

Integrating Indian MSMEs Into Global Value Chain: Determinants and Challenges

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How to cite this article: Subramanian Ramachandran, B.P. Chandramohan, N. Taibangnganbi (2024) Integrating Indian MSMEs Into Global Value Chain: Determinants and Challenges. *Library Progress International*, 44(3), 16733-16747

Abstract

Indian economy has been growing rapidly in the post liberalisation period since 1991. India's share of global GDP has grown between 2017 and 2023, rising from 3.2% to 7.59%. However, India's export performance lags in comparison to the growth of its GDP. India's export performance marginally improved from 1.7% in 2018 to 2.1% in 2022, despite exports having expanded to 115 countries. While the ranking of merchandise export advanced to 17th, share of value-added improved only marginally from 1.7% in 2014 to 1.82% in 2023. The FDI inflows and GVC participation delivers a plethora of benefits such as knowledge spill overs, access to technology, productivity growth, job creation and improved competitiveness. India with its specialisation and comparative advantage in low, medium and high-skilled labour and technology-intensive manufacturing has benefited from both FDI inflows and GVC participation. Nevertheless, India's integration into GVC is slow and significantly lower compared to other emerging economies. This descriptive study attempts to identify the determinants of GVC participation, and constraints faced by MSMEs in GVC integration. The study recommends intensive augmentation of service inputs to increase MSME involvement for higher capacity utilisation and improve integration of both Domestic Value Chain (DVC) and Global Value Chains (GVC) for improving the overall performance of the MSMEs.

Keywords: GVC, MSME, Manufacturing, Supply chain, value chain, technology, trade,

I. Introduction

Value Chain has been explained by using multiple terms such as 'slicing of the value chain', 'fragmentation of the production process', 'disintegration of production', 'delocalization', 'vertical specialization', 'global production sharing', 'unbundling', 'off shoring', 'outsourcing' and many more (Antràs, 2016). However, value chain connotes the entire gamut of activities undertaken to transform inputs into final products and services. Design, production, marketing, distribution and after-market support for the end user are all included in the value chain and can be handled by a single business or diffused among several (Porter, 1985).

According to Gereffi, et al. (2001) Global Value Chains (GVCs) comprise of businesses, processes and stages from at least two different nations; they can also be regional if majority of the production takes place within the same geography. Thus, GVC is defined as production system with shared responsibilities of business activities among several enterprises in two or more nations regionally or worldwide (Grossman. & Rossi-Hansberg., 2012). GVCs are autonomous networks of mutually trusting groups, comprising of large corporations, suppliers, service providers and investors (Morgan, & Hunt, 1994) to perform specific tasks. Within an alliance value chain network, heterogeneous businesses collaborate in ways that help them gain competitive edge to compete against other networks and firm-to-firm (Morgan & Hunt, 1994; Madhok, & Tallman, 1998). Owing to advancements in technical, economic and social conditions along the value chain, the value chain strategy provides the highest potential for trade benefits and therefore most appropriate for Micro Small and Medium Enterprises (MSMEs) (Milberg, & Winkler, 2013).

Domestic businesses can participate in GVC through direct exporting, outward FDI (OFDI), supplier links within a GVC network, and strategic partnerships with MNC, enhancing MSMEs opportunities to participate in the global economy (Qiang, et al., 2021; Epede, & Wang, 2022). As of 2022, about 70% of international trade transpires through the GVC in the form of services, raw materials, and components (OECD, 2022). Plotting MSMEs integration in GVCs displays that

integration improves component quality through technology adoption and ultimately strengthen the potential of the MSMEs to increase their size in developing countries. GVC refers to the fragmented system of inter-connected production processes that are distributed beyond national boundaries to produce goods and services from raw materials and intermediate goods (Cheng, et. al., 2015). At least two of these stages are carried out in different countries with experts in those specific stages of the manufacturing sequence (Hummels, et. al., 2001), thus fragmenting production across nations. It ushered the coproduction paradigm in matured industries, which has accelerated the growth of trade in intermediate inputs (Cezar, et. al, 2017). Over the years, businesses have become increasingly specialised in their area of operations, develop networks and partnerships to bridge the gap in the value chain and enhance their own contribution (Walters, & Rainbird., 2004). These developments have significantly tilted the debate in favour of those who have maintained having effective access to production means rather than mere possession of them leading to structural transformation (Normann, 2001).

Developed as well as developing economies are in the race for a share of pie in value addition, slicing up the production process into high-tech and low-tech due to technological gap (Posner, 1961) and the product cycle paradigm (Vernon, 1966) which determines where the stages of production are in terms of upstream or downstream with regards to proximity to the place of final consumption (Fally, 2012). The GVC with the high-tech concentration is relatively higher in the developed economies as that are away from the place of final consumption having a different composition of goods and services and are therefore also remote from accessing basic inputs due to nascent development of inter-industry linkages (Antras, & Chor., 2017).

