

## ECONOMY

**Q. The Minimum Support Price (MSP) scheme protects farmers from the price fluctuations and market imperfections. In the light of the given statement, critically analyse the efficacy of the MSP.**

Approach

Introduce by defining Minimum Support price (MSP).

Discuss the advantages of MSP scheme.

Analyse the constraints or issues with the MSP system.

Conclude with a way forward.

Introduction

The minimum support price (MSP) is an agricultural product price set by the Government to purchase directly from the farmer.

Reason behind the idea of MSP is to counter price volatility of agricultural commodities due to the factors like variation in their supply, lack of market integration and information asymmetry.

Body

Advantages of MSP

Food security: It ensures adequate food grain production in the country and hence, maintaining the food security.

Price fluctuations: It protects the farmers from any sharp fluctuations in price. MSP is announced before the sowing season so that the farmers can make an informed decision.

Increase in farmer's income: MSP increases the farmers' income and when they have more disposable income in hand, they can invest in new technology.

It also helps in achieving the Government's goal of doubling farmers income by the year 2022.

Surety for farmers: The policy of Minimum Support Price acts as a surety for farmers that their produce will get a fair amount and hence encourages them.

Constraints in MSP

In the process of selling at the MSP, the farmers faced various constraints which need to be done away with for smooth functioning of the system and to protect the interest of the farmers.

**Stagnant rates of MSP:** The Minimum Support Price, though announced every year, does not increase in proportion to the increase in cost of production.

**Lack of awareness:** A lot of illiterate farmers who do not have adequate knowledge about the Minimum Support Price end up being exploited by middlemen.

**Unequal access:** Not all farmers have equal access to the benefits given by the government through MSP. Several regions in the country do not have effective implementation of the scheme.

**Killing of competition:** Government interference in the market is seen as killing of the competition which disturbs the working of open markets.

**Issues in WTO:** The Minimum Support Price scheme by Indian government has been criticised by various countries at the WTO on the grounds of being highly trade-distorting by its method of calculation.

**Rising government expenses:** MSP has raised the maintenance cost of procuring food grains by the government. Rising transportation and storage costs of the FCI are other contributing factors in this increase. This rising cost affects the investment in the other sectors like agri-infrastructure.

**Way forward:** In order to improve the MSP procurement system and make it more effective, the following recommendations are offered:

First and foremost the awareness among the farmers needs to be increased and the information disseminated at the lowest level so that the knowledge would increase the bargaining power of the farmers.

The basic source of livelihood for the farmers is farming and the delay in payment has a negative effect. The delay in payment needs to be corrected and immediate payment should be ensured. For sustainability of farming prompt payment at remunerative rates should be made.

It has been found that MSP rates are announced after the sowing season begins or at the time when the farmers have already initiated the necessary preparation for sowing a particular crop. Rather, as intended by the policy makers, MSP should be announced well in advance of the sowing season so as to enable the farmers to plan their cropping.

The farmers should receive their MSP rate in case on the spot the same day, so that they will be encouraged to improve their production and create more marketable surplus.

#### Conclusion

The Minimum Support Price is an important policy of the Government to determine the floor price of major agricultural produce every year for protecting the farmers from fluctuating market conditions.

Hence, the policy of Minimum Support Price should continue as it insulates the farmers from unfavorable market conditions by assuring them a minimum return for their produce.

Q. "Financial inclusion is an essential tool in pursuit of social justice". In light of the given statement, examine the role of digital technology in furthering the cause of financial inclusion.

#### Approach

Write a few introductory lines on financial inclusion and social justice.

Explain the role of digital technology in achieving financial inclusion.

Mention the associated challenges.

Conclude by Suggesting a way forward.

#### Introduction

Financial inclusion may be defined as the process of ensuring access to financial services and timely and adequate credit where needed by vulnerable groups such as weaker sections and low income groups at an affordable cost.

Social justice is a political philosophical concept centered around equality among people along various social dimensions.

In economic terms, social justice efforts usually seek to elevate the economic status of poor and marginal groups.

In India, financial inclusion is a critical part of the development process to achieve social justice. The state of financial inclusion has improved considerably over time. However, the financial inclusion hasn't reached the poorest of the poor.

