Navigating the Development Divide: The Case for Policy Space in India's Industrial Policy Strategy Amid Rising Global Protectionism

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PRITAM BANERJEE
ZAKI HUSSAIN
KANIKA KARWAL
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CENTRE FOR WTO STUDIES
CENTRE FOR RESEARCH IN INTERNATIONAL TRADE
INDIAN INSTITUTE OF FOREIGN TRADE

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Executive Summary

The General Agreement on Tariffs and Trade (GATT) and its successor, the World Trade Organization (WTO), were created to make global trade more equitable by raising living standards, securing full employment and fostering broad-based growth. Participation in the global economy did narrow the development gap for several low- and middle-income economies – particularly in East and South-East Asia. However, these gains were disproportionately captured by a relatively small number of developing countries. Early industrialisers, whether industrialised economies or export-led manufacturing powerhouses in Asia, benefited from the wide policy latitude for government support for industrial development and investment that existed before the Uruguay Round, using it to scale up their manufacturing and exports.

The scope for industrial policy intervention contracted sharply due to the strict disciplines agreed to by WTO members under the Agreement on Subsidies and Countervailing Measure (ASCM) and Trade-related Investment Measures (TRIMS). These strict disciplines were largely pushed by global multi-national corporations and championed by industrialised economies where such firms were headquartered.

A major shortcoming of these agreements was lack of comprehensive special and differential treatment (SDT) measures. The drafters of the agreement were also completely oblivious to the fact that global economic dynamics are fluid, and member states might feel the need for greater policy flexibilities in the future to address critical developmental needs. These agreements had no provision that would provide such conditional flexibilities when the need arose, especially to those countries with the most critical developmental needs.

The situation today after three decades since formation of the WTO is that late industrialisers such as India, Indonesia and Brazil – home to large populations whose development aspirations remain unmet – now command only a small share of world manufacturing output and exports. At the same time, a single country, China, has captured much of the incremental opportunity generated by expanding trade in manufactures since the 1990s. Operating as a non-market economy, China continues to employ policy tools that would ordinarily contravene the WTO's Agreements on Subsidies and Countervailing Measures (ASCM) and Trade-Related Investment Measures (TRIMS). The failure of the rules-based trading system, represented by the WTO agreements, to hold China adequately accountable has led to a major crisis of faith in such a system.

The US decision to undermine the WTO dispute settlement mechanism was the earliest manifestation of this crisis of confidence, which started under President Obama in 2011.[2] The US-China trade conflict that started in 2018 saw it emerge as a full-blown challenge. China's

[2] President Obama refused to re-appoint Appellate body member Jennifer Hillman in 2011 because Hillman had not upheld US actions. In 2016, President Obama blocked the reappointment of South Korean judge Seung Wa Chang to the appellate body. It needs to be noted that Mr. Chang ruled against the US on disputes related to countervailing duties imposed by the Obama administration on China.

rise, compounded by COVID-19 era supply-chain shocks, has heightened concern in advanced economies about the survival of their own industrial bases. In response, many have introduced expansive industrial-policy programmes – often stretching WTO rules (Reinert, K, 2024) by using national security or environmental exceptions. Developing countries, therefore, face a double bind: they remain subject to the letter of WTO disciplines and yet must compete with both China's unrestrained interventions and new (and arguably WTO non-compliant) industrial policy programmes in rich economies; all the while, automation is closing the traditional developmental pathway using manufacturing-led employment generation. The global trading system has now entered into a phase of full-blown crisis due to rising protectionism across the world, especially the policy developments since January 2025 in the US under the second Trump Presidency.

There is an obvious need to review the current policy status quo. While the advanced industrialised economies have their own agenda for such a review, there is an urgent need to develop a strategy that reflects the needs and priorities of large-developing countries that are market economies like India.

Our working paper documents the wide development gap between developing countries and the industrialised world and the inequitable distribution of opportunities from trade. Large developing economies, such as India, Brazil and South Africa, although home to large middle-class populations, remain far from achieving sustainable middle-income status. Despite economic growth, a significant portion of their populations remains vulnerable to slipping back into poverty due to economic shocks like health crises or recessions.

Such wide gaps in developmental outcomes after three decades of WTO's formation undermines the credibility of the institution and underlines the need for reform. It stands to reason that such reform must prioritise the aspirations of the world's poor. Not addressing these issues will prove inimical to the longer-term socio-economic stability of the world. With the demographic shift underway, an increasingly prosperous developing world is also the key to sustained global economic growth.

Our paper outlines the aggressive industrial policies launched by the dominant players in the global economy. The US and EU have launched major industrial policy initiatives while China has significantly expanded the quantum of support to industry. The rise of industrial policy interventions and protectionism has deepened the divide between developed and developing economies. Developed nations, such as the US and the European Union, have increasingly implemented subsidies, trade restrictions and investment regulations to strengthen strategic sectors like semiconductors, renewable energy and advanced manufacturing.

Equally problematic has been China's state-supported growth of its industrial eco-system that has systemically increased China's market share of global exports. The Chinese state has used multiple tools of government support to give its industries an unfair advantage and achieve unparalleled scales of operations and dominance across sectors. China's output is at least 10 times greater than India in 33 out of 41 key industrial sectors, the largest developing country

economy, and at least 20 times greater in 21 of these industries. The disparity between China and other large developing countries like Brazil and Indonesia is even greater. Similarly, China has unprecedented dominance as an exporter across industries and specific products.

We argue that the rise of China represents a unique model of industrial policy implementation. While Beijing has reaped all the advantages of WTO membership that is based on the principles of a market economy complemented by rules governance that require state action to be transparent and accountable, it continues to operate as a non-market economy.

China's use of discretionary firm specific subsidies, tax waivers, below-market inputs and directed credit would not be possible for governments to sustain legally or politically elsewhere. Such interventions are impossible in democratic, market-oriented polities since governments in such systems are required to comply with fiscal accountability rules, public disclosure laws and legislative oversight that leave a clear documentary trail and limit ad-hoc favours to individual firms.

China's continued abuse of a rules-based system to pursue total dominance across industrial sectors, and industrialised market economies return to industrial policy as a response to China equally distort trade and negatively affect developing countries. These developments will further exacerbate the inequity in the distribution of gains from global trade and deepen the dominance of a few countries. Democratic market economies have tried to justify their actions on the basis of allowed exceptions to global rules to meet national security needs or address environmental challenges. While the legitimacy of the use of such exceptions is questionable, the pursuit of such policies by dominant economies will only lead to the further distortion of global trade, widening of the developmental gap and further undermining of the legitimacy of a rules-based global trading system.

We argue that while dominant players, i.e., large industrialised market economies and China, are actively undermining the system, developing countries are constrained by the restrictions of global rules. The dependence of developing countries on dominant economies for their exports make them wary of retaliation by these powerful actors if they are in contravention of global rules. The reverse is seldom true. While some experts have cited the increasing use of trade remedies by developing countries against dominant economies as evidence of a more level playing field, the fact is that given the relatively low share of trade of any of these developing countries, the impact of such measures are often not economically significant enough to bother policymakers in dominant economies.

Developing countries, therefore, are much less able to get away with trade distorting actions; at the same time, they have much less leverage to prevent dominant economies from using such policies or holding them accountable for them. Being particularly disadvantaged in this manner due to relative economic power dynamics, developing countries need policy flexibility from within the rules-based trading system. This would require extending special and differential treatment to late industrialisers allowing them to use industrial policies to expand their manufacturing sectors.

But developed countries are reluctant to allow such flexibility and have argued that large developing countries like India, Brazil, Indonesia or South Africa should not qualify for SDT benefits, given the large absolute size of their economies and sizable middle-class. Developed nations like the US and the EU, therefore, argue for narrowing the scope of SDT by denying benefits to large developing countries who are G20 members. We argue that these large developing countries still have a high percentage of population below the poverty line, and a majority of their population lives below the bare minimum level of income needed to be qualified as middle-class. This means they are home to the vast majority of the world's poor.

Finding a policy pathway is further complicated by the lack of any meaningful SDT provisions in the WTO agreements that matter for industrial policy, i.e., ASCM and TRIMS. The current ASCM framework hampers the economic transformation of developing countries. Subsidies for local content and export promotion, essential for scaling up industries, are prohibited under ASCM, denying these countries the flexibility to nurture domestic industries. Furthermore, the ASCM's de-minimis thresholds – allowing only minimal subsidies – are insufficient to achieve meaningful industrialisation.

Similarly, Trade-Related Investment Measures (TRIMs) Agreement prohibit local content requirements and export performance requirements. These measures were particularly effective in fostering technology transfer, skill development and the creation of an eco-system of local manufacturing industries as ancillaries. Such performance requirements were widely used in the post-WWII era by successful industrialisers in Europe, East and South-East Asia to maximise the benefits of foreign direct investment (FDI). Critics argue that the restrictions in the TRIMs Agreement disproportionately affects developing countries, undermining their ability to nurture industries and achieve sustainable development. The lack of substantive Special and Differential Treatment (S&D) provisions further exacerbates this issue, leaving developing countries with limited flexibility to tailor investment policies to their needs.

While developed countries have also been arguing for reforms of the existing status quo in ASCM and TRIMS, their priorities are very different from those of developing countries. With their core industries under competitive pressure from China, the United States, EU and Japan formed a trilateral group in December 2017 to address industrial subsidies and overcapacity issues. The group proposed significant reforms to the Agreement on Subsidies and Countervailing Measures (ASCM) to hold trade-distorting subsidies accountable. While these reforms focus on curbing the abuse of non-market economies, they do not address the pressing need for flexibility that developing countries need to develop their industries and participate effectively in global markets.

Without such flexibility, the proposals risk further limiting developing countries' abilities to support their industries. We argue that genuine reform must strengthen global trade disciplines in a manner that not only hold non-market economies effectively accountable to global trade rules but also include provision that ensure developing nations are provided with the necessary

policy space for industrial development. This would be a comprehensive as well as inclusive reform agenda.

Key policy recommendation includes developing objective criteria for Special and Differential Treatment (SDT) based on income inequities and the number of people living below the poverty line, and sector-specific criteria for granting flexibility in industrial policies. Countries that qualify for SDT based on this objective criterion that takes into account both relative and absolute levels of poverty, access to economic opportunities and sector specific shares of exports and production, should be allowed to implement industrial policy programmes that do not have to conform to the obligations under ASCM and TRIMS.

We recommend that such flexibility should be allowed to governments that meet the SDT criteria and in sectors that meet the sector specific criteria for a maximum of 15 years for developing countries and 25 years for least-developed countries (LDCs). Additional safeguards should also be introduced to protect other developing and less developed countries from import surges due to industrial policy action by countries enjoying such flexibilities. The implementation of these measures, along with the proposals from the trilateral group addressing non-market economies, will enable a more equitable distribution of global manufacturing and foster shared prosperity. The goal is to reform the global trading system to allow for fair competition, industrial growth and the realisation of developmental aspirations across all nations.

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1. Introduction

Industrial policy (IP) has long been a key instrument for economic growth, competitiveness and market stabilisation. The International Monetary Fund (IMF) (2024) defines IP as government interventions designed to support specific businesses, industries or economic sectors to achieve national objectives – both economic and non-economic. Over time, the scope of IP has expanded from traditional forms such as trade protectionism and subsidies to modern approaches involving public R&D investments, regulatory frameworks and strategic trade policies aimed at fostering industrial competitiveness. While an IP remains a crucial tool for national development, its application and impact vary significantly across economies, with developed and developing nations employing divergent strategies.

