VISION IAS
INSPIRING INNOVATION

WEEKLY FOCUS #98

GLOBAL VALUE CHAINS (GVCs)

Prospects and Challenges for India

Introduction

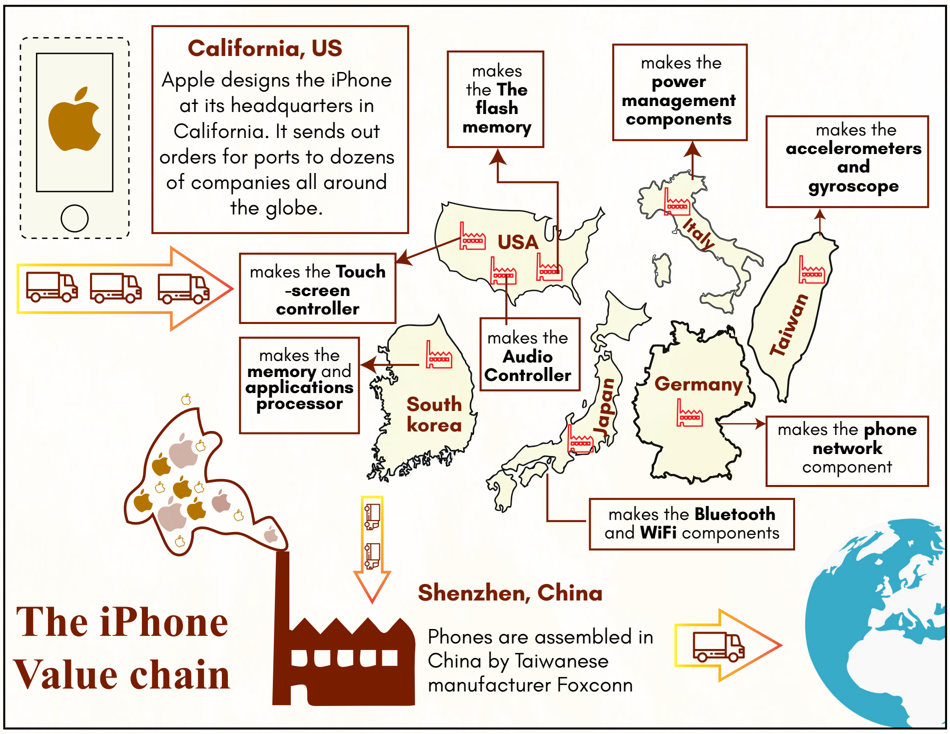
Ours is an interdependent world, connected by global flows of goods, services, capital, people, data and ideas. Global Value Chains (GVCs) have been built on these flows, creating a more prosperous world. However, in light of events like COVID pandemic, Russia-Ukraine war and years of rising tensions between the US and China, it is speculated that the world is deglobalizing. Contrary to this, according to McKinsey, the world remains deeply interconnected, and flows have proved remarkably resilient during the turbulent period and no region is now self-sufficient! The challenge therefore is to harness the benefits of interconnections while managing the risks and downsides of dependencies.

This structural shift and associated challenges is being seen as an opportunity for India to integrate more deeply into the GVCs as various domestic and international factors are in favour of India.

In this background, it becomes important to understand: What are global value chains (GVCs) and how did they emerge? What are the key benefits of participation in GVCs? How does a country participate in a GVC and what are the key determinants of such participation? How does India participates in GVC? What are the recent shifting paradigms in GVCs? What are the roadblocks that hinder India's participation in with GVCs? Are there any initiatives taken by India to integrate itself into GVCs? And, In what ways can India enhance its integration in GVCs? In this edition, we shall attempt to address these questions.

What are global value chains (GVCs) and how did they emerge?

- A global value chain (GVC) is a **series of stages involved in producing a product or a service** that is sold to consumers.
- A GVC **embodies value addition** (such as design and marketing ideas, labour services etc.) **at each stage of production and at least two stages are produced in different countries.**
  - **i-Phone exported by the USA is one such example.** iPhone conception and design is decided in California. High-tech components come from other developed countries and then it is assembled in China. California finally manages its marketing and branding.



Emergence of GVCs

The evolution of GVC can be traced back to the **1970s** with the shifting of national development strategies from import-substituting industrialization (ISI) to **export-oriented industrialization (EOI)** that happened throughout the developing world.

Emergence of GVC
A regional supply chains in East Asia was developed by Japanese investors
1970s

Strengthening of GVC
Emergence of the World Trade Organization (WTO) and associated trade liberalisation
1980s to 1990s

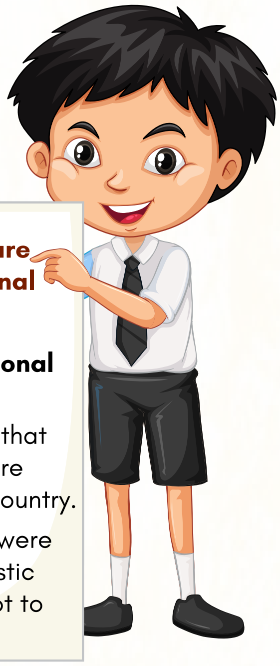
Further strengtheing of GVC
Integration of global economy through creation of the European Union integration of China, India, and the Russia into the global economy and ICT revolution
1990s to early 2000s

Stagnation of GVC
Since the Global Financial Crisis, the GVC appears to have stagnated or even declined. Still, about half of world trade appears be to related to GVC
2008 onwards

What are the key benefits of participation in GVCs?