#### Body

Digital technology is playing a big role in bringing financial inclusion in India:

Ease of operation: Digital technology has made financial inclusion easier for the poor daily wage labourers. They need not stand in long queues and miss their daily wage. Along with that transactions can now be made with a click of a button making it easier to operate for everyone.

Better governance and policy implementation: Digitalisation and financial inclusion has led to the beneficiaries getting allowances directly in their accounts and hence elimination the middle men, who were highly corrupt in their practices.

Increased tax base: While Banking has now taken to digital platforms and more and more people using the cashless transactions, escaping taxes had become nearly impossible.

#### Integration of Financial Services

The convergence of JAM trinity with the Direct Benefit Transfer (DBT) scheme has largely been successful.

Due to this, there has been a significant improvement in terms of targeted and accurate payments.

It has also helped in weeding out duplication of entries, and bringing down the reliance on cash mode of payments.

### Challenges

#### Non-Universal Access to Bank Accounts

Bank accounts are a gateway to all financial services. But, according to a report by the World Bank, about 190 million adults in India do not have a bank account, making India the world's second largest nation in terms of unbanked population after China.

#### Digital Divide

The most common barriers to the adoption of digital technology which may promote financial inclusion are non-availability of suitable financial products and lack of skills among the stakeholders to use digital services.

#### Infrastructural issues

Low-income consumers who are not able to afford the technology required to access digital services

#### Informal and Cash-Dominated Economy

India is the heavily dominated cash economy, this poses a challenge for digital payment adoption.

The combination of a huge informal sector along with a high dependence on cash mode of transaction poses an impediment to digital financial inclusion

#### Way forward

##### Leveraging JAM Trinity:

Technology should be used to improve the assessment of credit-worthiness for households and informal businesses.

With the adoption of appropriate technology a new data-sharing framework (using Jan Dhan and Aadhaar platforms), to enable easier access to credit, with adequate safeguards for maintaining data privacy.

##### Need For Data Protection Regime:

In addition to greater digitization, there is also a need to strengthen cyber security and data protection regime in the country.

##### Leveraging Differentiated Banks:

Differentiated Banks like Payment banks and small finance banks can be leveraged to scale up payments systems in underserved areas.

##### Promoting USSD for Rural Areas:

Payments through the USSD channel should be promoted, as they have an advantage over the internet in that it can also cover a large proportion of non-smartphone users.

In India, USSD can be particularly useful in rural areas where some segments still do not have reliable access to the internet.

#### Conclusion

For the success of financial inclusion in India, there has to be a multidimensional approach through which existing digital platforms, infrastructure, human resources, and policy frameworks are strengthened and new technological innovations should be promoted.

With the help of Digital technology, financial inclusion has the potential to amplify the benefits of economic growth to the poor.

**Q. Covid-19 crisis is an opportunity to pursue the goal of a self-reliant India. In the light of the statement, discuss how can India succeed in attracting manufacturing firms and jobs from China?**

#### Approach

Briefly explain the opportunity for India to pursue its goal of self-reliance and attract manufacturing companies especially after-effects of Covid-19 pandemic.

Discuss India's position in the manufacturing world and the issues with India's manufacturing sector.

Give a way forward to overcome these issues.

Conclude suitably on a positive note.

#### Introduction

In the aftermath of the pandemic, several manufacturing companies operating from China are planning to relocate their businesses to other destinations, including India.

Many American, Japanese, and South Korean companies based in China have initiated discussions with the Indian government to relocate their plants to India.

#### Body

India has an opportunity to become self-reliant and attract manufacturing businesses which are moving out of China due to following main reasons.

**Supply Chain Disruptions:** There is a realisation that relying heavily on China for building capacities and sourcing manufacturing goods is not an ideal business strategy due to supply chain disruptions in the country caused by Covid-19.

**Chinese Dominance Over Essential Goods:** There is a fear of Chinese dominance over the supply of essential industrial goods. This is an alarming situation for any country and its industry as this puts their independence and autonomy in peril.

**Trade War:** The growing risk and uncertainty involved in operating from or dealing with China in the light of geopolitical and trade conflicts between China and other countries, particularly the U.S. has further eroded Chinese potential.

#### India's Present Position

India lags far behind China in manufacturing prowess. China ranks first in contribution to world manufacturing output, while India ranks sixth.

