



BUILDING RESILIENT GLOBAL VALUE CHAIN LINKAGES IN INDIA

FINDINGS FROM AN
ENTERPRISE SURVEY

Terri Chapman, Jhanvi Tripathi, and Rakesh Kumar Sinha

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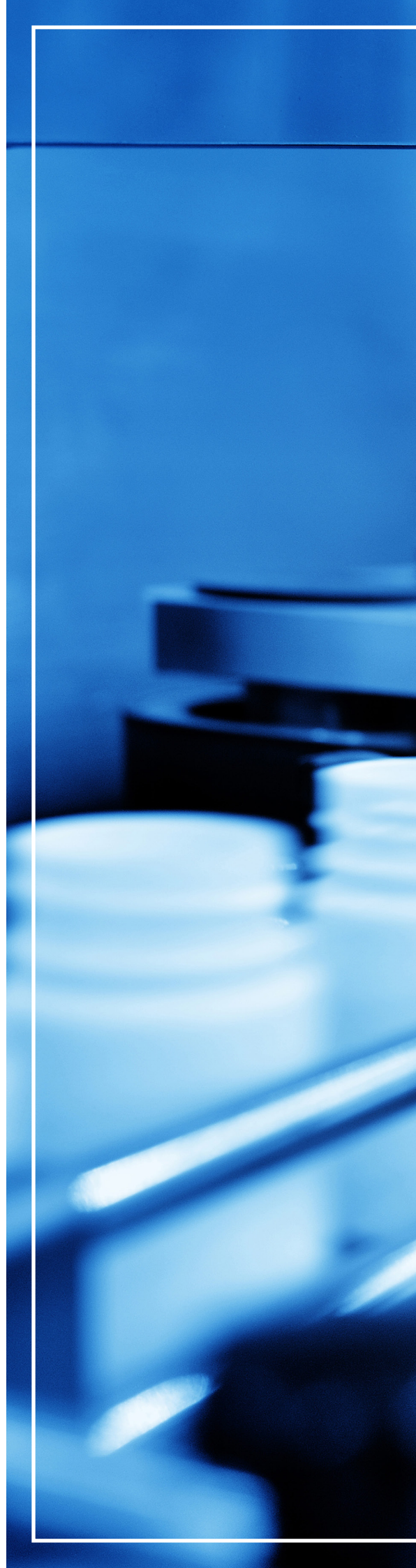
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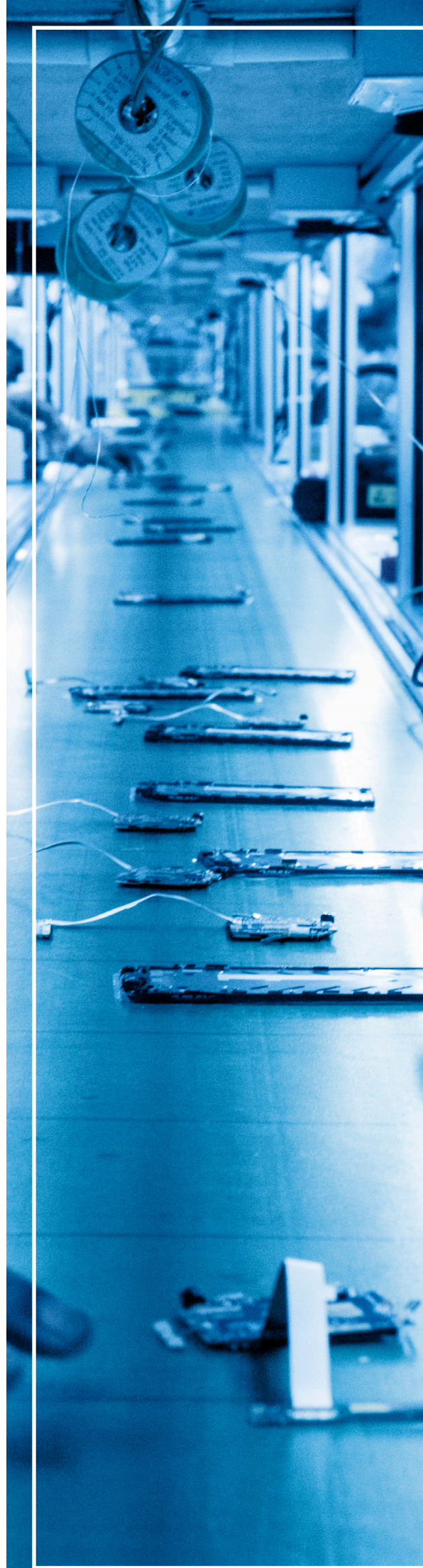
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Abbreviations

GVC	Global Value Chain
PPE	Personal Protective Equipment
MNC	Multi-National Company
FTA	Free Trade Agreement
API	Active Pharmaceutical Ingredients
TPF	Trade policy Forum
G2G	Government to Government
UK	United Kingdom
US	United States
EU	European Union
UAE	United Arab Emirates
RCEP	Regional Comprehensive Economic Partnership
SPS	Sanitary and Phytosanitary Measures
TBT	Technical Barriers to Trade
NTB	Non-Tariff Barriers

Executive Summary

The risk of supply chain shocks has never been more palpable than today, following compounding crises from the US-China trade war, the COVID-19 pandemic, and the war in Ukraine. Global Value Chains (GVCs), once viewed as a panacea for economic development, are coming under increased scrutiny in different parts of the world. Increasingly complex, cross-border production processes are exposing companies and populations to a multitude of risks. At the same time, it is becoming clearer that greater integration into GVCs does not inevitably lead to improved economic outcomes or shared prosperity, especially for developing countries.





This report examines how India can better integrate into GVCs while building resilience. The report draws on a survey of executives from 200 domestic and foreign companies in India across six sectors: aerospace and defence; automotive and auto-components; capital goods; electronic systems design and manufacturing (ESDM); new and renewable energy; and pharmaceuticals and medical devices. The report presents insights into these companies' perceptions of GVCs amidst immense disruptions from different causes. It describes the firms' views on India's trade policy, and summarises the key challenges facing these enterprises in scaling production and integrating into GVCs in India. The report makes recommendations for policy intervention in eight areas, and outlines strategies for incorporating resilience into India's GVC linkages.

Key Survey Findings

1 Despite risks and uncertainties, enterprises consider further integration into GVCs as being critical for India. The current geopolitical climate, especially as companies search for alternatives to China, offers a window of opportunity for India to attract GVCs looking for new production homes. A particularly salient opportunity is if India can offer an environment that is conducive to resilience.

2

Geopolitical developments inform investment decisions in India. Companies are currently reconsidering their value chains and the distribution of their production between countries. India can leverage this opportunity but must get the fundamentals right.

3

India's attractiveness vis-à-vis other countries depends on its ability to improve the business climate. Investments in human capital development and infrastructure will be critical and will have co-benefits with other domestic priorities.

4

Industry's dependence on both imports and exports is high, but firms say relatively less attention has been paid to import challenges, which they view as crucial.

5

Companies agree that India must re-evaluate its trade policies. Trade policy is essential to successful GVC integration, and India's recent trade agreements with the United Arab Emirates (UAE) and Australia are a testament to the country's willingness to enhance and deepen trade relationships despite its aversion to the Regional Comprehensive Economic Partnership (RCEP). Companies agree that India should prioritise a trade deal with the United States.

6

Enterprises continue to face domestic policy challenges. The most difficult obstacles to efforts in scaling up production in India include complex tax policies and procedures, the quality of infrastructure, and uncertainty in trade policy.

7

Government support is needed to facilitate GVC integration.

The most significant constraints to firms in participating in GVCs are meeting quality standards, lack of institutional support, and inadequate information. The government has a clear role in supporting enterprises in these areas.

8

Companies have clear domestic policy priorities in India.

Companies say that in the medium term, India should focus on enhancing its digital and physical infrastructure, strengthening financial and investment regulations, and ensuring clarity and certainty around trade policies and tariff rules.

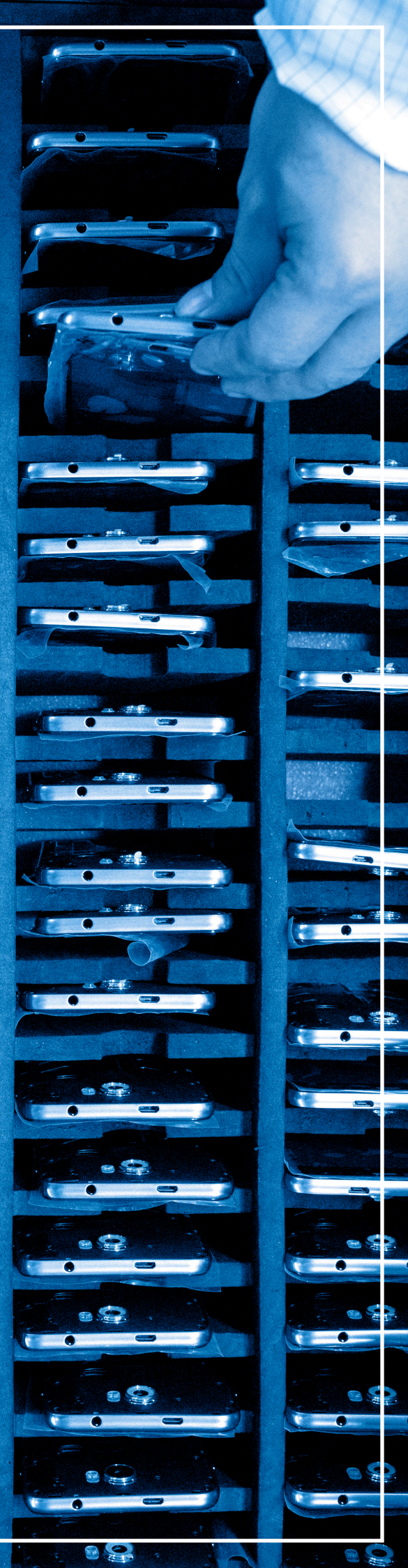
If managed well, greater integration into GVCs can support economic growth, increase productivity, and facilitate the transfer of knowledge and technology. This report outlines strategies for India to create stronger GVC linkages and ensure that in its efforts to better amalgamate into GVCs, it is building resilience.

I. Introduction

J.S. Deepak

Advanced manufacturing techniques, including computer-aided design, allow product design codification and the standardisation of components. This, in turn, allows companies to standardise production and assembly. As such, the product's design, production, and assembly can be carried out separately in different parts of the world, with pieces of the same product being manufactured or assembled in different countries. This has led to the emergence of global value chains (GVCs), where lead firms, mostly multinational corporations (MNCs) from advanced economies, maximise competitiveness by outsourcing production and assembly to the lowest-cost destinations.





Since GVCs account for a growing proportion of global value addition, countries that are part of a key GVC can benefit from job and wealth creation. At the same time, countries wanting to be part of GVCs need skilled human resources and a supportive policy and business environment. Moreover, since items move between different countries during the production process, sometimes multiple times, trade plays an essential role in manufacturing products in GVCs. Zero tariffs and trade facilitation measures, in particular, are critical to saving cost and time.

Since production and assembly are done based on standardised templates, it becomes possible for lead MNCs to substitute firms manufacturing components or doing assembly-line production to enhance competitiveness. This diversification of supply helps build reliable supply chains. Furthermore, the critical role and reliability of every country that is part of the global value chain also makes it essential for MNCs to diversify supply chains across countries to make them more resilient to shocks such as the COVID-19 pandemic, climate-related disasters, or conflict.

Typically, the upper end of GVCs, which involves research and development (R&D), design, services, and marketing (that have intellectual property rights embedded in them) are profit-intensive; these components also tend to be located in advanced economies. The lower parts of the GVCs, meanwhile, tend to be labour-intensive and have lower value addition, and are typically located in developing countries. GVCs give manufacturing a fillip, bring in infrastructure, develop skills, and increase exports, thereby

serving as catalysts for increasing local incomes and economic growth. However, GVC integration does not automatically result in direct economic benefits such as job creation and improved living standards, and therefore policy has an important role to play in ensuring the best possible outcomes.

What are Global Value Chains?

A global value chain is the gamut of activities that are divided among different workers in separate countries and geographies to bring a product through the entire production process. Decisions about where to locate various aspects of these processes—through restructuring and relocation—are based on the comparative advantage of a particular country.