Today, **over 50% of global trade involves GVCs.** The benefits of being a part of GVC are as follows:

- **Raise productivity:** A one percent increase in GVC participation is estimated to boost per capita income growth of a country by more than one percent, about twice as much as standard trade.
- **More employment opportunities:** Increased productivity leads to an expansion in firm output and thus to increase in employment.
  - GVCs are associated with **structural transformation** in developing countries, drawing people out of less productive activities and into manufacturing and services which in turn enhances their income.
  - In Ethiopia, for example, GVC firms are associated with faster growth in employment despite their higher capital intensity.
- **Reduced poverty:** Poverty reduction from GVCs turns out to be greater than that from conventional trade. As per world bank, the steepest declines in poverty occurred precisely in those countries that became integral to global value chains—China, Vietnam, and Bangladesh, among others.



Global Value Chains are different from Traditional International Trade!

In traditional international trade,

- Goods and services that were exported were produced in only one country.
- Goods and services were imported for domestic consumption and not to export.

- **Greater scope for Specialisation:** Due to the international fragmentation of production and unbundling of operations, countries no longer need to create complete products or value chains.
  - Instead, they can create targeted industries for a particular stage of production along the value chain that suits their existing level of capability.
- **Facilitates knowledge sharing:** Participating in a GVC opens considerable opportunities for knowledge transfers between firms. Such transfers may lead to industrial upgrading, improvement of product quality, and fostering involvement in higher value activities in production.
  - In Kenya, South Africa, and Uganda, for example, improved processes in horticulture were induced by demand for higher quality and sourcing requirements by global and regional supermarket chains.
- **Strengthening local firms:** GVCs bolster the capacity of local firms by achieving economies of scale and sharing of know-how and technology, thereby improving their export potential.

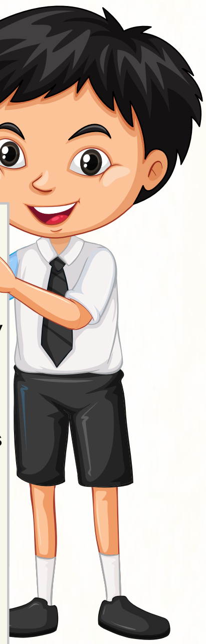
Risks associated with participation in GVCs

- **Potential to reinforce inequality:** The gains from GVC participation are distributed unequally across and within countries.
- **Loss of tax revenue:** Countries are under pressure to engage in tax competition by lowering the burden of corporate income tax to retain domestic and attract foreign investment.
- **Heightened risk to small exporters:** In developing countries, contracts are poorly specified and contract enforcement is weak which may drive sudden cancellation of contracts by the lead firm.
- **Propagating shocks:** Firms involved in trade networks (dominated by a few large buyers or suppliers of critical inputs) are at risk of disruption following a shock like a natural disaster.
- **Climate change altering traditional comparative advantages:** For example, the European Union (EU) Green Deal will adversely affect countries that are heavily involved in carbon-intensive GVCs, such as chemicals. This could put pressure mainly on Low- and middle-income countries.

How does a country participate in GVC and what are the key determinants of such participation?

Countries can participate in GVCs **by engaging in either backward or forward linkages** based on their economic specialisation.

- **Backward linkages:** These are created when **one country uses inputs from another country for domestic production.** In this case, inputs required for production are either not available locally or available but deficient in some aspects (e.g. quantity, quality and price).
  - For example, India procures raw material for steel manufacturing from Australia, South Africa and UK.
- **Forward linkages:** These are created when **one country supplies inputs/intermediate goods that are used for production in another country.** Supplying such inputs can be **especially important for developing countries** seeking entry into new industries and that are in the process of learning how to produce goods (however simple) for export markets.
  - For example, India supplies steel for production of consumer durables in countries like Korea, Japan and China.
  - These inputs are, however, equally important for industrialized economies that supply complex, specialized and high value inputs(as seen above in the case of I-phone manufacturing).

