

1. Examine the factors responsible for the transforming locational pattern of cotton textile industry in India.**Approach:**

It is a straightforward question where it expects students to write about – various factors responsible for transforming locational pattern of cotton industry from 19th century.

Introduction:

Cotton textile industry is largest organised modern industry of India. There has been a phenomenal growth of this industry during the last four decades. About 16 per cent of the industrial capital and over 20 per cent of the industrial labour of the country is engaged in this industry.

Body:

Initially they used to be dependent on sources of supply of raw material, but with the progress in science and technology, there are frequent changes in factors, on which location of the industries depends. A host of factors such as low labour costs, government subsidies, irrigation, proximity to ports led to the spread of the cotton textile industry.

Pre-1920's: Traditionally, the cotton industry in India was largely concentrated in cotton-growing areas of the peninsula, like Gujarat (Surat), Maharashtra (Mumbai). These areas had advantages of proximity to the market, capital facility, cheap labour, proximity to port facility and favourable humid climate. But cotton is lightweight, non-perishable material, humidity can be created artificially and there is hardly any weight loss during production. As a result, proximity to raw material becomes a non-critical factor in location. Production can be carried out anywhere with cheap labour, energy and water supply is available for dyeing.

Post-1920's: Dispersal of industry from the old nuclei started after 1921 with railway lines penetrating into the peninsular region. Gradually industry shifted towards small towns and cities. Example: centres like Coimbatore, Madurai, Bangalore, Nagpur, Indore, Solapur, Vadodara, Jaipur, Jodhpur, Indore, Amritsar. These were favourably located in respect to raw material, market and labour than places of original locations. This industry also reached some places with some additional advantages, such as nearness to coal (Nagpur), financial facilities (Kanpur) and wide market with port facilities (Kolkata). Dispersal of the cotton textile industry was further boosted with the development of hydroelectricity. The growth of this industry in Coimbatore, Madurai and Tirunelveli is largely due to the availability of hydroelectricity from Pykara dam.

Post-Independence: The industry also tended to shift from areas of high labour cost to those with low labour cost. The labour cost factor played a crucial role in establishing this industry at Madurai, Tirunelveli, and Coimbatore. Government

Incentives: Handloom industry considered highly labour-intensive, beneficial to the village economy and women empowerment. Therefore, the government aids them with measures such as the Integrated Village Handloom Development scheme and National Silk Yarn Scheme. Handloom sector employs more than 65 lakh people and contributes to 15 % of total textile productions. They are widely distributed throughout the country, states of Tamil Nadu, Uttar Pradesh, Assam and Manipur account for nearly 50 per cent of the production capacity.

Conclusion:

Cotton textiles sector carries huge potential for employment generation and solving India's employment generation crisis. Therefore, the sector must be harnessed to its maxima with effective policy support.



2. What are the key factors deciding the location of fertiliser industry? Discuss.

Approach:

It is a straightforward question where it expects students to write about various key factors responsible for locating fertiliser industry.

Introduction:

Indian soils are generally deficient in fertilizing elements namely NPK – Nitrogen, Phosphorus and Potassium, hence do not give high yield. It is therefore essential to feed these soils with the chemical fertilizers so that their productivity increases. The significant contribution made by the chemical fertilizers can be seen from the impact of green revolution on Indian agriculture.

Body:



Locational factors of fertiliser industry:

- Presence of oil refinery: About 70% of the plants producing nitrogenous fertilizers use naphtha as the basic raw material. Example: Gujarat-Maharashtra region fertilizer plants at Hazira, Mumbai, Trombay, Vadodara etc.
- Proximity to natural gas source: For the production of Urea and nitrogen based fertilizers, natural gas is a necessity.
- Presence of Iron and steel industry in the vicinity: Some fertilizer plants draw their feed stock from steel slug as well as coke and lignite.
- Pipeline infrastructure: During the recent year's transportation of Naphtha or Gas through rail or pipelines has facilitated the widespread distribution of fertilizer plants with priority to seaboard location. Example: Hazira-Bijaipur-Jagdishpur (HBJ) pipeline and subsequent fertilizer industry in Bijapur, Sawai Madhopur, Shahjahanpur etc.
- Port facilities: Some fertilizer plants import phosphate, potash etc. Many fertilizer plants export their produce to other countries via sea ports and pipelines.
- Raw materials: Availability of mineral phosphate, raw potash material etc. Example: Florida, North Carolina, Utah and Idaho; India: UP, MP, Rajasthan.