The emergence of GVCs in production has been enabled by trade liberalisation, innovations in ICTs and their adoption, as well as political developments.¹ Today, an estimated 70 percent of trade occurs through GVCs, with components of final products moving across borders multiple times before ending up with the end-user.²

An OECD report gives the example of the production process of a smartphone. A phone assembled in China could be designed in the United States, coded in France, and use silicone chips manufactured in Singapore. All the countries involved in this process will gain some value from it and benefit when the final product is exported.³

¹ Pol Antràs. "Conceptual Aspects of Global Value Chains." The World Bank Economic Review, 2020. https://scholar.harvard.edu/files/antras/files/conceptual_aspects_gvcs.pdf

² OECD. "Global Value Chains and Trade." Oecd.org, 2016. <https://www.oecd.org/trade/topics/global-value-chains-and-trade/>.

³ OECD, "The Trade Policy Implications of Global Value Chains"

Trade, one of the engines of growth, has not been fully leveraged in India in the last decade. Merchandise exports that create jobs in manufacturing have remained flat, at around US\$ 300 billion annually.⁴ It is noteworthy that India's trade as a percentage of GDP has plummeted from 56 percent in 2011 to 40 percent in 2019—the last year before the COVID-19 pandemic. While India's trade has picked up in 2021, mainly due to increased demand and the price effect, sustaining current levels will be challenging. Indeed, trade recovery is likely to slow down further as a result of the ongoing crisis in Ukraine.

India has not been part of significant trade blocs and is thus a latecomer to the GVC space. One of the main reasons for this is that 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).⁵ Today, the 'spaghetti bowl' of FTAs includes about 500 arrangements with linkages and overlaps. Latin American countries, the European Union, ASEAN, Japan, and even China, aggressive traders, have many plurilateral and mega regional trade arrangements that facilitate GVCs.

To be sure, being a massive market with a young population makes India attractive. However, it needs to quickly catch up on specific essential criteria like tariffs, logistics, and trade and investment facilitation measures that allow GVCs to function seamlessly. India has also recently decided to pursue preferential trade agreements aggressively, which will support integration into GVCs.

⁴ TrendEconomy. "India | Imports and Exports | World | ALL COMMODITIES | Value (US\$) | 2009 - 2020," 2021. <https://trendeconomy.com/data/h2/India/TOTAL>

⁵ The 'spaghetti bowl' effect was a term coined by Jagdish Bhagwati to explain the tangle created by cross-cutting trade and tariff rules created by the signing of multiple Free Trade Agreements. He argues that it creates confusion in trading rules. (Jagdish Bhagwati, "US Trade Policy: The Infatuation with FTAs", Discussion Paper Series No. 726 Columbia University (April 1995) Jagdish Bhagwati. "US Trade Policy: The Infatuation with FT As," 1995. <https://core.ac.uk/download/pdf/161436448.pdf>

The US-China trade war has already created further opportunities for India to become part of major GVCs. MNCs headquartered in the United States (US) previously established bases in China to leverage their infrastructure, skills, and low factor cost to manufacture at globally competitive rates and export to the US. Thus, a large proportion of global production of steel, consumer durables, textiles and clothing, shoes, and electronics became concentrated in China. However, with the trade war resulting in the imposition of tariffs on imports from China, many MNCs are looking for alternative locations for manufacturing these goods and reducing their risks by diversifying their sources of supply.

The COVID-19 pandemic has caused many bottlenecks in logistics networks, export restrictions on raw materials, intermediates, and supplies, playing havoc on the efficient functioning of GVCs. This has accentuated the need for both reshoring and diversification of sources of supply to make GVCs function efficiently with just-in-time availability of parts and components. Consequently, there is an urgent move globally to look for alternative destinations for manufacturing to increase the resilience of GVCs.

This is an opportunity that India cannot afford to ignore. A package of incentives, responsive governance, improved infrastructure and logistics, reduced tariffs, and seamless facilitation of imports and exports needs to be urgently unveiled. Some aspects like an ambitious Production Linked Incentive (PLI) scheme are already in place, while others still need to be implemented.

The US-China trade war and the COVID-19 pandemic exposed severe vulnerabilities in production networks of many important products and have made it imperative to reconfigure supply chains. The leaders of the Quad—i.e., Australia, India, Japan, and the United States—at their virtual summit in March 2021 underlined

the need for reliable and resilient supply chains.⁶ The call came as part of efforts to stimulate manufacturing as the COVID-19 pandemic broke out. It also resonated in various leaders' statements, especially in the US and India. At the time of writing this report, the omicron-led wave appears to be receding, but there is continuing uncertainty posed by the threat of future variants. Meanwhile, the Ukraine crisis has created new challenges for supply chains and international trade, severely impacting the energy and food sectors.⁷ Building more agile and robust supply chains has taken on new urgency as a matter of security as well.

This report is based on a survey of 200 domestic and foreign firms doing business in India on their experiences, expectations, and priorities related to GVCs in India. It seeks to address the following questions:

- i) How are geopolitical developments affecting firms' perceptions of GVCs, their relative importance, and the attractiveness of India vis-à-vis other countries?
- ii) What constraints are firms in India facing in integrating into GVCs and what are their imperatives?
- iii) What kind of ecosystem does India need to establish to create better GVC linkages, and what policies should the country prioritise to achieve this?

The rest of the report is structured as follows. Section 2 outlines the methodology used in the report, and Section 3 highlights key findings from the survey and discusses implications for Indian policymaking. The last section consolidates findings from the survey into eight policy intervention areas for India and nine strategies for building resilience into India's GVC linkages.

– JS Deepak is Distinguished Fellow at ORF, and former Ambassador of India to the WTO.

⁶ The White House. "Quad Leaders' Joint Statement: 'the Spirit of the Quad.'" The White House, 2021. <https://www.whitehouse.gov/briefing-room/statements-releases/2021/03/12/quad-leaders-joint-statement-the-spirit-of-the-quad/>

⁷ World Bank. "The Impact of the War in Ukraine on Global Trade and Investment," 2022. <https://openknowledge.worldbank.org/handle/10986/37359>

II. Methodology

The methodology for this report involved identifying key stakeholders across six critical industrial sectors and seeking their views, through a structured questionnaire, on what needs to be done to integrate India into GVCs.

To identify potential survey respondents, the authors shortlisted ten industries based on the “champion sectors” defined by India’s Department of Promotion of Industry and Internal Trade, Ministry of Commerce.⁸ The authors further narrowed the focus of the sample to six industries of particular interest for this research: 1) aerospace and defence; 2) automotive and auto-components; 3) capital goods; 4) electronic systems design and manufacturing (ESDM); 5) new and renewable energy; and 6) pharmaceuticals

⁸ “List of 27 Champion Sectors Manufacturing Sectors under DPIIT,” n.d. https://dpiit.gov.in/sites/default/files/List_of_Champion_Sectors_08July2020.pdf





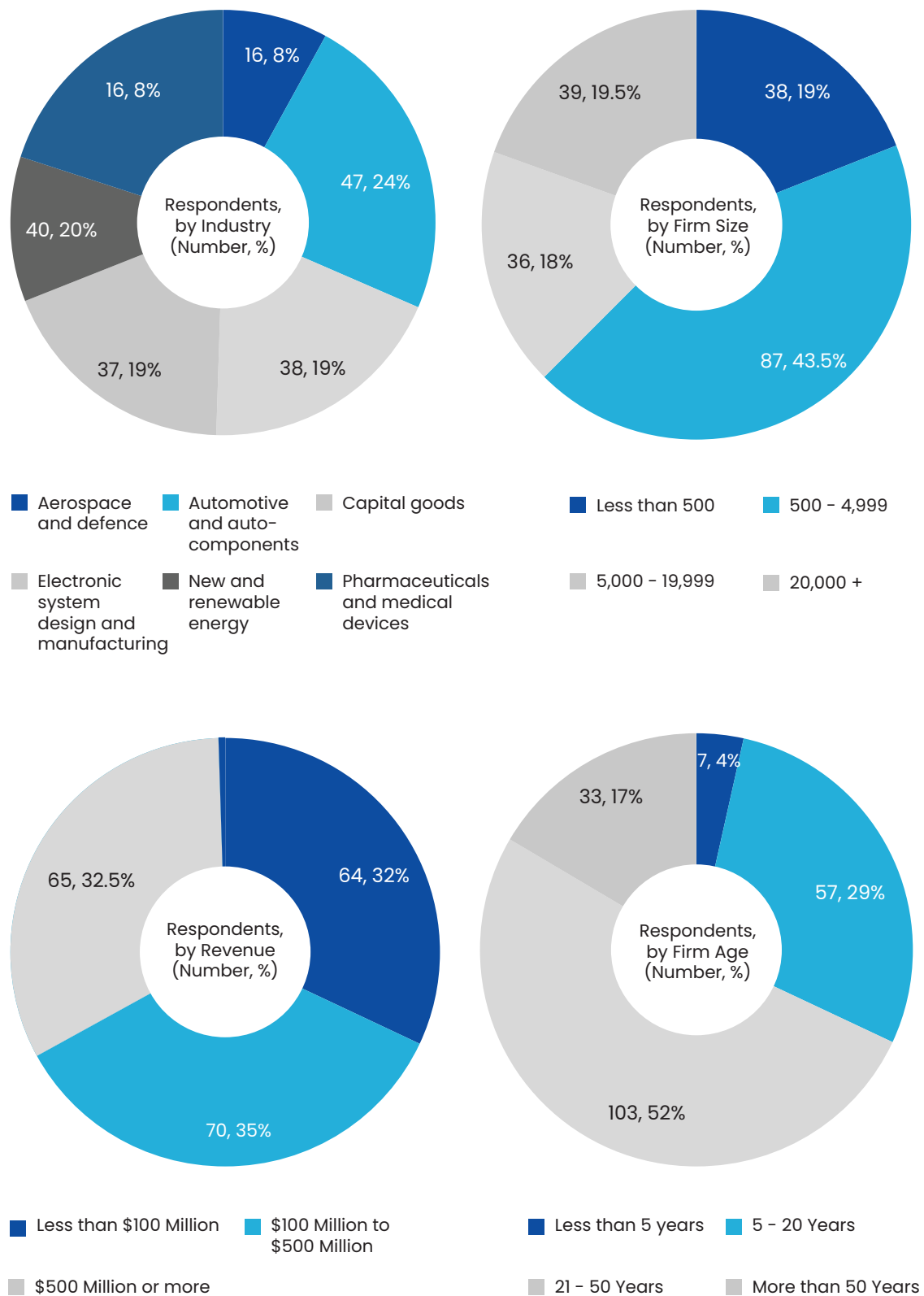
and medical devices. The sample of companies included in the study include both foreign multinational companies (MNCs) as well as domestic firms, all of which have a presence in India. The sample of companies were identified by a third-party survey company. The companies were selected based on their sector, their presence in India, and their potential or current participation in GVCs.

The survey respondents were selected based on their working knowledge of the selected companies' strategic and international direction and constraints. Therefore, respondents comprised a range of individuals, including those in-charge of public policy, external affairs, government relations, global policy, international business, corporate affairs, and corporate strategy, as well as country heads and chief economists.

The survey questionnaire was developed by researchers at the Observer Research Foundation, Delhi, and the Observer Research Foundation America in Washington, DC. It was written in English and comprised 27 multiple-choice and open-ended questions. The questionnaire was converted into a digital questionnaire by a third-party data collection firm. A pilot of ten interviews was undertaken to ensure the quality of the questionnaire.

The survey was administered over the phone to 196 respondents, and over email to four. The researchers received 200 complete responses that met all inclusion criteria—i.e., the sector, designation of the respondent, and presence in India. Figure 1 shows the details of the survey respondents.

Figure 1: Survey Respondents



III.

Results and Discussion

This section outlines the key findings from the enterprise survey and is centred around three key areas: i) global value chains in the context of current geopolitical uncertainties; ii) India's trade policy and the priorities and preferences of firms; and iii) the domestic policy environment, which looks at the core constraints that firms face in scaling up in India and integrating into GVCs.

The percentages in the figures presented in the succeeding pages will not always add up to an exact 100% because of rounding-off.

A. Global Value Chains Amidst Uncertainties

Enterprises across the globe are experiencing new uncertainties resulting from a number of global events: disruptions caused by the COVID-19 pandemic,





including those on supply chains, which result in shortages of essential goods; political backlash against globalisation; technological innovations; tensions in the international trade system and between global powers; increasing risks associated with cyber-attacks; climate related disasters; and conflict. Even as complex production systems that cross multiple borders provide potential benefits in cost and efficiency, increasingly, they are exposing firms to climate, technological, political, cyber, and health-related shocks.⁹ The rising costs of daily goods caused by supply chain disruptions are compounded by fears of job loss caused by globalisation and the rapid uptake of labour-saving technologies.

Together, these crises are forcing countries, firms, and people to reconsider the meaning of 'resilience'.