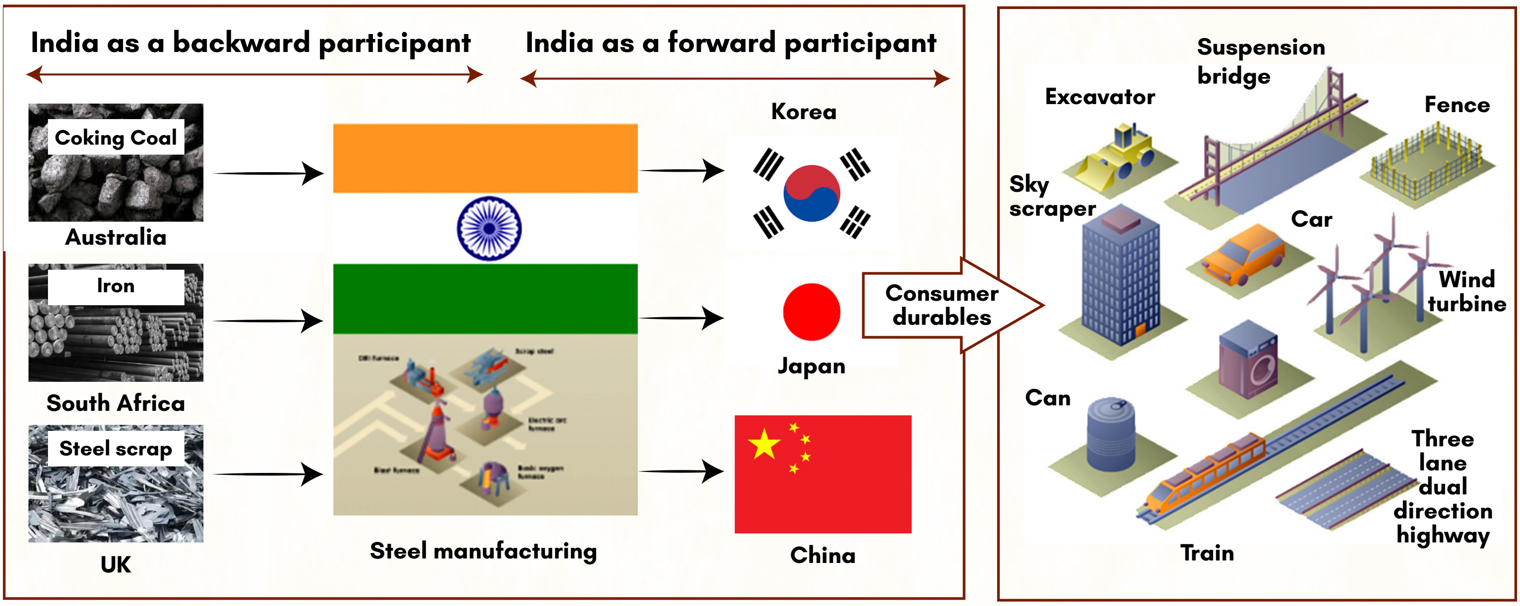


Supply chain and Value chain

A supply chain is a **network of entities** that source raw materials, transform them into finished goods, and then distribute or sell them to customers.

- In contrast, a value chain refers to **creating or adding value to the end product at every step,** from conception through production to delivery and support.
- Value chain is therefore a part of **entire supply chain.**

India's participation in GVC of steel manufacturing and consumer durables



While most developed and developing countries engage in both types of GVC activity(forward and backward) to some extent, **countries with relatively strong backward linkages tend to have weaker forward linkages and vice versa.**

Key determinants of GVC participation

A number of factors can influence the degree and type of integration into GVCs, and can be broadly grouped into two categories:

Non-Policy Factors: These are structural in nature, and their relationships with backward and forward engagement are diverse.

- **Factor endowments:** The availability of **low-skilled labour** is linked to countries' **stronger backward integration** in GVCs. Also a country's **higher abundance in natural resources** is a crucial determinant of **forward GVC integration.**
- **Market size:** The larger the size of the domestic market, the lower the backward engagement of a country, and the higher the forward engagement.
- **Level of development:** The higher the per-capita income, the higher the aggregate forward and backward engagement. For instance, developed countries tend to source more from abroad and sell a higher share of their gross exports as intermediate products.
- **Industrial structure:** The higher the share of the manufacturing sector in GDP, the higher the backward engagement, and the lower the forward engagement of the country.
- **Location/Geography:** GVC activity is organised around large manufacturing hubs – the larger the distance to the main manufacturing hubs in Europe, North America, and Asia, the lower the backward engagement, suggesting that there is a premium to locating close to large headquarter economies.

Policy factors:

- **Trade policy:** Low import tariffs, both at home and faced in export markets, and engagement in regional trading agreements (RTAs) can all facilitate backward and forward GVC engagement.
- **Openness to FDI:** Inward FDI openness tends to have a significant association with both backward and forward integration.
- **Institutional quality:** Countries with better institutional quality see faster growth in GVC participation levels. Presence of corruption, political instability and uncertainty of reforms tend to be detrimental for cross-border trade as they enhance the risks faced by global buyers and sellers.
- **Other GVC-related policies,** such as intellectual property protection, logistics performance, and quality of infrastructure all play a significant role in increasing the participation.

How does India particpate in GVCs?

Leading service exporting country

- **India** has **distinct competitive advantages** like lower workforce costs, knowledge based economy, English speaking proficiency and government support. Hence, it is a leading service exporting country and **has a target of reaching US$ 1 trillion in services exports by 2030.**

Global share

Key products driving India's GVC participation include coal and petroleum, business services, chemicals, and transport equipment.

Network products

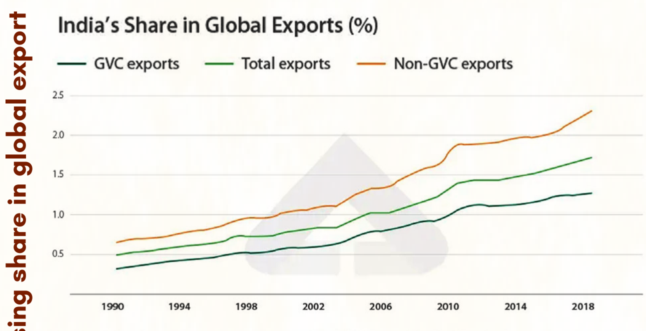
Network products such as electronic for which GVCS are the dominant mode of production account for only 10% of India's total merchandise export

Less labour intensive

Proportion of labour intensive sector has declined in India's GVCs linkage, despite rise in high-tech manufacturing

Forward linked

India's participation in GVC is mostly focused on forward linkages, as it still depends heavily on exports of raw materials and intermediate products, rather than exports based on imported materials.



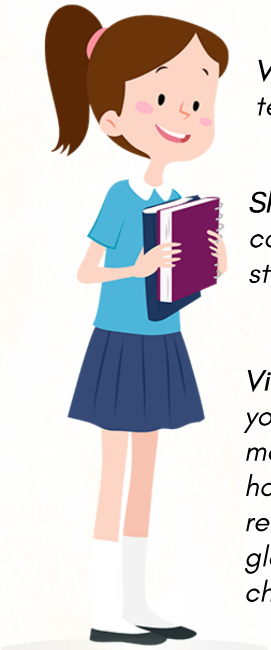
AIIB = Asian Infrastructure Investment Bank, GVC = global value chain.