Conclusion:

Fertilizer industry is not only a significant market in terms of size, but also an essential industry serving global food production. With a stable and streamline policy for Fertilizers, Joint ventures with countries well-endowed with resources for fertilizer production, India can have a robust fertiliser industry and meet its agricultural and food security needs.

3. What role does innovation and investment climate play in deciding the location of tertiary sector industries? Illustrate.

Approach:

As the directive here is illustrate, it is necessary to describe the factors of innovation and investment climate play in deciding the location of tertiary sector, you can start by explaining the meaning of tertiary sector industries. In the main body part explain how does innovation and investment climate give impetus to set up tertiary sector industries i.e. explain their essentiality. You can conclude by stating how India has given impetus to innovation and investment and how it will help India.

Introduction:

The tertiary sector industries consists of the production of services instead of end products. Services (also known as "intangible goods") include attention, advice, access, experience, and affective labour. It involves the provision of services to other businesses as well as final consumers.

Body:

Role innovation and investment climate play in deciding the location of tertiary sector industries:

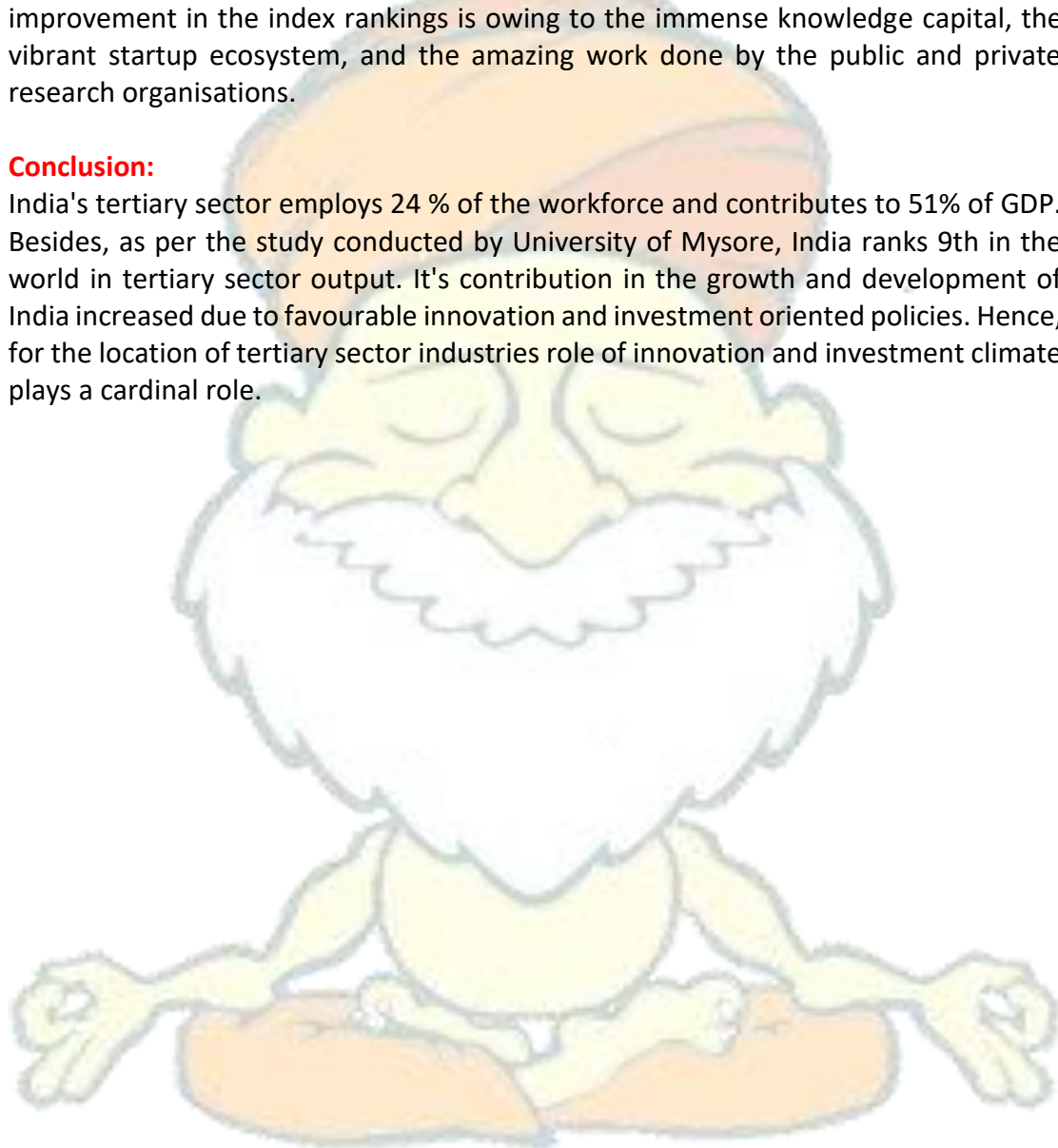
- **Institutions:** Having a good research and innovation culture in a country makes it easy for adaptation of technology there by it attracts the investors to look for the location where such culture is ripe. For instance, Silicon Valley in USA.
- **Human capital and research:** Deep penetration of innovation culture is possible when a sufficient intellectual human capital is there to serve the innovation needs. Besides, an investor looks for such place where innovation culture is deeply penetrated and there the investor invests. For instance, as per global innovation index 2020, India is one of the leading innovation achievers in the central and southern Asian region, as it has shown a consistent improvement in its innovation ranking for the last 5 years.
- **Infrastructure:** Only having a sufficient innovation culture will not decide the location of Industry. But having required infrastructure to cater to the needs and reduce investment cost also impacts location of industries. For instance, in Pune region Magarpatta region has sufficient office space infrastrucutre to set up an IT company.
- **Market Sophistication:** Investor invests in such a project where she gets a sufficient amount of return. However, if a countries market is not that much developed to adapt the new innovation and provide security of return then investors will not choose to invest in that country. For instance, Vietnam is attracting BPO industry investors and challenging the BPO industry in India.
- As per 'Ease of doing business' report, One of the main factor to specify the location of industry is Credit availability, an investor is not in full capacity to invest 100% amount in a project then she needs to apply for credit. Hence, Investment through easy or difficult credit route also affects the location of industries.