For India, the central questions are related to how the country can leverage current developments to integrate into GVCs; how it can create resilience in its value chains to reduce the human, economic, and ecological impacts of shocks; and how it can ensure that GVC integration translates into better incomes and the well-being of the population.

⁹ Susan Lund, James Manyika, Jonathan Woetzel, Edward Barriball, Mekala Krishnan, Knut Alicke, Michael Birshan, Katy George, Sven Smit, Daniel Swan, and Kyle Hutzler "Risk, Resilience, and Rebalancing in Global Value Chains." McKinsey, 2020. <https://www.mckinsey.com/-/media/McKinsey/Business%20Functions/Operations/Our%20Insights/Risk%20resilience%20and%20rebalancing%20in%20global%20value%20chains/Risk-resilience-and-rebalancing-in-global-value-chains-full-report-vH.pdf>

Creating Resilience in GVCs

Disruptions in global supply chains heightened when the trade war between the US and China erupted around 2017. In 2020, as the COVID-19 pandemic broke out, the risks in overdependence on a single source country for essential intermediary products became clearer. Supply disruptions due to border closures forced countries to exert efforts to build more resilient supply chains and production networks. Policymakers started looking for both immediate and long-term solutions to reduce disruptions in the production of essential commodities and traded goods.

The principle of ‘supply chain resilience’ refers to the ability of a supply chain to respond to sudden shocks and resist them, reducing the time required to recover in the event of a disruption in supply. For firms, according to Reinsch et al., this can be achieved in three ways: i) increasing the number of suppliers; ii) utilising different risk assessments; and iii) diversifying transportation methods.¹⁰ The key across these strategies is diversification: having multiple sources of goods that are essential to the completion of a product’s value chain, and ensuring multiple channels are available to access those products. This can become untenable in the long term, however, as the cost of maintaining alternate routes increases, especially in sectors where products have a shorter shelf life and there is no guarantee that alternative sources will be used. To temper this cost, some companies resort to reshoring—to decrease reliance on foreign manufacturing—and nearshoring, i.e., bringing the supply chain closer to the home country to reduce the gap between the final product and the consumer market. However, complex value chains can also be important for building resilience and reducing over-dependence on certain suppliers.

India has natural advantages as a production and supply destination. Its access to various trade routes by land and sea make it an ideal centre point, as does its proximity to markets in Asia. It needs to build on this edge by creating an enabling market for domestic manufacturers and attracting investments from lead firms.¹¹

¹⁰ William Alan Reinsch, and Emily Benson. “The Manufacturer’s Dilemma: Reshoring and Resiliency in a Pandemic World.” CSIS, 2021. <https://www.csis.org/analysis/manufacturers-dilemma-reshoring-and-resiliency-pandemic-world>

¹¹ Peter Horvát, Colin Webb, and Norihiko Yamano. “Measuring Employment in Global Value Chains.” [www.oecd-ilibrary.org](https://www.oecd-ilibrary.org/science-and-technology/measuring-employment-in-global-value-chains_00f7d7db-en), 2020. https://www.oecd-ilibrary.org/science-and-technology/measuring-employment-in-global-value-chains_00f7d7db-en.

To better understand how firms in India view these trends and their impact on investment decisions, the authors asked respondents about their perceptions of the importance of GVC integration. The questions were framed in the context of the COVID-19 pandemic.

Firms view GVC integration as critical. When asked how vital GVC integration is for their firms, 87 percent of respondents replied that it is *very important*; 10 percent answered *somewhat important*; and 3 percent said it is *not important* (see Figure 2). At present, India's total domestic value add for manufactured exports stands at 40.7 percent of gross exports of manufactured goods, in addition to 30.5 percent contribution from indirect value addition from intermediary sectors.¹²

Companies in different industries evaluate the importance of GVC integration differently. A greater number of companies in the capital goods and pharmaceutical and medical devices industries consider GVC participation to be important. More than nine of every 10 respondents (95 percent) in the capital goods industry said it is *very important*; 93 percent of respondents in the pharma and medical devices industry answered in the same manner. Of the respondents in the automotive and auto components industry, a lower 79 percent said integration is *very important*. In the same industry, a notable 11 percent of respondents selected *not important*. Intuitively, enterprises that produce final consumer products view GVC integration as less critical than those that manufacture primary and intermediate goods.

¹² World Trade Organization, India Country Profile, WTO, Geneva, Nd. WTO. "WTO | India - Member Information," n.d. https://www.wto.org/english/thewto_e/countries_e/india_e.htm#:~:text=This%20page%20gathers%20key%20information,GATT%20since%208%20July%201948.https://www.wto.org/english/res_e/statis_e/miwi_e/countryprofiles_e.htm Accessed on 15 June 2022 WTO. "WTO | Global Value Chains — Trade in Value-Added and Global Value Chains: Statistical Profiles," n.d. https://www.wto.org/english/res_e/statis_e/miwi_e/countryprofiles_e.htm

¹³ Sandeep Soni, "Despite Being World's Pharmacy, why India is Dependent on China for Bulk Drugs," Financial Express, December 22, 2021, <https://www.financialexpress.com/industry/sme/msme-eodb-despite-being-worlds-pharmacy-why-indian-pharma-is-dependent-on-china-for-bulk-drugs/2386143/> Sandeep Soni. "Despite Being World's Pharmacy, Why Indian Pharma Is Dependent on China for Bulk Drugs." Financialexpress, 2021. <https://www.financialexpress.com/industry/sme/msme-eodb-despite-being-worlds-pharmacy-why-indian-pharma-is-dependent-on-china-for-bulk-drugs/2386143/>

The historical context could partly explain why a larger share of companies in the capital goods and pharmaceutical industries, than in automotive see GVC integration as important. First, the auto industry in India is arguably already more integrated into GVCs than the other industries. Second, at present, India is overdependent on imports of Active Pharmaceutical Ingredients (APIs) from China.¹³ The pharmaceutical industry needs to find alternative sources of APIs to build resilience, especially amidst the prolonged COVID-19 pandemic. In capital goods, meanwhile, the challenge is to keep up with newer technologies and producing to scale at competitive rates, even as there is domestic manufacturing. More broadly, India's GVC manufacturing exports are less diversified than average, with GVC integration greatest in coke and petroleum, chemicals, primary and fabricated metals, and transport equipment.¹⁴

“

*87 percent of the respondents
said GVC integration is
very important for their firms.*

¹⁴ Mitra, Sabyasachi, Abhijit Sen Gupta, and Atul Sanganerla, Drivers and Benefits of Enhancing Participation in Global Value Chains: Lessons for India, Asian Development Bank South Asia, 2020 P. 13. Sabyasachi Mitra, Sen Gupta, and Atul Sanganerla. "DRIVERS and BENEFITS of ENHANCING PARTICIPATION in GLOBAL VALUE CHAINS LESSONS for INDIA." ADB South Asia, 2020. <https://www.adb.org/sites/default/files/publication/665781/sawp-79-enhancing-participation-gvcs-india.pdf>

How important is value chain integration to your company?

Figure 2: Importance of Global value Chain Integration, Responses by Industry (%)

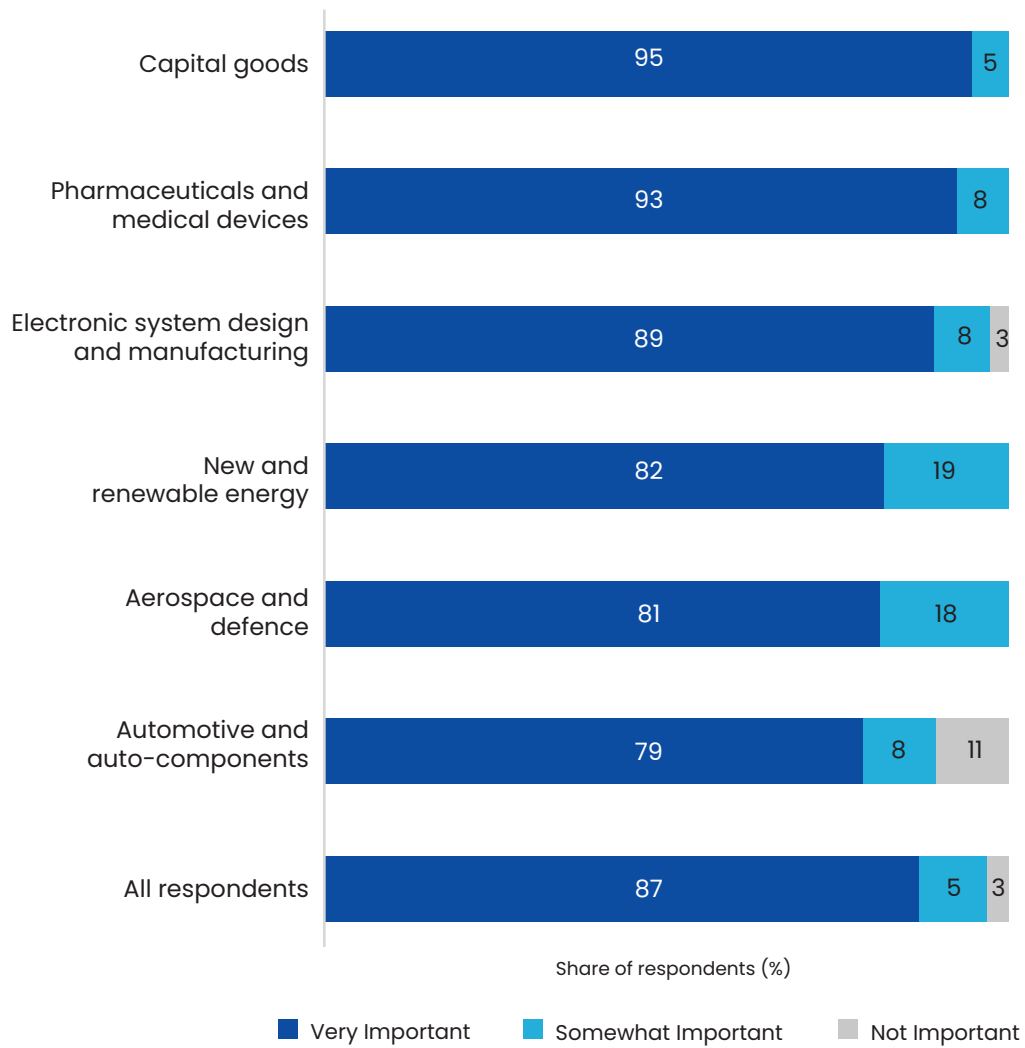
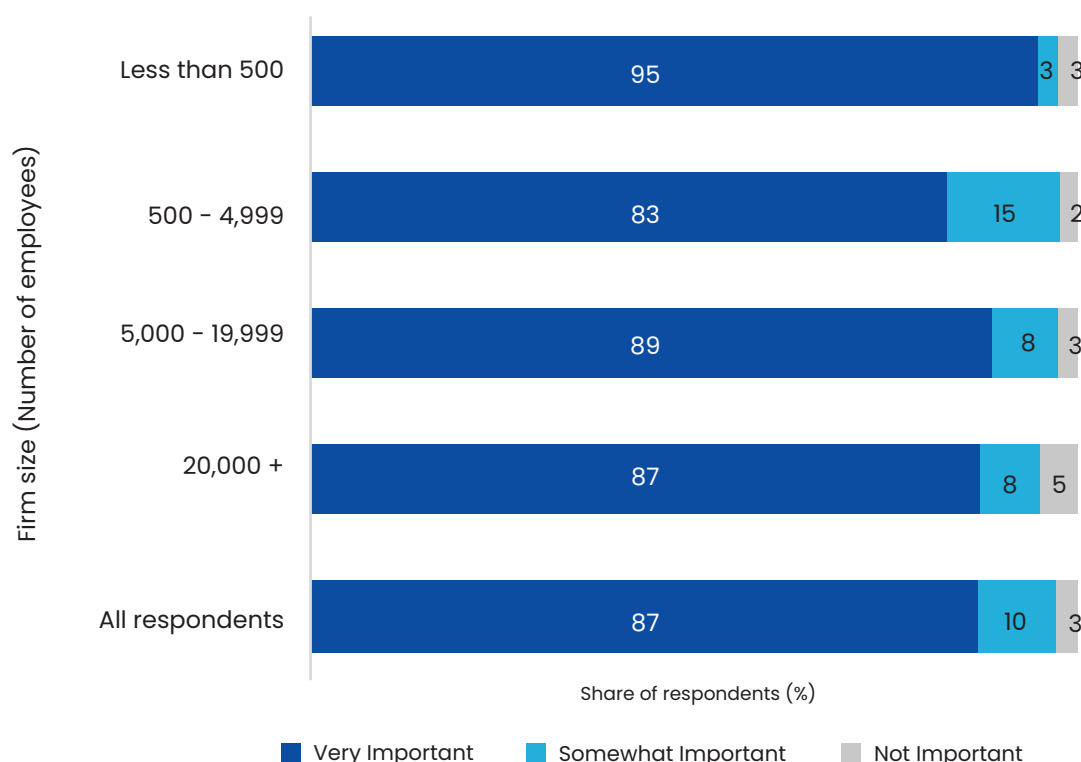