A key concern in recent years has been the rising wave of protectionist industrial policies in advanced economies, which has profound implications for global trade and the industrial strategies of emerging and developing economies. Naudé (2010) highlights how IP has evolved from traditional concerns – such as infant industry protection – to modern issues driven by geopolitical tensions, climate change and technological advancements. The pandemic, disruptions in global supply chains and heightened economic insecurities have further strengthened the case for a proactive IP. Governments are increasingly pressured to secure critical industries, safeguard economic resilience and counteract perceived market inefficiencies. Developed economies, in particular, have leveraged IPs to strengthen their strategic position. Ilyina et al. (2024) report that over 2,500 IP measures were implemented in 2022 alone, with nearly two-thirds distorting trade and disadvantaging foreign businesses. The United States, the European Union and other developed nations accounted for nearly half of these trade-distorting measures, often using subsidies and protectionist policies that conflict with WTO obligations (WTO, 2024). Additionally, frameworks such as the USA's Section 301 of the Trade Act of 1974, the European Union's Carbon Border Adjustment Mechanism (CBAM) and Deforestation Regulation (EUDR), the Trump tariffs and retaliation by Canada, Mexico and China in 2025 and China's state-driven economic strategy place mounting pressure on developing nations, limiting their industrial growth and economic flexibility.

A significant shift in industrial policy has emerged, where advanced economies are now driving the global industrial policy discourse, rather than developing economies striving to catch up. Ilyina et al. (2024) note that developed countries have not only implemented a larger number of industrial policies but have also committed substantial financial resources to support their policies. Historically, industrial policy debates focused on whether protecting inefficient industries in the short term could yield long-term economic benefits (Chang & Andreoni, 2016). However, these discussions largely overlooked deeper structural issues, such as balancing sectoral priorities, selecting the right policy tools and addressing governance challenges like bureaucratic inefficiencies and corruption.

China presents a compelling case in the evolving industrial policy landscape. Once classified as a non-market economy (NME) under WTO accession, China has leveraged its state-

controlled economic model to become the world's second largest economy, often using unfair trade practices to strengthen its position. China's industrial policy – characterised by state-owned enterprises, targeted subsidies, and controlled capital allocation – has disrupted global manufacturing and distorted competition. Rotunno & Ruta (2023) point out that Chinese subsidies have significantly boosted Chinese exports in downstream industries, undermining manufacturing growth in developing countries. The ITIF's Hamilton Index further underscores China's dominance in strategic sectors, where it leads in seven out of ten high-tech industries, amounting to over USD10 trillion in global production (Robert et al., 2023). This growth, however, has come at the expense of developing countries, which previously enjoyed competitive advantages in low-cost labour-driven manufacturing but have since struggled to sustain growth in these sectors.

Industrial policies have historically aimed to address economic, social and environmental challenges beyond market mechanisms. However, the increasingly protectionist and trade-restrictive measures adopted by developed economies – particularly in high-tech and green energy sectors – pose significant challenges to developing and least-developed countries (LDCs). Advanced economies are rapidly concentrating on high-tech production and automation-intensive industries within their borders, thereby reinforcing structural inequalities in global industrialisation. Chang (2002) argues that developed countries often promote free market policies for developing nations, despite historically relying on protectionist and interventionist strategies to achieve their own industrial growth. This contradiction underscores the asymmetry in global trade rules, where developing nations are expected to liberalise their markets while advanced economies continue to shield strategic industries under various industrial policy instruments.

As digitalisation and climate concerns shape the future of industrial policy, developing nations face dual challenges – limited access to technological advancements and a disproportionate burden of environmental consequences (UNCTAD, 2024). Many developing economies lack the financial and institutional capacity to harness the benefits of digital industrialisation while simultaneously bearing the brunt of climate change-related economic disruptions. Addressing these disparities requires inclusive international policy frameworks that recognise the diverse needs of developing countries and provide adequate policy space for industrial growth and sustainability.

The current WTO framework imposes significant restrictions on the industrial policy options available to developing nations. Certain WTO agreements, such as Trade-Related Investment Measures (TRIMS) and the Agreement on Subsidies and Countervailing Measures (ASCM), limit the use of industrial policy instruments essential for structural transformation. Chang (2002) criticises these agreements for narrowing policy space and reinforcing global economic inequalities. Many developing countries have repeatedly requested special and differential treatment (S&DT) to accommodate their unique developmental challenges. Proposals for rebalancing trade rules emphasise the need for greater policy flexibility to support industrialisation, climate adaptation and digital transformation in the developing world.

In this context, the policy space available to developing nations – particularly large emerging economies like India – remains highly uncertain. This raises a critical question this paper attempt to address: How can international trade frameworks be redesigned to ensure adequate policy space for India and other developing economies while fostering equitable global economic growth?

The paper is structured as follows. The second section examines the development divide where disparities between large developing economies like India and advanced economies (which in our analysis includes China) in key indicators, such as GDP per capita, poverty levels, urbanisation trends, share of global manufacturing output and exports, and share of global high-tech exports, are examined. The third section analyses India's position in global value chains (GVCs) and assesses the gaps between India, China and developed economies in terms of manufacturing integration and trade competitiveness.

The fourth section explores the increasing industrial policy activism in developed economies and China, highlighting the challenges posed by trade distortions, subsidies and protectionist policies for countries like India. The fifth section examines the policy space requested by developing nations including India, focusing on trade rules, WTO agreements and the demand for greater flexibility in implementing industrial policies. The final section concludes and provides policy suggestions for India and other developing economies, emphasising strategies to navigate the evolving industrial policy landscape while advocating for greater policy autonomy in global trade governance.

2. Analysing the Development Divide: The Fragile Path of Large Developing Economies towards Sustainable Middle-Class Transition

There is a view being taken in certain high-income countries that large developing economies like India, Brazil, Indonesia, South Africa and Egypt have large economies and large middle-class populations in absolute terms. The resultant large absolute size of the economy and purchasing power driven by a substantial middle to lower-middle-income consumer base reflects a relatively better economic condition and developmental status.

The argument that follows is that given this relatively better developmental status and large absolute size of the middle-class, these large developing countries are in a mature stage of transition to a middle-income economy and, therefore, not fully deserving of being classified as a developing economy.

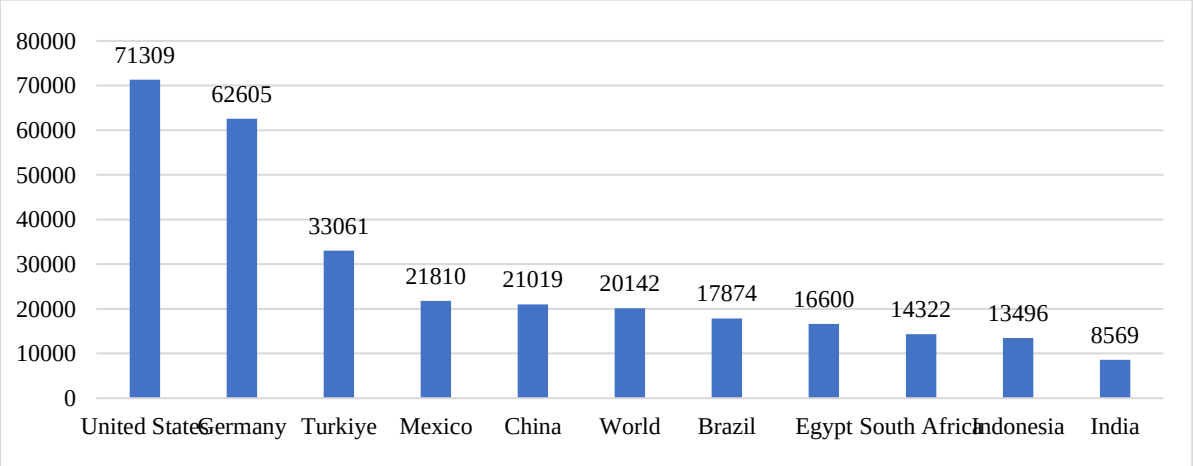
We would like to argue that this perspective mitigates against common sense and actual evidence available. First, the per capita income in purchasing power parity (PPP) terms for all these economies is below the global average[3] (see Figure 1 below) As we shall discuss using

[3] The World Average PPP per capita (2023 data) was USD 23444. Large developing countries that are above this average include Argentina, Mexico, China and Malaysia among others

key indicators later, these countries are far from completing their transition to ensuring sustainable middle-class livelihoods for most of their populations. In fact, a significant section of the populations that have attained middle to lower-middle income status still remains at the margins, i.e., any economic shock, both micro and macro, can push them back into poverty. In other words, while some sections of the populations of these countries might have made the transition, this transition cannot be said to be effectively sustainable. Any micro-level shock (for example, major healthcare issues leading to huge out-of-pocket expenditure or loss of employability due to sickness or injury) or macro-level shocks, such as a recession or pandemic, could push significant numbers back into poverty. In fact, Schady et al., (2023) substantiates this claim by emphasising that COVID-19 has caused the most significant setback to global poverty reduction efforts in decades, pushing an additional 70 million people into extreme poverty. The report further emphasises that the pandemic disrupted human capital accumulation at critical moments in the life cycle, derailing development for millions of children and young people in low and middle-income countries.

The founding principles of the WTO, as represented by the Marrakesh agreement, clearly indicate that the institution was founded to liberalise trade for development. In this case, development can only be logically interpreted as ensuring livelihoods through trade and economic development that allows for a quality of life that provides the fundamentals of food security, adequate levels of nutrition, health and education, and access to economic opportunities. It also includes ensuring that the maximum number of people have the opportunity for leisure and participation in cultural activities. These broad principles are also captured in the sustainable development goals (SDGs) that all WTO member states have endorsed.

Figure 1: GDP Per Capita, PPP (Constant 2021 International USD)



Source: WDI, World Bank

Essentially, we are discussing the transition of most of the population from poverty or the margins of poverty to sustainable middle-class status through livelihoods and economic opportunities. There is debate in the literature as to what should be the benchmark that categorises the middle class and much depends on context. Logically, a rough benchmark would have to be that average per capita incomes in purchasing power parity terms correspond

to that of newly industrialised economies (NIEs), or that the average per capita purchasing power of the third quartile in industrialised economies like the UK or Germany [4].

The significant economic and social gap between the developing low- and middle-income economies and developed high-income economies is a matter of fact. This gap manifests in various dimensions, including income, health, education, infrastructure and overall quality of life. Developing countries might need proactive industrial policies to be able to bridge this gap. As argued by Brooks at al. (2010) '*external trade and finance—including FDI, remittances—play a critical role in closing development gaps and that the governments in developing countries will need to implement policies that promote growth and broaden access to the opportunities that growth creates'.*

However, the ability of developing countries to use and apply a broad range of industrial policy instruments are proscribed under WTO rules. As we shall discuss in detail later, the Agreement on Subsidies and Countervailing Measures (ASCM) and the Agreement on Trade Related Investment Measures (TRIMS) severely restrict the policy options available to WTO member states to design an industrial policy programme that reward export competitiveness, provide subsidies linked to the use of local content or require value addition.

While these rules apply to all WTO member states, the countries that are already at the apex of global manufacturing have little need for such policies, given their dominance across a range of sectors. These countries had utilised the much greater flexibility in the pre-Uruguay Round period to use all the measures that are currently denied to developing member states of the WTO (Chang, H.-J,2002). The developed, wealthy nations of today have long made that transition and benefit from the socio-economic fundamentals that such a successful transition provides. Denying developing countries adequate pathways to make the same transition would not only be unfair but also a violation of natural justice.