Liberalisation and Globalisation have led to declining trade barriers, which is a boon to GVCs as they foster free trade agreements (FTA) enabling outsourcing of goods and services globally apart from labour and capital. It has eased the movement of labour and capital across boundaries to benefit from minimisation of cost and maximisation of profit (Dowlah, 2020; Dowlah, 2018). GVC is ingrained with the spirit of collaboration encouraging mutually beneficial partnerships beyond national boundaries between government and industry and between industry and industry. This has positively impacted success of the companies, technological progress, reduced skill difference (Borjas, 1995), generated employment opportunities (Guha-Khasnobis, et al, 2023), increased skill demand and improved labour markets (Feenstra, & Hanson, 1995) and as a result transformed the industrial structure (Gereffi, 2005) of many developing countries. MNCs have realised higher productivity at lower cost ensuing efficiency gains, while their affiliate firms supplying components also benefit from knowledge gains, capability enhancement and innovation. Improvements in production efficiency deep seeded in technology upgradation, increasing mechanisation and automation at firm level provide MSMEs opportunities to achieve economies of scale whereas the customers benefit from getting products at a lower price. To keep pace with the changing momentum and to integrate the MSMEs with the GVC, developing economies have increased their investments in social and physical infrastructure, transport and logistics (Kaur, et al., 2016). Greater offshoring and outsourcing of production activities of MNCs increased inter-sectoral linkages to attract investment, and reduction of time and cost and ease of doing business of MNCs. The integration of MSMEs into GVCs open fresh avenues not only by absorbing the labour displaced due to technological upgradation and automation but also boosting aggregate employment, labour productivity, income levels and economic growth of developing countries. Henceforth, it can be emphasised that enhancing labour productivity in one sector indirectly stimulates and compliments labour demand and development of value chain in other sectors (Calligaris, et al., 2023). This would further improve the overall capital attraction and allocation to develop supply-chains and labour market conditions thus furthering an increase in domestic demand and domestic value addition (Cheng, et al., 2015). Efficient spillovers of capital, know-how and technology will enhance the potential of domestic players (de Mello, 1997) to progress towards more high-tech sectors causing fast tracking industrialisation thereby propelling the rate of growth of national output (Ignatenko, et al., 2019). Accordingly, productivity is the primary factor influencing both employment and wages that fuels demand and economic progress (OECD, 2023).

In a well-connected global market, higher opportunities of integration with the GVCs increases when large firms dilute concentration on specialisation of production (Milberg, & Winkler, 2013) and small enterprises upgrade their capability with knowledge and technology. Modular manufacturing has been made possible by decomposition of the product i.e. the design and production process are broken up for specific components of a sub-system or a system without the need to produce the entire finished good under one roof. This affords the flexibility to produce at multiple sites across the globe where production of components is comparatively cheap. MSMEs are willing to adopt state-of-the-art technology to upgrade their production processes to participate in GVCs. This aspect of fragmentation has significantly reduced complexities of manufacturing particularly in high-tech products. The fragmentation of production provides greater opportunities for MSMEs in the developing countries to integrate into the less technologically intensive upstream GVCs. It enables them to access the knowledge of modern production methods and inputs required for specific products enhancing

productivity and improving competitiveness of firms. The economic and quality competitiveness of the products help MSMEs in producing and exporting components to GVCs.

MSMEs integrated with GVCs focusing also on native markets in developing economies benefit from sourcing core-technologies from multinational corporations (MNC) on non-core technological tasks such as assembling sub-systems into finished goods increasing domestic gross value-addition (DGVA). This tendency upsurges competition among domestic businesses firms. The domestic competition spurs innovation and improvements in standard-setting resulting in better products and services expanding into native market for goods and services enhancing the efficiency and effectiveness of the supply and demand chain optimising the value chain (Walters, & Rainbird, 2004). Thus, integration of MSMEs into the GVCs strengthen manufacturing resulting in sustainable industrialisation of developing countries. Apart from improving domestic industrial capacity this also opens the labour market for the downstream sectors for logistics, distribution, marketing and sales and after-market support. The productivity gains lead overall job growth either in the process of integrating into larger international firms or through building native brands to meet domestic demand. Hence MSMEs integrating into GVC immensely expands the scope and opportunity for increasing productivity, employment, capital and technology, contributing to economic development. In this approach, multiple organisations each with specialised skills can participate in product development, manufacturing, distribution and sales. In the niche area they get comparative advantage and market support that help to improve overall efficiency, cost effectiveness and productivity gains. The basic hypothesis of the paper is that the integration of MSMEs into GVC advocating outsourcing and offshoring is instrumental in coordinated production, investment and trade globally, ultimately increase the GDP. In short, GVC integration enables exploration of opportunities for improving production efficiencies and foster trade collaborations of the participating firms both of which result in increased economic activities and surge in trade volume for the developing economies.

According to International Trade Centre (2018), more so than large enterprises, MSMEs struggle with international trade and direct market access. Because of bureaucratic roadblocks and the lack the capacity to comply with complex rules, they operate as indirect exporters or importers. Bureaucratic barriers include needless inspections, onerous documentation and data requirements, manual processes, and lack of coordination among border officials and ineffective policies and procedures. These barriers make MSMEs less competitive as a supplier and impede their integration into regional and global value chain.

II. Review of Literature

Globalisation and advancement in manufacturing technology, digital and information technology fuelled the rapid growth of GVCs. The GVCs steered the fragmentation of industrial process which led businesses to specialise in their respective field of production. They are not only instrumental in job creation and economic expansion but also fostered exchange of know-how and exports which help emerging nations growth processes become more sustainable. The inferences some of the important studies by experts and institutions are reviewed and the gist are mentioned in this section.

Ando, and Kimura (2005a, 2005b) highlighted the integration of MSMEs into GVCs is motivated by the intensifying global competition focussed on quality, delivery and cost, with large enterprises embracing new business models based on international sourcing, flexible manufacturing and global markets. MSMEs integrate with GVCs through their main business focus, subcontracting, outsourcing, commercialization, knowledge creation and innovation, rapid technological change, production discontinuities, and advancements in information and communication technology (ICT). Bilateral, sub-regional, and regional free trade agreements (FTAs) have made them easier.