Figure 3: Importance of GVC Integration, Responses by Firm Size (%)

An overwhelming majority of respondents (95 percent) from companies with less than 500 employees, i.e. small firms, view integration into GVCs as *very important*. They face particular barriers, however, such as access to finance and human capital resources, and the inability to both, protect their intellectual property and technology, and meet standards requirements.¹⁵ The ability of MSMEs to integrate into GVCs is particularly salient for India, as they employ more than 120 million people and contribute 33 percent of manufacturing exports.¹⁶ Greater integration into GVCs can also help MSMEs gain access to new technologies and know-how.¹⁷

¹⁵ OECD, *Interconnected Economies: Benefiting from Global Value Chains*, OECD, Paris, 2013, P.12 "Interconnected Economies: Benefiting from Global Value Chains." OECD. OECD, 2013. [https://www.oecd.org/mcm/C-MIN\(2013\)15-ENG.pdf](https://www.oecd.org/mcm/C-MIN(2013)15-ENG.pdf)

¹⁶ Confederation of Indian Industry, "Micro, Medium, and Small Scale Industry," CII <https://www.cii.in/Sectors.aspx?enc=prvePUj2bdMtgTmvPwvisYH+5EnGjyGXO9hLECvTuNuXK6QP3tp4gPGuPr/xpT2f> CII. "Micro, Medium & Small Scale Industry," n.d. <https://www.cii.in/Sectors.aspx?enc=prvePUj2bdMtgTmvPwvisYH+5EnGjyGXO9hLECvTuNuXK6QP3tp4gPGuPr/xpT2f>

¹⁷ ADB, *Integrating SMEs Into Global Value Chains: Challenges and Policy Actions in Asia*, ADB, Manila, 2015. "Interconnected Economies: Benefiting from Global Value Chains." OECD. OECD, 2013. [https://www.oecd.org/mcm/C-MIN\(2013\)15-ENG.pdf](https://www.oecd.org/mcm/C-MIN(2013)15-ENG.pdf)

The pandemic has laid bare some of the risks of highly dependent, fractured production systems. For example, during the first wave of the pandemic, countries were unable to source critical components required to manufacture treatment drugs, medical devices, and oxygen cylinders. Meanwhile, even as the demand for personal computers and mobile phones increased as the pandemic forced populations to shift their daily activities online, production faced challenges due to the global semiconductor crisis.¹⁸ Yet, research suggests that GVCs remain the best way to reduce the risks of shocks. They can, however, be better managed through the harmonisation of quality standards to encourage faster substitution in the event of failure of one source of supply. There is also a need to stockpile essential commodities regionally, and to ensure global equity in access to essential commodities.¹⁹

Post-pandemic, how urgent is GVC integration?

Overall, 89 percent of companies say that the pandemic has shaped their perceptions of the importance of GVCs. A great majority of the respondents from the largest companies (97 percent) said that the pandemic has been critical in shaping their views on GVCs. Of the respondents belonging to smaller companies, 84 percent agreed with the statement.

¹⁸ Ayushi Kar, "Chip Shortage Hits Personal Computing Device Supply in India," Business Line, May 8, 2021, <https://www.thehindubusinessline.com/info-tech/chip-shortage-hits-personal-computing-device-supply-in-india/article34511985.ece> Ayushi Kar. "Chip Shortage Hits Personal Computing Device Supply in India." BusinessLine, 2021. <https://www.thehindubusinessline.com/info-tech/chip-shortage-hits-personal-computing-device-supply-in-india/article34511985.ece>

¹⁹ OECD, *Global Value Chains: Efficiency and Risk in the Context of Covid-19*, OECD, Paris, 2021. ——. "Global Value Chains: Efficiency and Risks in the Context of COVID-19." OECD, 2021. <https://www.oecd.org/coronavirus/policy-responses/global-value-chains-efficiency-and-risks-in-the-context-of-covid-19-67c75fdc/>

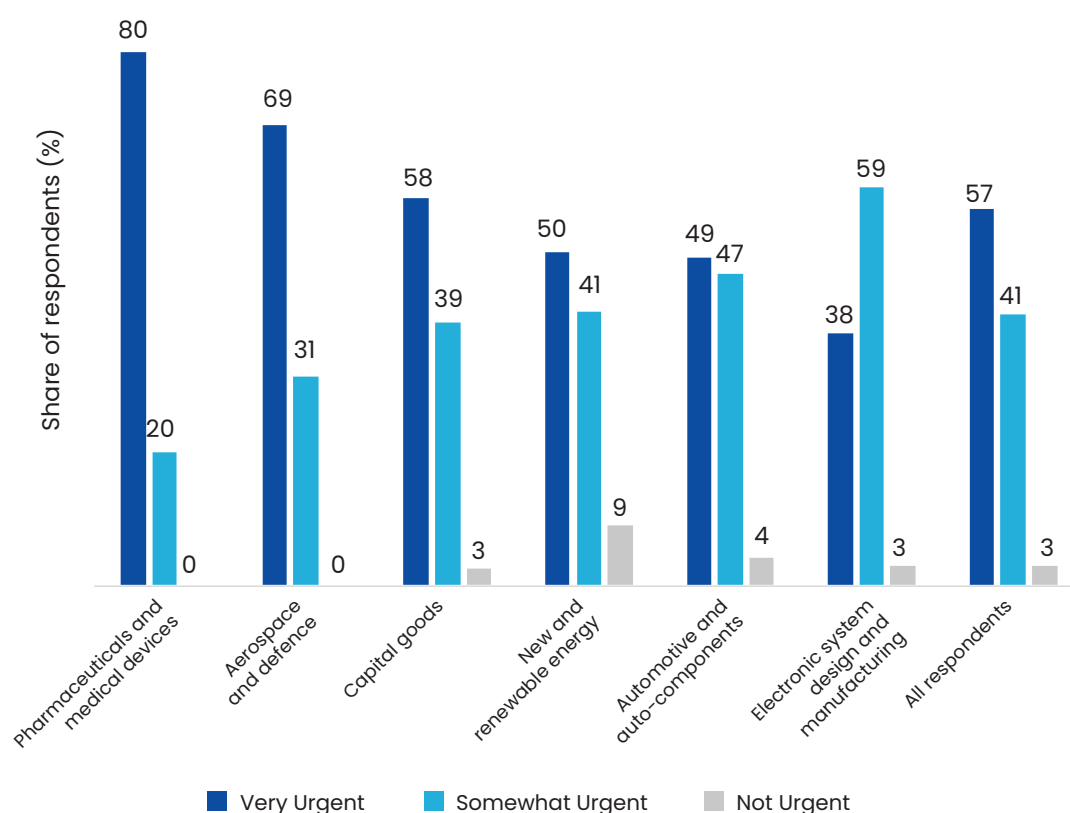
Moreover, a company's experiences during the pandemic helped shape their views on the urgency of GVC integration. For example, among the companies in new and renewable energy, 95 percent of respondents said the pandemic has shaped their perspective on the importance of GVCs, and 50 percent of these companies said that integration into GVCs is *very urgent* in the post-COVID-19 context. All 16 aerospace and defence companies said that the pandemic altered their assessment of the importance of GVCs, with 69 percent (11 companies) saying integration is *very urgent*.

The urgency for greater amalgamation into GVCs in the context of COVID-19 is greatest for firms in the pharmaceutical and medical devices industry. Eight of every ten respondents (80 percent) in the pharmaceutical and medical device industries said their integration in GVCs was *very urgent*, compared to 57 percent of companies overall. This perspective of companies in the pharmaceuticals and medical devices industry is unsurprising, and is important given the size of the industry in the Indian economy. India is the 12th largest exporter of medical goods in the world by volume and accounts for 20 percent of all exports of generic drugs.²⁰ In 2020 as the pandemic broke out, the sector suffered significant shocks owing to its dependence, as noted briefly earlier, on countries such as China for APIs. The sector became vulnerable when China blocked exports of these products to prioritise domestic use.²¹

²⁰ IBEF, "Indian Pharmaceutical Industry," IBEF, <https://www.ibef.org/industry/pharmaceutical-india.aspx> IBEF. "Pharma Industry in India: Pharma Sector Overview, Market Size, Analysis..." IBEF, 2022. <https://www.ibef.org/industry/pharmaceutical-india>

²¹ -- "Coronavirus Impact on India's Pharma Sector," The Economic Times, April, 14, 2020, <https://economictimes.indiatimes.com/markets/stocks/news/coronavirus-impact-on-indias-pharma-sector/articleshow/75136862.cms?from=mdr> The Economic Times. "Coronavirus Impact on India's Pharma Sector," 2020. <https://economictimes.indiatimes.com/markets/stocks/news/coronavirus-impact-on-indias-pharma-sector/articleshow/75136862.cms?from=mdr>

Figure 4: Post-Pandemic Urgency of GVC Participation, Responses by Industry (%)



Which geopolitical and geoeconomic development will most impact foreign investment decisions in India in the medium-term?

Companies carefully watch global economic developments to inform their investment decisions. One-third of the respondents said that global macroeconomic conditions are most important in determining their priorities for overseas investment. This is followed by climate change, with one of every five companies (21 percent) saying it is the most important factor shaping their investment decisions in India. For another one-fifth of companies (19 percent), domestic policy changes are most important. (See Table 1)

Table 1: Developments Influencing Investment Decisions in India, Responses by Industry (%)

Industry	Global macro-economic conditions	Climate and energy transitions	Domestic policies	Technological disruption	Geopolitical tensions and military conflict	Terrorism and extremism	Others
Aerospace and defence	38	25	13	13	6	6	0
Automotive and auto-components	23	13	30	23	11	0	0
Capital goods	42	26	8	13	8	3	0
Electronic system design and manufacturing	38	14	24	19	5	0	0
New and renewable energy	14	27	18	18	18	5	0
Pharmaceuticals and medical devices	38	28	15	13	5	0	3
All respondents	33	21	19	17	9	2	1

B. Trade Policy

Companies are dependent on both imports and exports.

The respondents' perceptions of the importance of imports, and that of exports, are nearly equal, despite relatively less attention being paid to imports. Overall, 57 percent of companies are *somewhat dependent* on imports, and 36 percent are *highly dependent*.

Overall, 56 percent of firms are *highly dependent* on exports, and 40 percent are *somewhat dependent*.

Figure 5a. Dependence on Exports, by Firm Size (%)