Geographical disparity

75 per cent of India's exports emanate from only six states, with the share of exports ranging from 30 per cent in Gujarat to less than one per cent in Bihar

In Conversation

Smile Curve in GVCs

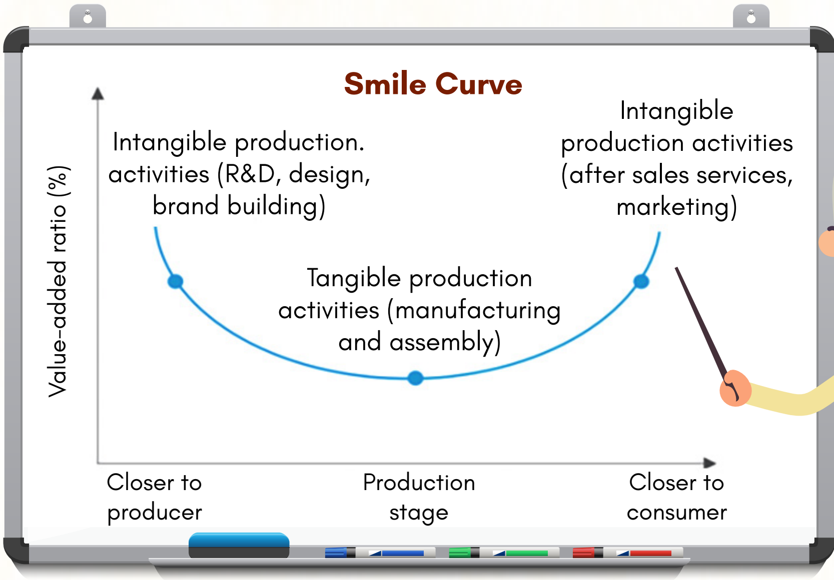


Vini: Good afternoon Sir ! While reading articles on Global Value Chains, I came across the term Smile Curve. Could you please explain this term to me?

Sharma Sir: Sure Vini. Smile curve was first proposed in 1992 by Stan Shih, the founder of Acer company in Taiwan. It is a graphical depiction of how value added varies across the different stages of production of a product.

Vini: Sir, can you elaborate more on it and how it is related to global value chains?

Sharma Sir: Why not. See, the vertical axis represents the value-added, and the horizontal axis represents the different stages of the production process.



In case of a global value chain, developed countries, tend to focus more on the high-value-added stages of the smile curve, such as research and development (R&D), design, branding, and marketing. On the other hand, developing countries, often participate in the lower-value-added stages of the smile curve, such as manufacturing and assembly.

Vini: Sir, that means, the things that command most value in the eyes of consumers are at the beginning and the end of the value chain. And developing countries like China add very less value to the products through their participation in GVC.

Sharma Sir: Right Vini. But developing countries may still benefit from the associated economic growth, job creation, technology spillovers, and knowledge transfer. Also, the roles of developed and developing countries in the smile curve can change over time.

Vini: How does that happen sir?

Sharma Sir: Developing countries, can move up the value chain by investing in human capital, improving infrastructure, fostering innovation, and developing their own brands. Similarly, developed countries can face challenges from emerging economies that may catch up in terms of innovation and technology, and thereby alter the distribution of value-added in GVCs.

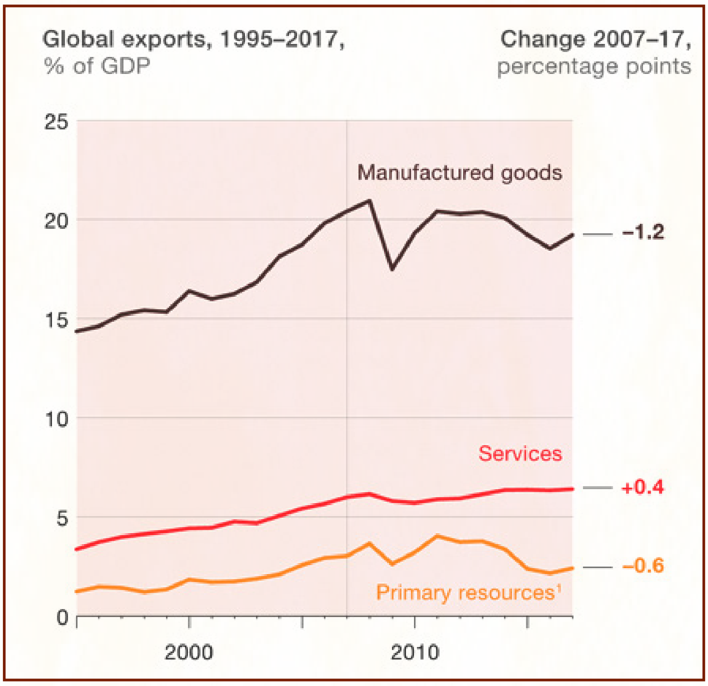
Vini: I get it Sir. Understanding the position of different countries along the smile curve therefore is crucial for countries in identifying upgrading opportunities, managing dependencies and vulnerabilities and formulating suitable trade and industrial policies.

Sharma Sir: You got it right Vini!

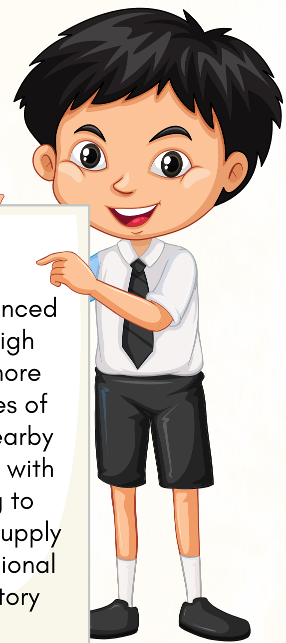
What are the recent shifting paradigms in GVCs?

As per McKinsey report, GVCs are undergoing five structural shifts in the present times:

- **Goods-producing value chains have grown less trade-intensive:** More recently, trade intensity (that is, the ratio of gross exports to gross output) in almost all goods-producing value chains has fallen.
  - **It reflects the development of China and other emerging economies,** which are now consuming more of what they produce.