According to Organisation for Economic Co-operation and Development (OECD, 1997), the development of MSMEs has been positively impacted by globalization and regional economic integration. Growing regional integration has stimulated the development of value chains and offered new market opportunities for MSMEs. The integrated process is able, flexible, quick to respond, and adaptive to constantly shifting local and global demand.

Porter, M.E. (1990, 1998) in his studies in 1990s reasoned the emergence of global value chains by participating in horizontal and vertical clustering and networking. These have facilitated access to knowledge-sharing spill overs and skilled labour as well as achieve economies of scale and scope, which would be impossible in isolation.

Ando and Kimura (2005b) opined that the emergence of GVC might be attributed to integrating the notion of arm's length transaction and geographical proximity. The structure of product fragmentation provides explanation for the emergence of firm-level fragmentation of production processes and industry-level agglomeration and clustering. The production and distribution networks will become even more fragmented due to lower production costs in fragmented production ventures, which in turn led to lower after market service costs, and lower network setup costs.

Harvie (2010) emphasises the need for MSMEs to improve their global competitiveness, particularly in Research and

Development, upgraded quality control, and skills. He recommended that governments should encourage the development of intermediate products and supplier industries as an operative strategy to boost domestic content for MNCs operating in a country.

Azmeh and Nadvi, (2014) highlighted the challenges faced by MSMEs inside value chains. They mentioned that there are vital asymmetries in sectors and value chain segments. In the automobile and electronics sectors, MNCs expertise in sourcing tier-one suppliers and assemblers, are critical, while MSMEs find it challenging to gain access such chains.

Kawakami, M., and Sturgeon, T.J. (2011) explain that lead firms have taken a narrow role in India's GVC integration. They came up with a reasoning in line with the low participation rate in GVCs. They debated how government policies can be implemented to improve the way businesses integrate into GVCs, strengthen an existing integration within GVC, and promote the formation of lead businesses and their expanded role inside GVCs. Although it is specifically applicable to India, it can be applied to other emerging nations. The approach proposed Gereffi and Sturgeon's (2013) framework to examine India's policy gaps.

Lee et al., (2012) reveal that insufficient quality standards increase the cost of local production thereby creating unwanted hurdles to trade by reducing FDI's spillover effects minimising the backward linkages. In this case, local jobs are limited to basic manufacturing and inputs need to be imported to satisfy the lead firm's standards and criteria. Nevertheless, high inappropriate local standards could also invite avoidable obstacles to trade. The remedy to this issue is adjustment through dialogue and cooperation, however, it is time consuming and gradual process that might take longer than anticipated (Cadot et al., 2012).

Baldwin, R. (2011) studied trade and globalisation and presented in a working paper that India's participation index comes at close to 40%, which is attained by merging the two measures from the buyer's and seller's perceptions. In addition to this, India's backward and forward participation has been low, at 22 and 19% respectively in 2009 (OECD, 2013). Baldwin (2011) argues that since 1970, due to contributions from Asian countries such as, China, Korea, India, Indonesia, Thailand, and European countries such as Turkey, and Poland, the manufacturing GDP of the world has increased by more than one percentage points. All of these countries, with the exception of India, have sizeable manufacturing sector that participates in the GVCs of Japan (East Asian Countries) or Germany (Poland and Turkey).

According to World Bank's 'World Development Report 2020' India performs below the global average in several logistics performance and efficiency indices compiled internationally. India falls short of major Asian economies such as Japan, Korea, Taiwan, and emerging economies such as China, Malaysia, and Thailand. India ranked 44th out of 160 nations in the World Bank's 2018 International Logistics Performance Index (LPI) with a score of 3.18, which indicates questionable performance. Other indicators which suggest mediocre performance in logistics are Trade Facilitation Indicator developed by OECD and the World Banks "Ease of Doing Business" indicators 'Trading across Border' parameter.

Song and Wang, (2013) mentioned that many MSMEs were unable to obtain funding from banking institutions due to poor credit histories and expensive transaction costs. In the case of MSMEs, it has been observed that transaction costs occasionally exceed the credit limit as a result MSMEs do not find it rational to take loans under conventional schemes.

Song et al., (2016) claimed that new instrument called, "Supply Chain Finance," (SCF) may be able to accommodate the needs of MSMEs while reducing default risk. Thus, creating a win-win scenario for both borrowers and the lenders. Despite numerous advantages, MSMEs face several obstacles to SCF adoption. Consequently, it becomes imperative to examine the adoption factors. According to 2009 research by Randall and Farris the use of SCF increases the degree of commitment and trust among SC participants.

III. Statement of the Problem

According to World Trade Organisation (WTO, 2021), SMEs are the world's growth engines, as they contribute to more than 90% of businesses, 70% of all employment, and 50% of global GDP (World Bank, MSME EI, 2019), and formal SMEs contribute up to 40% of national income (World Bank in 2022). MSMEs play a critical role in job creation and achieving the objective of inclusive, economic, regional and social development stimulating economic development. With the currently available data of the World Bank (2019), the highest formal MSME density per capita is higher in high-income countries followed by low and middle-income countries and the low-middle income economies have relatively a higher density of microenterprises that are not likely to be formally registered. Apart from offering cost effective solutions and services to large industries they also play a vital role in innovation, sector modernisation, and development of reliable, robust, and resilient supply and value chains.