2.1 Examining the Income Gap and the Challenges of Middle-Class Transition

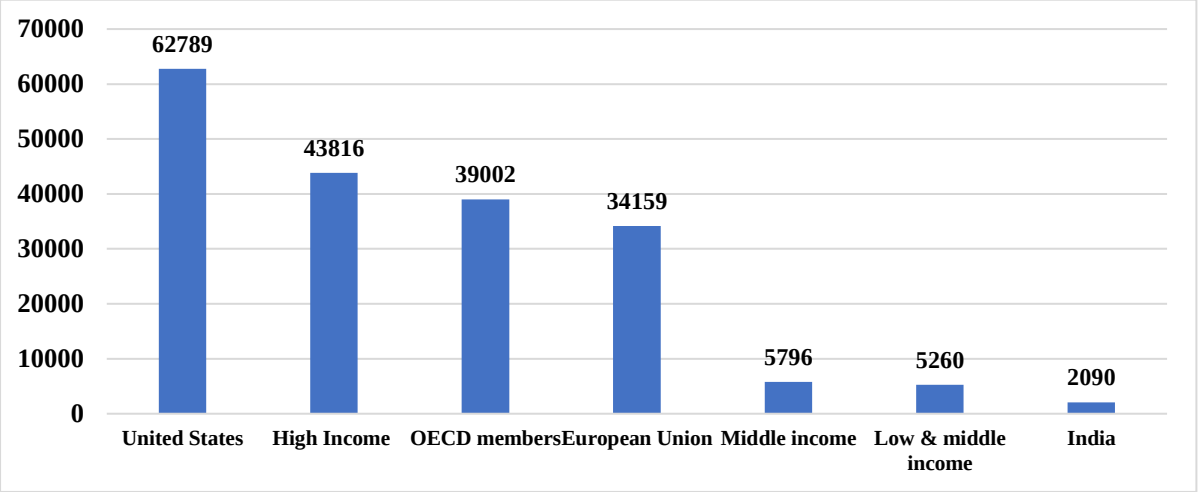
Developed countries typically have much higher GDP per capita than developing countries. For instance, according to World Bank data, the GDP per capita in high-income countries is around eight times higher than that in low- and middle-income countries. Figure 2 represents GDP per capita (measured in constant 2015 US dollars) for various countries and income groups for the year 2022.

A difference by a factor of eight between high-income and middle- and low-income country per-capita GDP underlines the vast economic disparity between different income groups and individual countries. The average GDP per capita of USD 5,260 in low- and middle-income countries indicates a moderate level of economic development, significantly lower than in high-income countries, suggesting widespread poverty and limited access to resources in many of

[4] This would roughly correspond to USD 35,000 to 40,000 PPP per capita

these countries. In addition to low per capita GDP in low- and middle-income countries, "Income inequality is also typically higher in developing and emerging economies than in advanced economies." (Derviş & Qureshi, 2016)

Figure 2: GDP Per Capita in 2022 (Constant 2015 USD)

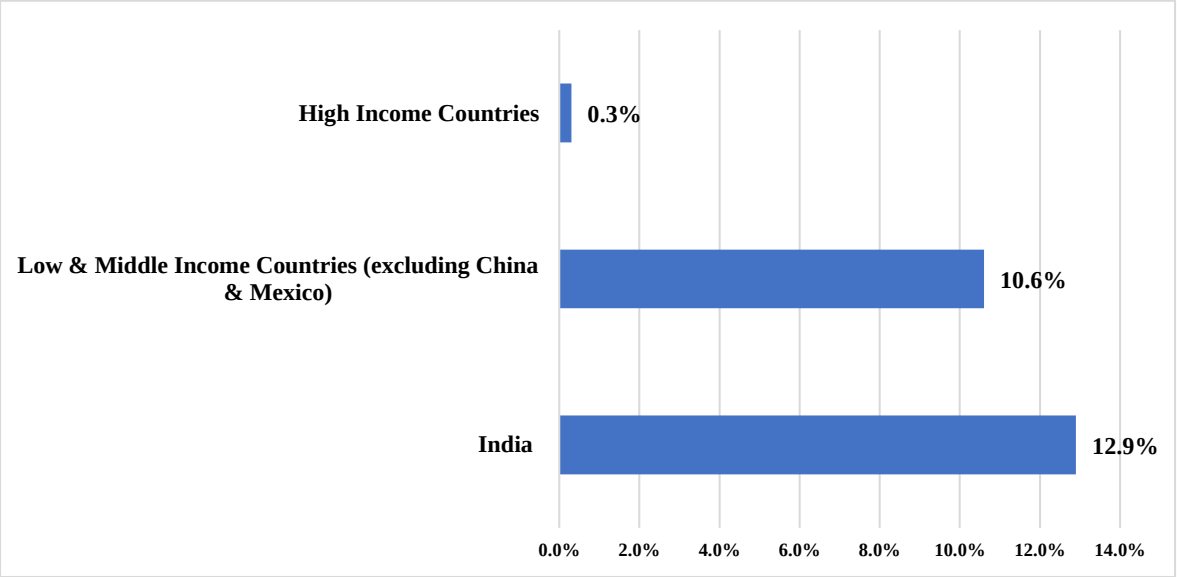


Source: WDI, World Bank

With a GDP per capita of USD 2,090, India's economic output per person is less than half the average for the low and middle-income category. This highlights the significant economic challenges India faces, including lower living standards, limited access to healthcare and education, and higher poverty levels compared to many other countries in this broader category. Figures 3 represents the percentage of people living under the poverty line, i.e., on less than USD 2.15 a day across different regions and income groups, highlighting significant disparities in poverty levels. In low- and middle-income countries, 10.6 per cent of people (excluding China and Mexico) [5]live under the poverty line, compared to just 0.3 per cent in high-income countries. This difference underscores the substantial gap in living standards and economic stability between these groups. Similarly, in India, 12.9 per cent of the population lives in extreme poverty, compared to only 0.3 per cent in high-income countries, as per the latest data available from the World Bank (which is 2021). However, according to several recent reports, India has eliminated extreme poverty. Based on the findings from S Bhalla et.al (2022), India's poverty rate has fallen from 52 per cent in 2011-12 to just 15.1 per cent in 2023-24. The proportion of people living on an income of USD 1.90 PPP, the extreme poverty line, is below 1 per cent. This marks a significant reduction in extreme poverty levels.

[5] China and Mexico are excluded from the group of low- and middle-income economies. China dominates the manufacturing sector as the largest producer and exporter of manufactured goods and, therefore, does not require additional policy space for industrial expansion. Similarly, Mexico, being a member of the OECD and classified as a high-income country, is not eligible for inclusion in this category.

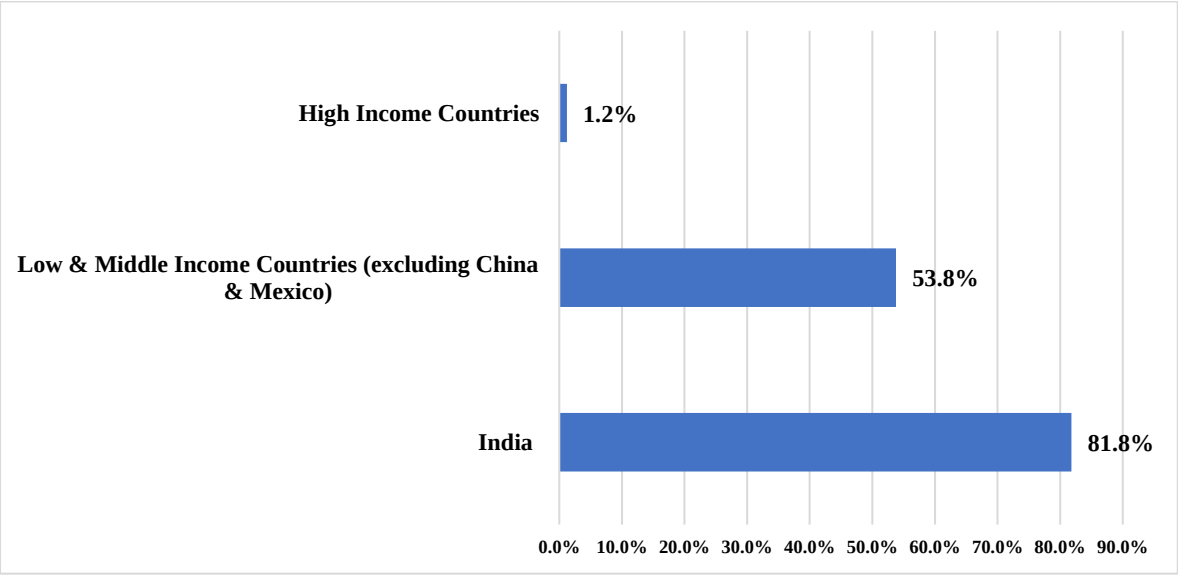
Figure 3: Proportion of people living on less than USD 2.15 a day (2021)



Source: Authors' calculation based on World Bank WDI database

The number of people living below USD 6.85 a day, which could again be a rough indication of those who can be considered below or are in the margins of a lower middle-income quality of life, is starker. As demonstrated in Figure 4, while just 1.2 per cent of the population in high-income countries falls in this category, more than 50 per cent of the population of low- and middle-income countries have yet to attain even lower middle-income status. For India, that number is over 80 per cent or four-fifths of its population, roughly 1.15 billion people. In other words, India is yet to transition about 2.5 times the entire current population of the EU from low-income to middle-income status.

Figure 4: Proportion of people living on less than USD 6.85 a day (2021)



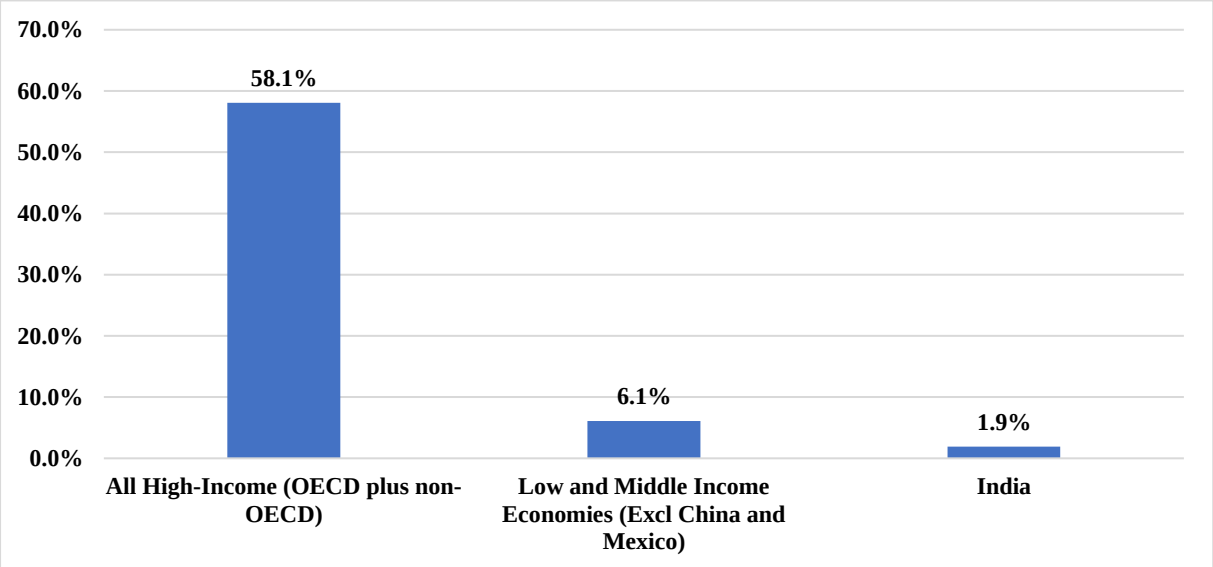
Source: Authors' calculation based on the World Bank WDI database

2.2 The Gaps in Industrialisation, Urbanisation and Access to Middle-Class Jobs: Challenges for India and Other Developing Economies

Industrialisation has historically been crucial for the development of high-income economies and remains important today. Exporting industrial goods can generate income for domestic producers and workers, leading to economic growth and job creation. Empirical analysis has found that export diversification may promote economic growth and reduce economic volatility in low-income countries (Lee & Zhang, 2022).

However, as Figure 5 below shows, the share of low- and middle-income countries in the global exports of industrial goods and selected manufactured goods is significantly lower than that of high-income countries. The share of developing countries in manufacturing exports is a mere 6.1 per cent compared to 58 per cent for rich industrialised economies, i.e., developed high-income economies export of manufactured goods is nine and a half times the export of manufactured goods from low and middle-income countries (excluding China and Mexico). This underlines the massive dominance of high-income countries in global manufacturing. This is in stark contrast to the popular narrative of the 'migration' of manufacturing out of industrialised economies to poorer countries.