- **Services play a growing but undervalued role in GVCs:** Trade in services has grown more than 60 percent faster than goods trade over the past decade.
  - This is partly facilitated by introduction of new types of leasing, subscription, and other **"as a service" business models.**
  - However, **services are intangible assets** such as software, branding, design, operational processes, etc. which represent tremendous value, but they often **go unpriced and untracked** unless captured as intellectual property charges.
- **Trade based on labour-cost arbitrage is declining:** In the 1990s and early 2000s, many decisions about where to base production for labour-intensive goods and services were based on labour costs. But, today **only 18 percent of goods** trade is based on labour-cost arbitrage.
  - This mainly **reflects rising wages in developing countries and factoring in of other considerations** such as access to skilled labour or natural resources, proximity to consumers, and the quality of infrastructure.
  - In the future, **automation and AI may amplify this trend**, transforming labour-intensive manufacturing into capital-intensive manufacturing.
- **Global value chains are growing more knowledge-intensive:** In many value chains, value creation is shifting to upstream activities, such as **R&D and design,** and to downstream activities, such as **distribution, marketing, and after-sales services.**
  - The growing emphasis on knowledge and intangibles **favours countries with highly skilled labour forces,** strong innovation and R&D capabilities, and robust intellectual property protections.
- **Value chains are becoming more regional and less global:** The intraregional share of global goods trade has increased by 2.7 percentage points since 2013, partially reflecting the rise of emerging-market consumption.
  - This development is **most noticeable for Asia and the EU countries and** is most apparent in global innovations value chains, given their need to closely integrate many suppliers.



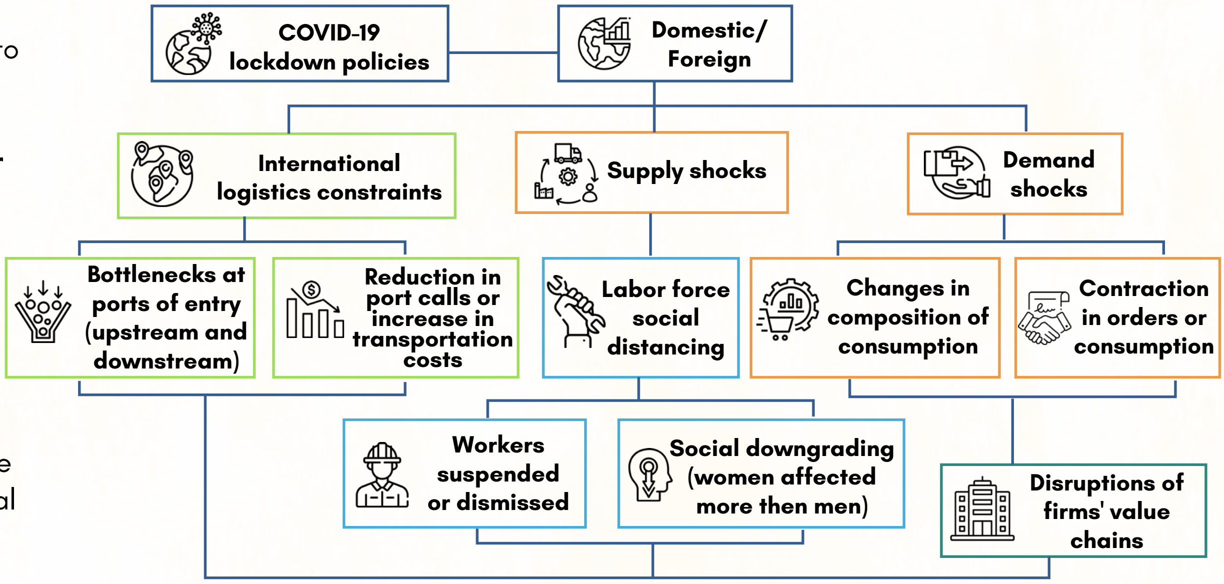
Factory Asia

Economies with advanced technologies and high wages tend to offshore manufacturing stages of the value chain to nearby developing countries with low wages, leading to creation of regional supply chains. One such regional supply chain is 'Factory Asia'.

Reshaping Global Value Chains in light of COVID-19

Disruptions to GVCs due to the COVID-19 pandemic (refer to the infographic) have **reinforced calls for greater self- sufficiency and reshoring of production** (process of returning the production and manufacturing of goods back to the company's original country).

Effects of COVID-19 lockdown policies on global value chains



Is Reshoring a solution?

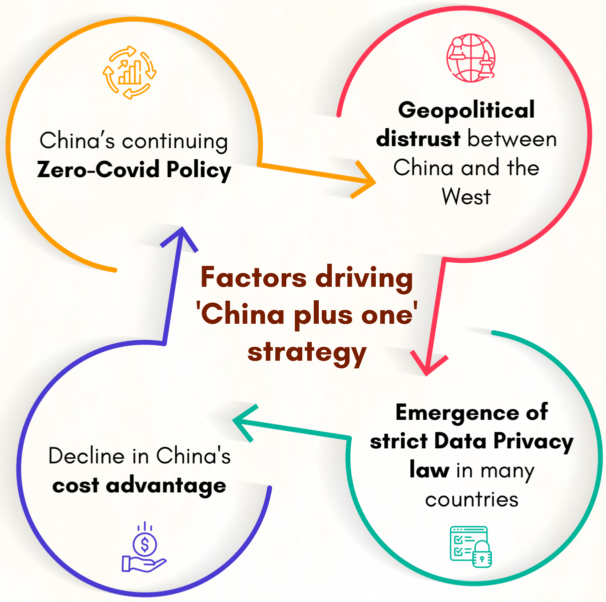
World Bank research shows that **reshoring would be counterproductive** and could drive an additional **52 million people into extreme poverty,** most of them in Sub-Saharan Africa.