- Protection to minority investors: A minority investor cannot stand toe-to-toe with a big investor company. Hence, while doing investment an investor will definitely think about the protection. Depending on it the location of industry will vary.

India ranks in the top 15 in indicators such as the Information and Communication Technology (ICT) services exports, government online services, graduates in science and engineering, and Research and Development-intensive global companies. The improvement in the index rankings is owing to the immense knowledge capital, the vibrant startup ecosystem, and the amazing work done by the public and private research organisations.

Conclusion:

India's tertiary sector employs 24 % of the workforce and contributes to 51% of GDP. Besides, as per the study conducted by University of Mysore, India ranks 9th in the world in tertiary sector output. It's contribution in the growth and development of India increased due to favourable innovation and investment oriented policies. Hence, for the location of tertiary sector industries role of innovation and investment climate plays a cardinal role.



4. What has been India's recent performance on the ease of doing business index? What are the key areas that require improvement? Examine.

Approach - It expects students to write about ease of doing business index, recent India's performance and also suggest key areas that require improvement.

Introduction

Ease of Doing Business is an annual survey published by World Bank. The report was introduced in 2003 to provide an assessment of objective measures of business regulations and their enforcement across 190 economies on ten parameters affecting a business through its life cycle. India bagged 63rd position this time 2019 marking an improvement of 14 places from its 77th in 2018. India for the third consecutive year was present in the list of 10 economies where business climates had improved the most.

