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FEDERATION OF INDIAN PETROLEUM INDUSTRY

POLICY & ECONOMIC REPORT

OIL & GAS MARKET

November, 2020

Table of Contents

Executive Summary

The COVID-19 virus has continued the spread at a faster pace over the last month. The number of new COVID cases have seen a sharp rise since October. The worst affected due to this second wave of COVID has been the European countries, many of which have imposed some form of lockdown to curb the spread of the virus.

While the world appears confident that the end of the ongoing COVID crisis is within sight, a report by United Nations Conference on Trade and Development (UNCTAD) warns that vaccine will not be able to bring a complete end to the spread of the economic damage and the impact of the pandemic will be felt for a long time by the poorest and the most vulnerable. The report warns that the COVID crisis could send another 130 million people into extreme poverty. It further mentions that United Nations' Sustainable Development Agenda 2030 will lose focus if the Governments across the globe do not take immediate policy actions in favour of the poorest.

The slowdown in 4Q20, amid the COVID-19 impact in the OECD, is forecast to carry over into 2021. This will also lead global growth slightly lower to stand at 4.4 per cent, compared with 4.5 per cent in October. While COVID is expected to have an impact on 2021, a further large financial stimulus from the US, EU and Japan may push the forecasts upwards. China will continue to outperform all major economies for the better part of next year. The world also faces strong downward challenges due to Brexit, rising geopolitical challenges in selective regions, unexpected repercussions from quickly rising global debt levels, and mounting social unrest in some countries as a consequence of COVID-19 and rising inequality. While the global trade has recovered from the lows it has seen in the second quarter of 2020, the direction for the future will depend a lot on the trade policies of the incoming US administration.

The number of COVID cases in India have witnessed a slight increase over the last few months after seeing a significant fall in October. Inflation increased to 7.61 per cent in October compared to 7.27 per cent in September. Food inflation rose to 11.07 percent from 10.68 percent, the highest since January. Unemployment rate, after dropping to 6.7 per cent in September, rose to 7.1 per cent in October. A report from Oxford Economics suggests that the scars of the COVID pandemic will continue to haunt the Indian economy in the near future and will keep the growth rate below 4.5 per cent over the next five years. However, the recent boost in consumption in the Indian economy due to the festive season of Diwali seems to have defied all negative forecasts. During the festive months of October and November, the Indian economy has seen a substantial rise in business activities and set the tone for a strong recovery for the country in the coming year.

Crude oil benchmarks rose strongly in the month of November on the hope of Covid-19 vaccine and strong demand for the crude oil in the Asian market. Earlier in October, crude benchmarks decline around 4-5% due to reduced demand forecast. Average Brent, WTI and Dubai basket crude prices in

November went up by 7.55%, 4.01 % and 8.07 % respectively from their October prices. India crude oil benchmark went up by 4.34% in the month of November.

Global rig count for the month of October went down by 3. From September's rig count of 1,019, it declined to 1,016. Asia Pacific and Latin America saw a mild increase in rig count while the US and Canada saw the biggest jump in rig counts. With oil price rebounding, exploration activities are brought back in a scaled manner. Indian rig count stood unchanged in the month of October.

World oil demand in 2020 is revised lower by 0.3 mb/d with annual decline of 9.8 mb/d. Total global oil demand is now little over 90.0 mb/d. In the OECD, demand forecast was adjusted by a reduction of 0.05 mb/d in 2020. New restrictions in countries like Germany, France and the UK has reduced the demand forecast, while rising demand for crude from Non-OECD countries like India and China led the demand recovery.

Asia refinery margin strengthened in October, backed by slower growth in gasoil inventory levels amid a pickup in fuel oil demand for heating purpose in Bangladesh and Pakistan. Refinery utilization rates in October averaged 84.97 % in selected Asian markets comprising of Japan, China, India and Singapore.

In October 2020, demand for petroleum products in India saw a significant growth and stood at 8 month high. Overall petroleum products consumption went up by 14.1 % as most economic activities have recovered to pre-covid levels. On yearly basis, petroleum product consumption was up by 2.1%. Except for lubricants and greases, all other petroleum products saw an increase in demand during the month of October.

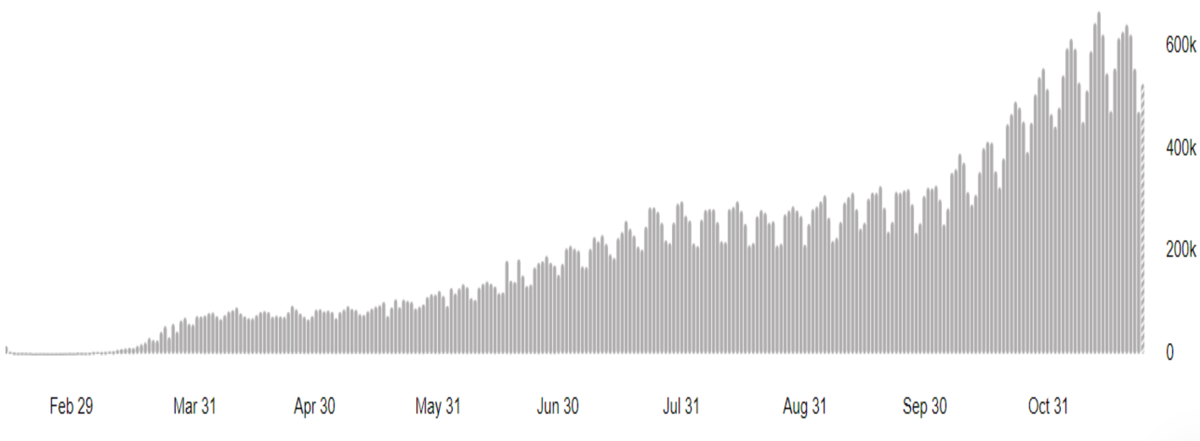
Natural gas price in the Henry hub went up by 13 % to reach $2.17/MMBtu in the month of October and compensated the decline in September. Rising domestic demand for the natural gas for domestic heating purpose and increase in export of LNG to the markets facing winter pushed the gas rice upwards. Natural gas price in went up by 23.8% in the month of October posting a significant increase in last three months. Restricting of gas inflow into the region has helped the natural gas to gain. October gas price in Europe stood at $ 4.89/MMBtu Asian spot LNG prices went up by 9% in the month of October. Geared by the stronger demand for LNG in China and South Korea, the price went up. Average LNG price for December delivery stood around $ 7.50/MMBtu. In India, Domestic gas price for October 2020 to March 2021 is $1.79/MMBTU and price for deep water, ultra-deep water, and high-pressure high temperature field is $4.06/MMBtu.

Policy & Economic report – Oil & Gas market

Economy in Focus

1. A Snapshot of the Global Economy: Resurgence of COVID dampens the recovery

The COVID-19 virus has continued the spread at a faster pace over the last month. The number of new COVID cases have seen a sharp rise since October. The worst affected due to this second wave of COVID has been the European countries, many of which have imposed some form of lockdown to curb the spread of the virus. As on 26 November, there were 58.9 million cases and the pandemic has already claimed 1.39 million lives.



Source: WHO

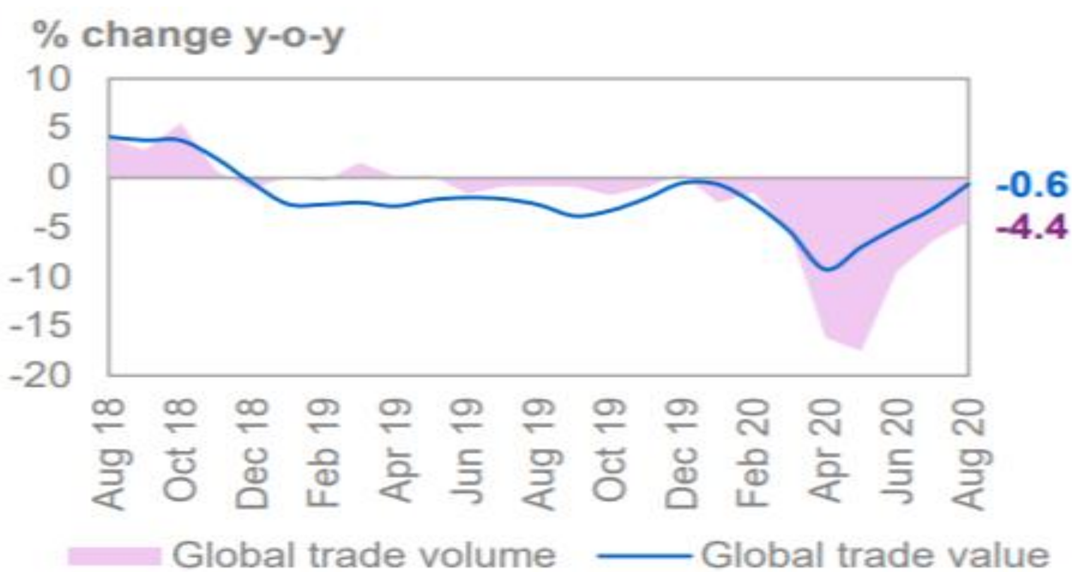
Global Economy

While the third quarter of the year was marked by an unexpectedly strong growth from the OECD countries, the fourth quarter is expected to be significantly impacted by the re-emergence of the COVID-19 virus, resulting in a high rate of hospitalization and fatalities. Some emerging and developing economies have also faced the challenge of increase in the number of COVID cases and a drop in foreign investment. The slowdown in 4Q20, amid the COVID-19 impact in the OECD, is forecast to carry over into 2021. This will also lead global growth slightly lower to stand at 4.4 per cent, compared with 4.5 per cent in October. While COVID is expected to have an impact on 2021, a further large financial stimulus from the US, EU and Japan may push the forecasts upwards. China will continue to outperform all major economies for the better part of next year. The world also faces strong downward challenges due to Brexit, rising geopolitical challenges in selective regions, unexpected repercussions from quickly rising global debt levels, and mounting social unrest in some countries as a consequence of COVID-19 and rising inequality.

In the recently concluded US elections, victory of Joe Biden has had a positive impact on global markets. However, the long term impact of the new regime remains to be seen. Labour markets across the world remain negatively impacted by the pandemic, but given the extraordinary stimulus measures across the world, the fallout from COVID-19 has been contained.

While the global trade has recovered from the lows it has seen in the second quarter of 2020, the direction for the future will depend a lot on the trade policies of the incoming US administration. Data available up to August shows that trade continued to recover. World trade volume levels declined by 4.4 per cent y-o-y in August, compared with a fall of 6.4 per cent y-o-y in July. Trade in value terms improved as well, falling by only 0.6 per cent y-o-y in August, compared with a drop of 3.2 per cent y-o-y in July.

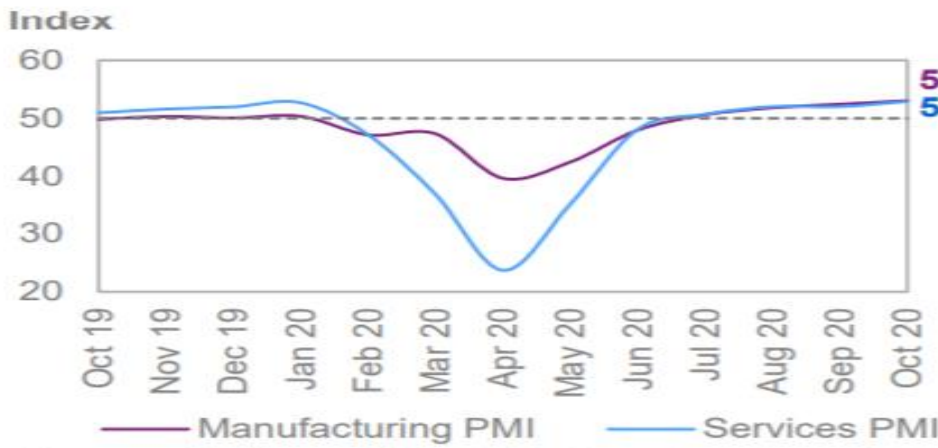
Global Trade



Sources: Netherlands Bureau for Economic Policy Analysis, Haver Analytics and OPEC.

The global Purchasing Manager's Index (PMI) supported the view of an ongoing recovery. The global PMI rose to 53 in October compared to 52.4 in September. The PMI for the global services sector increased to 52.9 in October from 52 in September.

Global PMI



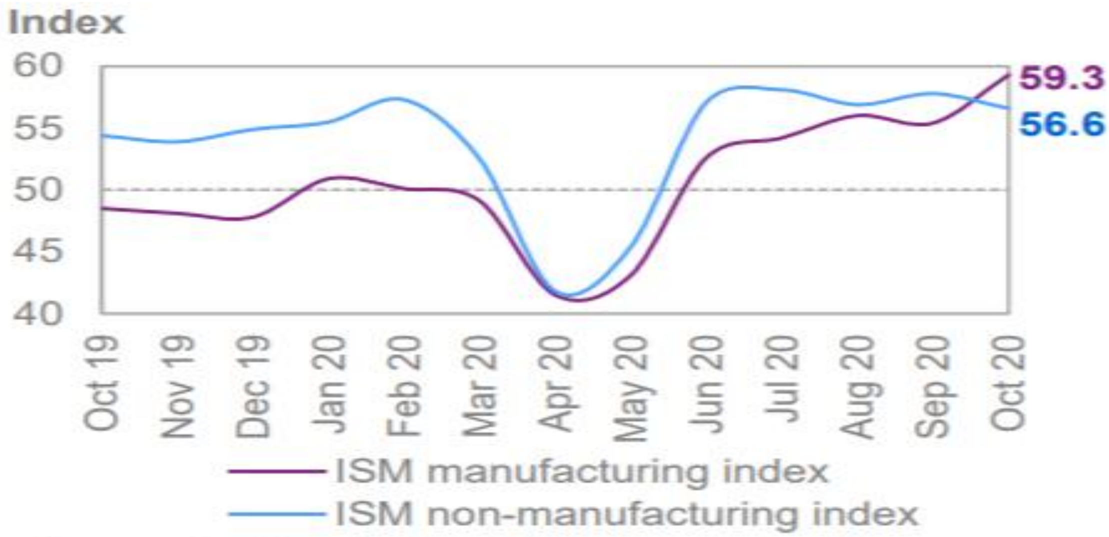
Sources: JP Morgan, IHS Markit, Haver Analytics and OPEC.

The US

In the third quarter of 2020, the US continued a strong growth in the labour market and important wealth factors of both equity and housing markets. This was supported by strong fiscal and monetary stimulus. While this has led to a V-shaped recovery, the recent ongoing rise in COVID-19 cases will most probably dampen the recovery in 4Q20. The US saw a GDP growth of 33.1 per cent quarter on quarter in the third quarter of the year. The recovery was visible across the board, but very much fuelled by private consumption and investment.

The recovery in the US economy is also visible in the October PMI levels. In October, the manufacturing PMI rose to 59.3 compared to 55.4 in September. The PMI of the services sector, however, dropped to 56.6 in October compared to 56.9 in September this year.

US PMI



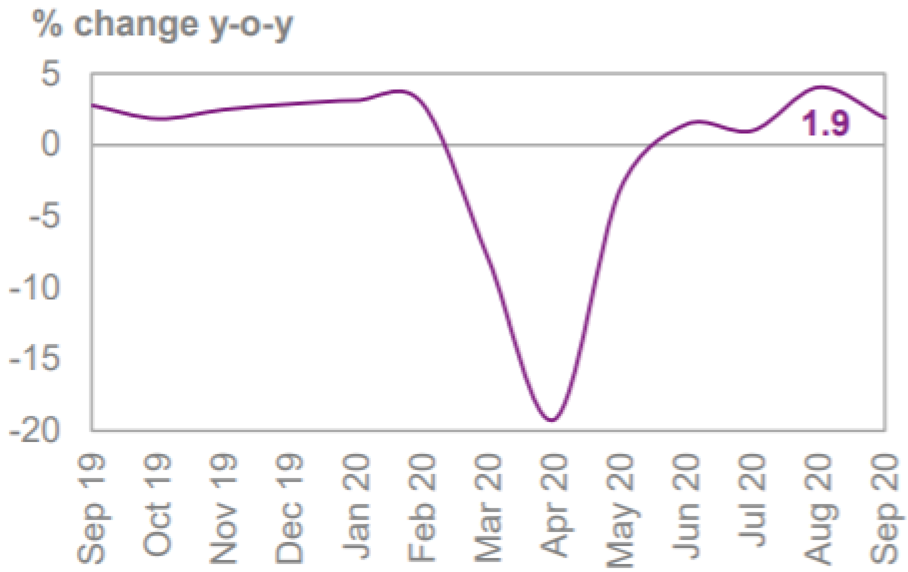
Sources: Institute for Supply Management and Haver Analytics.