MSMEs are uniquely positioned to benefit from the ability to produce small quantities and customisation capabilities. Both characteristics offer the flexibility to adapt quickly at low cost enable them to respond faster and better to become larger

firms due to the changing market dynamics, customer preferences and shorter product life cycle. Because of the shorter product life cycle, engaging the MSMEs enables to meet both the short-term and the long-term objectives of incremental and radical innovation; both of which are essential for survival of an organisation. The shorter product life cycle also has serious implications for the structure of organisation demanding it remain nimble to respond and therefore form alliances and collaborations enabling the backward leaning linking. This triggers cooperation in knowledge sharing and financial risks by the MNCs increasing the levels of interactions that encourages further participation in the GVC and the overall process leading to flexible specialisations (Lundvall & Bjorn., 2016). This paradigm exponentially enhances the potential for knowledge spillovers in both forward and backward leaning linkages. Also, it improves the ability and scope to scale for MSMEs for flexible engagement in orientation and contribute to the Domestic Value Addition (DVA) and GVC when targeting large customers and potential markets in the process establishing synergy. Therefore, MSMEs explore markets beyond their regional boundaries including outward FDI (OFDI) which will be able to expand rapidly. This is because they manage the four realms of innovation such as product, process, market and organisation (Avermaete, et. al., 2003), while simultaneously managing both internal and external sources of knowledge in the process of establishing a collaborative network (Chesbrough, 2003).

A substantial portion of industrial production, exports and employment in India is attributed to the MSME sector, it is the second largest employment generator after agriculture. Majority of the MSMEs are captive to large industries as auxiliary units or suppliers of critical input and are crucial to the development and growth of the GVC and domestic value chain (DVC) in both the secondary and the tertiary sectors. Approximately 45% of manufacturing output and 30% of India's GDP is attributed to MSME sector. According to a World Bank estimate there are 19-50 MSMEs per 1000 people in India (MSME EI, 2019) a high number of them operate informally.

In 2014, India's GDP was USD 2 Trillion and it was ranked 10th in the world ranking in terms of GDP. By April 2024 India's GDP had almost doubled to USD 3.9 Trillion and its ranking rose to 5th. India's share of global GDP has grown from 3.2% in 2017 to 7.59% in 2023. However, India's export performance has trailed in comparison to its GDP growth, it has only marginally improved from 1.7% in 2018 to 2.1% in 2022 (PIB). Despite exports having expanded to 115 countries and the ranking of merchandise exporter advancing to 17th its share has only marginally increased from 1.7% in 2014 to 1.82% in 2023 (India Briefing, 2024). This implies the domestic economy grew at a healthy pace while the integration into GVC remained relatively stagnant. According to a study by Shashank, & Mayya, (2021) the MSME sector was unable to compete with the challenges posed by the globalisation. Anshu & Abhimanyu, in their 2013 article expressed their concern about the ability of the MSMEs to survive in the process of globalisation in the absence of protection from trade tariffs.

The make in India campaign launched in 2014 give boost to domestic manufacturing that increased productivity with the view to integrate India in the GVC by promoting India as a global manufacturing hub. This initiative under Make in India 2.0 has opened 27 sectors, 15 in manufacturing and 12 in the services sector (PIB, 2021). The integral agenda of the Make in India initiative is to build investors' confidence by creating an investment conducive environment to make MSMEs export competitive. The seriousness of integrating with GVC trade is evident, however it has not picked up momentum. With this background, this study aims to investigate the challenges in integration with the GVC and examine factors that determine export competitiveness to improve GVC trade.

IV. Objectives

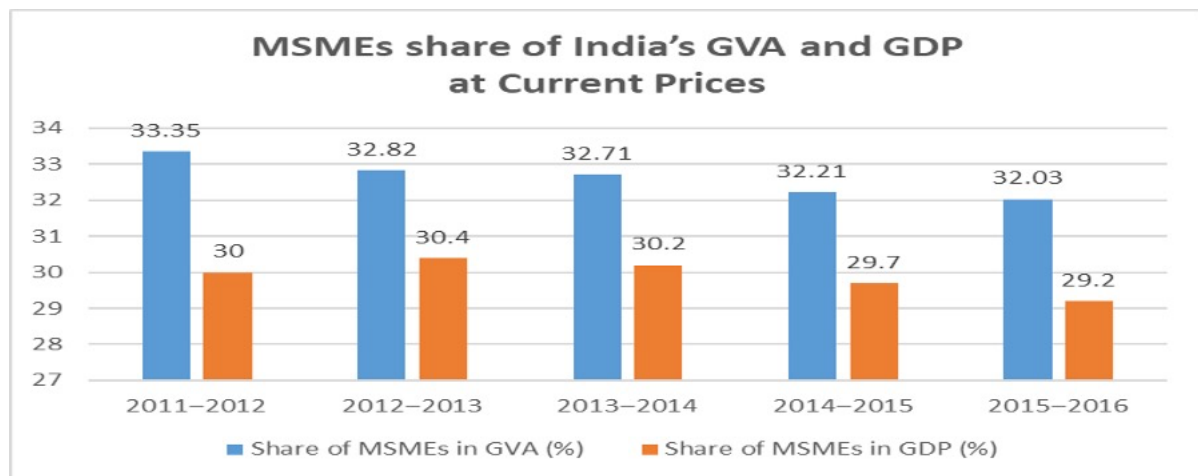
1. To understand the integration of Indian MSMEs into GVC.
2. To study the important factors determining the integration of MSMEs into GVCs.
3. To explore the challenges of integration of Indian MSMEs into GVCs.
4. To suggest various measures to improve the integration of MSMEs into GVCs.