Body

India's performance in recent years –

1. Resolving insolvency: The latest improvement has come on the back of the implementation of the Insolvency and Bankruptcy Code (IBC). India's rank has improved from 108 to 52 in the "resolving insolvency" category with the overall recovery rate for lenders moving up from 26.5 cents to 71.6 cents to the dollar according to the World Bank.
2. Trading across border: The country's ranking in the "Trading across borders" category jumped 12 places from 80 to 68 signifying the abatement of paperwork in favour of electronic filing of documents and single-window customs procedures. Importing and exporting also became easier for companies with the creation of a single electronic platform for trade stakeholders, upgrades to port infrastructure and improvements to electronic submission of documents.
3. Dealing with construction permits: Interestingly, there has been improvement in a parameter that most industrialists would consider as a problem even now: "Dealing with construction permits". The country's ranking has improved by 25 places from 52 to 27. Obtaining all permits and authorizations to build a warehouse now costs 4% of the warehouse value, down from 5.7% the previous year.
4. Enforcing contracts: The introduction of the National Judicial Data Grid has made it possible to generate case management reports on local courts.
5. Paying taxes: The report notes that India made paying taxes easier by requiring that payments to the Employees Provident Fund are made electronically. Further, it introduced measures to ease compliance with corporate income tax.
6. Starting a business: Starting a business involves obtaining clearances, and conforming to various regulations under laws such as Companies Act, 2013. The report noted that India merged the application procedure for getting a Permanent Account Number (PAN) and the Tax Account Number

(TAN) for new businesses. It also improved the online application system for getting a PAN and a TAN.

Expert Committee constituted by the Department of Industrial Policy and Promotion and the Standing Committee of Commerce, have studied the the regulatory requirements for starting a business in India and the made recommendations on the ease of doing business to improve the business environment in India:

- Starting a business: Need to streamline regulations to give businesses in India a boost. The Committee had suggested that the procedures and time period for registration of companies should be reduced. In addition, a unique business ID should be created to integrate all information related to a debtor. This ID should be used as sole reference for the business.
- Acquiring land, registering property: It has been noted that land titles in India are unclear due to various reasons including legacy of the zamindari system, gaps in the legal framework and poor administration of land records.
 - It recommended process of updating and digital land records should be completed at the earliest.
 - The digitised records would assist in removing ambiguity in land titles and help in its smooth transfer.
 - It also suggested that land ownership may be ascertained by integrating space technology and identification documents such as Aadhaar. Note that as of September 2017, land records had been linked with Aadhaar in 4% of the villages across the country.
 - Steps include integration of land records and land registration and the passage of a law to certify land titles in urban areas.
- Enforcing contracts: Standing Committee noted that it took close to four years in India for enforcing contracts. On the other hand, it took less than six months for contract enforcement in Singapore. This may be due to various reasons including complex litigation procedures, confusion related to jurisdiction of courts and high existing pendency of cases.
 - It recommended that an alternative dispute resolution mechanism and fast track courts should be set up to expedite disposal of contract enforcement cases.
 - It suggested that efforts should be made to limit adjournments to exceptional circumstances only.
 - It also recommended that certified practitioners should be created, to assist dispute resolution.
- Construction permits: The Committee had observed that it took 33 procedures over 192 days to obtain a construction permit in India. Similar permit in Singapore involved 10 procedures and took 26 days. The Committee also recommended creating a single window for registration and issuance of permit, to reduce delays.
- Taxation: The Standing Committee had noted that the tax administration in India was complex, and arbitration proceedings were time-consuming.
 - The Committee observed that for 'Make in India' to succeed, there is a need for a fair, judicious and stable tax administration in the country.

- Further, it suggested that to reduce harassment of tax payers, an electronic tax administration system should be created.
- Such a system would reduce human interface during dispute resolution. The GST framework allows for electronic filling of tax returns, among other measures.

Other side of the coin that need to be addressed:

- However, the rankings do not capture the real cost of doing business in the countries with large unorganized sectors (such as India), and the cost of production are different from larger formal companies.
- Starting, running or shutting down a business may be easier in Delhi and Mumbai compared to Coimbatore or Hyderabad where it is probably more difficult.
- The index fails at measuring the difficulties businesses face in terms of raising liquidity, controls on internal trade, skilling/employability issues, etc.
- Admittedly, it is not easy to streamline processes across the country given India's federal set up where States have a big say in several parameters that go into the ranking such as securing building permits, land approvals, electricity connections, registering assets etc.

Conclusion

Improvement have taken place due to the commitment of the Government to carry out comprehensive and complex reforms, supported by the bureaucracy which has changed its mindset from a regulator to a facilitator. To come under 25 or below 50, the government needs to announce and start implementing next set of ambitious reforms now, as these reforms takes a few years to be realised on the ground.