- **Countries engaged in reshoring** through tariffs and subsidies would also **see their incomes decline as trade shrinks.**
- On the other hand, **deepening trade** could **lift almost 22 million people out of poverty** by 2030, and **improve the incomes of the bottom 40%.**
- **Resilience comes from diversification,** hence, during a crisis, countries **more deeply integrated into GVCs recovered more quickly** than others.

Way ahead

Experts have suggested greater economic **integration and strengthening of GVCs** to remove the fragility and spur **resilient economic growth. 'China Plus One strategy'** have been one such initiative to strengthen the GVC.

- It aims to encourage firms and enterprises to **expand their operations outside of China.**
  - Driving forces majorly include a variety of **geopolitical reasons** (refer to infographics).
- **EU, Mexico, Taiwan, and Vietnam, have been the clear winners** of the China-plus-one model across sectors such as machinery, automobiles, and transport and electrical equipment.
- **India, however, did not significantly benefit from this trade diversion due** to various legacy concerns linked with labour and land.

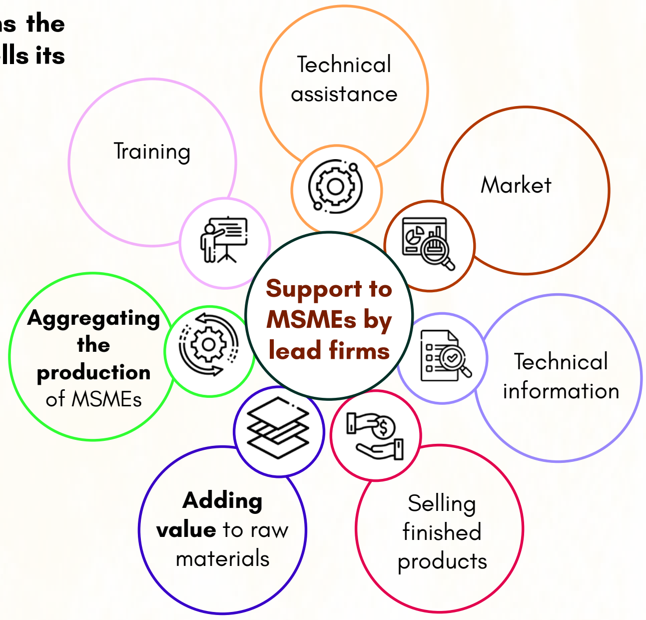


What are the roadblocks that hinder India's participation in GVCs?

- **Inward-looking Economic policy:** India's historical inward-looking industrial policies like **import substitution, the Licence Raj, and state-led industrialization** focused on **protecting domestic industries** through tariffs, subsidies, quotas, and other such measures and prevented participation in larger value chains.
- **Limited lead firms:** Indian policies **do not create enough lead firms,** which are **central to all aspects of a value chain** from sourcing supplies to the final product, in GVCs.
  - **Skill shortage, lack of access to finance, custom procedures, and high taxes** all prevent lead firms from developing in India.

Role of lead firms in GVC

- A lead firm is one that **governs the whole of a value chain and sells its final product.**
  - For instance, Tata Motors in the automobile sector and Ranbaxy in the pharmaceutical sector play key roles in transferring technology, establishing supply chains, and attracting foreign investment.
- Lead firm can **have forward or backward commercial linkages** with a significant number of micro, small and medium enterprises (MSMEs).



- **Not leveraging MSMEs:** MSMEs in India contribute around 30 percent to GDP and nearly 50 percent to the country's exports. But this has not translated to an increase in their engagement with GVCs
  - This is due to **weak innovation, lack of access to finance, and inadequate linkages with lead firms.**
- **Less regional integration:** GVCs thrive across geographies that liberalise trade with each other by reducing tariff and non- tariff barriers, actively,implementing trade facilitation measures, and protecting investments. These measures are usually part of Free Trade Agreements (FTAs)
  - However, India has not been part of significant trade blocs and is thus a latecomer to the GVC space. For example, SAARC is inactive and India withdrew from RCEP recently.
- **Technological shift:** The pace of re-skilling and up-skilling of the workforce is slow in India and does not match with the **rapid uptake of digital technologies** in value chains.

Next generation technologies and GVCs

New technologies have the potential to alter global trade

The next generation of technologies like digital platforms, blockchain, the Internet of Things and AI **will reshape trade flows and global value chains**. But unlike the previous ICT revolution, these innovations will **have a more varied and complex effect** on trade in the years ahead.

Reducing transaction costs

- **Digital platforms** — **$1.3T-$2.1T** increase in goods trade by facilitating cross- border B2B and B2C transactions
- **Logistics technologies** — **6-10%** increase in goods trade by removing delays and frictions

Altering economics and location of production

- **Additive manufacturing** — **Up to $790B** reduction in goods trade by allowing production at point of consumption
- **Advanced robotics** — **$1.5T-$3.0T** reduction in goods trade through reshoring or reduced offshoring
- **Artificial intelligence** — **Up to 9%** reduction in outsourced business and IT services

Changing goods

- **Renewables** — **-$100B** decrease in trade of inputs related to electricity generation, driven mainly by reduced commodities trade
- **Electric vehicles** — **-6%** reduction in total oil trade; **-10%** reduction in vehicle parts trade

Projected impact by 2030

SOURCE: IMF: WTO: OECD: UNCTAD: McKinsey Global Institute analysis

- **Structural shortcomings faced by firms**
  - **Meeting quality standards:** According to a study done by the OECD, the WTO, and the UNCTAD, **firms that supply multiple markets may have to duplicate production** to conform with fragmented standards or certification systems.
    - **This drives up the cost of production.**
  - **Lack of institutional support:** According to the Indian Council for Research on International Economic Relations (ICRIER), India has a number of policies that support day-to-day trade flows, imports and exports through straightforward incentives.
    - However, there is **a dearth in those related to GVC integration i.e.,** there is a lack of policies in terms of creating a downward pressure on domestic production costs.
  - **Absence of adequate information:** Information regarding markets, partners, EXIM rules, and even trade finance play an important role for companies in creating partnerships and tapping into value chains. The lack of information impedes enterprises' integration into GVCs.
  - **Domestic policy challenges:** Complex tax policies and procedures, the quality of infrastructure, and uncertainty in trade policy create obstacles in efforts to scaling up production in India.