V. Indian MSMEs in GVCs

Even though India's trade flows have grown significantly over the past 20 years, the integration of Indian MSMEs into GVC continues to show weak record when compared to some of the East Asian countries like Vietnam, Cambodia and Taiwan. Participation of Indian MSMEs in GVCs is nothing but their engagement with a particular segment of the production process (Banga, 2016). It means that the trade is in intermediary goods and services. The participation index of a country's engagement in GVC is determined by the backward and forward linkages. The backward linkages are defined as the share of foreign value added in gross exports while the forward linkage is the opposite or the share of domestic value added in exports of intermediate goods. In 2011, India accounted for 20% of foreign final demand when considering

domestic value added, but around 25% of foreign value added was included in domestic final demand for India (Taglioni & Winkler, 2016). Chart 1 shows the contribution of MSMEs to India's GVA and GDP at current prices.

Chart 1: MSMEs share of India's GVA and GDP at Current Prices



Source: Central Statistics Office (CSO), Ministry of Statistics and Programme Implementation

Chart 1 furnishes the impact of MSMEs on India's GVA and GDP from 2011 to 2016. It is explicitly clear that the contribution of MSMEs has been steadily about 32% and 30% in the GVA and GDP of India, respectively (GOI 2019). Furthermore, the MSME Annual Report (2016) gives the fact that MSMEs engage 80.5 million people. Furthermore, according to the International Finance Corporation (IFC 2013), MSMEs account for about 36% of the total value of all exports. Furthermore, just 4,000 of the 63,392 million establishments in the manufacturing, trade and other services sector are large enterprises, according to the 73rd Round of National Sample Survey (NSS) on unincorporated non-agricultural firms (CII 2018). These data exemplify the noteworthy role played by MSMEs in promoting the growth of the Indian economy. Firm distribution by Industry classification in GVC is shown in Table 1.

Table 1: Firm Distribution by Industry Classification in GVC

NIC Code	Sector	GVC Firms		
		Obs.	2006	2016
10, 11, 12	Food, beverages, and tobacco	475	0	2
13, 14, 15	Textiles, wearing apparel, and leather	330	2	9
16, 17, 18	Wood, paper products, and printing	109	0	0
19, 20, 21	Coke, chemicals, and pharmaceuticals	718	6	26
22	Rubber and plastics	260	2	5
23, 24	Non-metallic mineral products, basic metal	399	1	7
25, 31	Fabricated metal products, except machinery and equipment, furniture	142	0	3
26	Computers and electronics	151	3	11
27	Electricals	288	2	15
28, 29 30	Machinery and equipment, Motor vehicles and transport equipment	497	5	30
32	Other manufacturing	135	0	16
	Total	3,504	21	124

Source: Reddy, K., & Sasidharan, S. (2020). Driving Small and Medium-Sized Enterprise Participation in Global Value Chains: Evidence from India (Working Paper No: 1118; ADBI Working Papers).

Based on samples, Table 2 presents the coverage of MSMEs in the study across industries (Reddy & Sasidharan, 2020). Additionally, it shows the number of MSMEs that were involved in GVC throughout the 2006-2016 sample period. A significant increase in the number of participating firms from 21 in 2006 to 124 in 2016 is noted. Closer examination indicates that machinery, motor vehicles, and the transport equipment industry had the highest participation in GVC, followed by the coke, chemicals, and pharmaceutical industries. On the other hand, MSMEs in wood, paper products, and

printing industries have no participation at all. In addition, since 2006, more businesses from all industries – except from NIC 16, 17 and 18 have participated.

It is evident by comparing India to other similarly positioned nations, that it has not been able to increase the involvement of MSMEs to accelerate its participation in manufacturing GVC. As an example, between 2000-2020, Vietnam's direct trade share (DAVAX) in the middle- and high-technology manufacturing export sector fell from 54.57% to 31.55%. Meanwhile, its percentage of GVCs that underwent backward integration grew from 29.63% to 59.78%. However, during the past ten years, India's backward integration has only increased to 28.66% from 22.26%, while DAVAX only decreased from 54.86% to 51.95%. Concurrently, India's forward integration decreased over the past decade, falling from 22.88% to 19.38% (Ministry of Micro, Small & Medium Enterprises, Government of India). In the manufacturing sector, backward linkages have decreased from 35% to 23% in 2016, whereas forward linkages have been on the rise since 2012. The top five GVC export categories are: coke and petroleum (18.3%), renting of machinery (14.9%), chemicals (11.2%), basic and fabricated metals (8.6%), and transport equipment (6.3%). These sectors contribute almost 60% of India's manufacturing GVC exports (TiVA database, 2021).

VI. Determinants and Indian Challenges of Integration of MSMEs into GVC

The globalisation has changed the structure of production and modified the connections between partners along the value chain. The integration of partners is based on sourcing of inputs from low cost or complementary or strategic assets from more efficient producers. After globalisation, the organisational structure of production has undergone a significant change in the ratio of imported to domestic sourcing of inputs, and the export and import propensity of manufacturing affiliates under foreign management (OECD, 2007). The integration of MSMEs in GVCs could look at factors emanating from the angle of firm to develop a product or service as firm attributes while the factors determining the performance of the firm externally as country characteristics. Broadly factors determining the integration of MSMEs into the GVCs can be viewed from the angles of both factors related to MSMEs and the country characteristics. According to World Bank (2020), institutional quality, location, market size and endowments, are some of the variables that affect how well a business integrates with GVC. However, national policies which includes those pertaining to logistics and infrastructure, FDI, tariffs and trade facilitation, skill development and labour markets etc. play a significant influence on determining these necessities.