Figure 5: Share (%) in Global Exports of Manufacturing Goods

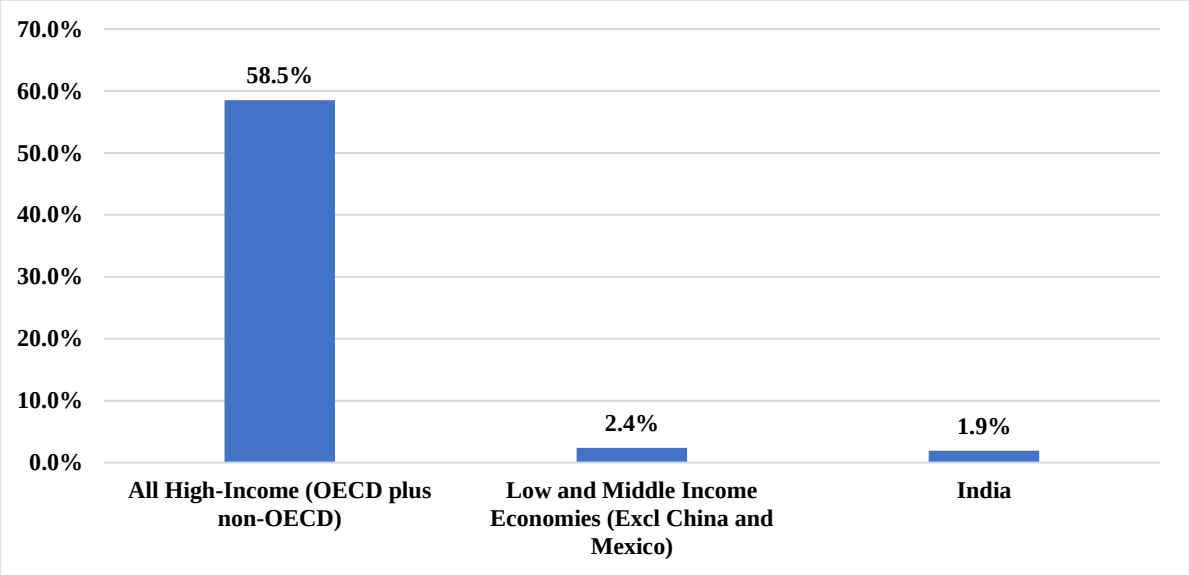


Source: Authors' calculation based on WITS database

Let us focus on the sectors within manufacturing that represent the biggest opportunities for future growth and encompasses more technologically sophisticated products – pharmaceuticals, engineering, electronics, automobiles, aviation and space, rail transportation and precision technology. Engineering includes all equipment and components related to renewable energy applications and electronics includes all equipment and components needed for the digital economy and internet-of-things (IoT) related applications. Automobile includes EVs.

Figure 6 below illustrates the relative picture in terms of the global share of exports. The dominance of high-income economies in the sectors mentioned above is even more pronounced; the share of low and middle-income countries is even lower.

Figure 6: Share (%) in Global Exports of Selected Manufacturing Products



Source: Authors' calculation based on WITS database
*Products include: HS 30, HS 84 to HS 90

Exports of such products from high-income countries are more than 24 times higher than those from low and middle-income countries. If India's relatively modest share of 1.9 per cent is not included in the list of low and middle-income countries, the export share for this group will drop to less than 1 per cent.

Technological and innovation capabilities in developing countries are generally lower due to limited investment in research and development (R&D), resulting in lower productivity and competitiveness. High-income countries invest heavily in R&D, leading to advanced manufacturing technologies and competitive products (UNIDO Industrial Development Report 2020). Access to finance is often limited in developing countries, constraining investment in modern machinery and technology. High-income countries have better access to financial markets, enabling significant investment in manufacturing capabilities (World Development Report 2019).

An expanding industrial base, and the employment and income generation associated with it, is crucial for developing revenue streams for governments. An ever-expanding revenue base, in turn, can be used to support the development of infrastructure that will further improve competitiveness and productivity. Investment in education, skill development and health leading to improved labour productivity also requires a significant and sustainable revenue base for national and local governments. Needless to say, direct support for industrial development through incentives schemes for industry and investment, and for indirect support such as government funding for R&D, also depend on the ability of governments to generate resources.

Most importantly, protecting citizens from both macro and micro shocks that can relegate large numbers of people back to poverty require investments in comprehensive welfare measures.

In other words, there is a virtuous cycle of increasing industrialisation and the creation of a large number of middle-class jobs and the ability of an economy to sustain a decent quality of life, providing for most of its citizens the basic necessities and opportunities that a vast majority of people in high-income countries take for granted. The primary objective of any discourse on trade and development will have to begin from this premise.

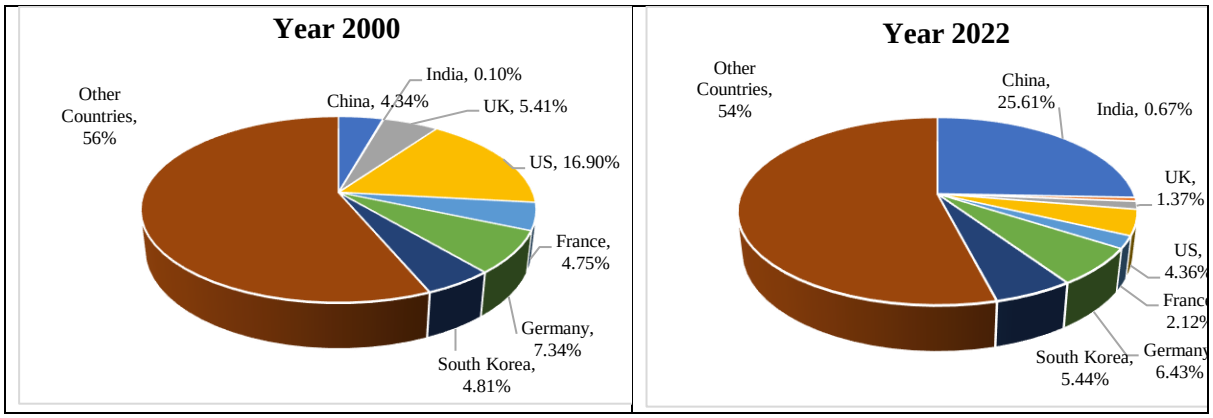
A critical aspect of sustaining such a virtuous cycle will be subject to an economy being able to develop an industrial base in the dominant sectors of the global economy. Dominant sectors are defined as those that are aligned to the core demand dynamics in the global economy, i.e., represent the bulk of global import demand and underpin global value chains. These sectors will also drive the technological shifts in industrial production and the green transition, i.e., these are aligned to the future growth of the manufacturing base. The inability to have competitive presence in these dominant sectors will prevent developing countries, especially large developing countries, from creating manufacturing jobs at scale.

Most developing countries have very little presence in relative terms in the dominant sectors of the global industrial economy, such as electronics, engineering, precision machinery, advanced chemicals and pharmaceuticals. Most successful developing country exporters tend to depend on labour-intensive sectors, many of which are rapidly declining in relative importance in terms of their share in the global industrial economy. It also needs to be noted that a large number of labour-intensive sectors will face challenges from automation. A report by Ellingrud et al. (2023) emphasised that AI will disrupt 12 million jobs by 2030, and the most affected sectors/areas would be manufacturing, administrative assistance, customer service, and food service. Georgieva (2024) point out that 40 per cent and 26 per cent of jobs are expected to be affected by AI in emerging markets and lower income nations respectively; many of these countries do not have the infrastructure or skilled workforces to harness the benefits of AI, raising the risk that the technology could worsen inequality over time.

It is especially important for developing countries to be able to develop industries that can sustain jobs in the future that are more resistant to technological shocks due to automation. This extremely low share, just 2.4 per cent of low and middle-income countries in advanced industrial sectors (Figure 6), therefore, is a matter of very serious concern that has implications for socio-economic stability not just in developing countries, but in the world.

There have been significant shifts in manufacturing across high-tech, low-tech, and medium-tech products between 2000 and 2022, which are presented in Figures 7(a), 7(b) and 7(c).

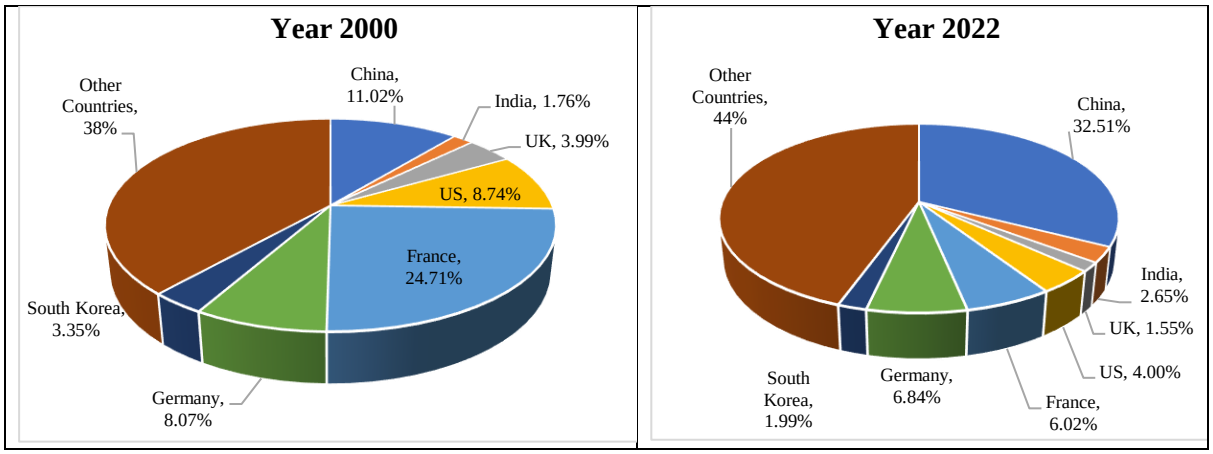
Figure 7(a): Share of exports of high-tech products from 2000-2022



Source: World Integrated Trade Solutions (WITS) UN COMTRADE

Since joining the WTO in 2000, China has experienced a substantial increase in its share of exports across all three categories, surpassing the United States. However, while China has been enormously successful, other large developing countries like India have shown very modest increases in the export share of these products. In contrast, the share of such exports from the United States, the United Kingdom, France and Germany has declined across high-tech, low-tech and medium-tech products. South Korea's share in medium-tech exports increased by 0.97 per cent, while it declined in the other categories between 2000 and 2022.

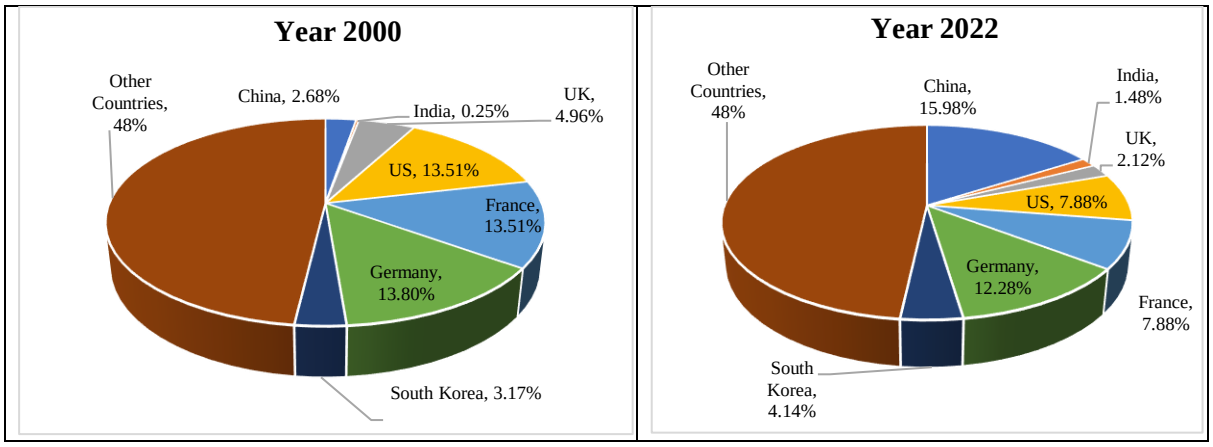
Figure 7(b): Share of exports of low-tech products from 2000-2022



Source: World Integrated Trade Solutions (WITS) UN COMTRADE

This demonstrates that China has dominated the entire market, surpassing traditional leaders like South Korea, Japan, the United States, etc. Additionally, other developing countries that aimed to expand their market share in these crucial sectors have been unable to do so.