Key initiatives taken by India to integrate itself into GVCs

India has made very focused efforts under transformational programmes such as Make in India and Atmanirbhar Bharat ("self-reliant India") toward integrating itself into GVCs by addressing several barriers that previously hindered the country from reaching its full potential. Specific measures include: -

Production Linked Incentives (PLI)

- It provides financial incentive for eligible manufacturers to make India hub of manufacturing in 14 key sectors like automobile and auto parts, etc.

Labour reforms

- Consolidation of 29 discrete laws under four codes covering **wages; occupational safety, health and working conditions; industrial relations; and social security.**

Infrastructure development

- **Bharatmala:** For bridging of critical infrastructure gaps in existing highway network for improving India's rank in the Logistic Performance Index (LPI).
- **Sagarmala:** For port led development by leveraging country's coastline and inland waterways to drive industrial development.
- **National Infrastructure Pipeline (NIP) programme:** To provide high quality infrastructure like transport, energy and water, across the country.
- **PM Gati Shakti- National Master Plan for infrastructure development:** A digital platform to create Next Generation Infrastructure by facilitating planning, designing and execution of the infrastructure projects with a common vision.

Foreign Direct Investment (FDI)

- In most sectors of the economy, India allows **foreign investments of up to 100 per cent through the automatic method.**

Foreign Trade Policy (FTP) 2023

- It aims at process re-engineering and automation to facilitate ease of doing business for exporters. Some important schemes under it are as follows:
  - **Advance authorization Scheme:** Provides duty-free import of raw materials for manufacturing export items.
  - **Export Promotion of Capital Goods (EPCG) Scheme:** Allows import of capital goods at zero customs duty for export production.
  - **Towns of Export Excellence (TEE):** Four new towns, namely Faridabad, Mirzapur, Moradabad, and Varanasi, have been designated as TEE in addition to the existing 39 towns.
  - TEE is a status provided to those towns which produce and export goods worth a minimum value in a specific sector. Sectors include handicraft, handloom, seafood, pharmaceutical, fisheries, apparels, coir, leather products etc.

In what ways can India enhance its integration in GVCs?

- **Skill development:** For high-tech sectors like electronics, semiconductors, and pharmaceutical GVCs, India should focus more on increasing the skill content of the existing processes, by engaging in design or R&D activities, to increase its share in GVCs.
- **Sectoral diversification:** India has an edge in several sectors, but they have largely been driven by domestic demand. Sectors like defence, aerospace, and electronics can jumpstart the process of increasing engagement in global value chains.
- **Support to MSMEs:** Vitalising them and giving them access to reliable credit so that they are able to scale and secure themselves against externalities is the key. There is a need to ensure access to finance and encourage and facilitate digitisation and formalisation through programmes like the Production Linked Incentive (PLI) scheme.
- **Upgrading Infrastructure:**
  - **Digital infrastructure:** Enhance ICT, broadband, and 5G connectivity; Ensure clarity on data protection rules that may impact investment decisions for digital infrastructure; and Implement cross-border paperless trading.
  - **Physical infrastructure:** Effective implementation of the 'National Logistics Policy'; enhance both road and non-road inland transportation networks; and address gaps in power supply and distribution.
- **Improving the Business Environment**
  - **Investment and financial regulations:**
    - **Dispute settlement:** Ensure seamless dispute settlement while dealing with the Bilateral Investment Treaty system.
    - **Predictable tax regime:** Simplify and streamline tax procedures and policies, regularise GST rates with import tariffs to equalise domestic costs and import costs.
    - **Other measures to improve ease of doing business:** Streamline import procedures and reduce hidden trade barriers, prioritise Trade Agreements to widen India's market access, and focus on providing cost advantages, avoiding delays, and reducing bureaucratic entanglements.
  - **Facilitating Trade:**
    - **Trade policy:** Review the link between trade policy and investment policy; Simplify and streamline border procedures, establish stable tariff rules.
    - **Improving quality:** Implement the Indian National Strategy on Standardisation to increase firms' capacity to meet international standards.
- **Ensure resilience of linkages to GVCs**
  - **Map supply chains for critical goods:** Mapping of supply of goods critical for public health, country's economic security, etc. would help finding the vulnerabilities in supply chain and charting out strategies for shoring up their supply.
  - **Ensure redundancies:** Government must ensure there are emergency stockpiles, and support firms in building diversified supply chains through an enabling investment environment and stable tariff structures.
  - **Use of technology:** The government must facilitate the uptake of digital technologies and tools that can support firms in identifying and responding to potential supply shocks.

A Learning Model: Bangladesh

Bangladesh's drive to achieve **global scale in the textile and apparel industry** has helped the nation achieve significant economic benefits.