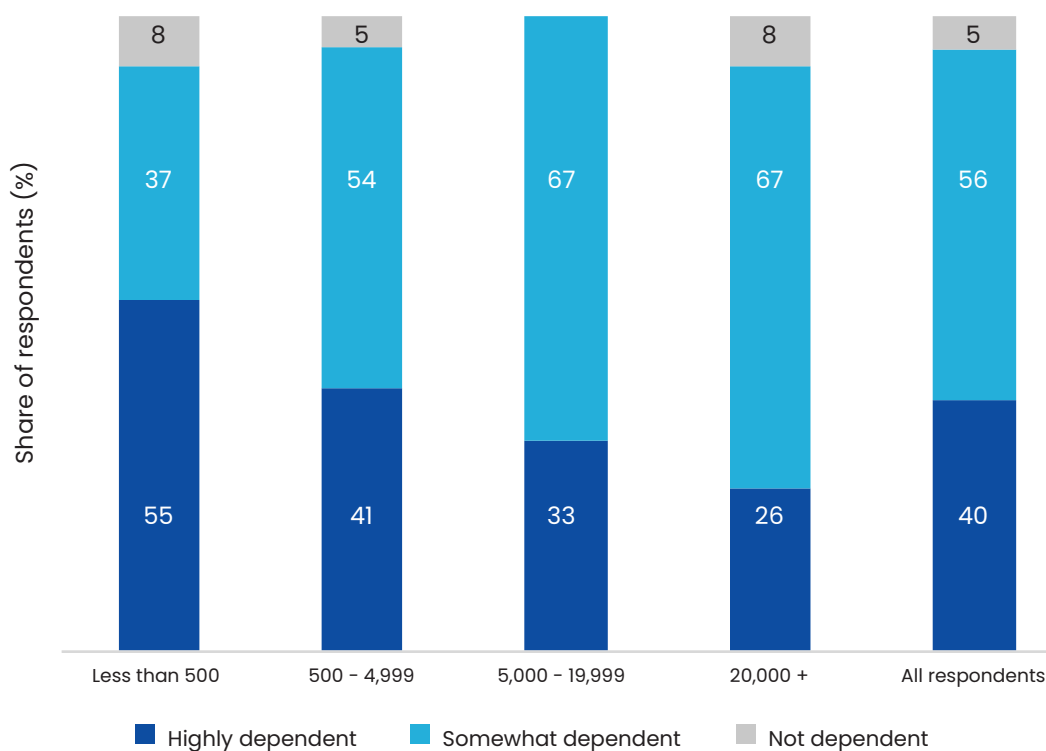
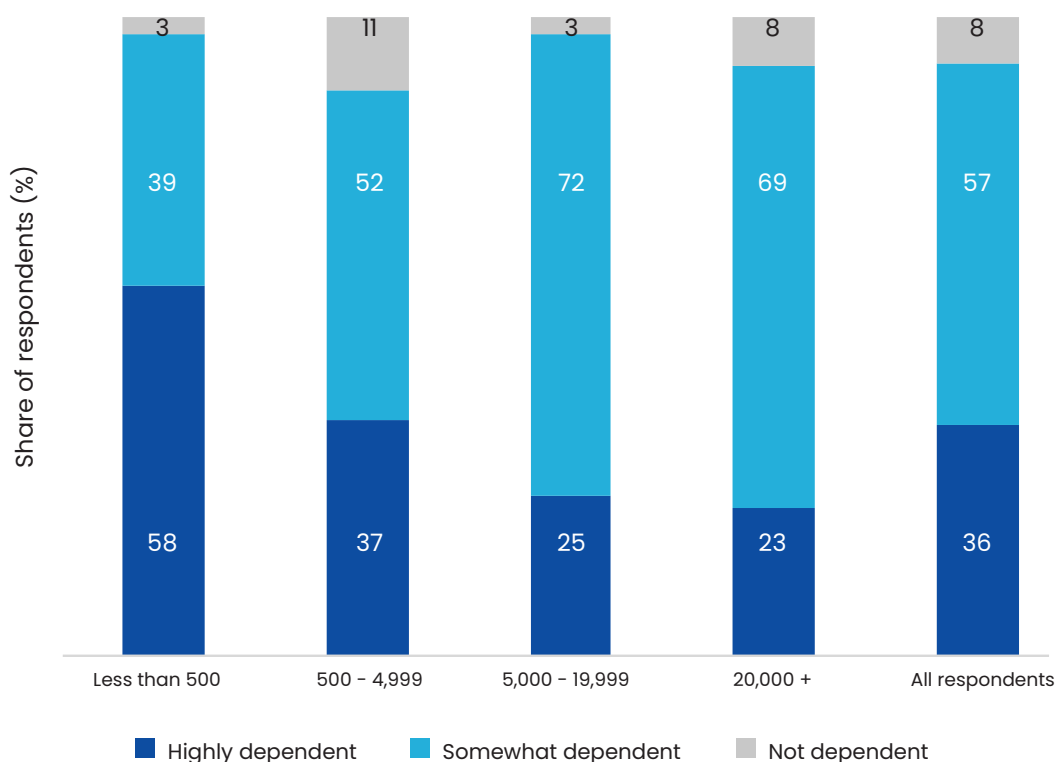


Figure 5b. Dependence on Imports, by Firm Size (%)



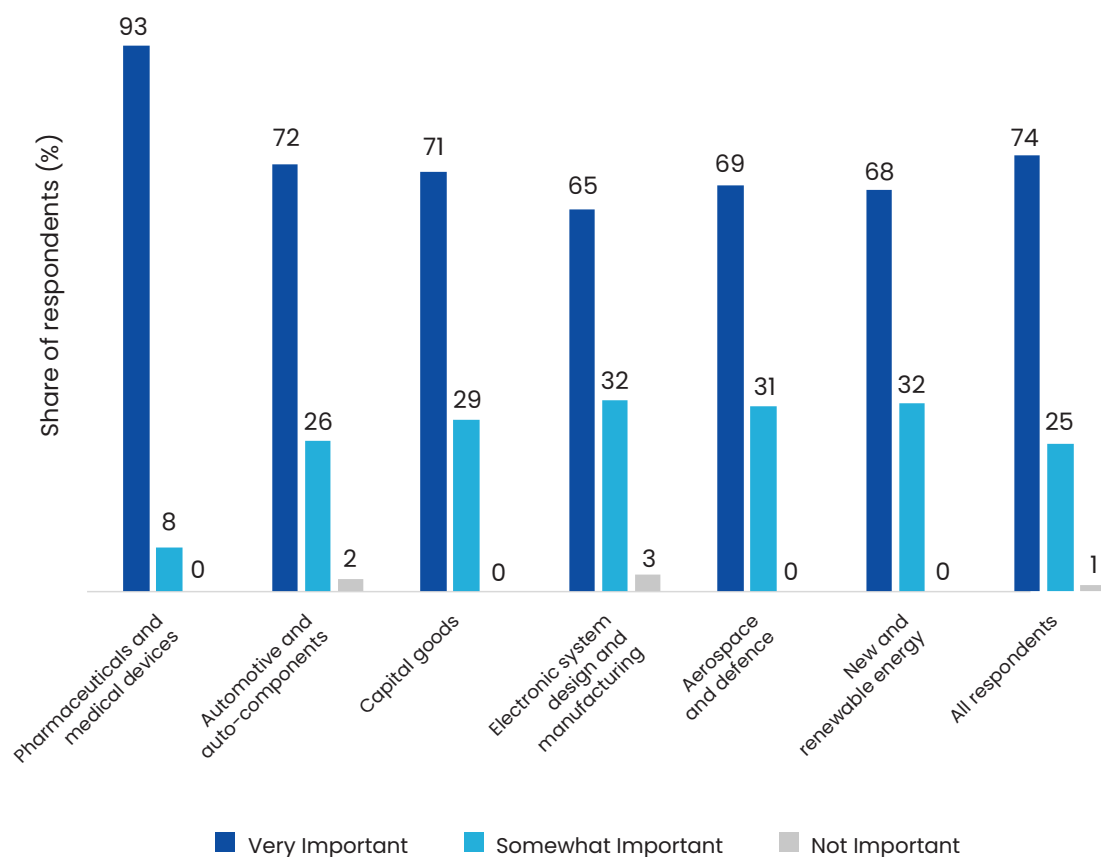
How important is it for India to update its trade policy to enable greater value chain integration?

Companies agree that the Indian government must prioritise trade policies. A near-unanimous 99 percent of the respondents said that trade policy changes are important for India's greater incorporation into GVCs. More than seven of every 10 respondents (75 percent) agreed that it is *very important*, while 25 percent said it is *somewhat important*.

Updating trade policies is most important for smaller firms.

Among companies with less than 500 employees, 87 percent said updating trade policies is *very important* for India's GVC integration, compared to 74 percent of firms overall.

Figure 6: Importance of Upgrading India's Trade Policies, Responses by Industry (%)



Which three countries or groupings do you think India should prioritise signing a free trade agreement with?

Enterprises say India should prioritise a trade agreement with the U.S. Respondents were asked to select the countries or blocs that India should prioritise signing a trade deal with. The US stands out as a priority country for companies across industries, while the RCEP appears to be less significant for firms in India. More than one-third of aerospace and defence companies would prioritise the US, followed by the UK. In automotive and ESDM, the US and the EU are the most important. For firms in the capital goods and new and renewable energy sectors, the US and the UK are the favoured countries for a trade agreement; and for enterprises in pharmaceuticals, the US, UK, and UAE.

Table 2: Preferred Partners for Trade Deals with India, Responses by Industry (%)

Industry	US	China	EU	UK	Australia	Canada	UAE	RCEP
Aerospace and defence	33	13	13	17	4	6	15	0
Automotive and auto-components	27	9	14	13	12	8	12	5
Capital goods	25	14	9	23	8	4	15	2
Electronic system design and manufacturing	23	5	18	10	10	14	14	5
New and renewable energy	27	6	11	17	14	11	14	2
Pharmaceuticals and medical devices	24	12	9	19	7	8	19	2
All respondents	26	10	12	16	9	9	15	3

That the UK is a preferred partner over the EU is hardly surprising, as the UK was India's largest trade partner amongst all EU members even before BREXIT. While industry resistance to RCEP is not unexpected, the response to an agreement with China is noteworthy. Perhaps predictably, enterprises in the automotive and auto-components sector, as well as ESDM, remain mostly skeptical of any agreement on that front. This is most likely because these two sectors are in direct competition with their counterparts

in China. For their part, firms in the sectors of aerospace and defence, pharmaceuticals and medical devices, and capital goods show a tendency, albeit slightly, in favour of an understanding with China while maintaining negative views about RCEP. Of the respondents in the capital goods sector, for instance, more respondents are in favour of an understanding with China than with the EU, Australia, and Canada. These findings merit further research, as these sectors are important for India's growth goals and manufacturing agenda.

India's Trade with Select Partners (FY2021-22, in US\$ Millions)		
Partner	Total Trade	Trade Balance
United States	96,618	+ 27,935
United Kingdom	14,446	+ 2,615
EU	686,243	- 102,627
China	95,018	- 58,225

Source: Import – Export Data Bank, Ministry of Commerce, Government of India

Recognising the importance of the US as a trading partner for India, this survey asked firms what they think the US needs to do to facilitate greater investments in India. One-third of the respondents said greater government-to-government engagement is needed. One-fifth of the firms (21 percent) said that the US should reconsider some of its positions in the WTO, and 13 percent said that the US should ease domestic regulations to facilitate greater investments into India.

Enterprises say the US needs to deepen its government-to-government (G2G) engagement with India. For India and the United States, G2G engagement is facilitated through multiple platforms. The 2+2 dialogue, for one, is an established forum for engagement between India's ministries of External Affairs and of Defence, and the US departments of State, and of Defence. The Trade Policy Forum (TPF) also serves as an important platform for trade policy. The most recent meeting of the TPF took place in November of 2021,²² during which the participating countries discussed various issues, from bilateral trade to multilateral cooperation.²³

C. Domestic Policy Environment

A country's ability to attract foreign investments and create stronger trade linkages depends not only on trade policies, but on supportive domestic policies, and the institutional and human capital environment.

The quality of infrastructure, for example, can strongly determine costs and efficiency, and in turn, the country's attractiveness for investments. Equally important is the overall business environment, labour laws, the quality of education systems, and the ease and cost of compliance with international standards and certification.

²² Office of the United States Trade Representative, Government of the United States <https://ustr.gov/about-us/policy-offices/press-office/press-releases/2021/november/joint-statement-united-states-india-trade-policy-forum> United States Trade Representative. "Joint Statement from the United States - India Trade Policy Forum," 2021. <https://ustr.gov/about-us/policy-offices/press-office/press-releases/2021/november/joint-statement-united-states-india-trade-policy-forum>

²³ Office of the United States Trade Representative, Government of the United States <https://ustr.gov/about-us/policy-offices/press-office/press-releases/2021/november/joint-statement-united-states-india-trade-policy-forum> United States Trade Representative. "Joint Statement from the United States - India Trade Policy Forum"

How much do the following influence foreign investment decisions in India?

Respondents were asked which factors are most important for investment decisions in India. In their view, the most important factor is the availability of raw materials, with 72 percent of respondents grading this as *very important*. This is followed by skilled workforce (70 percent) and the cost of production (68 percent).

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GVC can greatly raise productivity, benefitting both the investors and investee countries.

- Survey respondent

Figure 7: Factors Informing FDI Decisions in India (% of all Respondents)

How much of a constraint are the following for your company's ability to scale up in India?

In addition to investment decisions in a broad sense, the survey asked companies about their own experiences in production in India, especially the importance of various factors in constraining their production capabilities and expansion in the country.

The key constraints facing companies in scaling up in India include tax policies, the quality of infrastructure, trade and tariff policy uncertainty, and access to capital. More than half of respondents (54 percent) said that tax policies were *very much* of a constraint; 43 percent of companies called tax policies a *moderate* constraint; and 3 percent said they are *not a constraint*.

Meanwhile, infrastructure issues have been a consistent challenge for companies in India. More than half of the companies (51 percent) said infrastructure quality was a *major constraint*. The share of this response was higher among larger companies at 54 percent, compared to 30 percent of the smallest companies.

Fifty-one percent of the respondents named trade policy uncertainty as a *major constraint*, while 50 percent said access to capital is a *major constraint*. Capital constraints were more pronounced among smaller companies, with 53 percent of companies with less than 500 employees identifying it as a *major constraint*, compared with 39 percent of the largest companies.