Against India's target of pulling up the share of manufacturing in Gross Domestic Product (GDP) to 25% by 2022, its share stood at 15% in 2018, only half of China's figure.

Industry value added grew at an average annual rate of 10.68% since China opened up its economy in 1978. In contrast, against the target of 12%, the manufacturing sector has grown at 7% after India opened up its economy.

#### Issues With Indian Manufacturing Industries

**Stringent Labor Laws:** The labour laws in India are extremely complicated. e.g, Industrial Disputes Act-1947 provides that if you are a manufacturing firm with 100 workers or more, you cannot dismiss any of them under any circumstances unless you get prior approval from the government which is rarely given.

**Inadequate Skilled Workforce:** The manufacturing sector, for it to grow, requires an educated workforce with the necessary skills and training. India's skill ecosystem needs to be fixed.

**Basic Infrastructure:** Roads, connectivity and transportation are slow and costly when compared to developed nations which is a huge deterrence to Industries. An uninterrupted power supply is another challenge.

**Small Size:** Small enterprises, because of their smaller size, suffer from low productivity, preventing them from achieving economies of scale.

**Low Spending On R&D:** Currently, India spends about 0.7% of GDP on research and development, a considerably small amount when compared with other developed nations. This prevents the sector to evolve, innovate and grow.

#### Way Forward

**Reforming Labor Laws:** Reforming of the existing labour laws must be prioritised to make them simplified and flexible. They must be reformed in a way that will promote investment and ease of doing business within the sector.

**Imparting Skill:** The quality of teaching in schools and colleges must be improved. The high-quality vocational training must be provided within the education system.

**Stable Power Supply:** Stable, low cost and uninterrupted power are vital to promote the growth of the industries. Though the availability of Power has improved to a great extent but



India must ensure this as soon as possible on the industrial level to reap the benefits of manufacturing growth.

**Reducing Logistic Cost:** The logistics cost in India is estimated to be almost double of the developed countries. In India, nearly 60% of cargo travels by road. Cheap, fast and easy transportation is the basic requirement for booming industries.

**More Spending On R&D:** As India is spending very less on Research & Development, it must improve (at least upto 3-4% of the GDP) its spending on it.

#### Conclusion

Strong and carefully designed policy actions on the part of individual States would improve India's overall investment climate, thereby boosting investments, jobs, and economic growth.

However, such a strategy would be more effective if the policy actions of the Centre and the States are well coordinated.

**Q. What do you mean by Basel accords? Discuss the major changes proposed in Basel III over earlier accords and its significance over the Indian banking sector.**

#### Approach

Explain Basel accord.

Mention major changes proposed in Basel III over earlier accords.

Discuss the significance of these accords for Indian banking sector.

Conclude with the likely impact on Indian banking sector.

#### Introduction

Basel accords or Basel norms are the international banking regulations issued by the Basel Committee on Banking Supervision (BCBS).

The Basel accords are an effort to coordinate banking regulations across the globe, with the goal of strengthening the international banking system.

These are designed to ensure that financial institutions have enough capital on account to meet obligations and absorb unexpected losses.

It is the set of the agreement by the BCBS which focuses on the risks to banks and the financial system.

Basel Committee has issued three sets of regulations which are known as Basel-I, II, and III.

#### Body

Major difference between the three Basel norms

#### Basel I

It was created in response to the growing number of international banks and the increasing integration and interdependence of financial markets.

It focused on the capital adequacy of financial institutions.

Under Basel I, banks that operate internationally are required to have a risk weight of 8% or less.

#### Basel II

These were the refined and reformed versions of Basel I accord.

Basel II included new regulatory additions and was centered around improving three key issues – minimum capital requirements, supervisory mechanisms and transparency, and market discipline.

#### Basel III

Basel III identified the key reasons that caused the financial crisis of 2008. They include poor corporate governance and liquidity management, poor risk management, inappropriate incentive structures, and misaligned incentives in Basel I and II.

Basel III is a continuation of the three pillars along with additional requirements and safeguards. For example, Basel III requires banks to have a minimum amount of common equity and a minimum liquidity ratio.

Basel III also includes additional requirements for what the Accord calls "systemically important banks" or those financial institutions that are considered "too big to fail".

Basel III strengthened the minimum capital requirements outlined in Basel I and II. In addition, it introduced various capital, leverage, and liquidity ratio requirements.