OECD Europe

After almost a V shaped recovery during the third quarter of the year, the Euro Zone facing a sharp rise in COVID cases. The ongoing situation is visible on the in slowing economic activity indicators of the past few weeks. GDP growth in 3Q20 was reported at 12.7 per cent q-o-q while annualized rate stood at more than 60 per cent or almost twice the growth level of the US. Subsidies have been so far successful in shielding the labour market but consumption has again started falling in the region. Contact-intensive areas of the economy have especially been affected by the tightening of lockdown measures and voluntary social distancing. Economies that rely more on travel, tourism hospitality and leisure have been` more affected by the ongoing developments, while countries with stronger manufacturing sectors have seen a stronger recovery trend.

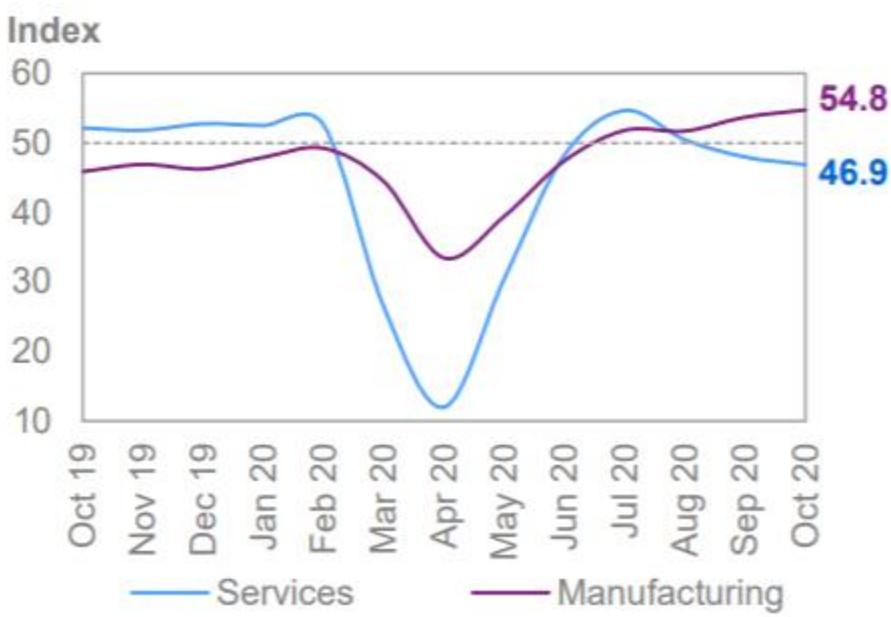
The European Central Bank (ECB) is continuing its accommodative monetary policy measures as the inflation is low and is expected to increase the stimulus in the near future. Fiscal measures supportive of the labour market have kept the unemployment rate unchanged at 8.3 per cent. Retail sales retracted again in September, growing by 1.9 per cent y-o-y in value terms, compared with 4 per cent y-o-y in August.

Euro Zone Retail Sales



Sources: Statistical Office of the European Communities and Haver Analytics.

The increase in PMI in the Euro Zone in October stands testament to the improved momentum in manufacturing. However, the services sector in the region still remained weak. The manufacturing PMI improved to 54.8 in October from 53.7 in September. The PMI for services, the largest sector in the Euro-zone, fell to 46.9 in October from 48 in September and 50.5 in August.



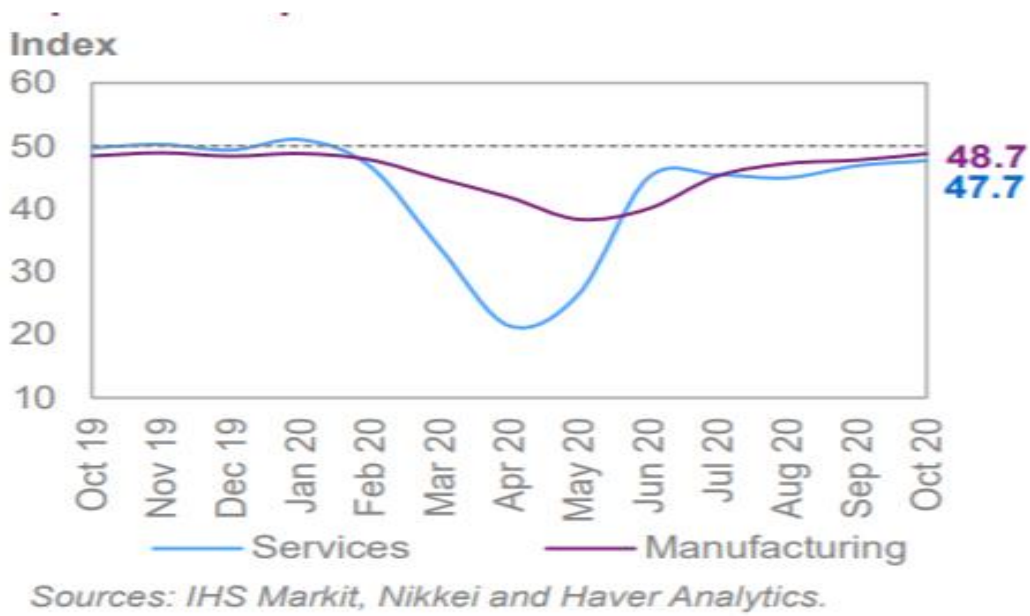
Sources: IHS Markit and Haver Analytics.

Japan

While it appears that Japan has better contained the pandemic compared to other countries, local demand is still seeing a very soft growth. The country's exports have shown a marked improvement but are still affected by the global trade environment. The Japanese labour market stabilized after a few months of decline, and the jobless rate remained at 3.0 per cent in September, highest in three years.

Retail sales in the country fall sharply in September, declining by 8.8 per cent y-o-y in September, compared to a decline of 2 per cent y-o-y in August. This decline was influenced by last year's very strong September sales ahead of the sales tax increase in October.

Japan PMI

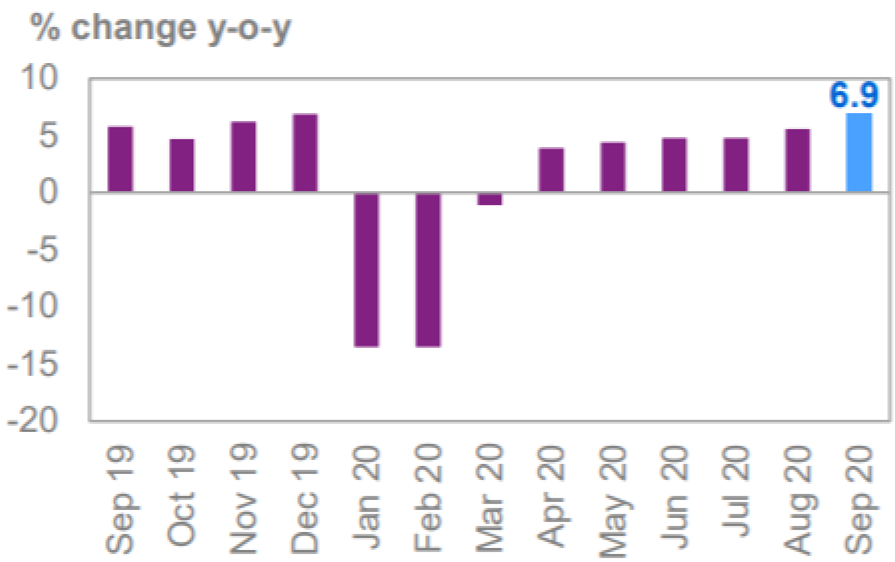


China

The Chinese economy grew by 4.9 per cent in the third quarter of 2020 after growing by 3.2 per cent in the second quarter. China is presently benefitting from swift pandemic restrictions and the prompt resumption of manufacturing activity. However, the recovery still remain lower than expected in the third quarter due to slower growth in private consumption an infrastructure investment. Moreover, the economy embarked on an uneven resumption between the supply and demand GDP. Economic recovery in the second quarter was driven mainly by investment, infrastructure and real estate sectors, in the third quarter, exports and services remained the major performers.

Industrial production in China rose by 6.9 per cent in September 2020, highest level since December, 2019. Retail sales expanded by 3.3 per cent y-o-y in September 2020 following growth of 0.5 per cent in August, the second straight month of expansion and the highest since December 2019, as domestic consumption kept recovering following the loosening of COVID-19 restrictions.

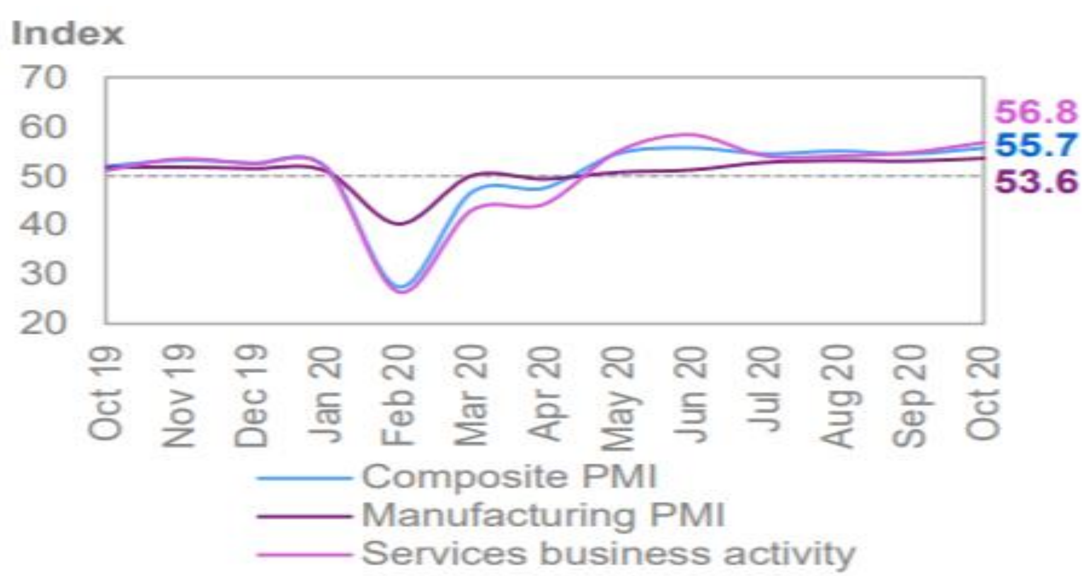
China industrial production



Sources: China National Bureau of Statistics and Haver Analytics.

China's economy is expected to continue on the path of recovery in 4Q20. October PMI marked a steady improvement in the manufacturing and services sectors. The Caixin China General Manufacturing PMI rose to 53.6 in October from 53.0 in September, the highest reading since January 2011. The Caixin China General Services PMI jumped to 56.8 in October from 54.8 in September, reflecting strong growth in the services industry.

China PMI



Sources: Caixin, IHS Markit and Haver Analytics.

2. Most vulnerable segment worst affected due to the pandemic globally; COVID may prove a catalyst for the much needed change: UNCTAD Report

The global markets are in high spirits after the news that two COVID-19 vaccines have shown to be more than 90% effective in late-stage clinical trials. While the world appears confident that the end of the ongoing COVID crisis is within sight, a report by United Nations Conference on Trade and Development (UNCTAD) warns that vaccine will not be able to bring a complete end to the spread of the economic damage and the impact of the pandemic will be felt for a long time by the poorest and the most vulnerable.

The UNCTAD report titled, "Impact of the COVID-19 Pandemic on Trade and Development: Transitioning to a New Normal" provides a comprehensive assessment of the economic variables and projects that the global economy is set to contract by around 4.3 per cent in 2020. The report warns that the COVID crisis could send another 130 million people into extreme poverty. The report highlights that the way the world economy is set up is partly to blame for the disproportionate impact on the world's poorest, who lack the resources necessary to respond to shocks such as COVID-19. It further states that the COVID-19 virus has moved swiftly through the global economy and has moved through the global interconnections of globalization, catapulting a global health crisis into a global economic shock that has hit the most vulnerable the hardest.

The report mentions that United Nations' Sustainable Development Agenda 2030 will lose focus if the Governments across the globe do not take immediate policy actions in favor of the poorest. To ensure a better recovery, the objective should be a renewed trade policy with focus on market concentration and sustainable growth. The report points out that there is a need, more than ever before, to reshape global production networks to be more green, inclusive, and sustainable while simultaneously resetting the multilateral system to support the most vulnerable and deliver on climate action.

Asymmetric impact of COVID

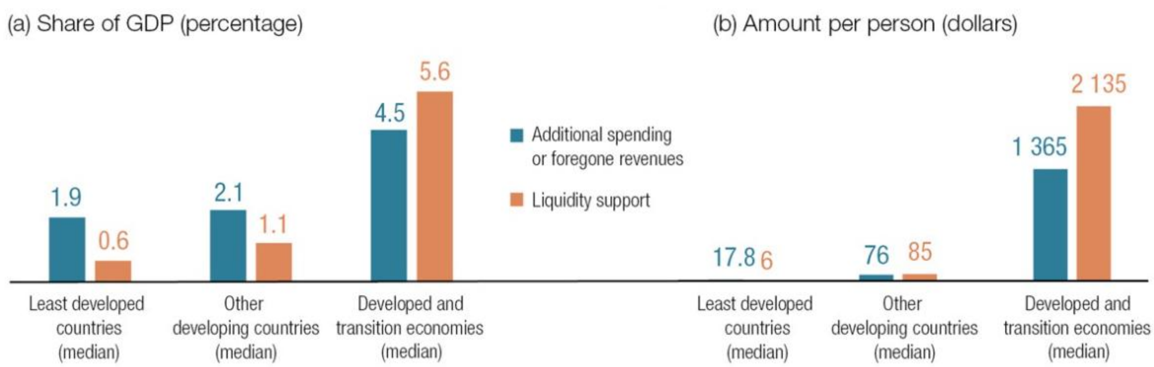
The UNCTAD report takes into account the impact of the pandemic on the world economy and explores the depth of the impact on global trade, investment, production, employment and, ultimately, individual livelihoods. The findings of the report suggest that the COVID virus has had an uneven impact on the economy and the worst affected are the most vulnerable, both within and across countries, affecting disproportionately low-income households, migrants, informal workers and women. The report indicates that poverty across the globe is on a rise for the first time since the 1998 Asian financial crisis. In 1990, the global poverty rate was 35.9 per cent. By 2018, it had been curtailed to 8.6 per cent but has already inched up to 8.8 per cent this year and will likely rise throughout 2021.

The worst affected sectors due to the pandemic have been the tourism and micro, small and medium-sized enterprises. These are also the segments that employ the vulnerable segments of the society. While older men may have suffered more from the health emergency, females and young people are most affected by the economic crisis. Across the 32 countries for which gender-disaggregated data are available, the countries with higher COVID-19 incidence have seen greater increases in female unemployment than male.

Non uniform response

The pandemic has brought the wide disparities to light. These disparities will be even more visible as the vaccine production and delivery underlines the limited capacity of most developing and least developed countries (LDCs) to respond to the crisis.

Fiscal measures in response to COVID-19 by country group



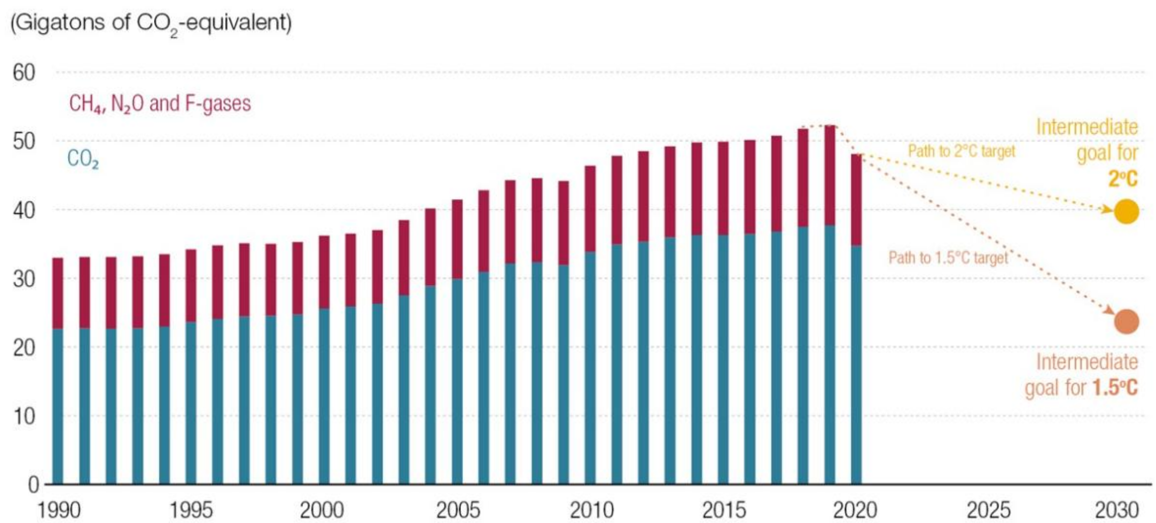
Source: UNCTAD calculations, based on data from International Monetary Fund, 2020, and the UNCTADstat database.