Figure 7(c): Share of exports of medium-tech products from 2000-2022

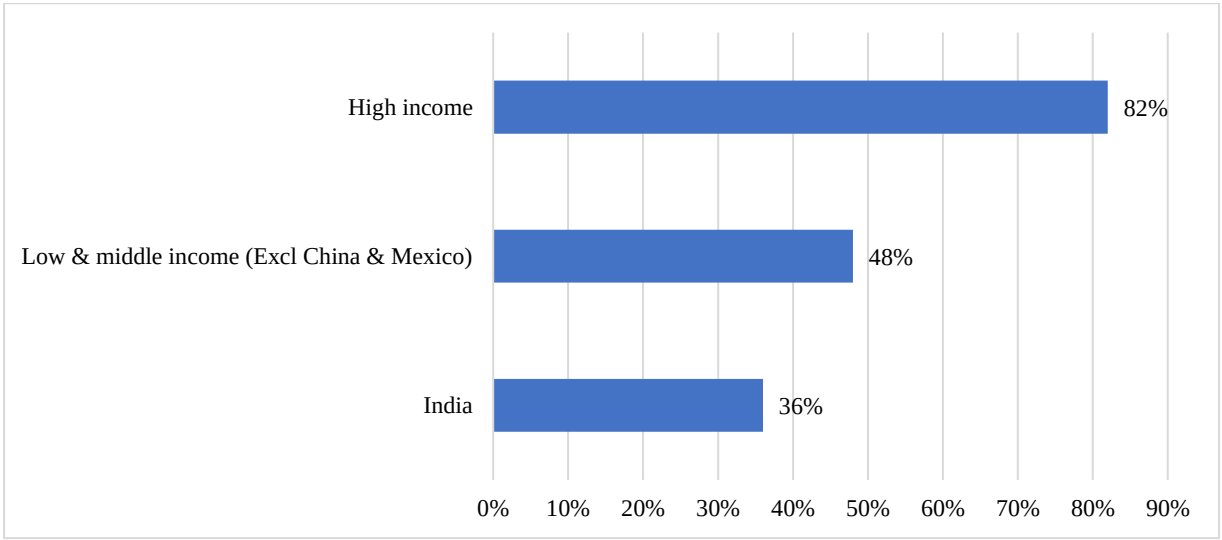


Source: World Integrated Trade Solutions (WITS) UN COMTRADE

Furthermore, this also indicates that since 2000, China, despite being a non-market economy, has operated like a market economy by leveraging its advantages. It has strategically secured its position in all three major sectors to minimise reliance on other countries and strengthen its global dominance across various industries.

Figure 8 below highlights the significant differences in urban population percentages among low and middle-income countries (excluding China and Mexico) and high-income countries. In low- and middle-income countries (excluding China and Mexico), 48 per cent of the total population lives in urban areas, whereas for India, that number is 36 per cent. This indicates that the majority of the population in India and other low- and middle-income countries population resides in rural areas.

Figure 8: Urban population in 2022 (% of total population)



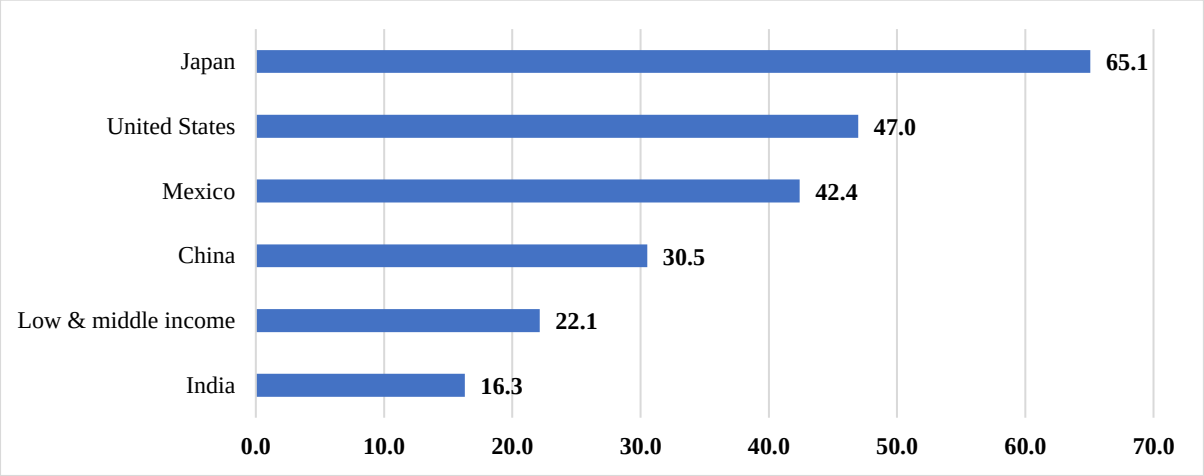
Source: Authors' calculation based on World Bank WDI database

In high-income countries, 82 per cent of the total population lives in urban areas. In other words, high-income countries have successfully undergone their rural to urban transition and

negotiated the very significant socio-economic challenges that societies face during that transition.

Economic literature provides compelling evidence that a higher proportion of populations in large urban agglomerations often correlate with greater economic activity and larger markets for goods and services. For example, Japan and the United States have a significant portion of their populations in large urban areas as compared to low- and middle-income countries like India, providing substantial markets for businesses as shown in Figure 9.

Figure 9: Population in urban agglomerations of more than 1 million in 2022 (% of total population)



Source: Authors' calculation based on World Bank WDI database

Urbanisation offers better job opportunities, leading to higher income levels and greater purchasing power among urban residents. Urban populations tend to consume more goods and services than rural populations due to higher disposable incomes and better access to markets. It also has better infrastructure that facilitates the distribution and consumption of goods and services. However, for urbanisation to yield effective outcomes, governments in developing and least-developed countries (LDCs) must have adequate policy flexibility to manage the transition and address challenges such as inadequate infrastructure, housing shortages and social inequality. Urbanisation is influenced by the push factor of underemployment in the agricultural sector, which drives people out of rural areas. To provide meaningful employment and a decent livelihood for those being displaced, the growth of the manufacturing sector is essential (Todaro & Smith, 2020).

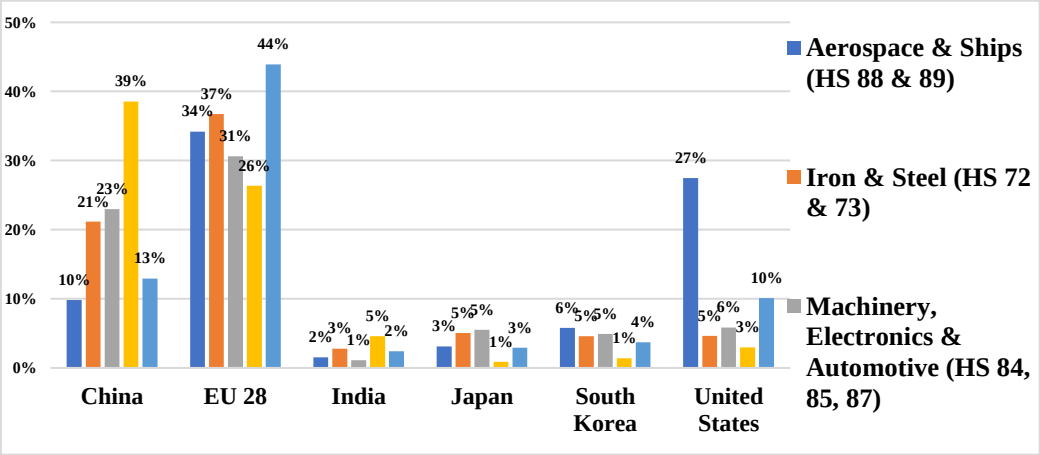
3. The Divide in Global Value Chain Participation: Assessing India's Gap with China and Developed Economies

Modern production networks that underpin global value chains are characterised by high levels of specialisation with different parts of the production process located across a number of countries. Such production networks are very common in sectors such as electronics, automobile, aerospace, chemicals, textiles, and iron and steel. For instance, the electronics sector relies heavily on GVCs for the production of components like semiconductors, which

are often manufactured in specialised hubs such as Taiwan and South Korea before being assembled in countries like China (Baldwin & Lopez-Gonzalez,2015). Similarly, the automotive industry depends on cross-border supply chains for parts and assembly, with countries like Germany, Japan, and Mexico playing pivotal roles (Sturgeon et al., 2008; Sturgeon, Van Biesebroeck, Gereffi, 2008). The textile and apparel sectors are another example, where raw materials are sourced from countries like India and Bangladesh, while design and marketing are concentrated in developed economies (Gereffi & Frederick, 2010).

Global value chains include services and R&D related activities, as well as logistics and distribution. Increasingly, the share of such services, design and development activities are taking an ever-larger share of value. An illustrative example is the pharmaceutical GVC where active pharmaceutical ingredients (APIs) are produced in China, India or Ireland while research and development are concentrated in the US, France, the UK, Germany and Switzerland (Gereffi, 2008; Quality Matters, 2023).

Figure 10: Share in global exports of selected members in major GVC integrated sectors



Source: Authors' calculation based on WITS data

China's growing global significance has been fuelled by its integration into global value chains (GVCs). Since the early 1990s, China's share of global GVC exports – defined as exports that either incorporate inputs from other countries or serve as inputs for other countries' exports – has increased fivefold. This growth was initially driven by China's role in assembling inputs sourced from other nations. However, from the mid-2000s onward, China has increasingly transitioned into a key supplier of inputs for other countries' production processes.

Figure 10 illustrates the share of global exports in major GVC-integrated sectors for selected economies – China, EU28, India, Japan, South Korea, and the United States. The combined share of these economies in each sector is consistently high (71 per cent-82 per cent), confirming their strong integration into global value chains. China maintains a dominant role in global exports within key GVC-integrated sectors, emphasising its position as a manufacturing and trading powerhouse. Across various sectors, China consistently holds a significant share, reaching as high as 39 per cent in certain industries while the EU-28 maintains

the largest share in some categories (26 per cent to 44 per cent), with China as a close competitor and, in some cases, the outright leader. The United States typically ranks a distant third in most GVC-integrated sectors.

The other top global economies, i.e., Japan, South Korea, and India, generally contribute between 1 per cent and 6 per cent. China's steady rise in exports underscores its pivotal role in the global supply chain. This trend aligns with findings from the World Trade Statistical Review (2023), which identifies China as the world's largest exporter, surpassing traditional trade giants in manufacturing and technology-driven sectors. China's increasing share in GVC-integrated exports reflects its deep integration into global supply chains. China has established itself as a critical hub for the production of intermediate goods, particularly in industries such as electronics, pharmaceuticals and machinery, allowing multinational corporations to rely on Chinese suppliers for essential components.

Indeed, China's dominance is unprecedented. Jean et al. (2023) show that China held a dominant position in almost 600 products out of some 5,000 in 2019.[6] This is at least six times greater than the equivalent number for the United States, Japan or any other country, and twice the number for the European Union considered as a whole. This large number of dominant positions held by China is atypical by historical standards.

Our analysis shows that China has at least 25% export market share in the manufacturing sectors out of a total of 65[7]. It also enjoys massive economies of scale across sectors. China's domestic production is at least 10x times India's in 51 of these 65 sectors, and at least 20x times in 33 sectors. The gap between China and other large developing economies like Brazil and Indonesia in terms of economies of scale in industrial sectors is higher. Table A1 in the Annex provides details.