Basel III implementation has been extended repeatedly, and the latest completion date is expected to be January 2022.

#### Significance of Basel accord for Indian Banking Sector

Mounting pile of stressed assets: The banking sector in India is facing challenging times due to low credit growth, deterioration in asset quality and low profitability. India's banks have huge stressed assets and high gross Non Performing Assets which hamper their ability to give out fresh loans.

The new Basel III norms can help increase banks' risk mitigation and protect their gain margins.

Economic and policy changes: The banking sector is facing headwinds due to some recent policy and economic regulations such as demonetisation, GST rollout and the Real Estate (Regulation and Development) Act (RERA).



This could slow the process for implementation of global risk norms under Basel III. Such changes should act as complementary to the Basel norms.

A race for survival and operational efficiency: To meet the new regulations, Indian banks will need to raise high quality capital while preserving the core capital and using it more efficiently.

This may have a transformational impact on the banking landscape in India, leading to crowding out of weaker banks as it will get more difficult for them to raise the additional funding and capital.

It may lead to consolidation in the sector, with the most efficient, competitive and agile banks emerging as the winners.

Meeting investor and customer expectations: Due to all new regulations the banks will face the challenge of meeting stakeholder and customer expectations, all the while complying with the stringent new regulatory requirements.

In this scenario, banks will need to fully embrace disruptive technologies such as Big Data and Artificial Intelligence to meet the increasing demands of their customers.

#### Conclusion

Implementing BASEL III norms will insulate Indian banks against domestic and financial shocks, consequently reducing spillover risks from the financial sector to the overall economy. Indian banks should take up this opportunity in their stride to emerge as stronger, more efficient and future-proof organisations.

STUDY MASTER  
LEARN WHILE ENJOYING

**Q. "The agriculture sector is critical for India from a consistent growth and food security perspective". Discuss the steps to be taken to revitalise the agricultural sector.**

#### Approach

Introduce by explaining the given statement and showing how the agriculture sector is critical for India for consistent growth and food security.

Discuss in brief the main issues faced by the agriculture sector in India.

Discuss the steps to be taken to revitalise the sector.

Conclude with an emphasis on adopting sustainable agriculture for sustainable development.

#### Introduction

The agriculture sector is critical for India from a consistent growth and food security perspective as the sector and allied activities account for approximately 55% of India's workforce and nearly 15% of India's GDP.

Today, India has come a long way from facing severe food shortages after independence to becoming a net exporter of food. While the agricultural sector has made considerable progress, in India, we still have a long way to go when it comes to global benchmarks in yield, water use efficiency etc.

Body

Main issues faced by the agricultural sector in India:

**Land Fragmentation:** It creates difficulties for marginal farmers to access credit or new technology, severely affecting farm productivity and their incomes, making them entirely dependent on usurious moneylenders.

**Worsening soil health:** Rampant use of urea, partly caused by Nutrient Based Subsidy scheme, has led to worsening soil health, the decline in crop response ratio and contamination of surface water.

**Climate change:** Climate change leads to change in temperature, precipitation pattern, increase in extreme weather conditions etc. which poses a great challenge to agriculture.

**Dependence on rainfall and climate:** Indian agriculture is heavily dependent on monsoon and ever-increasing global temperature has made agriculture more prone to extreme weather events.

**Lack of easy credit:** Small scale farmers are in constant need of loans for seeds, fertilizers etc. Due to lack of easy credit from the formal sector and hence take loans from local money lenders who charge high rates of interest which the farmers are unable to pay and are caught in a debt trap.

**Lack of Mechanisation:** Introduction of latest technology has been limited due to various reasons like accessibility for credit and low awareness.

Steps to revitalise the agricultural sector

**Need for planned production:** Indian agriculture needs to move from the current fragmented production model, where each farmer produces what he thinks is right, to a planned production at a district level. This can help in reducing the mismatch in supply-demand and price fluctuations.

**Enhancement of soil nutrition:** To address the problem of worsening soil health, steps must be taken by the government to rationalise the use of fertilizers, promote organic farming and educate farmers.

**Digital push to improve farming practices:** Digital adoption will be key to improving the reach and delivery of services like agronomy advice, enhance adoption of Precision Agriculture practices and improve price transparency through digital platforms.