The UNCTAD report highlights that 79.4 per cent of workers in sub-Saharan Africa and 84.5 per cent of workers in LDCs still do not have proper access to any social protection or labor programmes. The report underlines the need for international assistance debt relief to many poorer nations so they have the fiscal space needed to address the pandemic's economic impacts on their populations.

A well-defined path for recovery

The report presents a roadmap for recovery that requires an overdue and opportune shift in the structure of global trade and cooperation. The report mentions that while the COVID-19 has been painful and resulted in loss of large number of lives, it may also prove as a catalyst for the much required change. There is an impending need to reshape the global production networks and reset the multilateral cooperation.

Greenhouse gas emissions and target reductions



Source: UNCTAD calculations, based on Netherlands PBL (2019) and United Nations Environment Programme (2019).

The pandemic has also presented an opportunity to make production greener. Global CO2 emissions are on track to decline by 8 per cent this year, or 2.6 gigatons. This is roughly the same reduction that is needed annually for the next 10 years to maintain progress to just a 1.5-degree Celsius rise in global temperatures. As economies open back up, more needs to be done to ensure international production is in sync with the climate emergency.

3. Biden pledges to indigenize manufacturing while going soft on protectionism to rejuvenate the US economy

Four year ago US President Donald Trump promised the working class to bring back the manufacturing jobs that had cemented the US as the world's largest economy, but over the past two decades had been lost to the likes of China and Mexico. The President's protectionist stance had deeply resonated with the public sentiments alongside the catchy slogans such as 'America First' and 'Make America Great Again'. However, these efforts yielded little on ground in terms of increase in production capacity.

The President designate Joe Biden has pledged to restore US manufacturing hegemony and that more products will be "made in all of America."

Commitment towards manufacturing

While the handling the COVID pandemic will be the Biden administration's first priority, Biden has made it clear that his Government will be looking to restore US manufacturing and that more products will be "made in all of America."

In this direction, the new administration the President designates plan includes 10 per cent tax on firms who offshore US manufacturing and would eliminate loopholes that help US multinationals to shield their foreign profits from the Internal Revenue Service (IRS). Projects that commit to rebuilding or strengthening domestic manufacturing would benefit from a 10 per cent tax credit.

Experts are of the opinion that Biden's carrot and stick policy may lead to some meaningful outcomes on where US based firms locate their manufacturing. However, there are many economists who believe that Biden's policies may be misdirected as many US multinationals often move production overseas to benefit from new and untapped markets, like Brazil and China. Few of this manufacturing capability will ever come back to the US.

Ambitious spending plans

Biden's spending plans of USD 5.4 Trillion over the next decade is expected to put huge pressure on the federal deficit. USA's federal deficits already stand at USD 3.3 Trillion or 16 per cent of the GDP. Biden's strong commitments to tackling climate change, boosting access to health care, addressing the lack of affordable housing and confronting racial inequality have been lauded by US progressives.

The expected large tax hikes, mostly on the wealthy by the Biden administration will undo some of Trump's $1.5 trillion in tax cuts and will offset almost two-thirds of his spending commitments. Some experts feel that while there will be higher budget deficits, but this is much less of an economic issue given that interest rates are near zero and likely to stay there for some time.

Practice caution on trade

Large corporates in the US will force the Biden administration do away with many of Trump's aggressive trade policies that, as well as tackling China's economic threat, have weakened ties with the United States' strongest allies, including Mexico and the European Union. However, some experts strongly feel that Biden will be restricted by his commitment to the Made in America pledge. Tariffs may remain high for some time, despite the huge cost to US importers.

4. Recent lockdowns may result in a double dip in the Eurozone economy for FY 2020

A recently released report by IHS Markit has warned that business activity in the UK has fallen sharply in the month of November as many countries have introduced aggressive lockdown measures against the spread of COVID across the European Union's single currency block. The purchasing manager's index for the bloc dropped from 50 to 45.1 in November, reaching a six month low. PMI takes into account economic trends in the manufacturing and services sectors. The report further mentions that With the exceptions of the declines seen in the first two quarters of this year, the average PMI reading of 47.6 in the fourth quarter so far is the lowest since the closing quarter of 2012 and indicative of a steep decline in GDP.

The IHS report claims that the recent fall in economic activity has put the bloc's economy for its first double-dip recession in nearly a decade. The findings of the report has further increased the likelihood of a GDP contraction in the fourth quarter in the Euro Zone. There were serious concerns over the contraction in the French economy with business activity in the country witnessing a constant contraction since May. The IHS report has pointed out that France's PMI dropped to 37.5 in November from 47.5 after the recently imposed lockdowns. The HIS report suggested that the results suggest that some French businesses have been able to adapt their operations to the new conditions and are subsequently less susceptible to sharp downturns in activity when tighter restrictions are imposed. The services sector in the country is among the worst hit due to downturn with most non-essential shops, restaurants and hotels forced to shut their doors.

The pandemic has also affected the German services sector adversely, after the country imposed restrictions. The country's PMI fall from 49.5 in October to 46.2 in November. Riding on the favorable working conditions in the country, manufacturing sector has continued to grow over this period. Activity in the factory sector still fell but only slightly to 57.9 from 58.2 in October.

The UK economy also showed signs of contraction after a fresh wave of coronavirus measures were introduced. PMI fell to a five-month low of 47.4 this month from 52.1 in October. It is the first time the index has gone below the 50.00 growth threshold since June. The reports of successful vaccine testing has given the businesses across Europe a hope to bounce back in 2021.

5. **Reemergence of COVID cases in the UK may result in a -11.2 to -11.4 per cent contraction in UK economy: Report**

The UK economy is expected to end the year on a negative quarterly growth for the fourth quarter. In the fourth quarter, the country's GDP is expected to fall between negative 2.1 to 3.3 per cent, while the annual GDP is expected to contract by -11.2 to -11.4 per cent.

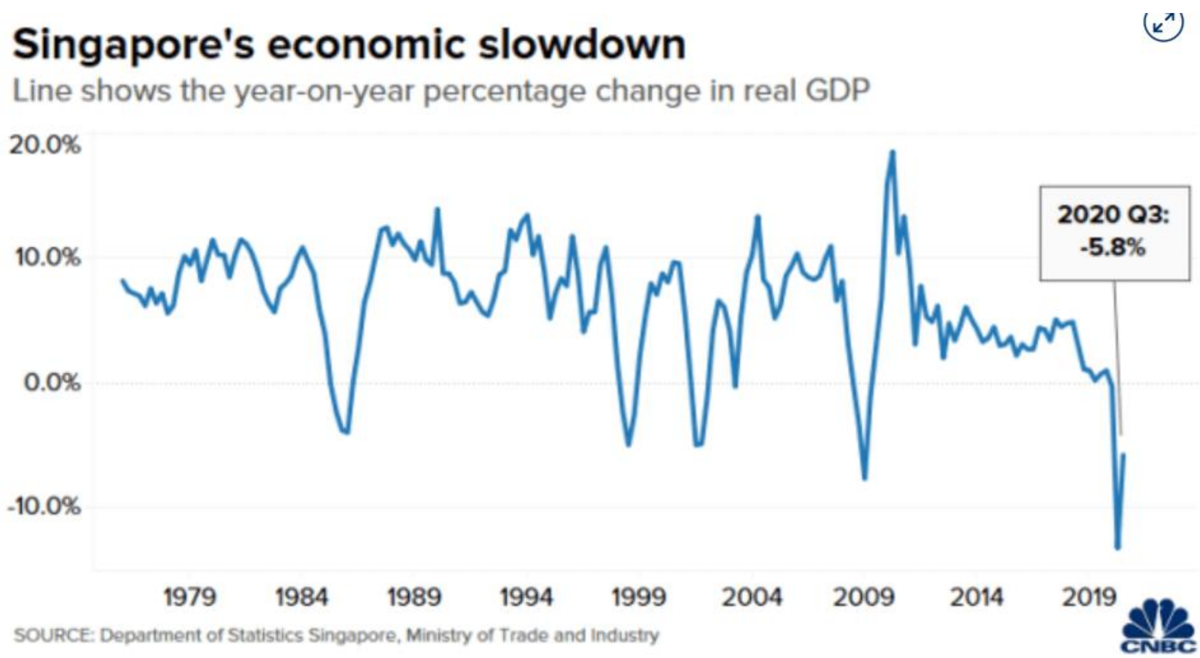
A new report by PwC predicts that in 2021, UK's GDP will increase by 6 to 3.4 per cent, depending on the success of the vaccine rollout and whether the UK can secure a trade deal with the EU. The report also claims that the UK economic output may return to pre-crisis levels by the third quarter of 2022, with the warning that recovery could take until the end of 2023 if lockdowns are further extended.

The PwC report claims that in November alone the UK witnessed an economic contraction of 5.7 per cent as new lockdown measures across the UK take their toll on the economy. This will be followed by a marginal recovery of 0.3% in December. Jonathan Gillham of PwC pointed out that after a double dip, the economy should begin a fresh start in the next year. While it was initially anticipated that recovery would be swift, however, now it appears that recovery may be W shaped– albeit with a much smaller second drop. The report expects a boost to economic activity as vaccines progress and confidence builds in the first half of 2021, the longer term outlook will very much depend on the nature and duration of further restriction measures and the outcomes of the UK-EU trade negotiation, which could weigh on growth.

The findings of the report concur with the expert opinions that the UK's economic recovery is facing a 'double-dip' downturn as trusted indicators on the health of the economy, indicates a decline in overall activity for the first time in months.

6. **Singapore economy set to rebound in 2021, posting a growth of above 5.5 per cent**

In the third quarter of 2020, Singapore's economy has contracted by 5.8 per cent, much better than the initial estimates. The country was earlier estimated its economy to shrink by 7 per cent year-on-year during the second quarter. The country's performance in the third quarter was significantly better than the 13.3 per cent yoy contraction seen during the second quarter of the year. On a quarter-on-quarter basis, Singapore's GDP grew by 9.2 per cent in the three months ended September, a turnaround from the 13.2 per cent contraction in the second quarter.



A statement issued by the Ministry of Trade and Industry pointed out that the improved performance of the Singapore economy came on the back of the phased resumption of activities in the third quarter following the Circuit Breaker that was implemented from 7 April to 1 June 2020, as well as the rebound in activity in major economies during the quarter as they emerged from their lockdowns.

Singapore started lifting the lockdown restrictions from early June, allowing economic activities to resume in a phased manner. However, some measures such as compulsory mask-wearing and a cap on gatherings are still in effect.

Below is a glimpse of how different sectors in the country performed in the third quarter:

- Goods-producing industries continued to do better than the services industries, led by manufacturing which grew 10 per cent year over year;
- But construction activities shrank by 46.6 per cent compared to a year ago — the third consecutive quarter of contraction;
- The finance and the insurance sector grew by 3.2 per cent yoy
- The transport and storage segment in the country proved to be the worst performing sector contracting by 29.6 per cent yoy

The ministry has accepted that the Singaporean economy is set to contract by 6 - 6.5 per cent in 2020 compared to a year ago. That's narrower than the previous official forecast range of 5 per cent to 7 per cent contraction for this year, and would be the country's worst economic recession. The Ministry expects the country to bounce back and grow at 4-6 per cent in 2021. The press release suggested that the recovery of the Singapore economy in the year ahead is expected to remain gradual, and will depend to a large extent on how the global economy performs and whether Singapore is able to continue to keep the domestic COVID-19 situation under control.

Economists largely believe that with the local COVID situation under control Singapore's economy is on the path to a swift recovery. It is largely believed that the country's economy is set to contract by over 6 per cent this year before it rebounds to over 5.5 per cent in the coming financial year.

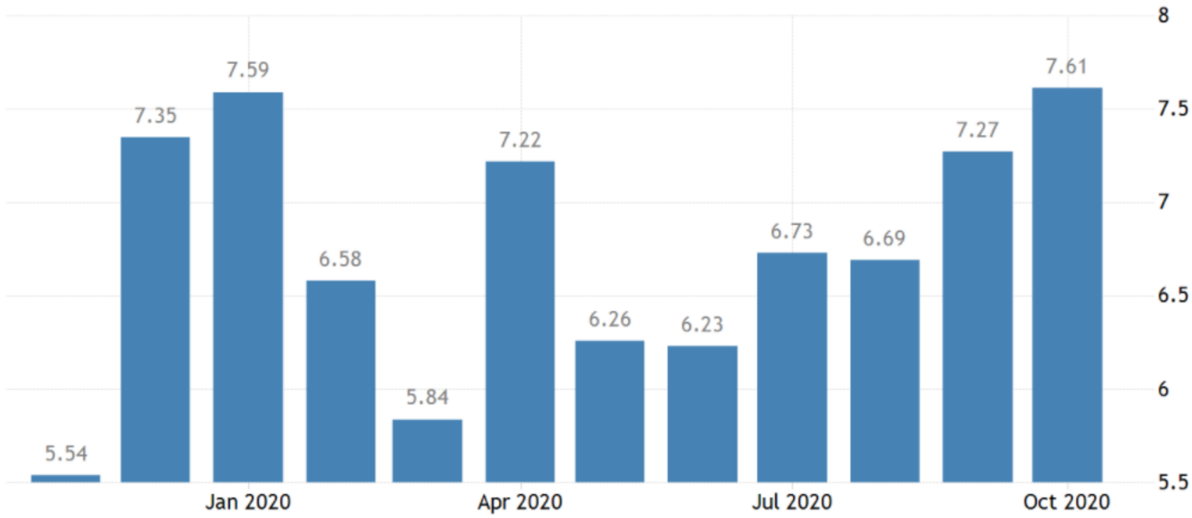
7. **Snapshot of Indian Economy: Significant improvement since September; serious downside risks due to fresh lockdowns**

The number of COVID cases in India have witnessed a slight increase over the last few months after seeing a significant fall in October. As on 25 November, the country had over 9.22 million cases. The pandemic has already caused over 135,000 lives in the country.

Inflation

Annual consumer price inflation in India increased to 7.61 percent in October of 2020 from a d 7.27 percent in September. This is the highest rate since May 2014, well above the central bank 2 percent-6 percent target range for the seven months. Food inflation rose to 11.07 percent from 10.68 percent, the highest since January and ahead of the festival season. Prices of vegetables jumped 22.51 per cent, egg 21.81 per cent, meat and fish 18.7 percent and pulses 18.34 percent.

India Inflation

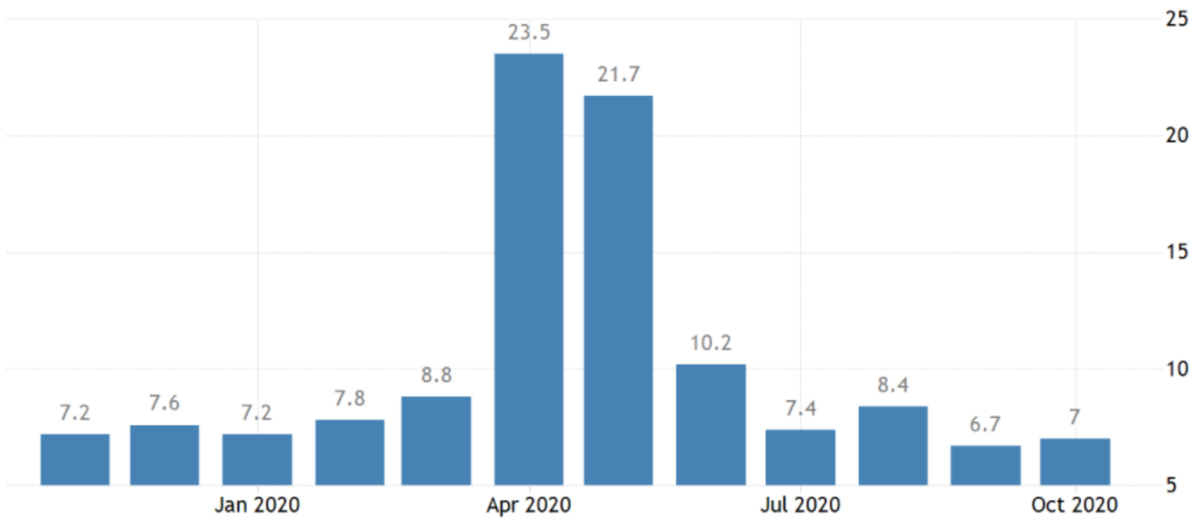


Source: Ministry of Statistics and Programme Implementation (MoSPI)

Unemployment Rate

While the unemployment rates have come down significantly from the high it witnessed in April, 2020, in October the unemployment rate reached 7 per cent from 6.7 per cent in September.