VI.A. Firm Attributes

In the last two decades, production of goods and services have increasingly become tradable due to lesser trade costs, digital infrastructure and superior technology. MSMEs have also benefited from increased specialisation of production as segments of GVCs. The degree of integration between MSMEs and GVCs is influenced by a number of critical characteristics, including predictability, reliability, and time sensitivity of trade flows.

VI. A.1. Productivity

Improving the productivity of MSME enterprises generate more resilient jobs and growing economies. GVCs are considered as an entrenched vehicle for creating productivity spillovers to local firms (OECD-UNIDO, 2019). Each country and sector to achieve high levels of productivity to remain competitive in GVC. Studies establish that businesses that participate in GVCs are associated with higher levels of productivity, technological capacity and competitiveness (Lileeva & Trefler, 2010; Caliendo & Rossi-Hansberg, 2012; Joachim Wagner, 2012; Koreen, & Cusmano, 2019). It is also true that better integration into GVCs could help MSMEs improve their productivity and access more markets. MSMEs unlike the large firms exhibit lower levels of labour productivity and are furnished with inferior technological capabilities, have a competitive disadvantage in GVC participation. According to WDR 2020, GVC firms involved in manufacturing activities display higher labour productivity than petty traders or non-traders, scheming for firm-level capital intensity. In India sectors like electronics, semiconductors, and pharmaceutical GVCs, the productivity enhancement is largely based on design, R&D activities and skill content. Though India has better productivity in many other sectors, their integration into GVCs is insignificant because their growth is largely determined by domestic demand rather than exports. Additionally, compared to non-GVC enterprises, Indian firms in GVCs enjoy a productivity premium of up to 22%. The productivity premium from GVC linkages is higher for automotive, electronics and IT industries as compared to textiles and chemicals because the former category of industries have increased integration into GVC than the latter category of industries.

VI. A.2. Relationship Management

The philosophy of relationship development acknowledges that establishing a strong bond takes time. According to Morgan

and Hunt (1994) five elements have the power to make or break a relationship: past benefit, opportunistic conduct, shared values, communication and build-up of significant termination cost. In addition, is the power struggle that results from coordination and asymmetries in the interactions between firms caused due to GVC governance which are hierarchy, captive, relational, modular, and market (Gereffi, 2005). Opportunistic behaviour can erode confidence and has the potential to undermine trust impacting future interactions. Likewise, businesses in partnership exchange considerable knowledge and transfer of technology, hence, are expected to invest in non-replaceable items that have little to no value outside of the relationship to demonstrate commitment to embeddedness in the network ecosystem, and to create organisational processes conducive to knowledge sharing and use, such as Electronic Data Interchange (EDI). The aim is to view the relationship as important that it warrants to maintain and preserve it to further the relationship, practice joint adaptation, and make dissolution difficult. The goal is to establish a long-term successful relational exchange that meets the objective of the relationship that is value co-creation and fulfils the business objectives of both the individual firms.

VI. A.3. Access to Finance

Access to finance is an important determinant of integrating MSMEs into the GVCs. Better integrated MSMEs have stronger position to access credit which is a precondition to participate in international trade. But most of the Indian MSMEs struggle to access trade finance owing to multiple factors such as creditworthiness, collateral requirements, short-term liquidity, political risk and currency risk. Relatively small firms face the problem of long-term trade finance gap that tends to be particularly hard on them. One of the important reasons is that private banks focus more on lending to large companies due to Basel III capital reserve norms and those related to Anti-Money Laundering, Combating the financing of Terrorism and Know Your Customers (KYC) (Wass, 2019; IFC/WTO, 2019). MSMEs struggle to access trade finance due to high-risk perception, higher operation costs, and lack of business skills, area differences and low short-term liquidity. Hence, they either pay higher interest rates, tighter borrowing terms and are more likely to be credit-rationed, or they face rejection of loan applications. The credit supply shortage to MSMEs critically affect GVC integration, often plagued by a lack of working capital, disturbing its day-to-day operations. Since 95% of the MSMEs are in the informal sector, access to formal finance remains a challenge. Evidence shows that MSMEs in total receive less than 6% of bank credit. Moreover, the number of applications filed by MSMEs on the delayed payment monitoring system MSME Samadhan has crossed the 1-lakh mark, amounting to over Rs.26,000 crore.