Easier loans for farmers: With farmer incomes highly dependent on external factors such as climate change and commodity price fluctuations, it is important to have robust risk management and financial solutions for the farmers.

The availability of credit through Kisan Credit Card (KCC) and associated crop insurance is one such instrument.

Go for end-to-end integrated supply chain for finished products: The development of a robust supply chain infrastructure is critical for reducing high post-harvest losses estimated at between 10 and 18% in India. With many intermediaries, processors lose control over the quality of produce as well as traceability.

By encouraging private sector investment in processing, exports, and retailing of agriculture produce, we can bring local communities together to achieve economies of scale, encourage standard practices to meet quality specifications for exports including niche products like organic produce.

Cooperative Farming: Due to fragmented land holdings consolidation of land holdings also becomes important to raise farmer incomes. Farmers can voluntarily come together and pool land to gain the benefits of size. Through consolidation, farmers can reap the economies of scale both in input procurement and output marketing.

#### Conclusion

India's production levels of agriculture and allied segments along with current productivity, infrastructure and processing rates, represent huge untapped opportunities for all players of the agriculture value chain.

Backed by progressive policies, fiscal incentives and an effective regulatory environment, the Indian agricultural sector can provide a strong thrust to the economic growth momentum of the nation.

These favourable shifts in the agriculture industry will also lead to a substantial increase in farmer incomes in the country, and safeguard food security for the country's growing population.

**Q. What is the rationale of Participatory Irrigation Management. Explain its utility in irrigation management in India.**

#### Approach

Start your answer by defining Participatory Irrigation Management (PIM).

Briefly mention the objectives and necessity of PIM.

Highlight the constraints in the implementation of PIM.

Enumerate some steps to implement it.

Conclude suitably.

Introduction

The term participatory irrigation management (PIM) refers to the participation of irrigation users, i.e., farmers, in the management of irrigation systems. It is done by creating local water regulatory bodies like Pani Panchayat or Water Users' Associations (WUAs).

Objectives of PIM

Creating a sense of ownership of water resources and the irrigation system among the users, so as to promote the economy in water use and preservation of the system.

Improving service deliveries through better operation and maintenance of the irrigation systems.

Achieving optimum utilization of available resources, precisely as per crop needs.

Striving for equity in water distribution.

Increasing production per unit of water, where water is scarce and to increase production per unit of land where water is adequate.

Body

Necessity of PIM

Need to increase Agricultural Production: The human as well as the bovine population has been increasing all over the world and more so in India.

It is, hence, imperative to increase agricultural production to keep pace with the requirement.

Irrigation being the lifeline of agriculture, its development and meticulous management is the necessity of the day.

Problem of Fiscal Availability: As there is severe budgetary competition at the government level under different sectors, the ratio of financial outlay for the irrigation sector to the total outlay is coming down year after year.

Under such circumstances, the investment of more money by the Government on operation and maintenance of the old system appears difficult.

Thus, farmers have to take up this responsibility themselves in order to avoid overburdening of the Government exchequer and to become self-dependent.

High Maintenance Cost and Low Recovery of Irrigation charges: Often the cost of recovery of water charges by the Government is more than the amount recovered.

This is causing severe budget constraints to the Government and consequently, maintenance of irrigation systems could not be properly carried out resulting in system deficiency and unreliability of irrigation water to farmers.

Thus, the Water Users Associations could play this role in a better way.

#### Constraints in Implementation of PIM

**Lack of legal backup and policy changes:** In many States, there is no or very little legal back up and clear-cut policy decisions at the Government level to take up PIM.

**System deficiency:** There are many problems like deterioration of old control and measuring structure, leakages and seepage at various places, erosion of banks and beds. These problems hinder farmers from taking over irrigation management.

**Uncertainty of Water Availability:** Farmers are reluctant to take on the responsibility for managing the system unless deliveries of water are made reliable, flexible, practical and responsive to need.

**Fear of financial viability:** Farmers are apprehensive to take irrigation management, due to the absence of surety of finance, it would be difficult for them to fulfil the requirement of funds for operation and maintenance.

**Demographic Diversity:** Due to variation in economic, ethnic, education levels etc. diversity of farmers, PIM is taking much time in India.

#### Way Forward

**Rationalisation of Water Rates:** There is a dire need for rationalization of water rates so as to meet the expenditure on account of Maintenance of the irrigation system.