Unemployment Rate

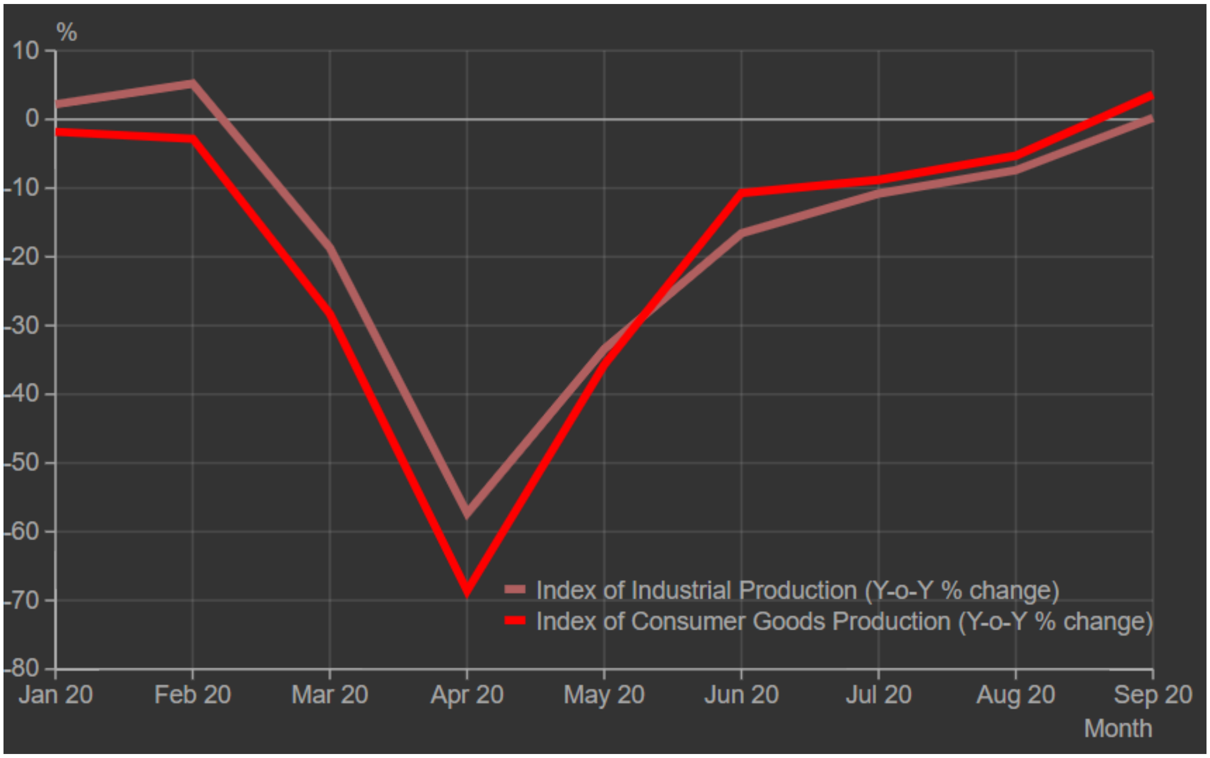


Source: Centre for Monitoring Indian Economy (CMIE)

Industrial Production

The index of industrial production (IIP) increased by 0.2 per cent in September 2020 compared to last year. Since the lockdown, this is the first month, when the index reported a year-on-year growth. Nonetheless, the performance was healthy as September 2020 was the best month in terms of industrial production since the lockdown. Release of pent-up demand along with fresh festive spending aided the improvement.

India index of industrial production (IIP)

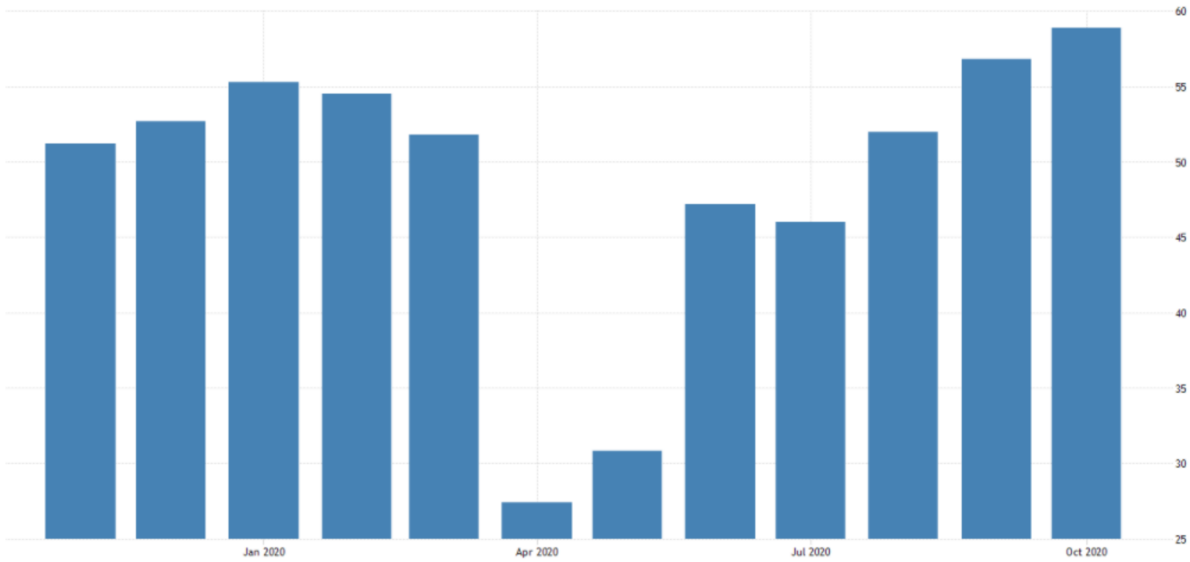


Source: Centre for Monitoring Indian Economy (CMIE)

Purchasing Manager's Index

The Manufacturing PMI, published by IHS Markit India, rose to 58.9 in October 2020 from 56.8 in September, easily beating market consensus of 55.4. The latest growth indicates improvement in the health of the sector in over a decade, amid ongoing relaxation of COVID-19 restrictions. Output touched the highest levels since 2007 and new order growth hit its highest level since mid-2008.

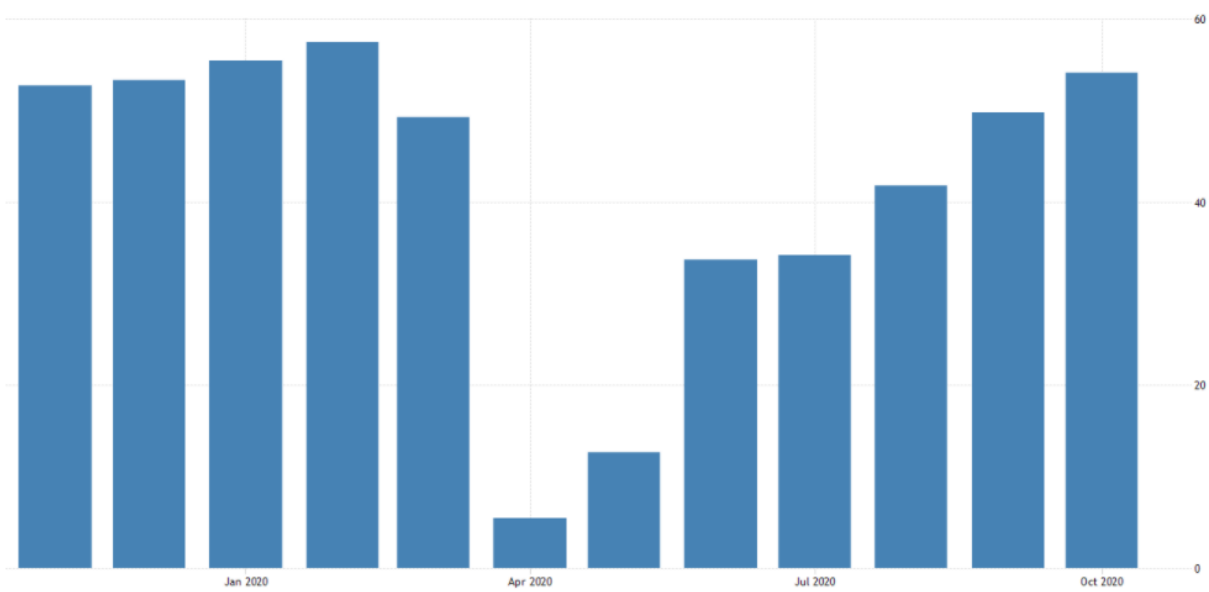
India Manufacturing PMI



Source: IHS Markit

Services PMI increased to 54.1 in October 2020 compared to 49.8 in September, against market expectations of 51.2. The latest reading pointed to the first time expansion in the services sector since February, as output expanded faster while new orders rose for first time since February, amid the loosening of coronavirus pandemic restrictions.

India Services PMI



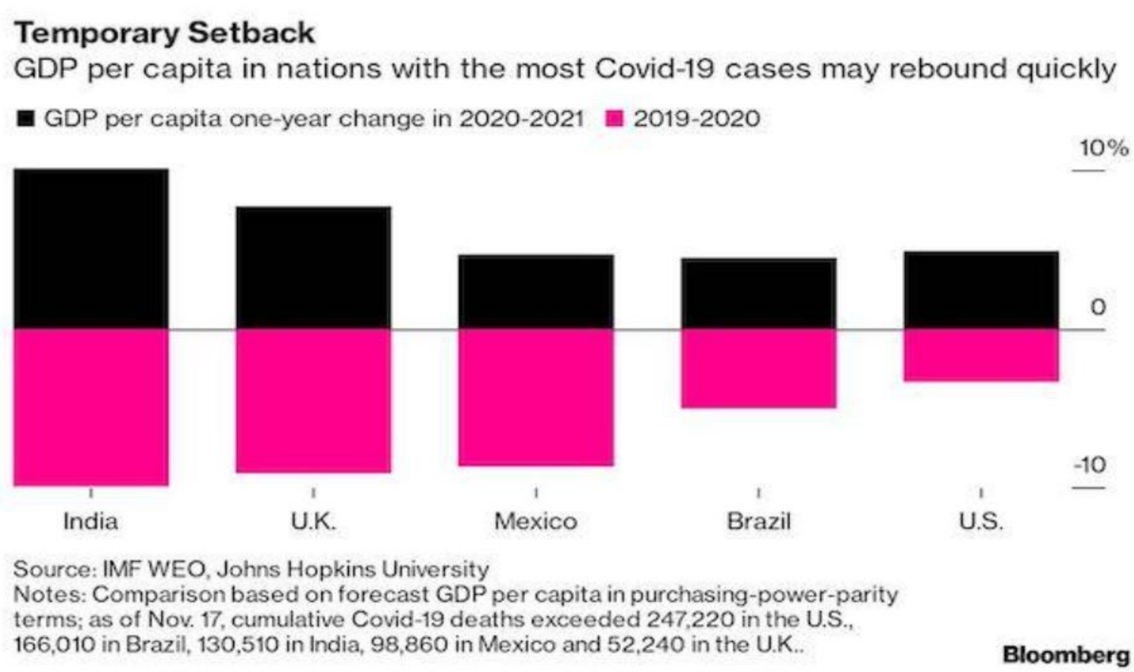
Source: IHS Markit

8. Scars of the pandemic to haunt Indian economy for some time to come

A recent report by Oxford economics claims that India will be among the worst affected economies in the world after the pandemic wanes with output dropping by as much as 12 per cent from the pre-pandemic levels.

The report further suggests that balance sheet stress that has already been building since before the virus will only further worsen. The report expects India to grow at 4.5 per cent over the next five years lower than the previous estimate of 6.5 per cent. The report suggests that there were headwinds already hurting growth prior to 2020 -- such as stressed corporate balance sheets, elevated non-performing assets of banks, the fallout in non-bank financial companies, and labor market weakness – These will only further worsen after the pandemic. The report claims that these factors will have to be tackled properly else they will draw down the country's growth significantly below the pre-COVID levels.

The Hon'ble Prime Minister has set the target of making India a USD 5 Trillion economy by 2025 from present USD 2.8 Trillion. While the government has announced a slew of measures to support growth, lot more still needs to be done to increase demand, leaving the central bank to do much of the heavy-lifting. A recent paper published by the Reserve Bank of India claims that India, Asia's third largest economy, has entered a historic technical recession. The International Monetary Fund has forecasted that the Indian GDP is set to contract by 10.3 per cent in FY2020-21. It is expected that even after the economic activity resumes there will be scars of the lockdown that will haunt the Indian economy for some time to come.



A report from HSBC Holdings suggested that the country's potential growth could drop to 5 per cent in the post-pandemic world from 6 per cent on the eve of the outbreak and more than 7 per cent before the global financial crisis. The reports mentions that all supply side factors have taken a hit due to the pandemic and only the human capital contribution remain unchanged from the pre-virus levels. Capital accumulation has also taken a big hit and the balance-sheet stresses are expected to worsen following the crisis, lengthening the investment recovery cycle.

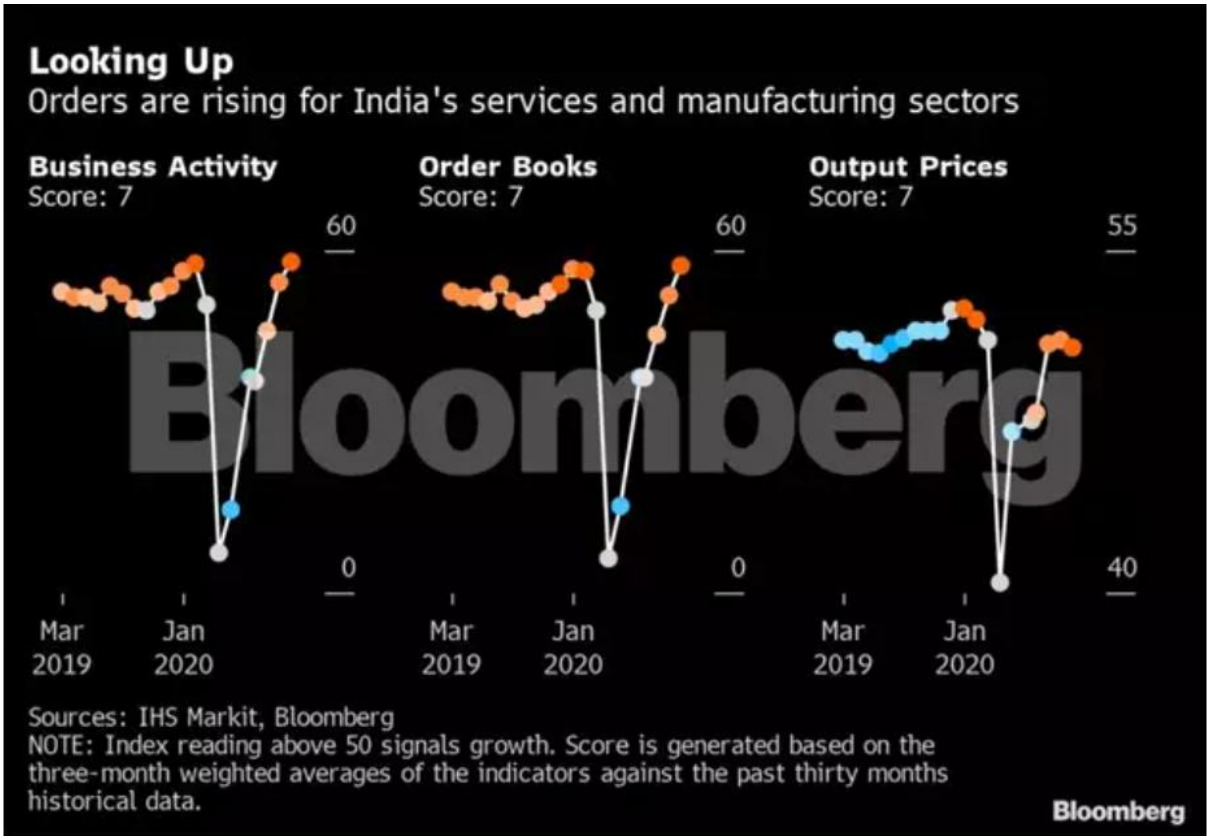
9. Diwali festive season places Indian economy on track for strong recovery

The Indian economy showed strong signs of recovery in the month of October increasing the likelihood that it will soon exit the pandemic-induced recession in the final quarter of this year. Demand during the festival season helped boost three of the eight high-frequency indicators designed by Bloomberg. The index measuring so-called 'Animal Spirits' remained steady at 5, a level arrived at by using the three-month weighted average to smooth out volatility in the single-month readings.