Our study examines the three leading countries in each major sector, focusing on both top producers and top exporters. Countries highlighted in yellow in Table 1 below represent those that rank among the top three in either category for a given product. As shown in Table 1, it is evident that developed nations and China dominate most sectors. In contrast, India and other developing nations are largely absent from the list of dominant players in most of the sectors. This suggests that the strategies and policies adopted by developed countries have limited the involvement of India and other developing economies in the global market, hindering their economic growth and global participation

[6] The study analyses products at the harmonized system (HS) level 6 (HS6) classification, which is the most disaggregated level of internationally standardised product classification available.

[7] The data is taken from IHS Markit Database of Standard & Poor, for 65 industrial sectors using International Standard Industrial Classification (ISIC) version 4

Table 1: Top 3 producers and exporters by sector: IHS Markit data on export intensity and global production share

Sectors	Country	U.S.	China	EU	Japan	Korea	Other Industrialised	G20 Developing	Other Developing
Pharmaceuticals	**Prod**								
	Exp								
Synthetic Fibres	**Prod**							*India*	
	Exp								
Iron and Steel	**Prod**							*India*	
	Exp								
Electric Components	**Prod**						*Taiwan*		
	Exp						*Taiwan*		
Computers and Components	**Prod**						*Taiwan & Mexico*		
	Exp						*Taiwan*		
Consumer Electronics	**Prod**						*Mexico*		*Malaysia*
	Exp						*Mexico*		*Vietnam*
Communication Equipment	**Prod**								*Vietnam*
	Exp								*Vietnam*
Special Purpose Machinery	**Prod**								
	Exp								
Motor Vehicles	**Prod**								
	Exp						*Mexico*		

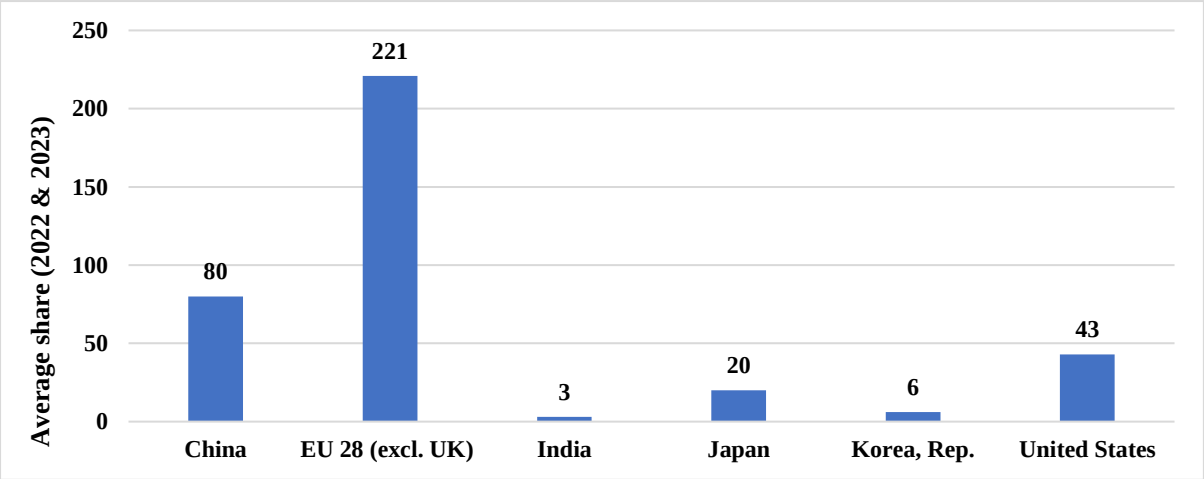
Source: S&P IHS Market Database (2024)

Note: Abbreviations used in the table are as follows- Prod: Production and Exp: Exports

Table 1 clearly shows the overwhelming dominance of China, both as a manufacturer and an exporter across most major industrial sectors. This overwhelming dominance is further underlined by Xing et al. (2021), who point out that China's dominance extends beyond basic manufacturing and assembly lines to include high-tech and value-added production, solidifying its role as a key player in global trade networks. The dominance of China in GVCs can also be proved by looking at Figures 11 and 12 below.

Figure 11 presents the number of HS 6-digit product lines where countries hold a global export share of 20 per cent or more in the High-Tech Products List[8],1 with a total of 280 product lines. This data underscores the dominance of the EU 28 (excluding the UK) and China in global high-tech trade, highlighting their competitive advantage in technology-driven exports. China has 80 product lines where it holds a 20 per cent or greater global export share, making it the second-largest contributor after the EU 28, which leads with 221 product lines.

Figure 11: Number of HS lines (HS 6) having a global share of more than or equal to 20 per cent in High Tech Products List – Total Lines 280

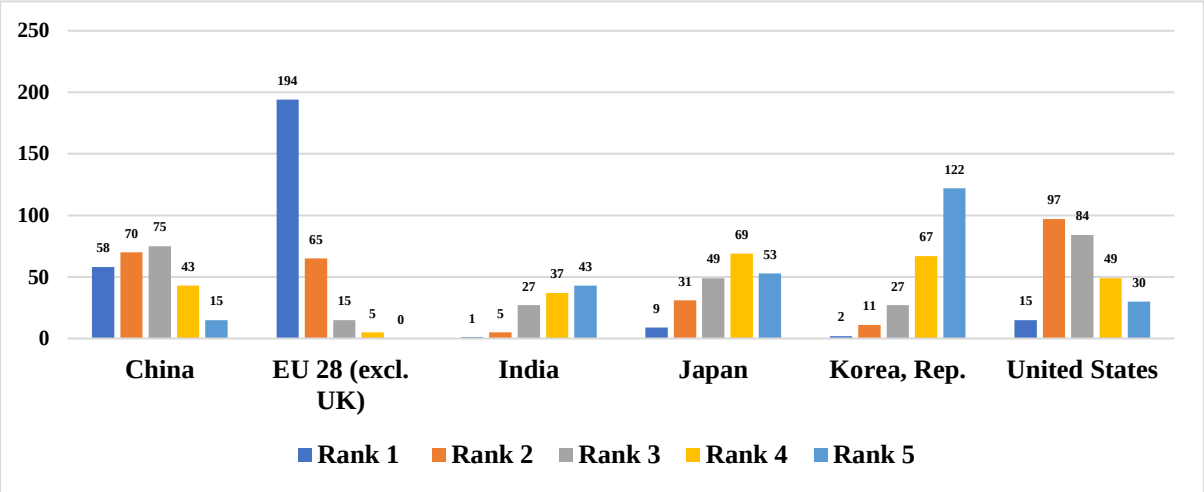


Source: Authors' calculation based on WITS data

This indicates China's strong presence in high-tech manufacturing and its growing influence in industries such as electronics, telecommunications, semiconductors and advanced machinery. While the United States has 43 lines, Japan has 20, and South Korea has 6, their contributions are significantly lower than China's. India, with only 3 lines, has a minimal presence in this sector. The disparity between China and other major economies, particularly traditional tech giants like the US and Japan, reflects China's rapid innovation and industrial scaling advancement. The Made in China 2025 industrial policy, introduced in 2015, the 2016 innovation-driven development strategy, and the 2017 restructuring of artificial intelligence value chains, aimed at achieving self-sufficiency across various high-tech sectors, have progressively materialised as intended. (Xing et al., 2021) Figure 12 below presents the country-wise rankings among six major economies in high-technology exported products at the HS 6-digit level, categorising their positions from rank 1 (highest share) to rank 5 (lowest share). The data highlights the dominance of China and the EU in global high-tech exports, with China emerging as a strong competitor to European economies in this sector.

[8] The High Technology Product List of Harmonized System (HS) codes defined by the United States Trade Representative (USTR) refers to a set of HS 10-digit product classifications that encompass goods considered high-tech and innovation-driven. For the current analysis, the HS 10-digit codes are converted into HS 6-digit.

Figure 12: Country-wise ranks among six members of High-Tech Exported Products



Source: Authors' calculation based on WITS data

*247 HS codes out of 280 US High Tech Products (at HS 6 Digit Level) that are exported by all the selected members

China holds a substantial number of top rankings, with 58 products ranked first, 70 products ranked second, and 75 products ranked third, reinforcing its global competitive edge in technology-intensive exports. While the EU leads with 194 products ranked first, China's ability to secure high positions across multiple categories demonstrates its increasing strength in advanced manufacturing, electronics and high-tech components. The United States, Japan, and South Korea have relatively fewer products ranked first or second, indicating that China is not only competing with but also surpassing traditional technology powerhouses in some key sectors. India, with 1 product ranked first and only two ranked second remains a minor player in high-tech exports.

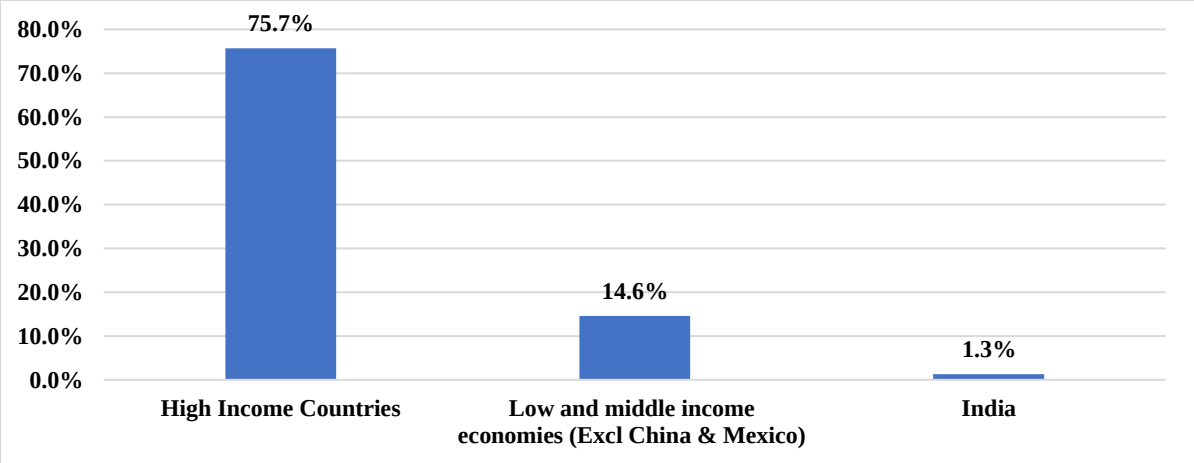
Based on the number of products ranked among the top five. China emerges as a dominant force, with 261 high-tech products, just behind the EU (excluding the UK) with 279 and the United States with 275. This underlines China's formidable presence and competitiveness in the global high-tech arena. In stark contrast, India is represented by only 113 products, signalling a much smaller role in the global high-tech ecosystem. While South Korea and Japan hold solid positions with 229 and 211 products respectively, the data particularly underscores China's rise as a high-tech powerhouse and the urgent need for India to enhance its global standing in this critical sector.

China's ability to outperform the US, Japan and South Korea in several high-tech sectors suggests a long-term shift in global trade patterns. With continued investments in AI, semiconductors and advanced electronics, China is poised to further strengthen its position as a global leader in high-tech exports in the coming years. China's dominance is also highlighted by Baldwin (2016) in *The Great Convergence*, which examines how advancements in information technology and logistics have enabled China to compete with—and in some cases surpass—advanced economies in global exports. This trend is supported by the data in Figures 11 and 12. However, a comprehensive analysis must also consider the role of state support,

which has been instrumental in China's transformation from a low-cost manufacturer to a leader in several high-value sectors. China's position as a driving force in international trade is now undeniable. Its growing dominance in GVC exports not only reinforces its global economic influence but also indicates a long-term shift in trade patterns favouring Asia's economic rise. Participation in GVCs is found to have brought about economic benefits in terms of productivity, sophistication, and diversification of exports, although the benefits do not accrue evenly across countries.