- Exports of **ready-made garments have grown from approximately $5 billion in 2000 to over $30 billion in recent years.**
- The country is now the **second largest exporter globally, after China,** and ready-made garments contribute to over 80% of total exports.
- Much of this growth has been enabled by the Government's **focused steps to drive world-scale operations** in the textile and apparel industry.
  - **Industry- and export-friendly policies** have been adopted consistently and framed in consultation with wider stakeholders.

- **Public-private partnerships:** Robust partnerships between firms and the government are needed. For instance, an Indian tech company now provides an 'Early Warning Solution' for supply chain resilience. Such models can be escalated to a PPP model.
- **Harmonise logistics and transportation:** Implementation of harmonised logistics and transportation standards can help reduce bottlenecks and ease the movement of goods.
- **Ensure policy coherence:** Ensure that policies aimed at GVC integration complement other policy priorities such as consumer protection, the welfare of workers, the creation of decent jobs, competition, gender equity, and green transitions.

Sustainability of Global Value Chains

- International trade through GVCs has contributed to climate change by **increasing energy consumption and CO2 emissions** in related transportation and production(refer to the infographic).
- Even so, GVCs **also have mitigating effects on GHG emissions and climate change.**
  - International trade may lead to lower CO2 emissions if production and distribution via GVCs entail **lower emissions than domestic production.**
  - **Technology spill overs** through participation in GVCs contribute to the diffusion of new **environmentally sustainable technology,** thus facilitating the transition toward **carbon neutrality** in both developed and developing countries.
  - Participation in GVCs ensures supplier firms **compliance with global standards and environmental certifications,** which can cut down their carbon footprints.

Emission of Carbon in GVC

- **Higher GHG emissions from transportation,** which is estimated to be responsible for **3.5% of total global emissions.**
- GVCs further accelerates t**he growth of the global energy footprint,** in which stronger backward linkages can increase energy use.
- **International carbon leakage**– production moving to countries with less stringent climate measures—leads to the **burden-shifting of emissions and threatens climate mitigation targets.**
- The cost-benefit of GVCs has resulted in an **abundance of production and excessive waste in products,** including electronics, plastics, and food.

Conclusion

GVCs are currently undergoing transition, driven by several factors like the need for diversification due to the pandemic and ensuring supply chain security due to strategic reasons. This has opened significant opportunities for newer countries to step up in existing value chains and capture greater market share. This shifting trend will favour emerging economies particularly India only if they overcome key challenges. Rather than only focusing on reducing reliance on imported materials, India also needs to develop capacities, acquire new capabilities, upgrade existing ones, improve trade facilitation, and incorporate MSMEs to increase GVCs integration. If executed efficiently, GVCs will be a significant contributor to India's economic growth, employment, productivity, and income.

Topic at a glance

Global Value Chains (GVCs): Prospects and Challenges for India

A global value chain (GVC) is a **series of stages involved in producing a product or a service** that is sold to consumers. It **embodies value addition** at each stage of production and **at least two stages are produced in different countries.**

Key benefits of participation in GVCs

- **Raise productivity:** Rise in per capita income is about twice as much as standard trade.
- **Reduced poverty:** Due to employment opportunities and an expansion in firm output.
- **Greater scope for Specialisation:** A country can create targeted industries for a particular stage.
- **Facilitates knowledge sharing:** Leading to industrial upgrading, improvement of product quality, etc.
- **Strengthening local firms:** Achieving economies of scale, sharing of know-how and technology, etc.

Ways of participation in GVC by different countries

- **Backward linkages:** When one country uses inputs from another country for domestic production.
- **Forward linkages:** When one country supplies inputs for production in another country.

Key determinants of GVC participation

- **Non-Policy Factors:** Factor endowments, market size, industrial structure, Location/Geography
- **Policy factors:** Trade policy, openness to FDI, Institutional quality, etc.

Recent shifting paradigms in GVCs

- GVCs are growing more knowledge-intensive
- Value chains are becoming more regional and less global
- Goods-producing value chains have grown less trade-intensive
- Trade based on labour-cost arbitrage is declining
- Services play a growing but undervalued role in GVCs

Roadblocks that hinder India's participation in GVCs

- **Inward-looking Economic policy:** import substitution, the Licence Raj, etc.
- **Limited lead firms:** Due to shortage, lack of access to finance, custom procedures, etc.
- **Not leveraging MSMEs:** Due to weak innovation, inadequate linkages with lead firms, etc.
- **Less regional integration:** SAARC is inactive and India withdrew from RCEP recently.
- **Technological shift:** The pace of re-skilling and up-skilling of the workforce is slow in India.
- **Structural shortcomings faced by firms:** Meeting quality standards, Lack of institutional support, etc.

Key initiatives taken by India to integrate itself into GVCs

- **Production Linked Incentives (PLI):** To make India hub of manufacturing in 14 key sectors like automobile and auto parts, etc.
- **Labour reforms:** Formulating four codes covering wages; occupational safety, health and working conditions; industrial relations; and social security.
- **Infrastructure development:** Bharatmala, Sagarmala, National Infrastructure Pipeline programme, PM Gati Shakti, etc.
- **Foreign Direct Investment (FDI):** In most sectors of the economy, India allows foreign investments of up to 100%.
- **Foreign Trade Policy (FTP) 2023:** Aims at re-processing and automation.

Ways to enhance India's integration in GVCs

- **Skill development:** For high-tech sectors like electronics, semiconductors, etc.
- **Sectoral diversification:** Sectors like defence, aerospace, etc. can jumpstart the process of increasing engagement in GVC.
- **Support to MSMEs:** Access to reliable credit, ensure access to finance and encourage and facilitate digitisation, etc.
- **Upgrading Infrastructure:** Enhance ICT, broadband, and 5G connectivity, effective implementation of the 'National Logistics Policy', etc.
- **Others:** Improving the Business Environment, Ensure resilience of linkages to GVCs etc.