A steady pace of recovery from the month ago will help the economy alter course, after output likely posted its second straight quarter of contraction in the July-September period.

Rising economic activity

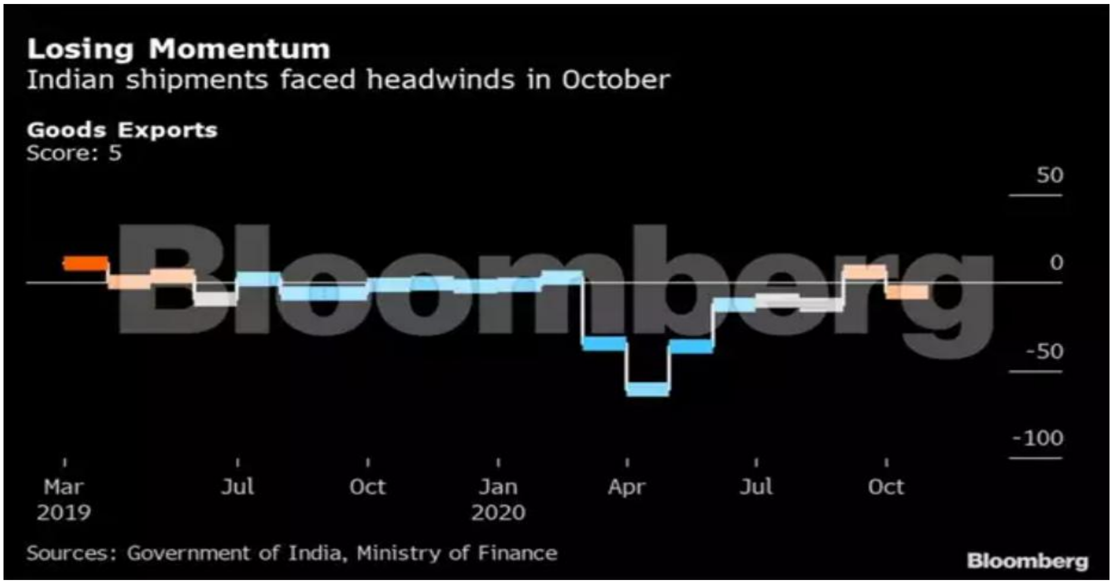
Economic activity in the dominant service sector of the country registered a sharp rise in November after eight straight months of contraction. The IHS Markit India Services Purchasing Managers' Index rose to 54.1 last month, the highest since February, riding on renewed increase in new work orders with business optimism also rising.



During the last month manufacturing activities in the country too continued to expand at a steady pace. The manufacturing PMI touched 58.9, the highest since May 2010. Both the manufacturing and services sector in the country faced broad price pressures which will likely keep the inflation-targeting central bank from resuming interest-rate cuts next month.

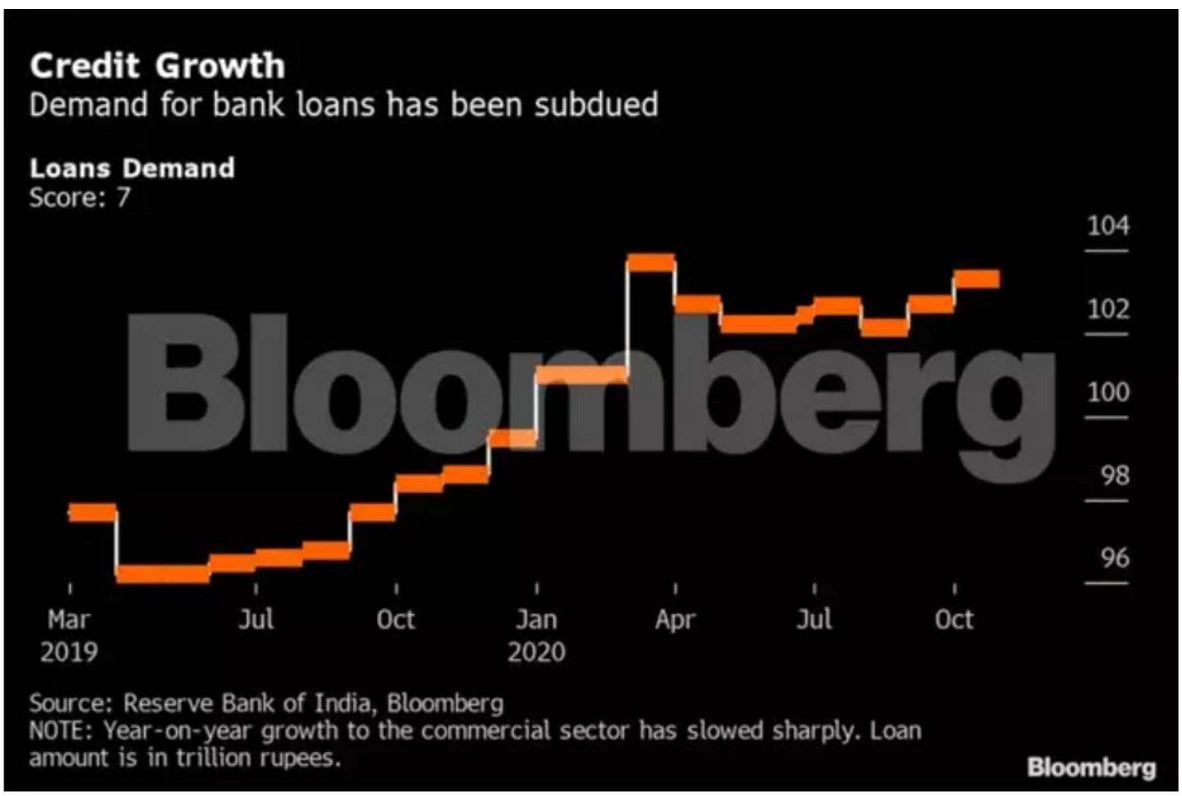
Exports remained low

The country lost some momentum in exports last month as a second wave of Covid-19 infections started to hit the global economy. While shipments of drugs and pharmaceuticals along with farm and textiles helped, gems and jewelry, electronic and engineering goods were a drag. While the imports remained low on an annualized basis, some improvements were noticed from a month earlier as domestic economic activity continued to normalize.



Increase in consumer activity

Sales of passenger vehicle, an important indicator of demand, increased by 14.2 per cent in October compared to a year ago ahead of Diwali. Retail sales too showed signs of picking up, even though they were nearly 60 per cent below the year-ago level.



However, demand for loans remained subdued. Data from RBI shows credit grew just about 5 per cent in the second half of October from a year earlier. Tighter liquidity conditions eased a bit in October, with RBI intervention in the foreign exchange market boosting some of the cash surpluses in the banking sector.

Rise in Industrial activity

Industrial activity in India rose by 0.2 per cent in September compared to the same month last year. While capital goods production declined 3.3 per cent from a year earlier, consumer durables and non-durables rose 2.8 per cent and 4.1 per cent respectively. While the output from infrastructure industry contracted by 0.8 per cent in September from a year ago, it was well above the revised 7.4 per cent decline in August.

10. **India produced 7.5% fewer goods and services in Q2 of 2020-21 as compared to what it produced in Q2 of 2019-20**

    This means to say that, India has now formally entered into a technical recession because along with a 24% contraction in Q1, India is now seeing two consecutive quarters where GDP growth rate has declined.
    While the 23.9% fall in GDP in Q1 was one of the worst among the major economies of the world, the 7.5 % contraction is deemed to be better than the global average. The average decline of the 49 countries, who have declared their GDP data for the July-Sept quarter is 12.4%. Hence, in comparison India's 7.5% looks much better.

    Economic recovery is fairly broad-based and to understand this, one must look at the Gross Value Added instead of GDP data, for a GVA data provides a measure of national income by looking at the value added by different sectors of the economy in that quarter.

Recession vs Technical Recession

In its latest nowcast, it was reported that India had entered in technical recession, a first for this country. This could be because India's economy shrank for a second straight quarter pushing the country into an unprecedented recession.

The quarter ending September showed a contraction in the Gross Domestic Product of the country to the tune of 8.6 percent.

CONTRACTION IN INDIA. ELSEWHERE

Quarterly Real GDP growth rate (in %)

	October to December 2019	January to March 2020	April to June 2020	July to September 2020
India	4.1	3.1	-23.9	-8.6*
US	2.3	0.3	-9	-2.9
UK	1	-2.1	-21.5	-9.6
China	6	-6.8	3.2	4.9
Brazil	1.7	-0.3	-11.4	NA
Indonesia	5	3	-5.3	-3.5
South Africa	-0.5	0.1	-17.1	NA

RBI estimates : Source: Trading Economics

* RBI estimates : Source: Trading Economics

So what is technical recession and how does it differ from Technical Recession?

Essentially a recession is when a recessionary phase sustains for a considerable length of time and while it covers a wide range of decline in economic activity, covering several economic aspects such as employment, household, corporate incomes and so forth, it is long duration and is not caused by a single off event.

A Technical Recession is when a country faces a back-to-back decline (for two consecutive quarters) in the GDP, it s mainly used to snapshot the trends in GDP. A technical recession is of a shorter duration but is often caused by a single off event, in this case COVID-19 being the trigger.

One often confuses a drop in the stock market with a recession. While more often than not, they can and frequently do happen together, they are completely different events. While a recession is a normal part of the economic cycle, a recession can only be confirmed once one is already in it since it's based on the previous two quarters.

By this definition, it would mean that India entered a recession at the end of September. The UK is in its third quarter of recession while Brazil and Indonesia are also in recession and South Africa has evaded it until now, but only marginally. China, where the pandemic began, has bucked the trend.

The possible consolation is that technical recessions are due to the fact that many businesses will be economically affected by it even though it is an isolated event and not a sign of broader problems with the economy.

Recessions, while they can't be perfectly predicted, do have indicators which help identify that one might be on the way. The first is an inverted yield curve. In a normal yield curve, as one would expect, the longer the duration the higher the yield. An inverted yield curve disrupts the normal pattern making longer-term bonds less attractive. The second measure tends to be extreme volatility, which is certainly something that has been seen over the past so many months.

The third indicator would be high unemployment, while the fourth would be a strong decline in home prices and lastly, negative earnings would be the final indicator.

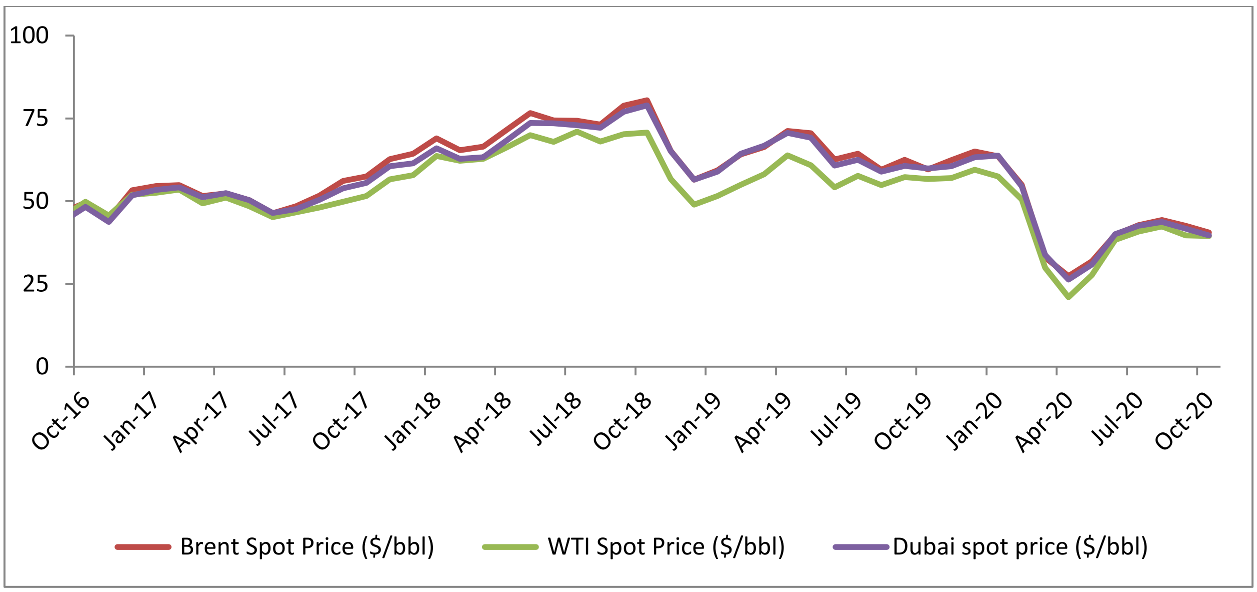
Oil Market

Crude oil price

Crude benchmarks stood stabilized in the month of October after dropping down in the first week and recovering later. While recovery has gone beyond the expected range in China, it stood lower than the expected recovery in the Europe. Withdrawal of crude stocks led to some ups and downs in the month. In the US, higher gasoline stock builds up let to decline in WTI benchmarks in the third week of October.

For the month, crude benchmarks saw a minor decline. Average Brent, WTI and Dubai basket crude prices in October declined by 1.53 %, 0.4% and 1.56 % respectively from their September prices.

Figure 1: Benchmark price of Brent, WTI and Dubai crude



Source: WORLD BANK

- Brent crude price averaged $ 40.50 per bbl in October 2020, down by 5. 0 % on a month on month (MoM) and by 32.1 % on year on year (YoY) basis, respectively.
- WTI crude price averaged $ 39.50 per bbl in October 2020, down by 0.4 % on a month on month (MoM) and by 30.3 % on year on year (YoY) basis, respectively.
- Dubai crude price averaged $ 39.70 per bbl in October 2020, down by 4.9 % on a month on month (MoM) and by 33.7 % on year on year (YoY) basis, respectively.

Table 1: Crude oil price in October, 2020

Crude oil	Price ($/bbl) in October 2020	MoM (%) change	YoY (%) change
Brent	40.50	-5.0%	-32.1%
WTI	39.50	-0.4%	-30.3%
Dubai	39.70	-4.9%	-33.7%

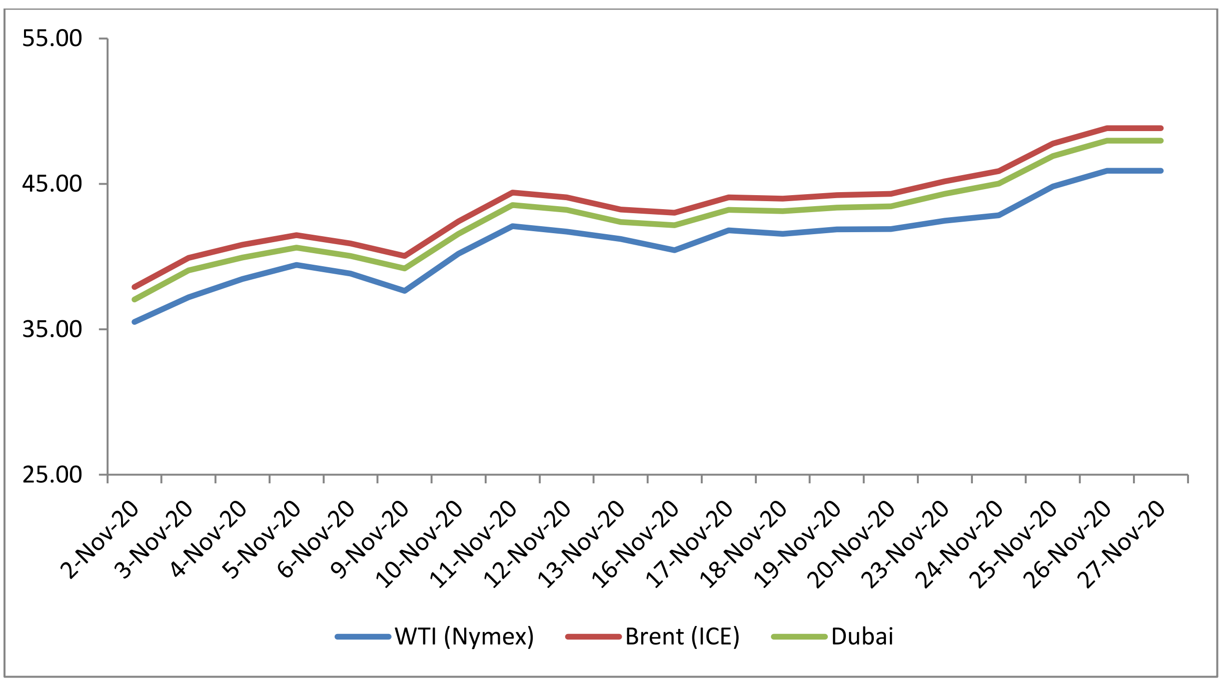
Source: WORLD BANK

Oil Prices rises on the hope of Covid-19 vaccine and strong demand

Crude benchmarks saw a good comeback in the month of the November and countered last month's decline. Driven by strong demand in the Asian market, crude prices went up week over week in the month and Brent price index reached the highest price since March 2020. Boosted by the hope of Covid-19 vaccine, crude benchmarks saw a sustained increase in the second half of the month. In the US, inventory drop pushed the WTI benchmark to 8-month high.

