and the technology is still being refined. However, with the rise of a climate conscious generation which loves to use its finances, EVs are projected to eat up the market and mark a significant and irreversible path for the future of travel. And this is perhaps a more frightening prospect for the oil industry giants because most of them have built their entire economies around the resource. When the shift to EVs becomes apparent and people start flocking to that segment, oil producing nations will find themselves in trouble if they have not prepared for it beforehand.

Conclusion

It is indeed difficult to predict what will happen next, especially in sectors with such volatility as the oil sector. With funds such as theirs, resources and people dedicated to keeping it alive, we just might see an event or a development that turns the ride in their favour. The oil industry and its players have been instrumental in shaping the world as we know it today, influencing

global politics, international trade, economic policies and structures and affecting stock markets through its proceedings. Whatever its future may bring, it is apparent that the industry will leave a lasting impact on humanity for its years to come.

-Aastha Kumaarr

ONDC: The Next UPI

Introduction

India's startup community is growing at a neck-breaking speed. No doubt about it. However, the same community often bemoans how India doesn't make world-class products; many even complain that most Indian products are knockoffs of ideas that have already worked elsewhere. But there's a truly world-class product that's come out of India, and it's winning praise across the globe. And it comes from an unlikely source — the Indian government. Yes, it's none other than UPI- Unified Payment Interface.

If you see the quantum of transactions that are carried out using UPI in a single day with the efficiency it provides it's just BANG ON! Just trying to figure out how NPCI (The Government undertaking whose brainchild is UPI) manages the millions of bank accounts spread across numerous financial institutions is just the state-of-the-art IT infrastructure we are talking about. Today no matter which bank account you hold you can make payment to any account in any bank account in seconds. There's no need to ask for someone's A/c number, then the IFSC code, and all those other details to identify their bank account. Today, just a simple UPI id (these IDs can be anything, just like our social media handles) will do.

Now coming to the point, have you ever experienced the constant workload of switching through various applications and websites whenever you have to order anything online be it your clothes, books, electronic appliances, groceries, food in short everything?

If yes, then you are not alone. We all visit multiple e-commerce platforms to see all the options available to us and then select the one which we consider the best fit. Imagine a network where you can browse through each and every seller who is registered on any e-commerce platform be it Amazon, Flipkart, Zepto, Dunzo, Bigbasket, Paytm mall, Esaamudaay, etc wouldn't that be so convenient?

Well, the government is already working on something just like that. The media calls it the UPI of E-Commerce. Yes, it is the ONDC- Open network for Digital Commerce.

The government is trying to unlock the true potential of e-commerce in India with ONDC.

The need

Currently, the Indian e-commerce market is growing at an exponential rate. India's e-commerce market is expected to reach US$ 111 billion by 2024 and US$ 200 billion by 2026. Amazon is leading the Indian e-commerce market. The other prominent players include Flipkart, Myntra, and Nykaa. Apart from these conventional e-commerce players, there are the likes of Dunzo, Goodbox, Jiomart, Blinkit, Zomato, Swiggy, Zepto, Delhivery, Ekart, and many others who form part of this growing E-commerce industry.

ONDC is trying to solve multiple challenges today's digital commerce landscape faces. Today the majority of the retail sector is not digitally enabled. To get an idea the total number of Kirana stores in India is around

12Mn whereas only 15000 Kirana stores are digitally enabled. E-retail penetration is only 4.3% in India, well below China (25%), South Korea (26%), and the UK (23%).

The reason for this limited reach is that the seller onboarding and customer acquisition costs are way high for these e-commerce companies thus limiting their reach. ONDC is solving this problem by unbundling customer and seller acquisition to reduce Go-to-market efforts and the interoperability between platforms/applications for greater market access. It is creating a decentralized network of interconnected ecosystem actors, orchestrating the flow of value. In other words, ONDC will enable the buyers and sellers to transact irrespective of the platform/application they use.

A soft launch has already been rolled out on April 29, in five cities spread across different geographical regions in India - Delhi NCR, Bengaluru, Bhopal, Shillong, and Coimbatore.

What will be the legal standing of ONDC?

ONDC was incorporated on 31st December 2021 as a private sector-led non-profit (Section -8) company. ONDC was incubated by the Department for Promotion of Industry and Internal Trade (DPIIT) at the Quality Council of India. The objective is to democratize e-commerce in India and offer alternatives to proprietary e-commerce sites.

To ensure that this goes on to become a great success the government has set up a nine-member advisory committee, which includes Nandan Nilekani from Infosys and National Health Authority CEO RS Sharma, to figure out the steps required to design and accelerate the adoption of ONDC.

ONDC has managed to get investments worth the US $33.34 million. Twenty government and private institutions have confirmed their investments. Several public and private sectors have confirmed their investment in ONDC.

Axis Bank, HDFC, SBI, and Kotak Mahindra has acquired a share of 7.84 percent each, by individually investing INR 100 million (US$1.3 million) to purchase 10,00,000 equity shares of the face value of INR 100 each.

The benefits

It is expected to reduce the cost of doing business through dynamic pricing, inventory management, and optimization of delivery costs. It is also expected to provide equal opportunities to all marketplace players, including consumers. It is a neutral platform that will set protocols for cataloging, vendor match, and price discovery on an open-source basis.

The Indian government is trying to democratize the e-commerce market for both buyers and sellers by launching ONDC. Through this platform, all types of retailers, small businesses, Kirana stores, etc, irrespective of their sizes, and capacity will get an equal level playing field. Businesses are expected to benefit from transparent rules, lightweight investment, and lower costs of business acquisition.

The future

ONDC is often pitched as a solution to break the dominance and monopoly of e-commerce giants like Flipkart, Amazon, and others. This will provide a boost to smaller online retailers and will help new entrants as well to compete against the fierce e-commerce markets

Many firms are trying to integrate with the ONDC platform. This includes high-profile start-ups like Flipkart's logistics arm Ekart and Reliance Retail-backed Dunzo have already integrated with ONDC for logistics services. PhonePe, owned by Flipkart and Walmart, is in the advanced stages of integration with ONDC. Digital payment platform Paytm announced the company will be pivoting to ONDC as its primary focus and to explore opportunities in export businesses.

How exactly will this unfold in the competing e-commerce landscape is uncertain. Will ONDC work as seamlessly as UPI? How will all the e-commerce players react to it? There are many questions about the future of ONDC. We all will have to wait for it to unfold.

-Sai Kharade and Rohan Jain

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