VI. A.4. Size of the Firm and Linkages

Firm size, industrial clusters and Market size are critical to development of inter-firm and sectoral linkages (idea of industrial district) to ensure availability of inputs impacting Total Factor Productivity (TFP) and can therefore influence the productive capacity and growth of the MSMEs. Intensity of the service sector participation in the supply chain; trade, transportation and logistics plays a facilitating role to coordinate and improve both domestic value added and integration of MSMEs in domestic value chain and GVC inducing growth. A recent study by McKinsey Global Institute highlights MSMEs share of value added and employment is 30% and 62% respectively as compared to 49% and 77% respectively in emerging economies indicate productivity gap among comparable economies. The value added by the MSME manufacturing sector in India is 40% with 83% contribution to employment in the sector indicating labour-intensive process. The comparative figure for Indonesia is 44% and 66% and for Brazil is 28% and 50% respectively. There is a relative dominance of value added in ratio by large firms observed in India even in trade and transportation as 76% while MSMEs contribute disproportionately to employment at 80%. Unlike 69% and 67% in trade and 75% and 40% in transport respectively in Indonesia and Brazil. The share of rural MSMEs is 51% in India, however the foregoing figures indicate low intensity participation of MSMEs in trade, logistics and transportation for provisioning production inputs and market making which can lead to unequal advantage and resource control by large enterprises (He, & Zhu., 2016). Another key aspect is the productivity ratio which is wider when compared to large industries within India at 26% implying deep efficiency gaps in the MSME sector and variations in the characteristics. This could be due to collective contribution of issues related to securing input supplies, creating and sustaining market share and labour related and factor endowment. These aspects imply both upstream and downstream firm performance needs to be strengthened to improve MSME performance. The likelihood of MSMEs to leverage absorptive capacity for value addition and greater forward participation in the value chain of India is high because it is endowed with natural resources, huge domestic market and abundance skilled labour. Therefore, to improve MSME competitiveness removing trade related policy barriers might not be enough, but the intensity of service inputs also needs to be enhanced; institutional credit, knowledge spill-over, technology diffusion, creating skilled labour, trade, transportation and logistics to improve capacity utilisation, and for greater

participation in value chain - forward, upstream and downstream.

VI. A.5. Age of the firm

In the previous section, discussion is centred on explaining how development of linkages and resource availability are critical to productivity increase and growth of firm size. However, enterprise age and experience also play a critical role in GVC integration as it takes time to develop suitable reliable suppliers with capacity to supply demanded quantities and establish dependable logistics and transportation channels to meet the Just-in-Time (JIT) inventory management and other lean manufacturing processes followed by MNCs. Hence, until these two are channels are established i.e. reliable suppliers and dependable logistics and transportation channel under the influence of MNCs, MSMEs engaged in value addition in upstream GVC would typically source smaller proportion of their production input from the local economy. Another aspect to this is the volume demanded might also exceed the capacity of the local supplier due to installed capacity, or unavailability due to variations in specifications with what is readily available necessitating the development of industrial ecosystem to meet the production process required to match the stringent quality specifications and time frame to deliver (Jordaan, et al. 2020). Empirical studies have shown a strong association of Knowledge and technological spillovers and innovation with time. Therefore, entities that have remained operational over a longer period of time have a greater potential and probability to participate in GVC.

VI. A.6. Foreign Support

A contributory factor supporting the integration of GVC participation is the ability of the lead firms to attract FDI into the manufacturing sector. However, majority of the MSME firms in India belong to the category of micro industries which don't have the ability to attract FDI into the manufacturing sector and hence low degree of GVC participation. Fragile links with GVCs lead to weak firms, remain as micro firms without any upgradation in size. Empirical evidence reveals that ability to attract FDI is positively connected with backward GVC participation. According to the United Nations Industrial Development Organization (UNIDO), GVC integration is driven by decreasing trade barriers and costs of international trade.

VI.A.7. Focus of the Firm on Foreign Market

Firms interested in integrating them with GVCs need to focus on foreign market for their growth. Timely delivery and lower transportation expenses cuts the costs of international trade, which is a necessary condition for improving participation in GVCs. With products being geographically distributed across economies results in high trade costs in the form of high tariffs or nontariff measures, which get passed on to the downstream firms raising the cost of the finished goods. This influences the production and investment decisions of firms involved in GVCs. The average tariff rates have a strong negative relation with GVCs participation, implying that countries with lower tariff rates are more amenable to GVC participation. One of the important reasons for India's low integration in labour-intensive chains is the large domestic market apart from the demanding high export standards and strict delivery pressures, Indian firms find it convenient to cater to the needs of the domestic market and markets in the Middle East (Banga., 2022).

VI.B. External Factors

Well-functioning trade simplification processes strengthens GVC trade by decreasing the time, cost, and uncertainty involved in importing and exporting (Taglioni & Winkler 2016). The external factors determining GVC participation of Indian MSMEs with the rest of the world largely influenced by the external factors to the firms mostly determined by the approach and policies of the government. Enterprises in the GVC evaluate their operating costs as impacted by prevailing industrial infrastructure, access to logistics hubs, land availability and acquisition policy, and provision of efficient power supply for finalising a contract with the MSME firm. The paper considers five external factors determines the GVC participation of India.

VI.B.1. Factor Endowments

Factor endowments is a critical factor determining the participation of countries in GVCs. In a densely populated country like India, the availability of labour at low wages serves as a gateway to downstream assembly-type stages of production with higher proportion of imported inputs in a country's exports. However, this production necessitates capital investments and hence capital endowment encourage GVC participation. Higher labour market rigidities discourage foreign investment and lead to reduced GVC spill overs (Javorcik & Spatareanu 2005). In labour-intensive production, India's outdated labour

laws discourage large firms from engaging in labour-intensive activities (Krueger 2010). Stringent labour market regulations caused less employment growth in the manufacturing sector and labour unrest, which have led to the employment of inefficient labour (Panagariya., 2008; Gupta, & Kumar., 2012).

VI.B.2. Measures Available to Attract FDI

Trade policy plays an important role in attracting FDI but a more important role in GVC trade because semi-finished products cross borders frequently. Measures available on imports and exports such as tariffs influence trade costs which mark positioning in GVCs. Reducing trade barriers augment benefits when production is sequenced across borders by reducing input cost and the price of final goods. Evidence confirms that tariffs on imports and exports negatively associated with GVC participation (World Bank, 2019). Earlier research suggests a favourable correlation between backward integration and GVC participation and openness to FDI. Trade policies and FDI are the proven factors for taking up GVCs, based on firm-level evidence for China and Bangladesh. India can better integrate into GVCs by bringing policies in line to attract Foreign Direct Investment. India has predominantly targeted its domestic market in its trade and manufacturing policies, whereas countries like China and Vietnam focused on luring MNCs with GVC linkages to their nations.