For the month, crude benchmarks went up strongly. Average Brent, WTI and Dubai basket crude prices in November went up by 7.55%, 4.01 % and 8.07 % respectively from their October prices.

Figure 2: Crude oil price in November 2020

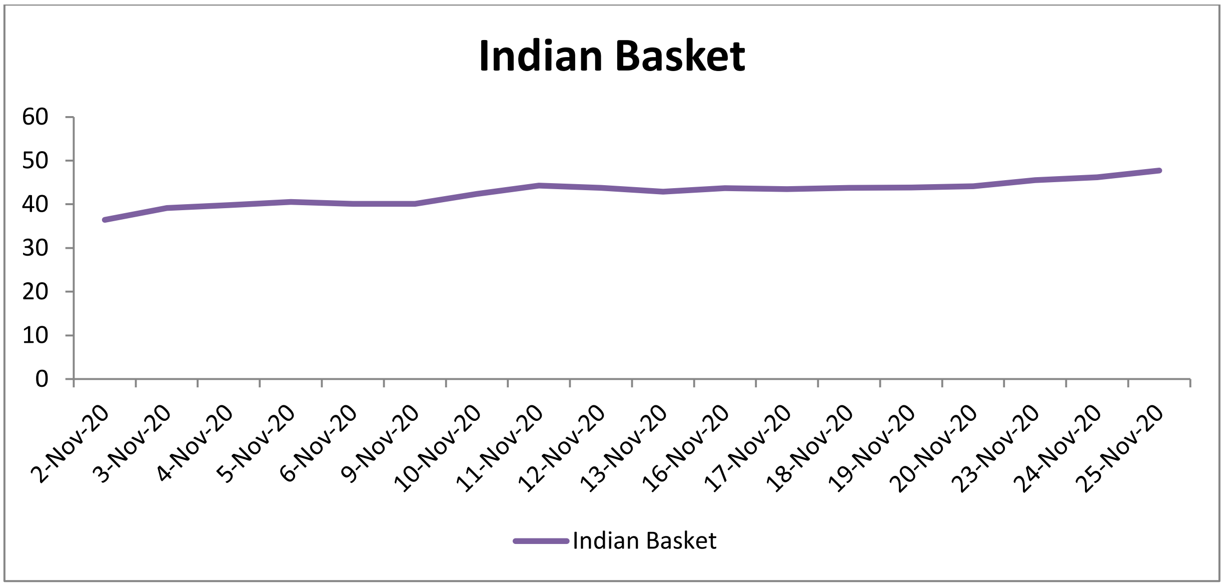


Source: EIA, Oilprice.com, PPAC

Indian Basket Crude oil price

- The Indian basket of Crude Oil represents a derived basket comprising of Sour grade (Oman & Dubai average) and Sweet grade (Brent Dated) of Crude oil processed in Indian refineries in the ratio of 74.77:25.23 during 2017-18.

Figure 3: Indian crude oil basket price in $ per bbl



Source: Petroleum Planning & Analysis Cell

- Indian crude oil benchmark prices increased as the reference crude benchmarks for the month of November went up in the global market.

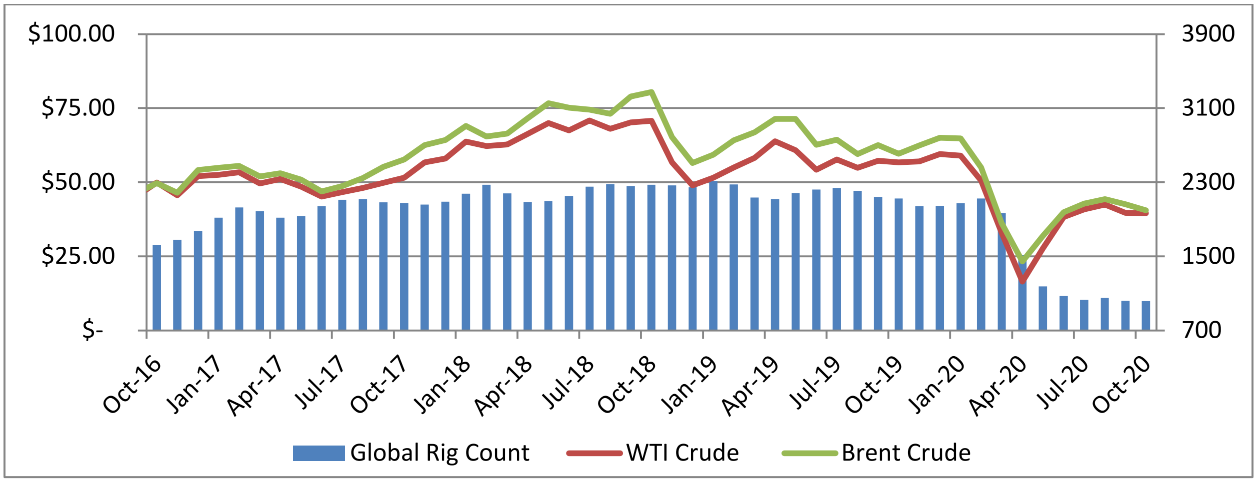
- Indian crude basket price averaged $42.90 per barrel in November, up by 4.34 % on Month on Month (M-o-M) but down by 30.72 % on a year on year (Y-o-Y) basis, respectively.

Upstream activity & Rig count

Global rig count

Rig count represents the total number of active drilling rigs in the world. Demand for drilling rig is highly dependent on crude oil price. When the oil price increases, demand for exploration activity increases, resulting in the increase in rig count. A lower oil price could trim the exploration budget of the oil companies, thereby reducing the demand for drilling rig.

Figure 4 Global Rig Count vs. Crude Prices



Source: Baker Hughes

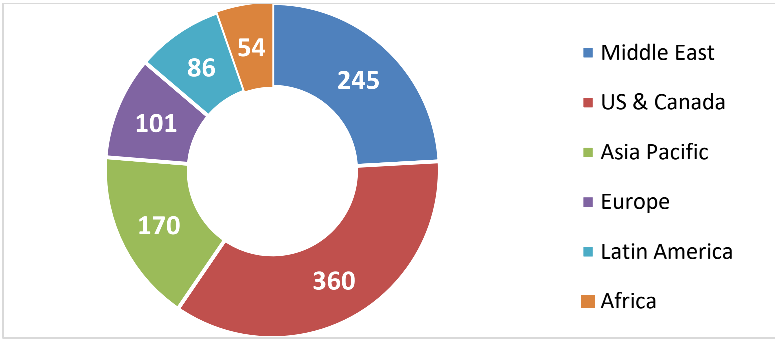
Global rig count for the month of October went down by 3. From September's rig count of 1,019, it declined to 1,013. Cut down of exploration activities led to reduction of rig counts in Middle East, Africa and in Europe. In October, Asia Pacific and Latin America saw a mild increase in rig count while US and Canada saw the biggest jump in rig counts. With oil price rebounding, exploration activities are brought back in a scaled manner. US rig count up by 23 from 257 to reach 280, while rig count in Canada went up by 20 from 60 to reach 80. Onshore rig went down by 20 and offshore rigs went down by 23.

Table 2 : Global Drilling Rig Count

Rig Type	Count in October 2020	MoM (%) change	YoY (%) change
Land	846	2.42%	-54.42%
Offshore	170	-11.92%	-36.33%
Total	1,016	-0.29%	-52.14%

Source: Baker Hughes

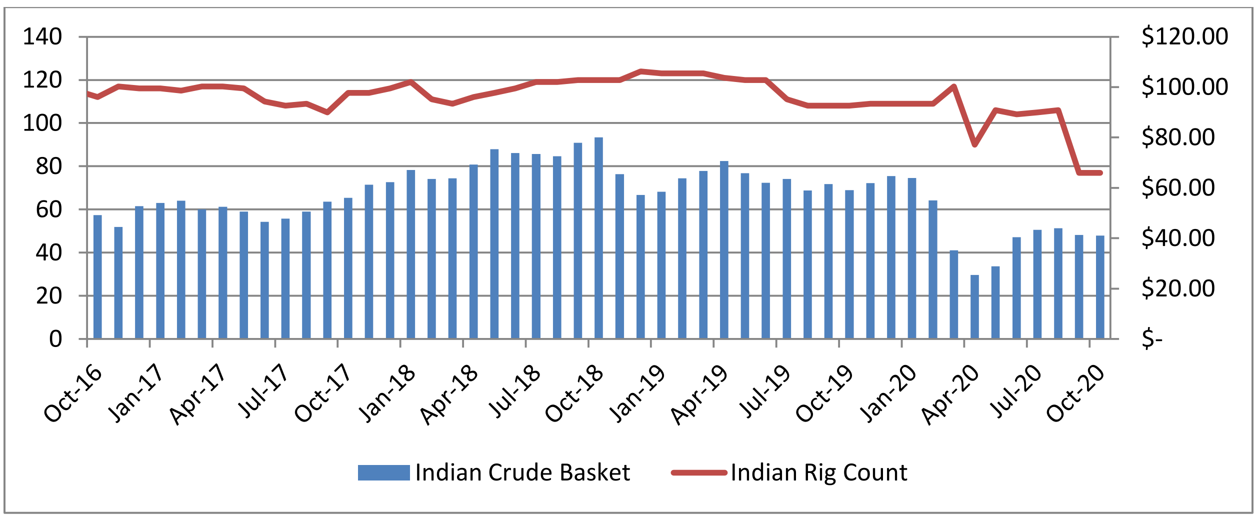
Figure 5 Geography-wise Rig count -October 2020



Source: Baker Hughes

Indian Drilling Rig Count

Figure 6 Indian Rig Count vs. Indian Basket Crude Price



Indian drilling rig count stood unchanged for the month of October 2020. Indian rig count decreased by 28.70% on Y-O-Y basis. 64 were onshore rigs and the rest 13 were offshore rigs.

Table 3 : Indian Rig Count

Rig Type	Count in October 2020	MoM (%) change	YoY (%) change
Land	64	0.0%	-16.88%
Offshore	13	0.0%	-58.06%
Total	77	0.0%	-28.70%

Source: Baker Hughes

Oil demand & supply

Preliminary data indicates that global oil supply in October rose by 0.58 mb/d m-o-m to average 91.17 mb/d and down by 9.25 mb/d Y-o-Y. Non-OPEC supply (including OPEC NGLs) increases in October by 0.25 mb/d m-o-m to average 66.79 mb/d in October 2020. On Y-o-Y basis, it was lower by 4.35 mb/d. The preliminary decrease in production was driven by Canada, the UK and Norway. In October, share of OPEC crude oil in total global production went up by 0.1% to 26.7%.

Estimates are based on preliminary data from direct communication for non-OPEC supply, OPEC NGLs and non-conventional oil, while estimates for OPEC crude production are based on secondary sources.

World oil demand in 2020 is revised lower by 0.3 mb/d with annual decline of 9.8 mb/d. Total global oil demand is now little over 90.0 mb/d. In the OECD, demand forecast was adjusted by a reduction of 0.05 mb/d in 2020. Total decline in the OECD region for 2020 is 5.3 mb/d. With the recent wave of Covid-19 cases in Europe, governments across France, Germany and the UK have introduced curfews and partially shutting down the hospitality services and other services that requires transportation. This was adversely impacted the demand for the year 2020.

In OECD Americas, the downward adjustment was due to lower-than-expected demand in the transportation sector in 3q2020 and expected slower demand recovery in 4Q2020.

In non-OECD, oil demand for 2020 was adjusted with an upward revision by 0.02 mb/d m-o-m due to the positive momentum witnesses in china in 3Q2020. Rebounding economic activity, improving industrial indicators and growth in petrochemical sectors have led to the upward revision of demand. Yearly decline in the non-OECD region stood around 4.5 mb/d. in India and other Asian countries, the demand looks somewhere stabilized.

Total global oil demand is estimated to be 90.01 mb/d in 2020. Oil demand forecast for Q4 2020 was revised down by 1.19 mb/d to reach 93.67 mb/d.

Table 4: World Oil demand in mbpd	2019	1Q2020	2Q2020	3Q2020	4Q2020	2020	Growth	%
Total OECD	**47.75**	**45.44**	**37.59**	**42.87**	**43.86**	**42.44**	**-5.30**	**-11.10**
~ *of which US*	**20.86**	**19.66**	**16.38**	**19.32**	**19.98**	**18.84**	**-2.03**	**-9.71**
Total Non-OECD	**52.02**	**47.27**	**45.02**	**48.12**	**49.81**	**47.57**	**-4.45**	**-8.56**
~ *of which India*	*4.84*	*4.77*	*3.51*	*3.55*	*4.34*	*4.04*	*-0.80*	*-16.53*
~ of which China	13.30	10.70	12.85	12.97	13.58	12.53	-0.77	-5.79
Total world	**99.76**	**92.71**	**82.60**	**90.99**	**93.67**	**90.01**	**-9.75**	**-9.78**

Source: OPEC monthly report, November 2020

*Note: *2019 = Estimate and 2020 Forecast*

Global petroleum product prices

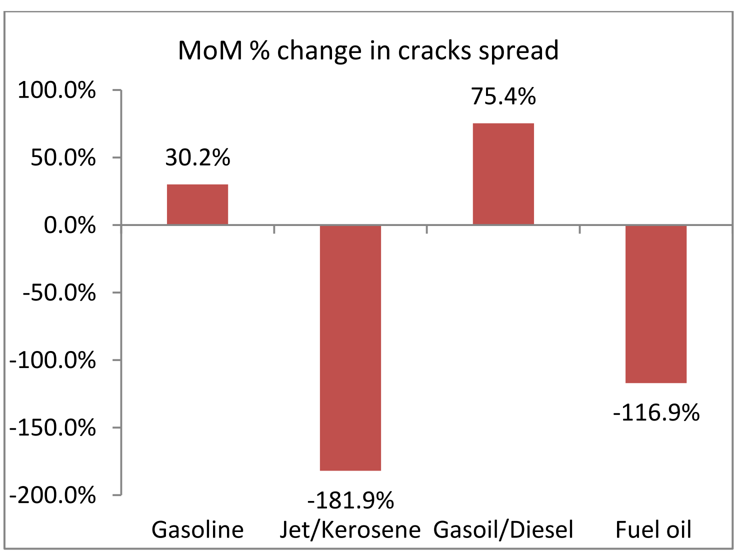
Asia refinery margin strengthened in October, backed by slower growth in gasoil inventory levels amid a pickup in fuel oil demand for heating purpose in Bangladesh and Pakistan. Economically driven cuts in South Korea and positive y-o-y product demand growth in India helped to cut down the product glut and lift gasoil and fuel oil markets. Refinery margins for Oman in Asia gained 51¢ on m-o-m to average $1.16/b in October and were lower by $1.30 on y-o-y basis. Refinery utilization rates in October averaged 84.97 % in selected Asian markets comprising of Japan, China, India and Singapore.

Asian gasoline 92 cracks spreads against Dubai weakened as strong regional supplies countered the demand recovery in the region Weakness of gasoil in Malaysia, Thailand, and Indonesia countered the strong rebound from China and India. Singapore Gasoline cracks averaged minus $4.09/b against Oman in October, down by 12 ¢ m-o-m and by $4.49 y-o-y.

Jet/kerosene cracks spread against the Oman were boosted by robust kerosene demand from Japan for heating. The Singapore jet/kerosene crack spread against Oman averaged 95 ¢ /b, up by $3.03 m-o-m but down by $14.97 y-o-y.