5. What are global supply chains? How do they evolve? Explain.

Approach:

It expects students to write about global supply chain and write about how they evolve.

Introduction

The COVID-19 pandemic has caused closures of business, the stoppage of factory outputs, and the disruption to global manufacturing industries and their supply networks. This is a result of China becoming the production hub of the entire world in the last two decades. Global supply chains are networks that can span across multiple continents and countries for the purpose of sourcing and supplying goods and services.

Body

Global supply chain:

- Global supply chains involve the flow of information, processes and resources across the globe. It is a chain of separate but inter-linked and coordinated activities in different geographical locations to bring out a product or a service to complete production and delivery to final consumers.
- Belt and Road Initiative (BRI) is strategy of China for global supply chain management under which it is promoting transport infrastructure and communication facilities, supply chain logistics network.
- India needs to develop a robust long-term vision to establish itself as a major player in the global supply chain arena. The Sagarmala Programme is an initiative by the government of India to enhance the performance of the country's logistics sector.

Evolution of global supply chains:

- Before 1900: The industrial revolutions started to change things. As railroads were laid, it became faster, easier and cheaper to transport goods over longer distances, although supply chains still tended to be limited to countries. International ocean trade was fairly inefficient as loose goods were stored in ship's hulls, and required a lot of effort to load and unload.
- Early 20th Century: Since the invention of the internal combustion engine and cars in the late 19th century, pioneers started developing trucks to allow for the faster transport of goods by road. A major development in supply chain storage was in 1925 when pallets started to be used in warehouses. This allowed goods to be consolidated together onto pallets, which could then be stacked vertically, saving space and making goods handling more efficient.
- From the 1930s to the 1940s Greater Mechanisation: Logistics became very important during World War II, as military organisations needed efficient supply chains at home and in Europe. The 1940s saw a consolidation of industrial engineering and operations research into supply chain engineering.

- The Global Supply Chain in the 1950s: The revolution in global supply chains was the invention of the shipping container. Whether a container is being pulled by road on a truck, carried on the railway or shipped overseas on a container ship, standardisation makes transporting and handling these containers fast and easy. The invention of containerisation was one of the main drivers in making global trade cheaper and more efficient.
- From the 1960s to the 1980s: IBM developed the first computerised inventory management and forecasting system in 1967. Before the 1960s, logistics records and data were captured, sent and reported through paper. Data computerisation started to streamline logistics, and created opportunities in many areas including more accurate forecasting, better warehouse storage, truck routing and better inventory management. In global supply chain due to barcodes made it much easier to scan products.
- Further Efficiencies and the Shift to a Global Model: The 1980s new software like flexible spreadsheets, mapping and route planning made it easier to track costs and maximise profits. This was coupled with other advancements including air freight optimisation, supply chain distribution networks and the introduction of Enterprise Resource Planning (ERP) systems. MIT also developed RFID tags to make it easier to electronically track goods and shipments, a predecessor of the Internet of Things devices we use today.
- Now with True sense of Globalisation: All of this history brings us to the present, and continued transformation in global supply chains. One of the biggest influences has been the explosion of manufacturing in Asia, with China, Japan and Korea becoming major suppliers and exporters of goods. At the same time Block chain technology, AI, and machine learning combines with predictive and prescriptive analytics to provide better forecasting, enhanced order management and more. What's more, the supply chain is evolving toward a more data-driven, network-driven and collaborative supply chain ecosystem that drives real value and growth for all participants.

Importance of Global supply chain GSC:

- Tool to Economic Growth: GSC are a powerful driver of productivity growth, job creation, and increased living standards. Countries that embrace GSC grow faster, import skills and technology, and boost employment.
- Diversifying Country's Export Sector: It provides opportunities for developing countries to diversify their exports and intensify their integration into the global economy.
- Boon to Developing Countries: By embedding more technology and know how in all their agriculture, manufacturing, and services they make it easier for those countries to diversify away from primary products to manufactures and services and develop high value added task.

Conclusion

For many countries like India, the ability to effectively insert themselves into Global supply chain is a vital condition for their development. This supposes an ability to access Global supply chain, to compete successfully and to capture the gains in terms

of national economic development, capability building and generating more and better jobs to reduce unemployment and poverty.