Table 3: Key Constraints to Scaling Up (% of all Respondents)

Constraints to Scaling Up	Very Much	Moderate	Not at All
Taxation rules and policies	54	43	3
Quality of infrastructure	51	44	6
Uncertainty in trade and tariff policy	51	43	7
Access to Capital	50	43	8
Availability of raw materials	49	47	5
Skilled workforce	47	47	7
High tariff on finished products	47	50	4
Intellectual property protection	46	49	5
Cost of production	46	48	7
High tariff on inputs	46	48	7
Labour issues	45	36	20
Beurocratic and administrative procedures	45	48	7
Regulatory Uncertainty	42	52	7
Political and Social Risks	41	47	13
Investment Protection	40	54	6
Land and Acquisition	39	51	11
Corruption	33	39	29

Which challenges does your company face integrating into GVCs?

The survey asked the respondents to name the specific issues they face in integrating into GVCs, drawing on their own experiences.

The biggest challenges companies face in integrating into GVCs are meeting quality standards, lack of institutional support, and inadequate information. Nearly half of the companies (45 percent) said that meeting quality standards is a significant problem for them. The fragmentation of standards drives up the cost of production. As a joint study done by the Organisation for Economic Cooperation and Development (OECD), the WTO, and the United Nations Conference on Trade and Development (UNCTAD) has found, firms that supply multiple markets may have to duplicate production to conform with fragmented standards or certification systems.²⁴ The various components of the quality assurance ecosystem—from standards to certification—already constitute a fixed cost for producers.

The next biggest challenge identified by 41 percent of the companies is the lack of institutional support. This could be in terms of infrastructure, market access, and even production subsidies. Indeed, a study done by the Indian Council for Research on International Economic Relations (ICRIER) finds that while India has a number of policies that support trade, there is a dearth in those related to GVC integration.²⁵ This implies that policies may support day-to-day trade flows, imports and exports through straightforward incentives. On the other hand, there is a lack of policies that actively support GVC integration in terms of creating a downward pressure on domestic production costs.

²⁴ OECD, WTO, UNCTAD, "Implications Of Global Value Chains for Trade, Investment, Development And Jobs" OECD, WTO, UNCTAD, 2013, Saint Petersburg.

²⁵ Saon Ray, and Smita Miglani, "India's GVC Integration: An Analysis of Upgrading Efforts and Facilitation of Lead Firms." ICRIER, Working Paper 386 (2020): 3. Saon Ray, and Smita Miglani. "India's GVC Integration: An Analysis of Upgrading Efforts and Facilitation of Lead Firms, Working Paper 386." ICRIER, 2020. https://icrier.org/pdf/Working_Paper_386.pdf

The third biggest challenge companies report facing is the absence of adequate information. Four of every 10 respondents (40 percent) said that the lack of information impedes their integration into GVCs. After all, information regarding markets, partners, EXIM rules, and even trade finance play an important role for companies in creating partnerships and tapping into value chains.

Firms of varying sizes face different issues integrating into GVCs. Among the smallest companies, 55 percent said *high domestic tariffs* was a major challenge; and 53 percent of them identified their *inability to meet quality standards*. Meanwhile, for the largest companies (those with 20,000 or more employees), 46 percent said meeting quality standards was a crucial constraint.

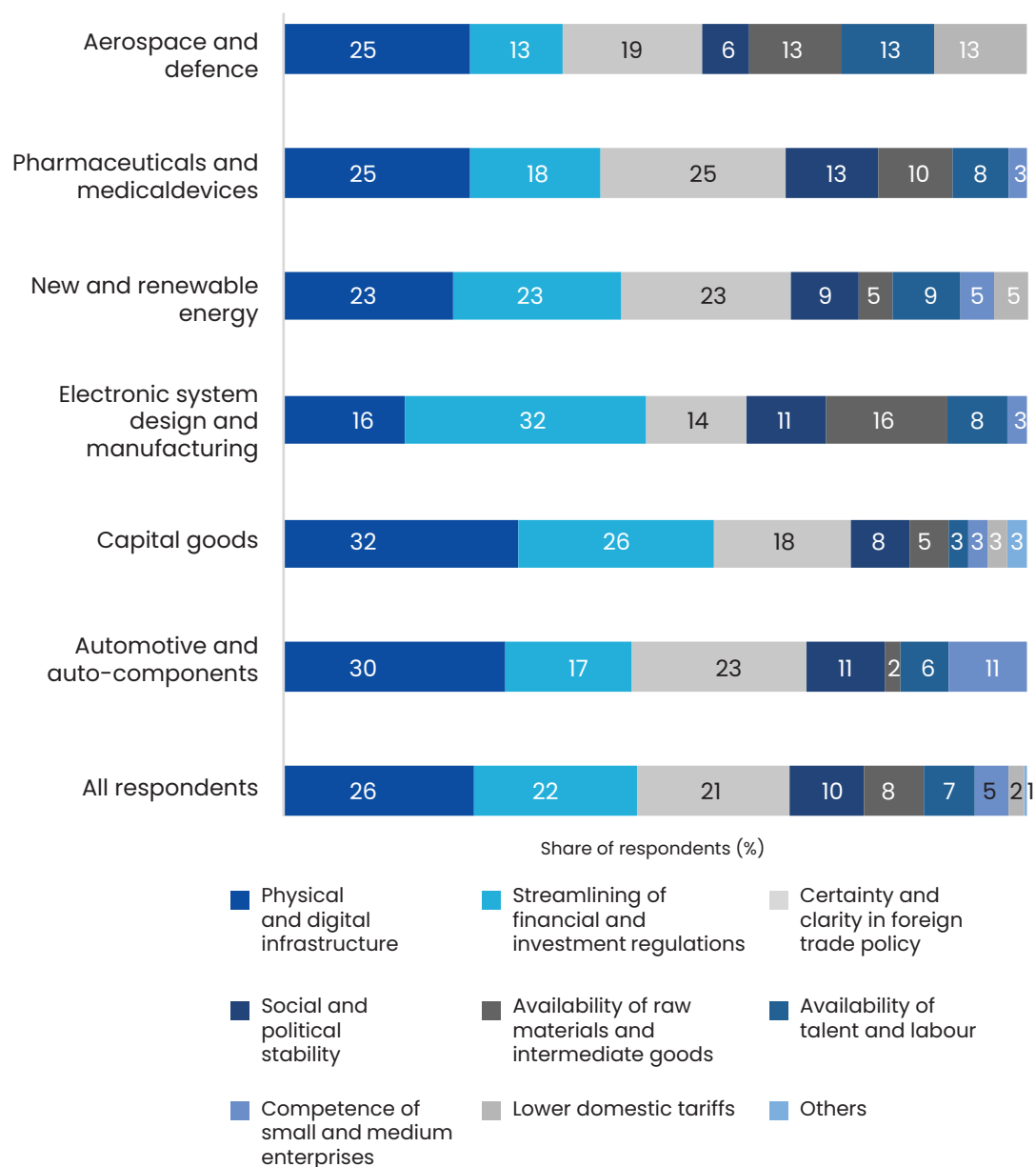
Table 4: Constraints to GVC Integration (% of all Respondents)

Challenges to GVC integration	Major Problem	Minor Problem	Not a Problem
Inability to meet quality standards	45	41	14
Poor institutional support	41	42	18
Lack of information	40	48	13
Poor market access	39	45	17
Lack of access to capital	36	45	19
Inadequate business networks	35	48	18
High domestic tariffs	33	57	11
Low production capacity	31	50	20

For India to integrate better in global value chains, which of these will you place as the highest priority?

The survey asked companies to name the policy areas that India should prioritise in the medium term to build better GVC linkages.

Companies say investments in digital and physical infrastructure are most important for India to integrate into GVCs. When the respondents were asked what India should prioritise to better participate in GVCs, the following were the top responses: 26 percent of the firms said *digital and physical infrastructure* are most important; 22 percent said India should strengthen its *financial and investment regulations*; and 21 percent said it is the *certainty and clarity around international trade policies* that should be prioritised.

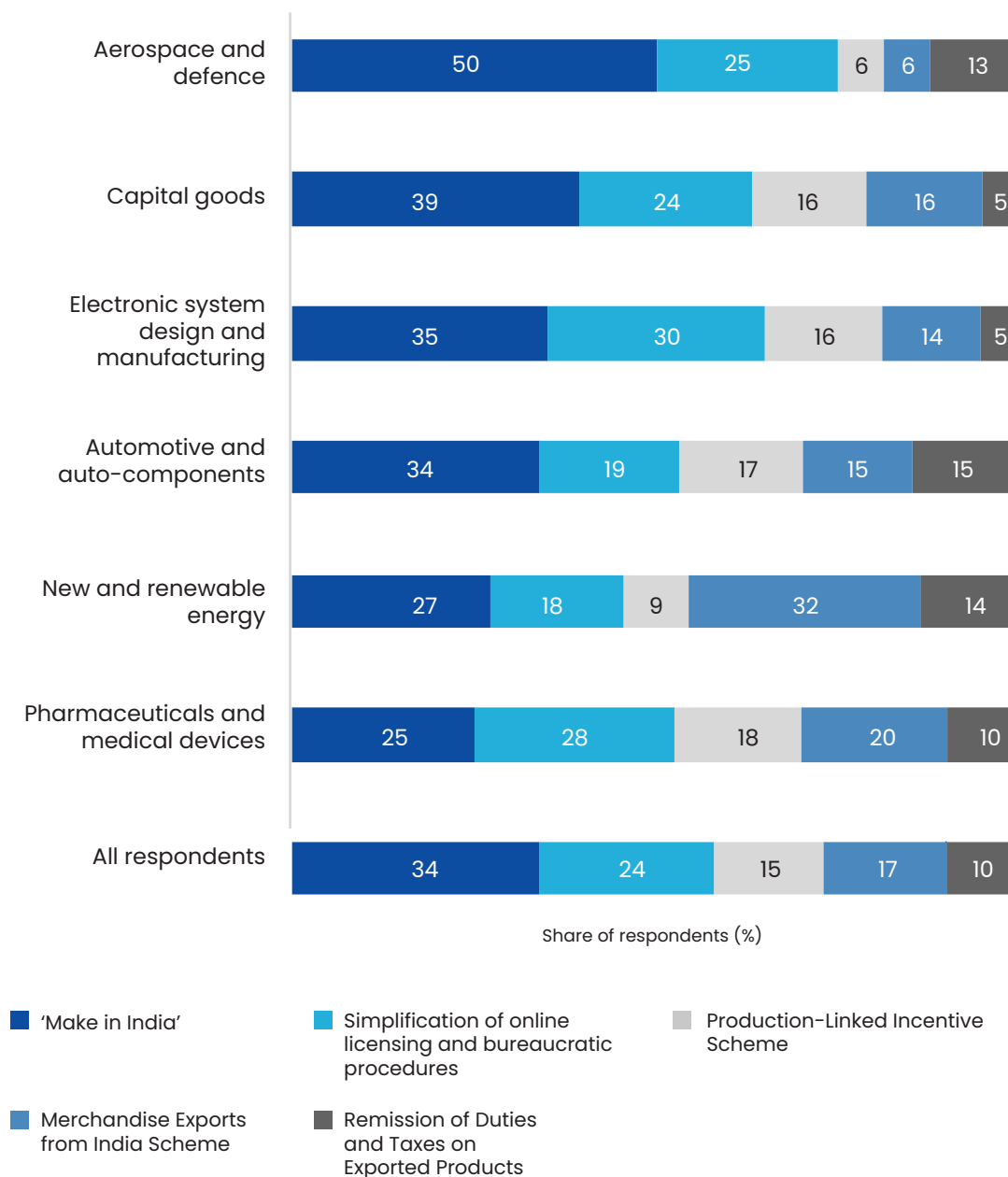
Figure 8: Policy Priorities for India, Responses by Industry (%)

What efforts by the government have improved GVC integration in India the most?

Firms consider the 'Make in India' mission to be beneficial for India's integration into GVCs. While further policy changes are needed to improve India's participation in GVCs, respondents were also asked about how they view the effectiveness of existing government initiatives. One-third of respondents (34 percent) said the 'Make in India' mission has helped India integrate better into GVCs; 24 percent pointed to the *simplification of online licensing and bureaucratic procedures*; and 17 percent ranked the *MEIS* highest.

The value given to the different initiatives varies between industries. For example, one-half of the firms from the aerospace and defence sectors selected 'Make in India', compared to the 34 percent overall proportion. Across the sectors, the respondents belonging to the pharmaceuticals industry ranked the simplification of online licensing and bureaucratic procedures most important. Overall, RoDTEP was considered the least important by the respondents across industries.