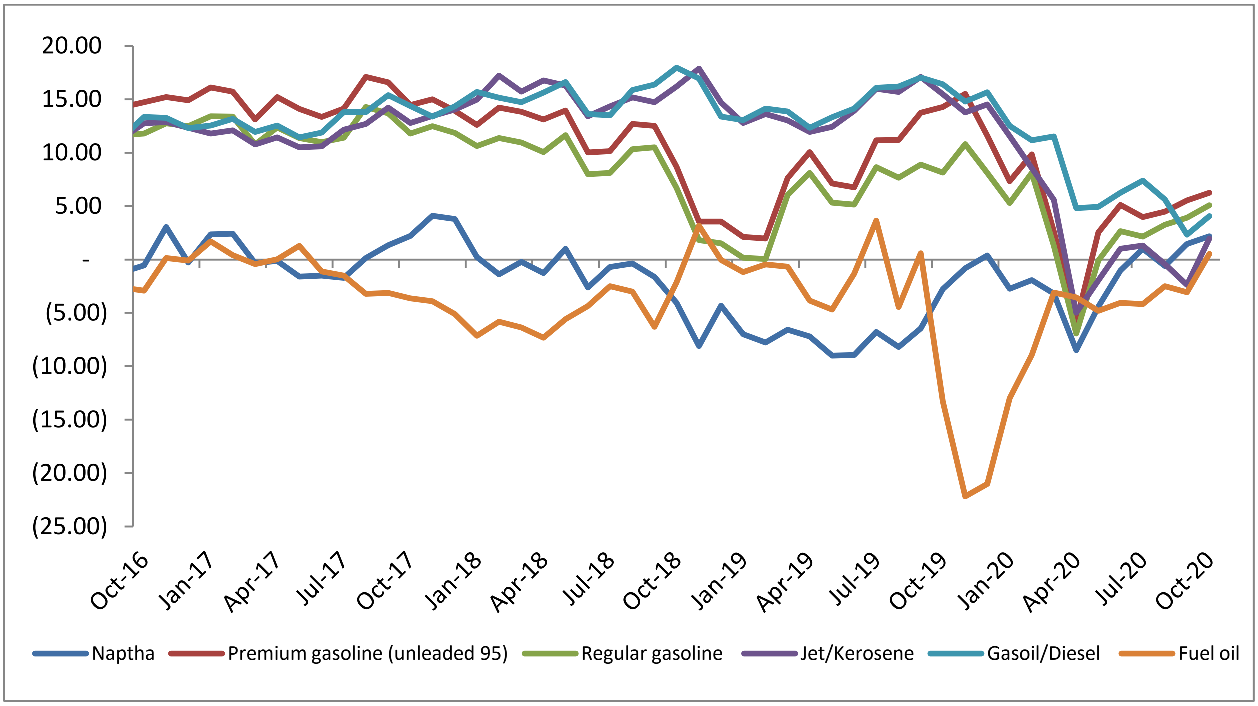
The Singapore gasoil crack spread strengthened in the month of October supported by strong consumption recovery in India despite strong supplies from China. Singapore gasoil crack spread against Oman averaged $2.73/b, up by 88 ¢ m-o-m but down by $14.11 y-o-y.

The Singapore fuel oil crack spread strengthened in October on lower refinery runs and limited supply. Weak demand and tight supplies lead to the volatility in the region. Most refiners in the Asian region set to maintain lower LSFO rates in November. Singapore fuel oil cracks against Oman averaged minus $1.80/b, up by $1.67 m-o-m and by $11.41 y-o-y.



Source: OPEC Monthly Report

Figure 7: Product crack spreads vs. Dubai crude



Source: OPEC, FIPI

Table 5: Singapore FOB, refined product prices ($/bbl)

Products	Price ($/b) in October 2020	MoM (%) change	YoY (%) change
Naptha	**41.88**	-3.0%	-26.7%
Premium gasoline (unleaded 95)	**45.96**	-2.8%	-38.1%
Regular gasoline (unleaded 92)	**44.79**	-1.9%	-34.2%
Jet/Kerosene	**41.65**	5.8%	-44.8%
Gasoil/Diesel (50 ppm)	**43.77**	-0.7%	-42.6%
Fuel oil (180 cst 2.0% S)	**40.22**	4.0%	-13.7%
Fuel oil (380 cst 3.5% S)	**38.9**	2.4%	-15.9%

Source: OPEC

Petroleum products consumption in India

- In October 2020, demand for petroleum products saw a significant growth and stood at 8 month high.
- Overall petroleum products consumption went up by 14.1 % as most economic activities have recovered to pre-covid levels.
- On yearly basis, petroleum product consumption was up by 2.1%.
- Petrol consumption was up by 8.3 % as more vehicles were back to road. With economy fully opened, transportation sector saw a strong recovery.
- Diesel consumption went up by 27.4% as need for transportation went up due to the increased economic activity and industrial productivity.
- ATF consumption went by 13.1% as government permitted airlines to increase their operational level.
- LPG consumption went by up 6.9% as the festive seasons led to increase in demand for cooking fuel.
- Except for lubricants and greases, all other petroleum products saw an increase in demand during the month of October.

Table 6: Petroleum products consumption in India, October 2020

Petroleum products	Consumption in '000 MT October 2020	MoM (%) change	YoY (%) change
LPG	2,422	6.9%	2.6%
Naphtha	1,299	14.1%	17.2%
MS	2,654	8.3%	4.5%
ATF	355	13.1%	-49.8%
HSD	6,994	27.4%	7.5%
LDO	69	5.2%	43.0%
Lubricants & Greases	316	-8.7%	6.0%
FO & LSHS	532	8.5%	13.1%
Bitumen	662	49.3%	58.5%
Petroleum coke	1,394	3.5%	-22.2%
Others	941	-0.8%	-4.8%
TOTAL	17,777	14.9%	2.1%

Source: PPAC

Natural Gas Market

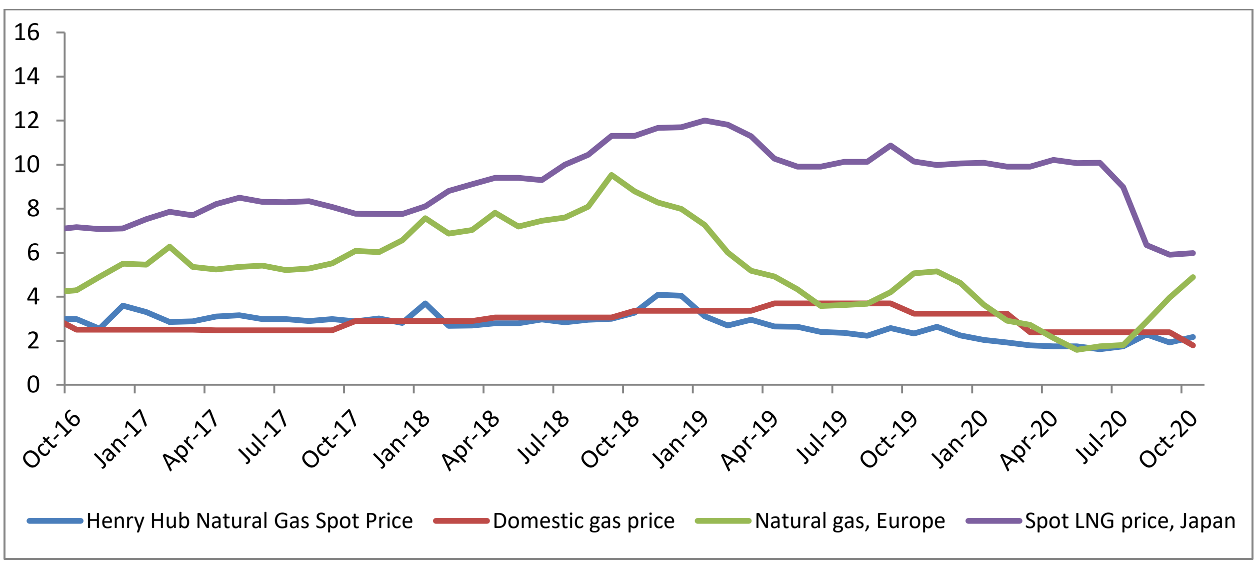
Natural Gas Price

Natural gas prices across all major gas hubs went up in the month of October. Natural gas price in the Henry hub went up by 13 % to reach $2.17/MMBtu in the month of October and compensated the decline in September. Rising domestic demand for the natural gas for domestic heating purpose and increase in export of LNG to the markets facing winter pushed the gas rice upwards. Natural gas price is expected to go beyond $ 3.50/MMBtu as the demand forecast stays higher.

Natural gas prices in Europe rallied up for the third straight month in October. Natural gas price in went up by 23.8% in the month of October posting a significant increase in last three months. Restricting of gas inflow into the region has helped the natural gas to gain. October gas price in Europe stood at $ 4.89/MMBtu.

Asian spot LNG prices went up by 9% in the month of October. Geared by the stronger demand for LNG in China and South Korea, the price went up. Average LNG price for December delivery stood around $ 7.50/MMBtu. With increase in using LNG as shipping fuel, it has further boosted the Asian spot LNG benchmark. Japan LNG benchmark went up by 1.5%, as the demand is likely to soar with the onset of winter.

Figure 8: Global natural gas price trends



Source: EIA, WORLD BANK

Table 7: Gas price

Natural Gas	Price ($/MMBTU) in October 2020	MoM (%) change	YoY (%) change
India, Domestic gas price (Apr 20)	1.79	-25.1%	-44.6%
India, Gas price ceiling – difficult areas (Apr 20)	4.06	-27.62%	-51.8%
Henry Hub	2.17	13.0%	-6.9%
Natural Gas, Europe	4.89	23.8%	-3.4%
Liquefied Natural Gas, Japan	5.98	1.4%	-41.0%

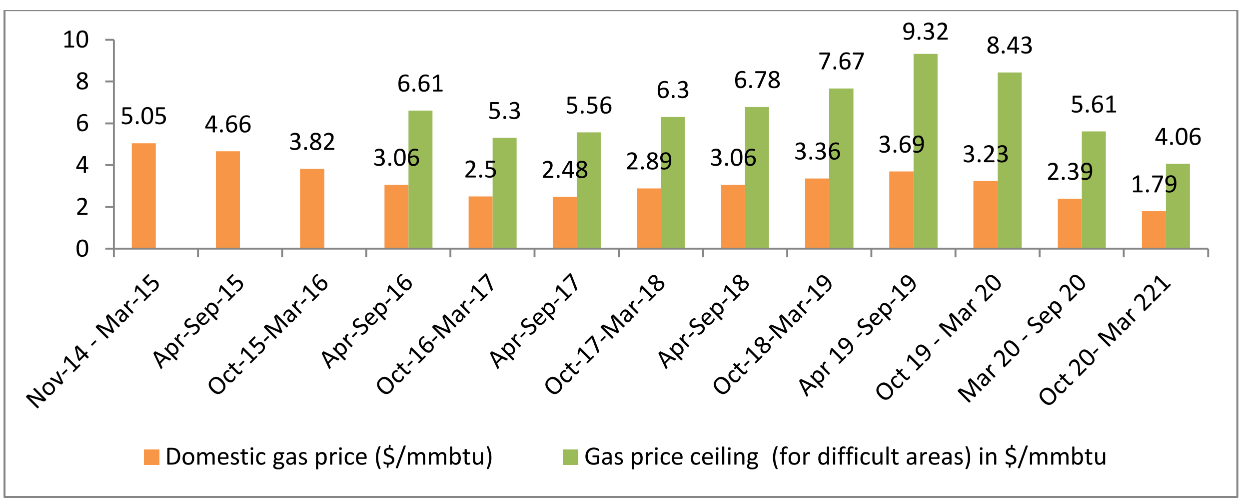
Source: EIA, PPAC, World Bank

Indian Gas Market

Domestic natural gas price which takes into account international benchmarks including Henry Hub, Alberta hub, Russia and UK National Balancing Point. With global gas price declining, India's latest gas price revision saw significant decline, thus capturing the international gas price trends. Domestic gas price for October 2020 to March 2021 is $1.79 per MMBTU and it is down by 25.10 % as compared to last revision and down by 44.58 % on Y-o-Y basis.

A notification was issued by MoP&NG on 21st March 2016, for marketing including pricing freedom for gas to be produced from discoveries in deep water, ultra-deep water, and high-pressure high temperature areas. For the October 2020 to March 2021 period, the price of gas from such areas has been notified at $4.06 per MMBTU, 27.62 % down from last revision and 51.8% down from last year.

Figure 9: Domestic natural gas price



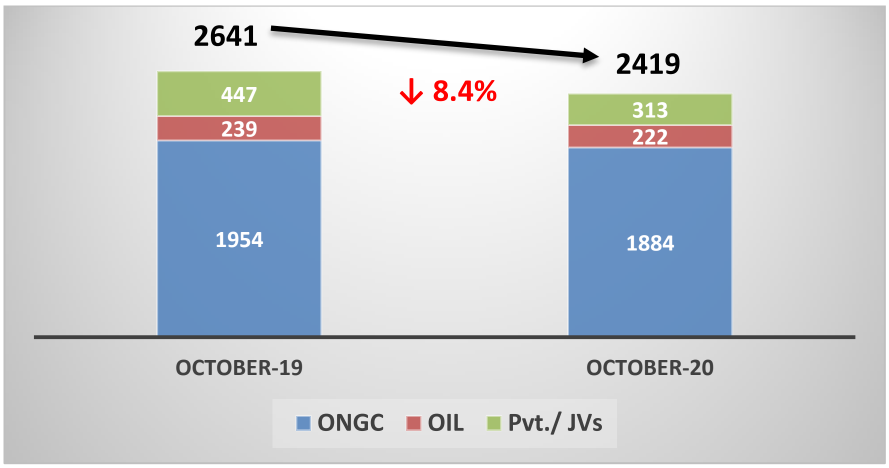
Source: PPAC

Monthly Report on Natural gas production, imports and consumption – October 2020

1. Domestic Natural Gas Gross Production:

Domestic natural gas gross production for the month of October 2020 was 2419 MMSCM (decrease of 8.4% over the corresponding month of the previous year 2641 MMSCM)

Figure 10: Domestic natural gas Gross production (Qty in MMSCM)

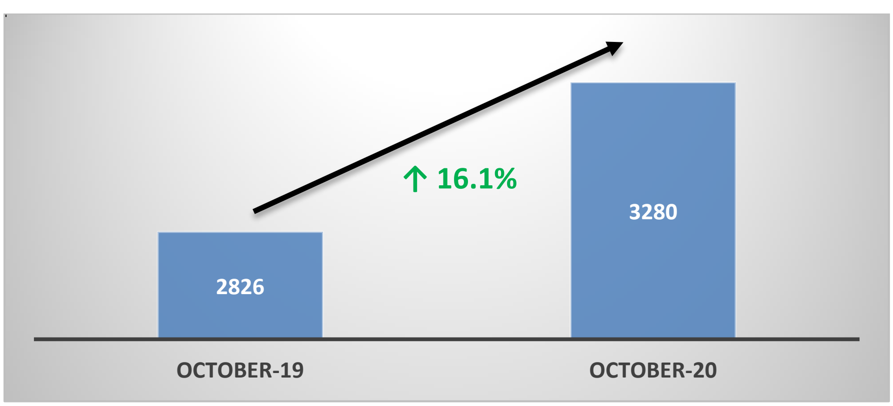


Source: PPAC

2. LNG imports:

Total imports of LNG (provisional) during the month of October 2020 were 3280 MMSCM (increase of 16.1% over the corresponding month of the previous year 2826 MMSCM).