There have been studies highlighting that many developing countries are increasingly involved in GVCs; however, the disparity in GVC participation between high-income countries and low- & middle-income countries is still very high. Figure 13 below shows the share of different categories of countries. The high-income countries account for the majority of GVC participation, with a share of 75.7 per cent. This indicates that high-income countries play a dominant role in global production and distribution networks. Low- and middle-income economies (excluding China and Mexico) collectively have a very modest 14.6 per cent share in the GVC.[9]

Figure 13: Share (%) in Global Value Chain (GVC) Participation



Source: Authors' calculation based on UNCTAD Eora database

India has a relatively small share of 1.3 per cent in the GVC. The World Bank (2020) points out that high-income countries dominate GVC participation due to their advanced infrastructure, technological capabilities and strong institutional frameworks. Developing countries, on the other hand, face challenges such as inadequate infrastructure, lower technological readiness and weaker institutions, which limit their GVC participation. Cusolito et al. (2016) underscore that high-income countries are more integrated into GVCs due to their better access to capital, technology and skilled labour. The report also emphasises that developing countries often participate in GVCs at lower value-added stages, such as raw

[9] China has been excluded because of its ability to pursue an aggressive industrial policy, taking advantage of the non-market political-economic structure that allowed it to bypass its obligations under WTO with minimum accountability. Mexico's industrial base was largely due to the unique advantage of being a developing economy with a contiguous border with the world's largest high-income economy and having zero duty access to that market, thanks to NAFTA. The presence of these two countries, therefore, skews the results.

material extraction and basic manufacturing, which limits the economic benefits they get from GVCs.

This disparity in GVC participation highlights the structural challenges that developing countries face in integrating into global production networks. To better understand the nature of this integration, it is essential to examine the mechanisms through which countries engage in GVCs. In this context, backward and forward linkages play a crucial role in determining the extent and quality of a country's participation in global trade. These linkages not only facilitate economic integration but also influence the potential for technological advancement, industrial upgrading, and long-term development.

Backward and forward linkages are crucial components of GVCs, as they facilitate the integration of firms, industries and economies into the global production network. As per the OECD, backward linkages capture the value added to a country's economy by imported inputs that are used in the production of exported goods. A country with strong backward linkages imports significant intermediate goods from other countries that are then incorporated into the local production process and subsequently exported. Strong backward linkages allow firms to benefit from technological spillovers and innovation diffusion, which are critical for upgrading within GVCs. By establishing relationships with GVC lead firms, local suppliers gain access to new markets, improved production standards and new business practices, contributing to their own economic development (Gereffi et al., 2005; Gereffi, 2018).

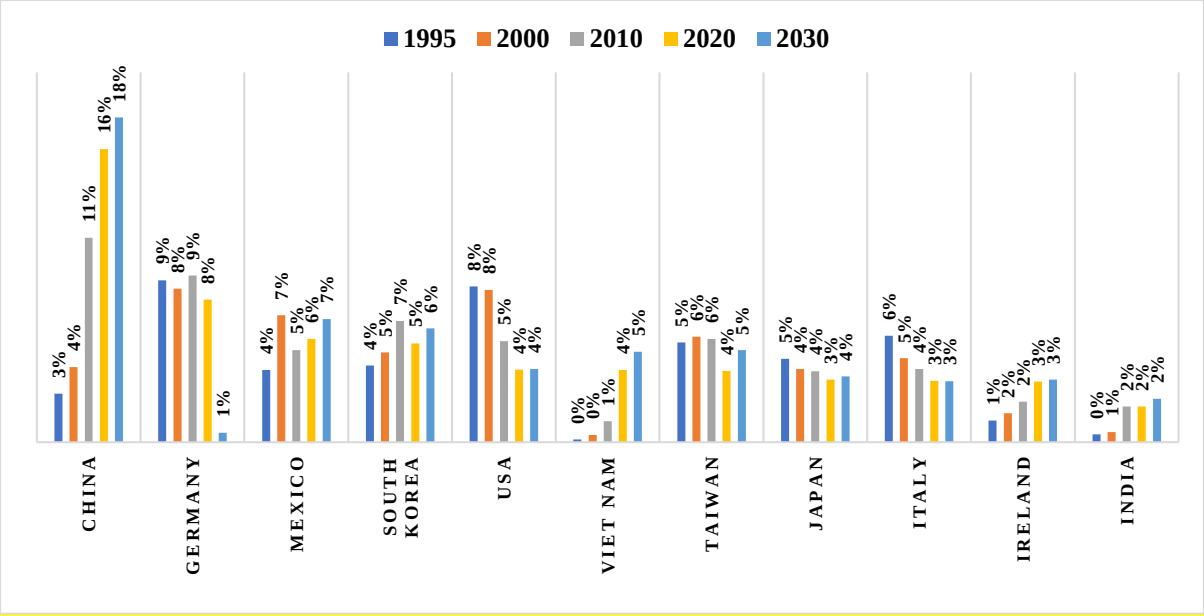
On the other hand, forward linkages refer to the extent to which a country's industries contribute to the value added in the production of goods and services that are eventually exported to other countries. Forward linkages measure the degree to which a country's production feeds into the value chains of other countries, providing final products or intermediate goods that are used in foreign production and consumption. Forward linkages enable firms to capture greater value by aligning their production with market demands and securing stable revenue streams. This is particularly important for developing countries seeking to integrate into GVCs and moving up the value chain. (Kaplinsky and Morris, 2001).

Figure 14(a) illustrates the changing share of countries, including India, in pure backward participation (PBP) in the manufacturing sector from 1995 to 2030. China's share in global PBP manufacturing trade rose significantly from 3 per cent in 1995 to 16 per cent in 2020. By 2030, it is projected to reach 18 per cent. China's cost-effective labour, large-scale industrial capacity, and strong infrastructure have been pivotal in this rise. China's policy of "Open Door" reforms and "Made in China 2025" has aligned with global trade networks, boosting its share in global manufacturing trade. China attracted FDI, particularly in manufacturing, enhancing its role in the global value chain. Economic liberalisation, membership in the WTO (2001), and state support for strategic industries helped China scale up its backward participation. (Baldwin, 2006). A study by Fu, (2023) found that "*China's manufacturing industry mainly embeds the GVC in the way of backward participation, which is manifested in the processing trade of imported intermediate products. Capital-intensive industries, technology-intensive industries,*

and high-tech industries gain significant trade benefits, and embedding the GVC is more conducive to upgrading

Share of top countries and India in pure backward and forward GVC participation (% trade in manufacturing sector)

Figure 14 (a): Pure backward GVC participation (% trade in the manufacturing sector)



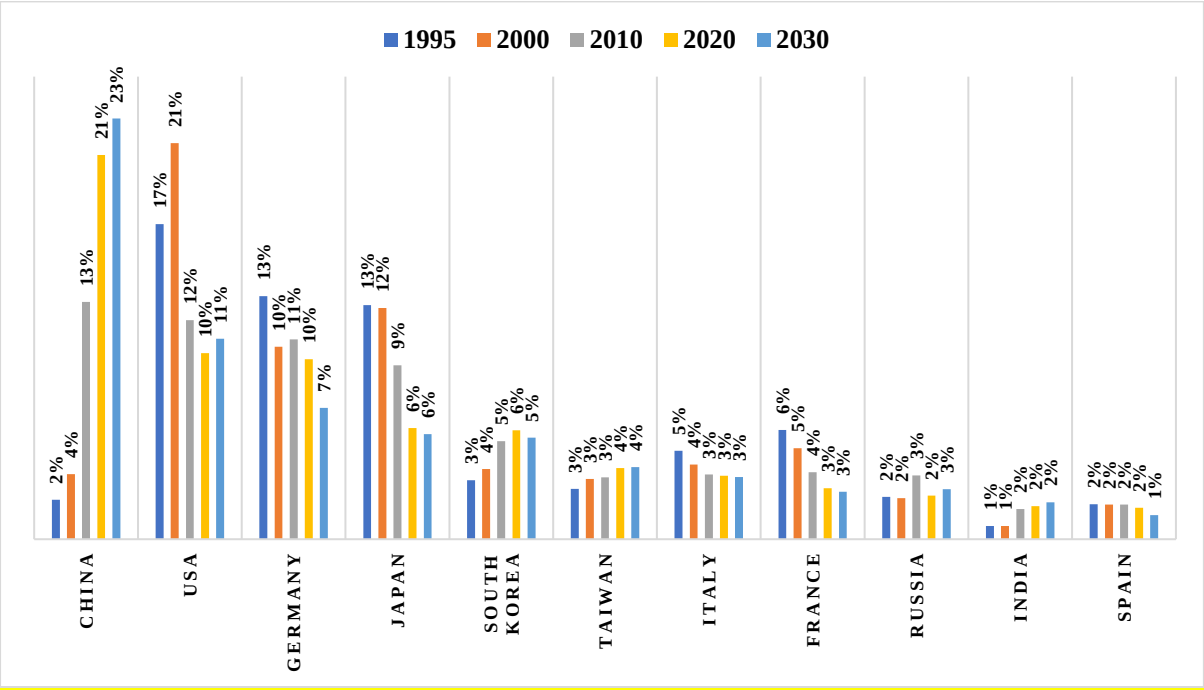
Source: Authors' calculation based on WITS-TIVA GVC data

Note: The value for 2030 is projected based on data from 1995 to 2020, using linear regression analysis.

India's share remains relatively low, growing only from 0 per cent in 1995 to 2 per cent in 2030. The share of the US declines from 8 per cent to 4 per cent, reflecting a broader trend of offshoring and outsourcing. Many low-tech manufacturing jobs have been moved abroad to low-cost countries like China and Mexico. The share of "Other Countries" in PBP is expected to decrease from 55 per cent in 1995 to 43 per cent in 2030, reflecting the concentration of global manufacturing in a few key players, especially China and emerging economies like Vietnam and Mexico.

Figure 14(b) illustrates the share of key countries in pure forward participation (PFP) in the manufacturing sector from 1995 to 2030. China's share surges from 2 per cent in 1995 to 21 per cent in 2020, making it the world's largest supplier of intermediate goods. China's PFP is projected to reach 23 per cent, solidifying its dominance in global supply chains

Figure 14(b): Pure forward GVC participation (% trade in the manufacturing sector)



Source: Authors' calculation based on WITS-TIVA GVC data

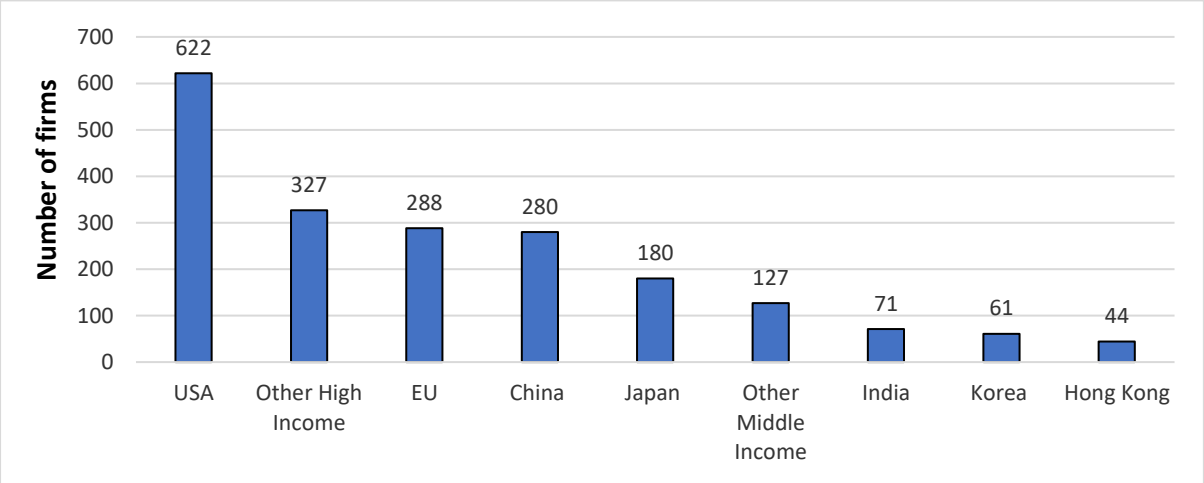
Note: The value for 2030 is projected based on data from 1995 to 2020, using linear regression analysis.