Figure 9: Effective Government Initiatives, Responses by Industry (%)



Findings from the enterprise survey highlight several key points that may be useful for Indian policymakers.

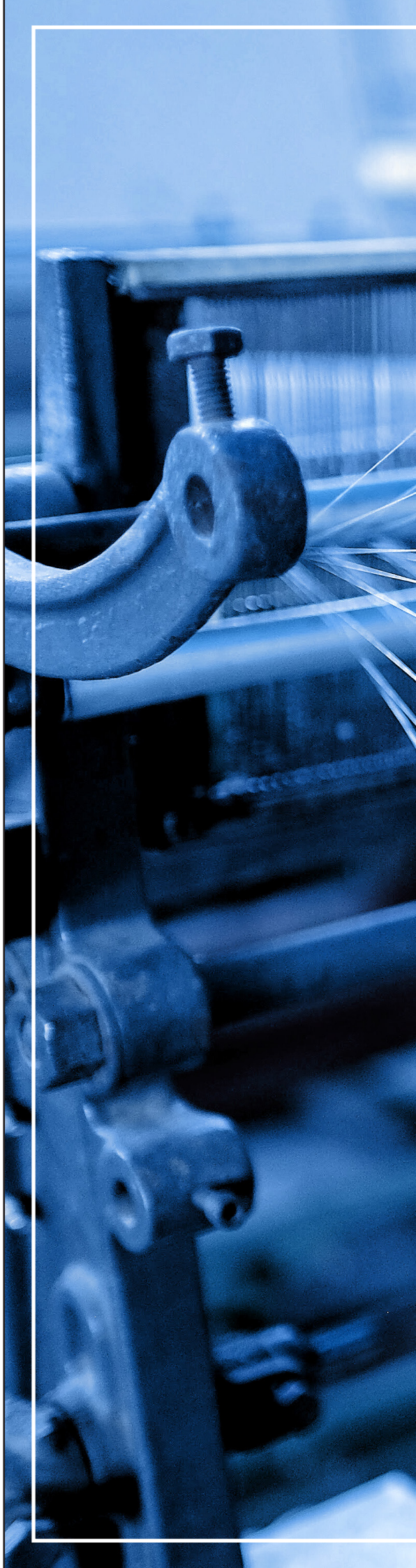
1. The respondents see integration into GVCs as important for their firms despite disruptions, shocks, and backlash. The pandemic has shaped these companies' perceptions of GVCs, and for the pharmaceutical and medical devices industries, in particular, integration is an imperative.
2. Companies keep a close watch of geopolitical developments to inform their investment decisions.
3. Companies are highly dependent on both imports and exports, and policies to reduce costs and barriers to both are needed to strengthen better GVC linkages.
4. There is a nearly unanimous view among the respondents that India needs to make its trade policies more consistent and stable to facilitate integration into GVCs. This can be done through a predictable tariff regime, and greater engagement in FTAs. Respondents say India should focus its efforts on the United States.
5. Respondents say that the availability of raw materials and skilled labour, the cost of production, and infrastructure are the most crucial factors that inform FDI investment decisions in India.
6. The biggest hurdles companies face in scaling up production in India are taxation, infrastructure, and uncertainty around trade policy.
7. The biggest challenges facing these firms in participating in GVCs is the inability to meet quality standards, absence of institutional support, and lack of information.
8. In the medium term, the respondents say, India should focus on improving digital and physical infrastructure, strengthening financial and investment regulations, and ensuring clarity and certainty around trade policies.

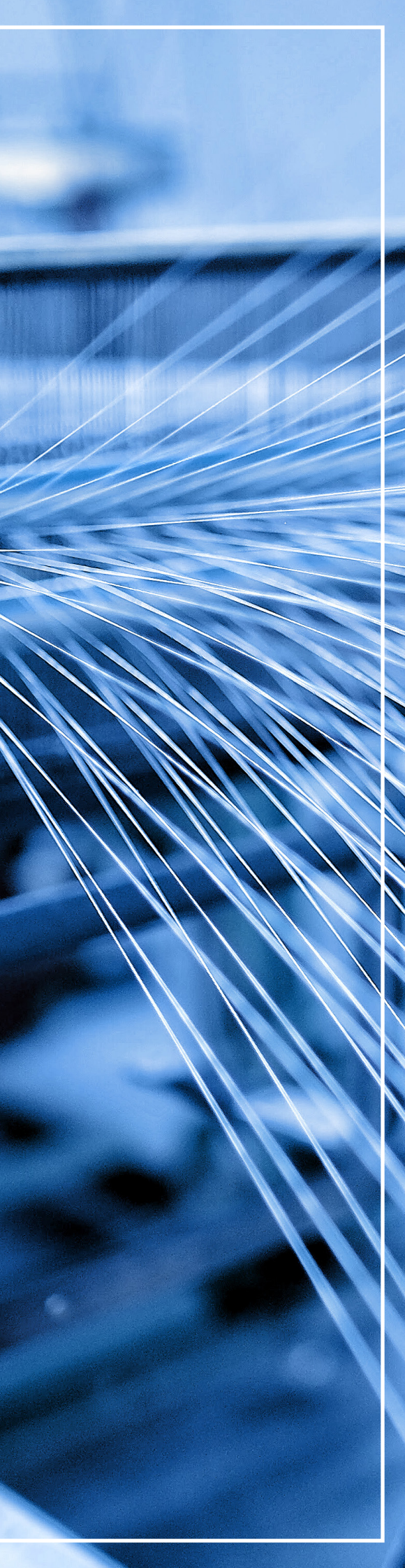
IV. Policy Priorities and Options

The Objectives for India

India stands to benefit from building resilient linkages with global value chains. Better integration can support economic growth by raising productivity and facilitating the transfer of knowledge and technology, and in turn help increase incomes. The following, therefore, should be India's objectives: i) enhancing India's integration into GVCs; ii) ensuring the resilience of its value chain linkages; and iii) enhancing the social and economic benefits of more robust GVC participation.

Indeed, GVC integration is viewed as amongst the most important drivers of economic development, as it offers lower- and middle-





income countries opportunities to participate in global markets by lowering the bar for entry. This is because firms no longer need to produce entire goods—and thereby require comparative advantage across all areas of production—but can specialise in specific aspects of it.²⁶

While the benefits of integrating into GVCs are clear, two issues emerge which can be addressed with adequate policy response. The first is that this model of production intrinsically favours high-income countries, where value is created and extracted, leaving lower-income countries often trapped at the lower value-add positions of the value chain. Coordinated policy efforts to move up the value chain can help resolve this. Second, the rapid uptake of digital technologies of the fourth industrial revolution are undercutting the cost-competitiveness of production in lower-income countries across many industries. Re-skilling and up-skilling the workforce is important to maintain competitiveness.

When developing countries enter GVCs, they often concentrate on the low-skilled and low-value-added activities. They often find it difficult to upgrade their activities due to competition from others, and therefore they derive limited benefits.²⁷ Moreover, while many developing countries view GVCs as a much-

²⁶ Orchard Baldwin. "Trade and Industrialisation after Globalisation's 2nd Unbundling: How Building and Joining a Supply Chain Are Different and Why It Matters." NBER, 2011. <https://www.nber.org/papers/w17716>

²⁷ Saon Ray, and Smita Miglani. "India's GVC Integration: An Analysis of Upgrading Efforts and Facilitation of Lead Firms, Working Paper 386." ICRIER, 2020. https://icrier.org/pdf/Working_Paper_386.pdf.

needed pathway to job creation, research suggests that job creation is not necessarily a result of GVC participation as technological upgrade tends towards lower labour use and has indeed been below-target in many developing countries.^{28,29}

It is clear that participation in GVCs alone will not necessarily lead to improved development outcomes, and policy choices in India will shape the extent to which GVCs benefit society as a whole. For example, it will be important for India to increase the value-add in production, facilitate knowledge and technology transfer, address market failures, and ensure that the economic benefits are shared.³⁰

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*GVCs create more and better jobs,
improve economic growth, and hence
reduce poverty.*

- Survey respondent

²⁸ Stefan Pahl, and Marcel peter Timmer. “Do Global Value Chains Enhance Economic Upgrading? A Long View.” ResearchGate. Journal of Development Studies, 2019. https://www.researchgate.net/publication/338192859_Do_Global_Value_Chains_Enhance_Economic_Upgrading_A_Long_View

²⁹ Dani Rodrik. “New Technologies, Global Value Chains, and the Developing Economies.” Pathways for Prosperity Commission, 2018. https://drodrik.scholar.harvard.edu/files/dani-rodrik/files/new_technologies_global_value_chains_developing_economies.pdf

³⁰ Daria Taglioni, and Deborah Winkler. Making Global Value Chains Work for Development. Washington, DC: World Bank, 2016. <https://openknowledge.worldbank.org/handle/10986/24426>

Policy Priorities

Based on the findings of the survey, this section highlights eight policy intervention areas and recommends policy options for India.

From the perspective of companies, India should prioritise the following policy domains: 1) upgrading digital and physical infrastructure; 2) improving the business environment; and 3) facilitating trade (See Table 5).

Table 5: Policy Options for GVC Integration

Key Intervention Area	Policy Options
Upgrading Infrastructure	
Digital infrastructure	<ol style="list-style-type: none"> 1. Enhance ICT, broadband, and 5G connectivity. 2. Ensure clarity on data protection rules that may impact investment decisions for digital infrastructure. 3. Implement cross-border paperless trading.
Physical infrastructure	<ol style="list-style-type: none"> 1. Implement the National Logistics Policy. 2. Enhance both road and non-road inland transportation networks. 3. Address gaps in power supply and distribution.
Improving the Business Environment	
Investment and financial regulations	<ol style="list-style-type: none"> 1. Ensure clarity on dispute settlement in the post-Bilateral Investment Treaty system. 2. Regularise GST rates with import tariffs to equalise domestic costs and import costs. 3. Promote financial access by improving creditworthiness assessments (especially for SMEs).

Institutional support	<ol style="list-style-type: none"> 1. Set up a supportive contracting environment. 2. Implement legislation to protect Intellectual Property. 3. Provide support for regulation compliance 4. Increase investments in research and development (R&D). 5. Update and implementation of Labour Rules 6. Giving more momentum to initiatives like Skill India
Addressing information gaps	<ol style="list-style-type: none"> 1. Develop a GVC integration action plan with an inclusiveness framework. 2. Improve access to digital technologies and establish secure feedback loops and information sharing for technology-enabled sectors.
Tax policies	<ol style="list-style-type: none"> 1. Simplify and streamline tax procedures and policies. 2. Remove barriers and disincentives for firm formalisation.
Facilitating Trade	
Trade policy	<ol style="list-style-type: none"> 1. Establish stable tariff rules. 2. Pursue further FTAs with partners. 3. Review the link between BITs and trade, i.e., trade policy and investment policy. 4. Simplify and streamline border procedures.
Improving quality	<ol style="list-style-type: none"> 1. Implement the Indian National Strategy on Standardisation to increase firms' capacity to meet international standards.

Strategies for Resilience

India must focus on building the resilience of its linkages to GVCs to mitigate the impacts of future shocks. The following points outline specific strategies for creating resilience.

1. Map supply chains for critical goods and identify vulnerabilities.

As we have learned from the pandemic, India should identify goods critical for public health and other sectors critical to the country's economic security. India should carry out an in-depth mapping of supply chains. Based on the supply chain mapping, potential vulnerabilities should be identified, stress tests carried out, and strategies articulated for shoring up supply of the identified critical goods.

2. Ensure redundancies (stockpiles and diversified sources) for critical goods.

Based on the identification of critical goods, the government should ensure there are emergency stockpiles, and support firms in building diversified supply chains through an enabling investment environment and stable tariff structures. The government should also facilitate the uptake of digital technologies and tools that can support firms in identifying and responding to potential supply shocks.³¹

3. Foster a stable regulatory environment.³²

Creating resilience in India's linkages to GVCs requires investors and MNCs to take a long-term view of engagement with/in India. As such, policy and regulatory certainty in the medium- and longer-term should be a key priority rather than an overemphasis on short-term incentive schemes for attracting GVCs.

³¹ —, "Global Value Chains: Efficiency and Risks in the Context of COVID-19." OECD, 2021. <https://www.oecd.org/coronavirus/policy-responses/global-value-chains-efficiency-and-risks-in-the-context-of-covid-19-67c75fdc/>

³² OECD, "Global Value Chains: Efficiency and Risks in the Context of COVID-19." 2020

4. **Promote best practices through government procurement.**

Resilience at the firm-level is of critical importance for resilience throughout the system. The government should leverage public procurement to incentivise companies to adopt best practices by including sustainable practices as a criteria for participation in government projects.