**Women's Role in PIM:** Considering the importance of women in terms of their numerical strength and the significant contribution they make to the agriculture labour force, there is a need for women to play an important role in the PIM.

**Need For A Legal Framework:** A model act can be framed by the parliament, which will ensure the systemic involvement of beneficiaries in the management of the irrigation system at various levels.

Also, a provision for adequate financial support needs to be incorporated under the act.

**Need For Monitoring:** Regular monitoring and evaluation of the performance of the WUAs is necessary for the development of the PIM programme in the country.

The experience shows that wherever farmers have been actively engaged, the overall management of the irrigation system and the water use efficiency have significantly improved. Thus, in light of the increasing vulnerability of Indian agriculture, PIM should be actively pursued at all levels.

Q. What is Operation Twist? Discuss its impact on the banking sector in India.

Approach

In the introduction briefly discuss the operation twist and its history.

Discuss why there was a need to conduct operation twist in India.

Mention the impacts of operation twist on the banking sector in India.

Conclude by summarizing your answer.

Introduction

Operation twist is a programme adopted by the central bank (RBI in India) for quantitative easing. In this programme the proceeds from the sale of short term securities is used to buy long term government debt papers leading to earning of interest rates on the long term papers.

The Reserve Bank of India announced to carry out US-style 'Operation Twist' to boost the economy by bringing down long-term interest rates for the first time under Open Market Operations (OMOs).

Operation Twist was first used in 1961 by the US Federal Reserve (central bank) as a way to strengthen the U.S. dollar and stimulate cash flow into the economy.

Body

Impact of Operation Twist

Prices of bonds: As the central bank buys long-term securities (bonds), their demand rises which in turn pushes up their prices.

The bond yield comes down with an increase in prices (inverse relationship). If the yield is low, interest rates decrease.

Bank operations: Due to CRR and SLR norms, banks are bound to keep some amount as Government securities.

Operation twist would enable the selling of their long-term bonds to the government since they would lose on yield if they held it for more time.

Consumer demands: If the money meant for the long term would be available to the banks, they would lend it for economic activities such as buying houses, cars or financing projects at lower rates.

Escaping stagflation: Greater borrowing to consumers by the bank could increase the overall demand in the economy.



This impetus to the market could rescue the Indian economy from slipping into stagflation due to the lagging economy in Covid-19 crisis.

#### Conclusion

Thus, Operation twist could help banks free up their long-term capital for boosting long-term investments and increasing their lending opportunities. It has been an optimistic and prompt remedy in the endeavour to restore the health of Indian economy.

### Q. Discuss the utility and importance of methanol production for the Indian Economy.

#### Approach

Highlight the relevance of Methanol with respect to energy demand in India. Briefly explain the nature of methanol.

Discuss the utility of Methanol by discussing its characteristics such as its efficiency as fuel.

Illustrate the importance of methanol such as in transportation and cutting on import bills.

Summarise your answer highlighting future prospects.

#### Introduction

Energy is considered as the key inputs for economic development of the Country. India is poised to play a significant role in the Global energy space, as it is likely to account for 25% of the rise in global energy demand by 2040. Methanol can play an important role in order to contain the rising imports and improve the energy security of India.

Methanol is a low carbon, hydrogen carrier fuel produced from high ash coal, agricultural residue, CO<sub>2</sub> from thermal power plants and natural gas. Use of methanol in various ways is one of the viable options for meeting India's commitment to COP 21. Methanol production is also an important component in achieving aims of the National Policy on Biofuels, 2018.

#### Body

##### Utility Of Methanol Production

**Efficient Fuel:** Methanol is an efficient fuel and emits lesser Nitrogen Oxides and Particulate matter (PM) than gasoline and even produces no sulphur oxides as there is no sulphur in Methanol.

**Blender and substitute:** It can be blended (or be completely substituted) with gasoline to use as a transport fuel along with other applications.

**Less Emission:** The tailpipe emissions from methanol usage (i.e. at the consumption end) are quite low in comparison with conventional fuels like gasoline and diesel.

### Importance of Methanol in Indian Economy

As a Transportation fuel: Methanol can be blended with gasoline and diesel, or can be used as a substitute. It gives us an opportunity to reduce our dependence on imported crude oil.