Figure 11: LNG imports (Qty in MMSCM)

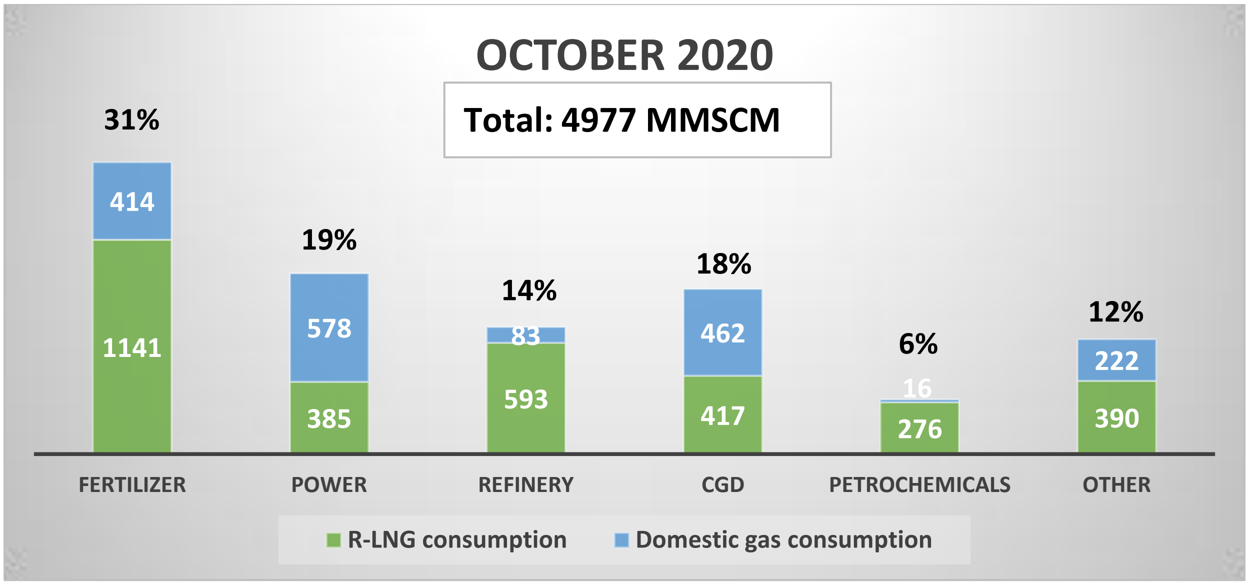


Source: PPAC

3. Sectoral Consumption of Natural Gas:

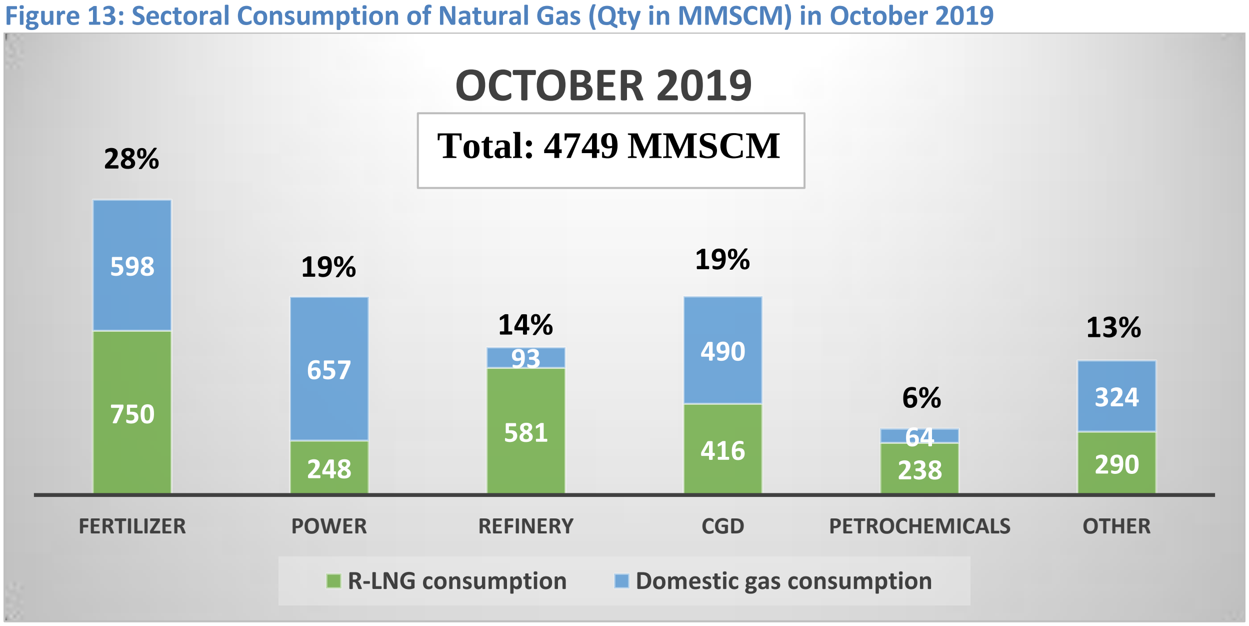
Total consumption of natural gas during October 2020 was 4977 MMSCM (increase of 4.6% over the corresponding month of the previous year 4749 MMSCM). Major consumers were Fertilizer (31%), Power (19%), City Gas Distribution (CGD) (18%), refinery (14%), and petrochemicals (6%).

Figure 12: Sectoral Consumption of Natural Gas (Qty in MMSCM) in October 2020



Source: PPAC

Figure 13: Sectoral Consumption of Natural Gas (Qty in MMSCM) in October 2019



Source: PPAC

Key developments in Oil & Gas sector during November 2020

- **Monthly Production Report for October,2020**

Crude oil production during October,2020 was2567.70 TMT which is7.10% lower than target and6.24% lower when compared with October2019.Cumulative crude oil production during April-October, 2020 was 17940.49 TMT which is 5.0% and 6.12% lower than target for the period and production during corresponding period of last year respectively.

Natural gas production during October, 2020 was 2418.88MMSCM which is 18.20% lower than the monthly target and 8.41% lower when compared with October, 2019. Cumulative natural gas production during April-October, 2020 was 16372.77MMSCM which is 13.90% and 12.19% lower than target for the period and production during corresponding period of last year respectively.

Crude Oil Processed during October, 2020 was 18389.27TMT which is 15.26% lower than the target for the month and16.13% lower, when compared with October, 2019. Cumulative crude throughput during April-October, 2020 was 118555.33 TMT which is 18.41% and 19.71% lower than target for the period and crude throughput during corresponding period of last year respectively.

- **Shri Dharmendra Pradhan calls for launching a campaign for making users aware about the benefits of LNG as fuel**

Union minister of Petroleum and Natural Gas & Steel Shri Dharmendra Pradhan has called upon the various stakeholders in the LNG sector to mount a campaign to make people/users aware about the benefits of this fuel. Addressing a webinar on "LNG as a Transport Fuel" here today, he said that LNG is a fuel of the future, and its cost benefit and other advantages over other fuels must be communicated in an aggressive and specific manner. He said that less cost of the LNG will attract the bulk and large consumers, if the message reaches them properly.

Shri Pradhan said that there is abundant availability of the LNG commodity and the Government is providing all facilities for its growth. He said that the opportunity of promoting LNG as the preferred fuel should be harnessed at the earliest. The environmental dividend, economic dividend and Convenience aspect, associated with the usage of LNG, should be highlighted.

The minister said that the Government, in its focus on moving the country towards the gas-based economy, is making huge investments in the gas infrastructure- terminals, pipelines, Stations, and CGD network, and LNG is integral part of this focus. "We are focused on realizing Prime Minister Shri Narendra Modi's vision of transforming India into gas-based economy and are extending every support required to aid this transition."

The Minister exhorted the industry to come out of the subsidy-based model, and focus on LNG's commercial viability, by going in for scale of operation. On the issue of bringing LNG within the ambit of

GST, the Minister said that it is a genuine demand, and a consensus is likely to develop on this soon. He asked the industry to probe and identify sector specific requirements of LNG for expansion of LNG markets in India. This will create a win-win situation for fleet owners, vehicle manufacturers & stakeholders in the gas value chain and also ensure a better environment, he added.

The Webinar was also addressed by the Secretary, Ministry of Petroleum and Natural Gas Shri Tarun Kapoor. He said that the scenario world over regarding use of LNG has undergone massive change, as the fuel being under high pressure and low temperature, can be transported over a long distance, thereby eliminating the need of laying pipelines. Officers from GAIL, Controller of Explosives, and senior functionaries of SIAM, automobile companies and other stakeholders also shared their views during the webinar.

- **Petroleum Minister lays foundation stone for the first 50 LNG fueling stations, says 1000 LNG stations will be set up in next three years**

Shri Dharmendra Pradhan, Minister of Petroleum & Natural Gas and Steel today laid the foundation stone for the first 50 LNG fueling stations, across the golden quadrilateral and major National Highways. This is part of a slew of initiatives of the Ministry of Petroleum and Natural Gas in realizing Hon'ble Prime Minister Shri Narendra Modi's vision of transforming India into a Gas based economy. Government has identified LNG as a transport fuel as a priority area considering the potential of manifold benefits in terms of reducing vehicular pollution, saving in terms of import bill of the country and wide-ranging benefits that may accrue to fleet operators, vehicle manufacturers and other entities in the gas sector.

Speaking on the occasion, Shri Pradhan said that a well-thought strategy is being implemented to take the country towards the gas-based economy. In this regard, gas infrastructure is being set up, in terms of laying of pipelines, setting up of terminals, enhancing gas production, introduction of simple and rational tax structure. He said that LNG is going to be the fuel of the future for transport, and in this regard, retro-fitting of the vehicles as well as development by Original equipment manufacturers is being undertaken. The Minister said that the LNG is not only almost 40% cheaper than diesel but also causes very less pollution. He said that the Government will set up LNG stations at the distance of 200-300 km on golden quadrilateral, and within 3 years, we will have 1000 LNG stations on all major roads, industrial hubs and mining areas. He expressed confidence that 10% of the trucks will adopt LNG as fuel.

Shri Pradhan said that the government is working to meet the commitment made by the Hon'ble Prime Minister in COP-21 to reduce pollution. He said that the government provided 8 crore poor households with LPG connections under PMUY, and during the pandemic, 14 crore free cylinders have been distributed to help support PMUY beneficiaries. The Minister said that clean and affordable fuel has become an instrument of welfare of people. He said that the Government will continue to promote CNG vehicles, Electric vehicles, Auto-LPG, but at the same time, LNG as long-haul fuel will be pushed. 20-25 MMSCMD equivalent LNG will come to the country, and cheaper LNG is likely to be available in the global market. He said that increased LNG consumption in the country will reduce the country's dependence on crude oil.

The Secretary, Ministry of Petroleum and Natural Gas Shri Tarun Kapoor said that the Government is making a long-term plan to promote LNG. The first trial of the fuel was started in 2015, and it is now ready to take off on the commercial scale. He expressed confidence that LNG's use will increase and adopted for long haul trucks and buses.

These fifty LNG stations will be set up and commissioned in partnership by country's Oil & Gas majors such as IOCL, BPCL, HPCL, GAIL, PLL, Gujarat Gas and their Joint Venture Companies and subsidiaries. Out of these 50 LNG stations, IOCL will set up 20 LNG Station, while BPCL and HPCL will set up 11 each LNG station. These 50 LNG stations are being put up at the nation's Golden quadrilateral and major National highways where LNG is to be made available for heavy vehicles and buses.

Natural Gas, being an environment friendly clean fossil fuel, has potential to play a significant role in providing solutions to the environmental challenges as well as ever growing energy needs in a sustainable manner. Accordingly, Government of India has focused to promote the usage of natural gas as a fuel/feedstock across the country to increase the share of natural gas in primary energy mix from current level of 6.3 % to 15% by 2030.

LNG use in trucks can reduce SOx emissions by 100% and NOx emissions by 85% thus befitting society at large. Further, Heavy Duty vehicle segment is expected to grow significantly with increased highway development which is on-going across the country. LNG based truck operators can look forward to saving around Rs 2 Lakh per annum per truck which will result in higher upfront cost of LNG trucks being paid back in around 3 – 4 years. LNG as heavy vehicle fuel segment can also provide around 20-25 MMSCMD of new gas demand by 2035, and will be an important contribution towards our vision of 15% share of Natural Gas in India's energy mix.

- **Rs. 2 lakh crore to be invested for setting up 5000 Compressed bio-gas in the country, says Petroleum Minister at MoU signing event for setting up 900 CBG plants**

To boost availability of affordable and clean transport fuels, a MoU was signed today between MoPNG and leading oil & gas marketing companies & technology providers to establish Compressed Bio-Gas CBG) plants across India under the Sustainable Alternative Towards Affordable Transportation (SATAT) initiative, in the presence of Union Minister of petroleum and Natural Gas & Steel Shri Dharmendra Pradhan. MoUs were signed with energy companies viz. JBM Group, Adani Gas, Torrent Gas and Petronet LNG for setting up of Compressed Bio-Gas (CBG) plants, and with technology providers in CBG sectors Indian Oil, Praj Industries, CEID Consultants & Bharat Biogas Energy for facilitating availability of technology for the projects.

Government of India, under the SATAT initiatives envisages setting up of 5000 CBG plants by 2023-24 with production target of 15 MMT, facilitating the creation of new employment opportunities and enhancing farmers' income towards further invigorating the rural economy.

Speaking about SATAT, Shri Pradhan said, "We have developed a clear-cut roadmap for SATAT. I am glad to note that Indian industry players have shown immense interest in SATAT. Letter of intent for 600 CBG plants have already been given and with today's signing of MoUs for 900 plants, a total of 1500 CBG plants are at various stages of execution. Rs 30,000 Cr of investment is envisaged in these 900 plants. A total of 5000 CBG plants with approximate investment of Rs. 2 lakh crores are envisaged. Biofuels have the potential to reduce our fuel import bill by Rs. 1 lakh crore."

Elucidating the benefits of SATAT, Minister Pradhan said, "Benefits out of the SATAT will go to our farmers, rural areas and tribals. With inclusion of forest waste, Agri-waste, animal husbandry waste and marine waste, SATAT involves a multi-pronged approach. With liberalized policy regime ensuring ease of doing business for entrepreneurs, off-take guarantee, financing and technology support, SATAT is all set to contribute towards doubling farmer's income, generating employment for the youth and ensuring clean energy for sustainable development.

The Minister also thanked the Reserve Bank of India for including CBG in priority sector lending framework.

SATAT (Sustainable Alternative Towards Affordable Transportation) initiative for boosting production and availability of CBG as an alternative and affordable clean fuel for transportation sector was launched by Government of India on 1.10.2018. The scheme envisages setting up of 5000 CBG plants by FY 2023-24. Signing of the MoUs will give a big fillip to the clean energy initiative of the Government.

Over the last two years, SATAT has grown into one of flagship programs of MoPNG. SATAT will establish an ecosystem for the production of Compressed Bio Gas from various waste and biomass sources in the country leading to multiple benefits viz. reduction of natural gas import, reduction of GHG emission, reduction in burning of agriculture residues, remunerative income to farmers, employment generation, effective waste management etc. The initiative is in line with the goals of Aatma Nirbhar Bharat, Swachh Bharat Mission and boosting MSME sector.

MOU Signing ceremony marks MoPNG's commitment towards SATAT and the increased participation of the private sector would help the nation in achieving indigenous and sustainable production of clean fuel. SATAT initiative is also an important step towards fulfilment of India's COP-21 commitments for carbon emission reduction. Shri Pradhan, in his address, affirmed that completion of 5000 CBG plants will facilitate in lowering greenhouse gas emissions, remunerating farmers for agricultural residues and reducing natural gas imports, in line with the Aatmanirbhar Bharat and Swacch Bharat missions.

- **Contract signing ceremony held for E&P blocks awarded under OALP bid round-V**

Minister of Petroleum and Natural Gas & Steel Shri Dharmendra Pradhan today said that Open Acreage Licensing Policy (OALP) is a market friendly policy which is driving self-reliance in energy sector. He was speaking at the signing of contracts for 11 oil and gas blocks offered under the OALP Bid Round-V.

Shri Pradhan said that successful roll-out of the HELP regime, followed by OALP Bid Rounds, has led to increase in exploration acreages in India. The exploration acreage which stood at about 80,000 sq. km. from earlier regimes now stands at approx. 2,37,000 sq. km., post the award of blocks under OALP Round-V.

Calling it a transformative policy, the Minister said that the OALP has removed red-tapism and brought in a quantum jump in Exploration & Production sector. He called for moving away from business-as-usual approach and strive for exponential growth and speed, asking the winners to bring in new technology and new business models, so as to expedite the production of oil and natural gas from these areas.

Speaking about technology, Minister Pradhan said that greater digitization and data mapping tools have aided in fundamentally transforming the E&P landscape and called for greater infusion of technology and state-of-the-art data management systems.

Shri Pradhan offered all support to the OLAP winners in carrying out their activities by facilitating the relevant approvals from the Central Ministries and also the State Governments. Shri Pradhan said that the winners should farm out these areas so as to bring in international players into the exploration activities and run the business in a professional manner. Shri Pradhan also suggested that an independent body should be set up for data gathering and data management so that all the bidders have access to the relevant information for making an informed investment decision.

A total of 11 blocks in 8 sedimentary basins covering a total acreage of 19,789.04 sq km has been awarded under OALP Bid Round 5, with Rs. 465 crore of immediate exploration work commitment. ONGC has been awarded 7 blocks where 4 blocks went to Oil India Limited (OIL).

- **PNGRB has notified the unified pipeline tariff structure**

Petroleum and Natural Gas Regulatory Board (PNGRB) recently released a unified tariff structure for more than a dozen pipelines in a bid to boost gas consumption in the country. The new structure puts a fixed tariff for the first 300 km from the source of gas and another tariff for beyond on the same integrated pipeline network.

The new tariff structure would help create a single gas market in the country by attracting investment to complete the gas grid and make it more easily accessible. This is part of the government's plan to raise the share of gas in India's energy mix to 15 per cent by 2030 from the current level of about 6.3 per cent to cut its carbon footprint.

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