5. **Invest in public-private partnerships and promote transparency and collaboration.**

Robust partnerships between firms and the government are needed to create resilience in India's GVC linkages. The government should regularly seek inputs from the private sector. For instance, an Indian tech company now provides an 'Early Warning Solution'³³ for supply chain resilience. Such models can be escalated to a PPP model.

6. **Harmonise logistics and transportation.**

Implementation of harmonised logistics and transportation standards can help reduce bottlenecks and ease the movement of goods.

7. **Support MSMEs.**

MSMEs make up the bulk of the Indian economy. Vitalising them and giving them access to reliable credit so that they are able to scale and secure themselves against externalities is key. It is important therefore to assist MSMEs in mitigating risks and coping with shocks. Ensure access to finance and encourage and facilitate digitisation and formalisation through programmes like the Production Linked Incentive (PLI) scheme.³⁴

³³ Infosys. "Handle Disruptions with Supply Chain Early Warning Solution | Infosys," n.d. <https://www.infosys.com/services/data-analytics/offerings/early-warning-solution.html>

³⁴ Invest India. "Production Linked Incentive (PLI) Schemes in India," n.d. <https://www.investindia.gov.in/production-linked-incentives-schemes-india>

8. Ensure policy coherence between industrial strategies and other policy priorities.

Ensure that policies aimed at GVC integration complement other policy priorities³⁵ such as consumer protection, the welfare of workers, the creation of decent jobs, competition, gender equity, and green transitions.

9. Support the workforce and workers' well-being.

India's ability to move up the value chain will depend on the capabilities of the workforce. Rather than focusing on job-specific skilling initiatives, India should continue to invest in quality education. Educational foundations can help workers adapt to changes in a more flexible manner. Where appropriate, vocational education can be utilised to bolster capabilities in strategic areas. Facilitate the formalisation of labour, and the expansion of access to social protections to shield individuals and households from income and other shocks.

³⁵ Karl Aiginger, and Dani Rodrik. "Rebirth of Industrial Policy and an Agenda for the Twenty-First Century." ResearchGate. Journal of Industry Competition and Trade 20, 2020. https://www.researchgate.net/publication/338431081_Rebirth_of_Industrial_Policy_and_an_Agenda_for_the_Twenty-First_Century

V. Conclusion

This report utilised an enterprise survey of 200 domestic and foreign companies in India to highlight the constraints and opportunities for the country's integration into global value chains. Opportunities exist for India to better integrate into global markets and benefit from the potential job creation, productivity, knowledge transfer, and growth that can result from greater integration. For India to do this, it is imperative to exert concerted efforts and nurture a strategic vision, backed by policy action.

This report outlined eight priority policy intervention areas to help India better integrate into GVCs. Under each of these eight priority areas, the report articulated policy options for India. The eight key intervention areas





include: i) digital infrastructure, ii) physical infrastructure, iii) investment and financial regulation, iv) trade policy, v) improving quality standards, vi) improving institutional support, vii) addressing information gaps, and viii) tax policies.

India could benefit from greater GVC integration if it focuses on resilience and the broader social benefits of deeper GVC linkages. In taking that opportunity and designing strategic policy pathways, India will not only be able to deepen its linkages in GVCs but meet other imperatives such as creating jobs, raising incomes, and facilitating knowledge and technological transfer.

The opportunities and potential benefits of strengthening India's integration into GVCs are immense, but the country must be strategic in its efforts to maximise the benefits and ensure resilience. The policy options outlined in this report are based on the preferences of enterprises and are meant to act as pointers for policymakers keen on building greater and resilient GVC linkages in India.

ANNEX GVCs IN INDIA: SURVEY QUESTIONNAIRE

About the Survey

The survey aimed to study India's integration into global value chains. As a part of this research, an enterprise survey was conducted.

The survey aimed to collect data on the main challenges companies in India are facing with regard to integrating into global value chains. The survey targeted C suite executives of companies to better understand the main challenges domestic and foreign firms face in expanding value chains in India.





ORIGINAL SURVEY: Confidentiality Statement and Consent

Your answers will be kept anonymous, your name, contact details, and other personal information will remain with only the research team solely for the purpose of quality audits. Your views will be analyzed along with other business leaders. Participation in the survey is voluntary, and you may decline to answer any question(s) you wish

Do you consent to participate in the survey?

- Yes
- No

1. What is the name of your company?

2. What is your Designation?

3. Which industry does your company operate in? (Select one)

- a. Aerospace and defense
- b. Automotive and auto-components
- c. Capital Goods
- d. Electronic system design and manufacturing
- e. New and renewable energy
- f. Pharmaceuticals and medical devices
- g. Others

4. How many employees does your company have globally? (Select one)

- a. Less than 500
- b. 500-4,999
- c. 5,000-19,999
- d. 20,000 or more

5. What is the approximate total global annual revenue of your company? (Select one)
- a. Less than \$100 million (INR 750 crores) QUOTA 50%
 - b. \$100 million to \$500 million (INR 750 – 3750 Crores)
 - c. \$500 million or more
(INR 3750 Crores or more) QUOTA 50%
 - d. I don't know
6. How many years has your company been operating in India? (Select one)
- a. Less than 5 years
 - b. 5 – 20 years
 - c. 21 – 50 years
 - d. More than 50 years
7. What stage of production do your company's products fall in? (Select all that apply)
- a. Primary goods
 - b. Intermediary goods
 - c. Consumer / final goods
8. In how many countries does your company have manufacturing facilities? (Select one)
- a. 1 country
 - b. 2 – 10 countries
 - c. 11 – 50 countries
 - d. More than 50 countries

Section B: Significance of GVCs

In this section, we are interested in your views on global value chain integration.

By **global value chain**, we mean the process by which firms locate different stages of the production process in different countries.

By **global value chain integration**, we mean the nature and extent to which India is incorporated into international production processes.

9. **How important is value chain integration for your company?**
 - a. Very important
 - b. Somewhat important
 - c. Not important

10. **Has the Covid-19 pandemic influenced the way your company views the importance of GVCs?**
 - a. Yes
 - b. No
 - c. I don't know

11. **Post pandemic, in your view, how urgent is GVC integration for your company?**
 - a. Very Urgent
 - b. Somewhat Urgent
 - c. Not Urgent

12. **How important is it for India to update its trade policy to enable greater value chain integration?**
 - a. Very important
 - b. Somewhat important
 - c. Not important

Section C: Geo-economic Developments

13. In your view, which geopolitical and geo-economic developments will most impact foreign investment decisions in India in the medium-term? **(Select one)**
- a. Climate and energy transitions
 - b. Global macroeconomic conditions
 - c. Domestic policies
 - d. Geopolitical tensions and military conflict
 - e. Technological disruption
 - f. Terrorism and extremism
 - g. Other (please specify) _____
14. Which three countries/groupings do you think India should prioritize in signing a free-trade agreement? **(Select 3)**
- a. United States
 - b. China
 - c. EU
 - d. UK
 - e. Australia
 - f. Canada
 - g. UAE
 - h. RCEP (Regional Comprehensive Economic Partnership)
15. In your opinion, which effort by the Indian government most improved GVC integration in India? **(Select one)**
- a. The Make in India Initiative
 - b. Simplification of online licensing and bureaucratic procedures
 - c. Production Led Incentives Scheme
 - d. MEIS (Merchandise Exports from India Scheme)
 - e. RoDTEP (Remission of Duties and Taxes on Exported Products)
 - f. Other (please specify) _____

- 16. In your view, which US policy would most promote American investments in India? (Select one)**
- a. Ease US domestic regulations
 - b. Reassess US positions on global trade at the WTO
 - c. Prioritize G2G (Government to Government) engagement (e.g. defense, energy)
 - d. Reassessing the Generalized System of Preferences
 - e. Special 301
 - f. US subsidies for their domestic industry
 - g. New semiconductor policy
 - h. Other (please specify) _____
- 17. Rank in order of importance the new international instrument most likely to impact your business (Rank 1–5 with 5 being most important)**
- a. GDPR (General Data Protection Regulation)
 - b. Border adjustment mechanisms
 - c. OECD BEPS (Organization for Economic Co-operation and Development and Domestic tax base erosion and profit shifting)
 - d. Digital equalization levies
 - e. WTO Moratorium on Customs Duties on E-Commerce
 - f. International tariff policy
- 18. Which technology is going to impact your business most? Rank in order of importance. (Rank 1–5 with 5 being most important)**
- a. 5G
 - b. Blockchains
 - c. Cryptocurrencies
 - d. 3 D printing
 - e. Nuclear energy
- 19. What are the risks you foresee for supply chain diversification as it relates to technology? Rank in order of importance. (Rank 1–5 with 5 being most important).**
- a. Foreign intervention
 - b. Monopolization
 - c. Overproduction/ supply
 - d. Trade protectionism
 - e. Over dependence on foreign suppliers

Section D: GVC Integration Intensity

20. To what extent is your company's revenue in India dependent on exports?
- Highly dependent
 - Somewhat dependent
 - Not dependent
21. How dependent is your company on imports to India?
- Highly dependent
 - Somewhat dependent
 - Not dependent
22. In general, how easy is it for your company to engage in international trade? Both imports and Exports. (Select one)
- Very Easy
 - Easy
 - Difficult
 - Very Difficult
23. Roughly how many companies do you supply to? (Select one)
- Less than 10
 - 10–15
 - 16–20
 - More than 20
 - Sales to final consumers only
24. Which countries do your trade partners hail from? (Select all applicable)
- | | |
|--------------------------|---------------------------|
| • USA | • East Africa |
| • Japan | • North or Central Africa |
| • Australia | • Southern Africa |
| • South Korea | • West Africa |
| • Vietnam | • SAARC |
| • Thailand | • Russia |
| • Indonesia | • India |
| • China | • Other – please specify |
| • Middle East/ West Asia | _____ |

Section E: Domestic Barriers

25. In your assessment, how important are the following in influencing foreign investment decisions in India?

(Very important, important, not important)

	Very Important	Important	Not important
a. Regulatory uncertainty	1	2	3
b. Political and social risk	1	2	3
c. Labor issues	1	2	3
d. Land acquisition	1	2	3
e. Skilled workforce	1	2	3
f. Taxation rules and policies	1	2	3
g. Quality of infrastructure	1	2	3
h. Uncertainty in trade and tariff policy	1	2	3
i. Intellectual property protection	1	2	3
j. Investment protection	1	2	3
k. Corruption	1	2	3
l. Access to capital	1	2	3
m. Cost of Production	1	2	3
n. Availability of raw materials	1	2	3
o. Bureaucratic and administrative procedures	1	2	3
p. Low tariff on inputs	1	2	3

26. To what extent are the following constraints for your company's ability to scale up in India?

(Very much, moderately, not at all)

	Very Much	Moderately	Not at All
a. Regulatory uncertainty	1	2	3
b. Political and social risk	1	2	3
c. Labor issues	1	2	3
d. Land acquisition	1	2	3
e. Skilled workforce	1	2	3
f. Taxation rules and policies	1	2	3
g. Quality of infrastructure	1	2	3
h. Uncertainty in trade and tariff policy	1	2	3
i. Intellectual property protection	1	2	3
j. Investment protection	1	2	3
k. Corruption	1	2	3
l. Access to capital	1	2	3
m. Cost of production	1	2	3
n. Availability of raw materials	1	2	3
o. Bureaucratic and administrative procedures	1	2	3
p. High tariff on inputs	1	2	3
q. High tariff on final products	1	2	3

27. To what extent are the following challenges for your company in integrating into GVCs?

(Major Problem, Minor Problem, not a Problem).

	Major Problem	Minor Problem	Not a Problem
a. Inadequate business networks	1	2	3
b. Lack of access to capital	1	2	3
c. Poor institutional support	1	2	3
d. Poor market access	1	2	3
e. Lack of information	1	2	3
f. Inability to meet quality standards	1	2	3
g. Low production capacity	1	2	3
h. High domestic tariffs	1	2	3

28. For India to integrate better in global value chains, which of the following do you think should be prioritized? (Select one)

- a. Certainty and clarity in foreign trade policy
- b. Streamlining of financial and investment regulations
- c. India's physical and digital infrastructure
- d. Availability of talent and labor
- e. Availability of raw materials and intermediate goods
- f. Social and political stability
- g. Competence of small and medium enterprises
- h. Low domestic tariffs
- i. Others?

29. Do you have any additional comments you would like to share? (Open Ended Question)

Interviewer to fill in

30. Respondent Name : _____

31. Contact Number : _____

Thank you for taking the time to complete this survey, we appreciate your inputs.

About the Authors

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