VI.B.3. Logistics

Distance and geography of an importing country determine cost of trade. Countries find it difficult to participate in certain parts of GVCs owing to timely production and delivery conditions. Main firms and intermediary producers in GVCs need to fulfil the conditions of reliable, predictable, and timely delivery of intermediate goods helping final output to meet demand on time. Hence, logistics are critical to the predictability, reliability, and time sensitivity of GVCs for smooth trade flows. Trade cost can be one of the important determinants of a country's positioning in GVC. Trade costs compound along the value chain have a higher incidence on downstream stages than on upstream stages. Hence India surrounded by the seas therefore have the advantage of meeting both upstream and downstream stages. However, inefficient transport and logistics and weak competition magnify trade costs in many manufacturing GVCs. Evidence suggests, bilateral GVC links are positively correlated with proximity to manufacturing hubs like China, Germany, and the USA, while negatively correlated with distance, highlighting the significant role of geographical distance in GVC participation.

VI.B.4. Governance

Industrial policy is central to development, promoting MSME integration in GVC through export facilitation, promotion of FDI, or free trade zones (FTZ) based on industrial location. Typical criticism to industrial policy is information asymmetry, corruption and rent-seeking. In the case of information asymmetry, it is impossible for governments to take the right decision by secular dissemination of information. GVC participation is still a notion even after policies of liberalisation, globalisation and privatisation. Lack of specialised managerial talent among MSMEs stay uncompetitive in the digital economy. To achieve Atma Nirbhar Bharat (self-reliant India) the top priority is given to the development of MSME ecosystem. The Make in India campaign seeks to establish India as a hub for global manufacturing by focusing on the manufacturing value chain. Initiatives like the production linked incentives (PLI) schemes and zero effect zero defect (ZED) certification are aimed at integrating MSMEs into the GVCs. In order to benefit from the competitiveness of MSMEs Bureau of Energy Efficiency (BEE) along with UNIDO gave energy efficiency advisory services to 695 MSMEs in 23 clusters covering brass, ceramic, dairy, foundry and hand tool sectors. Other schemes carried out by the Indian government to promote GVCs include ASPIRE scheme, Credit Guarantee Scheme, Credit Linked Capital Subsidy Scheme (CLCSS), MSME Samadhan, Scheme of Fund for Regeneration of Traditional Industries, Interest Subvention Scheme for Incremental Credit to MSMEs etc.

VI.B.5. Public Policy Measures

Export oriented industrialisation after globalisation is being replaced by GVCs where the MSMEs enter vertical specialisation and upgradation with GVCs. Luring MNCs to participate in GVCs as domestic firms and increase involvement of native firms through favourable policies has become a priority for governments in developing economies to integrate into the global economy. There are three categories of industrial strategies that make up the typology for enhancing GVC participation. These include vertical industrial policies that target specific industry (e.g. Automotive Mission Plan 2016-26 for the automobile industry) and GVC oriented policy. Horizontal policies, such as Goods and Services Tax, cover the whole nation. Attracting foreign investment and opening the borders are important in attracting the entry in GVCs besides attracting and keeping offshore factories. However, to retain GVCs, countries must integrate their

domestic productive sector and strengthen linkages with domestic businesses. Also ensure that the host country benefits from technology transfers, knowledge spillovers, and increased value addition in the country. If GVCs is de-linked, lead firms take major decisions, and governments play a limited role to leverage such decisions for domestic economic development. It is important to note that GVC participation aids domestic economic conditions through more employment, better wages, and social cohesion. Better policies can help countries to boost their participation in GVCs and nurture development. India needs to simplify its custom and trade procedures similar to a country successful in expanding its share in global value chains (GVCs) in order to facilitate MSME sector with global lead firms.

India's policy approach has been largely addressing logistical and infrastructure bottlenecks and improving the ease of doing business. It can be categorised in terms of horizontal or vertical, GVC-oriented policies are necessary for increased integration, though.

VII. Conclusion and Suggestions

GVC covers a wide range of firm-to-firm relationship through people, investment, technology, trade, and information flows. The industrial policy implications show that the GVCs do not respond to piecemeal approaches hence a holistic approach is indispensable for considering the huge benefits from the integration of MSMEs into the GVCs. India's GVC participation primarily focuses on forward linkages, with heavy reliance on exports of raw materials and intermediate goods, rather than exports based on imported inputs. Some of the barriers identified are service inputs such as inadequate banking finance, limited capital and knowledge, non-availability of appropriate technology, restraints on modernisation and expansion, scarcity of skilled labour at reasonable cost, underdeveloped transportation and logistics for smooth trade flow, and lack of efficient management require speedy attention. Improving intensity of these service inputs would help the micro and small enterprises to upgrade their competitiveness and facilitate deeper integration both within the DVC and the GVC.

Given the importance of MSMEs to the economic development of India, increasing participation of MSMEs into the GVCs will be an important factor deciding India's position in the global trade. Assistance and incentives are crucial for MSMEs technology upgradation, innovation, R&D, and skill development. India also requires additional certifying bodies and harmonisation of standards.

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