This also offers an opportunity for the railway engines to run on methanol blends.

In order to check the pollution caused by diesel run ships, methanol powered ships would not only be cost effective alternatives but would also produce far less pollution.

Compliments Pradhan Mantri Ujjwala Yojana (PMUY): It provides LPG connections to Below Poverty Line (BPL) households, who were earlier dependent on solid biomass as cooking fuel.

Since the price of crude is likely to increase in the long term. Therefore, methanol blending with LPG would help in ensuring clean fuel supplies for a longer duration.

Reduction in import bills: Blending of 15% methanol in gasoline can result in at least 15% reduction in import of gasoline/ crude.

The methanol economy will result in a minimum 15% reduction in fuel bill annually for the country by 2030.

Replacement of diesel genset: A large number of telecom towers, especially in rural areas run on diesel for as long as 18-20 hours a day because of frequent electric cuts.

Telecom towers in India consume around 2% of diesel consumption which is a significant amount indicating a vast potential for methanol to replace diesel.

Production of various chemicals: Methanol can be used for producing various chemicals like formaldehyde, acetic acid and olefins which can be exported and can be a foreign exchange earner.

Reduction in GHG emissions: Adoption of Methanol as priority fuel would bring down GHG emissions by 20% in terms of particulate matter, Nitrogen oxide, and Sulphur oxide thereby improving urban air quality.

Dovetailing with Swachh Bharat Mission: Biomass and low quality coal can be sourced to generate methanol. Thus it can become a successful model of “waste to wealth” generation in India which can be dovetailed with Swachh Bharat Mission.

### Way Forward

Hence, by adopting Methanol, India can have its own indigenous and cheaper fuel. To achieve this, the Methanol Economy program initiated by NITI Aayog has been started.

It aims at reducing our oil import bill; reducing greenhouse gas (GHG) emissions & converting Indian coal reserves and municipal solid waste into methanol leading to low import's while creating new jobs by setting up methanol production plants.

Q. Discuss in what ways the food processing industry can be a game-changer for Indian agriculture.

Approach

Define Food Processing and its status in India.

Discuss the significance of Food Processing Industries for Indian agriculture.

Discuss the steps to be taken to promote the Food Processing Industry in India.

Conclude suitably.

Introduction

Food processing generally includes the basic preparation of foods, the alteration of a food product into another form and preservation and packaging techniques. India, being an agrarian economy, has a natural advantage in terms of food processing industries (FPI). Thus, FPI is recognised as the 'Sunrise Industry' in India.

Body

Significance of Food Processing Industries for Indian Agriculture

**Absorbing Rural Workforce:** In India, it is estimated that nearly 50% of the Indian labour force is engaged in agriculture and allied sectors.

Thereby, food processing industries can absorb a major share of workers from the agriculture sector, who face disguised unemployment.

**Food Security:** If there are good food processing industries in India, raw materials such as grains or meat can be converted into food for domestic and foreign consumption.

**Increasing Exports:** With an increasing and busy lifestyle, there is an increasing demand for processed food.

Thus, by leveraging food processing industries, India can become a key player in the exports of processed food.

This may also assist the government to earn foreign exchange reserves and check the current account deficit.

**Overall Economic Growth:** Food processing industries provide vital linkages and synergies among all the sectors of the economy viz. Primary (agriculture), Secondary (industry) and Tertiary (Transportation of goods, R & D in Agro-processing).

**Curbing Migration:** Since rural areas are a more favourable factor of location for food processing.

Thus, it will check rural-urban migration and poverty in rural India.

**Doubling Farmers' Income:** Given this multi-sectoral significance, food processing industries can play a critical role in achieving the goal of doubling the farmers' income.

Steps to be taken for the promotion of food processing industries

The government should adopt a hand-holding approach by establishing risk-sharing mechanisms, fiscal incentives and partnership models for creation of infrastructure for logistics, storage and processing.

There is a need to foster the development of backward linkages, evolving conducive regulatory framework for contract and corporate farming and encouraging commodity clusters and intensive livestock rearing.

In this context, the launch of Pradhan Mantri Kisan Sampada Yojana is a step in the right direction.

**Conclusion**

Thus, the need today is to treat food processing as part of the overall food sector and provide all the facilities, exemptions, and concessions as available to agriculture and related activities.