China's transition from being an assembler of imported components to a producer of high-value intermediate goods is one of the key factors behind China's sharp rise in forward linkages. China became a core supplier for global industries, particularly for the electronics (Apple, Huawei), automotive (Tesla, Volkswagen) and machinery (Siemens, Caterpillar) sectors. Its dominance in rare earth metals and battery technology strengthened its role as an upstream supplier. Studies have also shown that due to increased participation in GVCs "the provinces/sectors with greater export penetration have higher employment and labour production" (Lu et al., 2024).

While China surged ahead, Western and East Asian manufacturing giants experienced declines in forward GVC participation. The US saw a major drop from 21 per cent in 2000 to 10 per cent in 2020, reflecting the offshoring of industrial production and a shift toward services and technology. The growth has remained modest for India as the PFP in manufacturing remains low, increasing only from 1 per cent in 1995 to 2 per cent in 2030. This modest growth indicates India's limited role as a supplier of intermediate goods in global value chains compared to China, Germany, or the United States. India presents a unique example of manufacturing capability in most sectors, but low integration into GVCs. Ray & Miglani (2020) have argued that the reasons for India's low integration into GVCs, especially in the manufacturing sector, is due to its primary focus on the domestic market. The share of 'Other Countries' in PFP has experienced a slight decline, dropping from 34 percent in 1995 to 32 percent in 2020 and 2030. The dominance of high-income countries is not just in terms of where goods are manufactured and exported from, and the levels of backward and forward integration into GVCs, but also in terms of being home to the firms that dominate GVCs across sectors.

According to the 2024 Forbes Global 2000 list, firms from developed nations such as the United States, the European Union, Japan, etc., continue to lead globally. In addition, other high-income and middle-income countries, which include both upper and lower middle-income nations as well as China, feature prominently among the top firms. This distribution underscores the dominance of high-income nations in GVCs, both through forward and backward linkages across manufacturing and services sectors. In contrast, developing countries like India have a comparatively smaller presence, reflecting their limited integration and expansion within global value chains.

Figure 15: Forbes Global 2000 List 2024



Source: Forbes

China's dominance across GVCs is undeniable, with a significant share in high-tech, intermediate and manufacturing exports. Its rise from an assembly hub to a key supplier of high-value inputs has positioned it as a global trade powerhouse, surpassing traditional economic giants like the US, Japan and South Korea in various sectors. With strong backward and forward linkages, China has successfully leveraged industrial policies such as "Made in China 2025" and strategic trade reforms to deepen its integration into GVCs. In stark contrast, India's presence in GVCs remains minimal, contributing only a fraction of global exports in key sectors. India's limited participation – evident in its low backward and forward linkages – highlights its struggle to integrate into global trade networks. Unlike China, which strategically shaped its industrial policies to become a GVC leader, India's domestic market-oriented approach has constrained its ability to compete globally. The data overwhelmingly supports the fact that India, along with other emerging economies, lags far behind not just China but also the EU, US, Japan, and South Korea.

The discussion in Sections 2 and 3 summarise four important trends in the global economy. These are the following.

1. High-income countries have continued to remain dominant players in the global economy and in terms of share of their exports in manufacturing. This dominance is even more pronounced when it comes to industries and sectors that represent

technology intensive goods that will drive future global demand. However, their absolute dominance in terms of global manufacturing output and exports have declined somewhat largely due to the rising share of China.

2. China's rapid economic growth has been fuelled by its success in the exports of manufactured goods. China today is the world's largest manufacturing economy in terms of the value of output as well as the largest exporter.
3. All other developing countries continue to have a very minor share of global manufacturing output or exports. Even large developing countries like India, Brazil, and Indonesia have seen only a marginal increase in these metrics
4. Apart from a few of these large developing countries (i.e., developing countries that are members of G20), low and middle-income countries have a very minor presence in global manufacturing and manufacturing related GVCs.

This concentration of benefits of world trade, especially in the manufacturing sector, which serves as the catalyst for the creation of jobs that would lead populations in poor countries from poverty to more stable middle-income existence, is a matter of grave concern. It severely undermines the very concept of a rules-based global trading system as envisaged under the WTO architecture. One must reiterate that a fundamental founding principle of the WTO was to promote the growth of international trade, while also recognising the need for positive efforts to ensure that developing countries, especially the least developed among them, obtain a share of this growth that aligns with their economic development needs.[10]

Given this disparity, India and other developing nations require greater policy space within the World Trade Organization (WTO) to implement industrial policies that foster GVC integration. China's success illustrates how targeted state-led interventions can drive economic transformation. To improve their global standing, emerging economies need the flexibility to adopt similar policies, support domestic industries and build robust trade networks. Without such measures, they risk remaining on the periphery of global trade while China continues to solidify its dominance. Such reforms become even more urgent in the face of developments since the 2008 financial crisis, which has resulted in dominant economies in the global trading system adopt policies that are in violation of the spirit if not the letter of WTO law.

4. The Global Surge in Industrial Policy Interventions and Protectionism

In recent years, industrial policy interventions and protectionist measures have been on the rise globally as nations seek to safeguard their economic interests, boost domestic industries and reduce reliance on foreign competitors. Developed countries, including the United States and those in the European Union, have increasingly adopted subsidies, trade restrictions and investment regulations to support strategic sectors such as semiconductors, renewable energy and advanced manufacturing. At the same time, China has intensified its industrial policies through state-backed investments, technology subsidies and trade barriers, aiming to strengthen its global position in critical industries. To gain a deeper understanding of this evolving landscape, the following sections provide a detailed analysis of the issue.

[10] World Trade Organization. (1994). *Marrakesh Agreement establishing the World Trade Organization*. WTO.

4.1 Rising Industrial Policy Interventions in Selected Developed Countries.

In addition to driving trade liberalisation through binding commitments on tariffs, the Uruguay Round negotiations led to deepening of disciplines that regulated industrial policy in the form of the Agreement on Subsidies and Countervailing Measures (ASCM) and Trade Related Investment Measures (TRIMS).

Both these agreements reduced the flexibility available to developing countries that needed most the policy space to further the growth of their manufacturing sectors. But, as we shall argue later in the sections that follow, fundamental flaws in both the design of these agreements and the institutional mechanism to enforce due process and accountability from the member states allowed countries to get away with violations of these agreements.

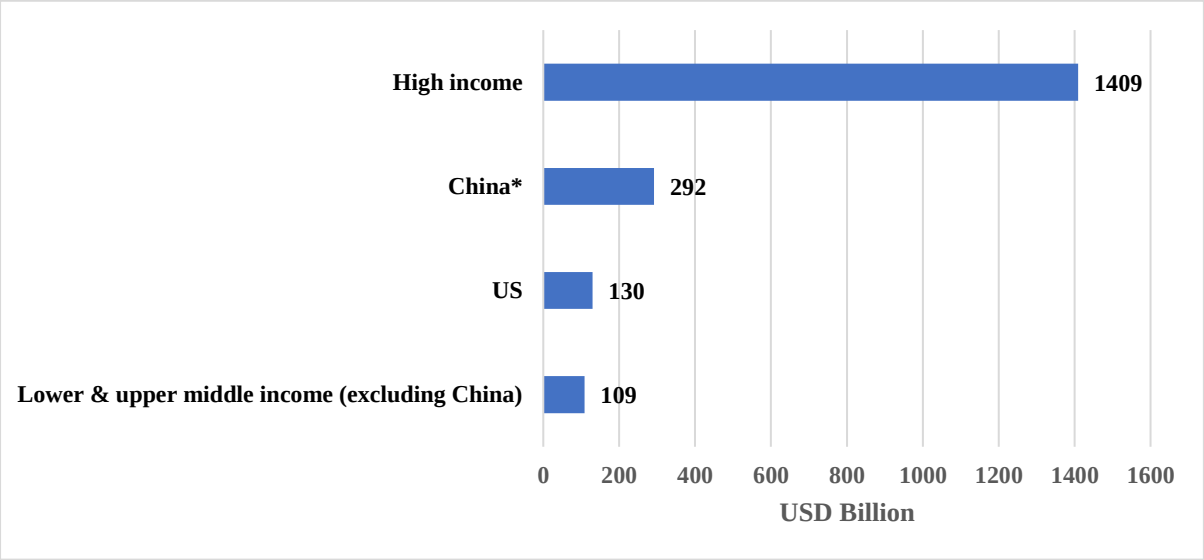
This was especially true of China, whose process of policy-making and implementation, and the non-market nature of its economy made the process of holding it accountable to its obligations under these agreements extremely difficult.

The 2008 financial crisis marked a turning point, as many governments implemented recovery plans to support their domestic populations, often at the expense of global equity. In the aftermath, developed countries increasingly relied on both tariffs and non-tariff measures to shape trade policies. Non-tariff barriers, such as currency controls, anti-dumping duties, import restrictions, export subsidies and voluntary export limits became particularly prominent tools in their policy arsenals.

As highlighted by Sanskar (2023), while GATT agreements successfully reduced tariffs over time, non-tariff measures grew in prevalence. Developed and high-income nations not only introduced restrictive trade policies but also allocated significant financial resources to enforce them. According to Ilyina et al (2024), advanced economies have been more proactive than emerging markets and developing economies in implementing industrial policies that distort trade. In recent years, the focus of these policies has shifted. While competitiveness remains a goal for about one-third of industrial policy measures, the majority are now driven by objectives such as climate mitigation, supply chain resilience, and economic security. This reflects a broader trend where green transition and strategic security concerns are increasingly prioritised over traditional economic competitiveness.

Figure 16 illustrates the industrial policy subsidies in USD billion introduced by high-income countries, lower- and middle-income countries, the United States, and China between 2015 and 2023. The majority of these subsidies were provided by high-income countries. China, as a developing country, allocated approximately USD 292 billion, while the US introduced subsidies worth around USD 130 billion during the same period. This stark disparity in industrial subsidies underscores the disproportionate financial support provided by China and high-income countries, which hinders the global participation of developing and least-developed countries (LDCs) in global markets.

Figure 16: Industrial policy interventions announced between 2015 and 2023



Source: Authors' calculation based on Global Trade Alert (GTA) and the New Industrial Policy Observatory (NIPO) databases

Note: Numbers are from the GTA Database as downloaded in April 2024, and do not reflect the full planned programme expenditures as per policy announcements. CHIP and IRA have a total allocated budget of USD 700 billion, and Korea has indicated another USD 44 billion in spending. EU numbers do not include programmes by individual member states. China's number is calculated based on 1.7 per cent of GDP (Constant 2015 USD) for the year 2023.

As per the IMF, over 2,500 IP measures were implemented in the year 2022, with more than two-thirds being trade-distorting in nature and likely to disadvantage foreign businesses. The United States, the European Union and China (Ilyina et al.,2024) accounted for almost half of such measures, which were unfair, trade-related and discriminatory. Out of the 32 different types of measures in Table 2 below, the EU used 20 such measures, the US (17), South Korea (15), Japan (11), and China (8). Production-linked subsidies, export licensing quotas and bans are the most commonly used measures by the US, the EU, and China.

Table 2: Type of industrial policy interventions in selected countries

S. No	Type of Measure	Measure Explanation	EU	USA	Japan	China	Korea
1	Input Subsidy	Free or reduced cost of access to land, electricity, water and other essential inputs for products; can be regional or sector specific					
2	Production Linked Subsidy	Financial incentives linked to production/turnover targets. Might be subject to minimum requirements of scale and investment; could be sector or region specific					
3	Tax Relief	Tax discount or tax holiday for investments of a certain scale, in a sector, region or a specific zone					

4	Capital Injection	Government investment in enterprise, i.e., government takes a share of risk	■		■	■	■
5	Loan Guarantee	Government underwrites risk of loan, effectively helping to reduce the cost of borrowing	■	■		■	■
6	Loan Subsidy	Reduced interest loan (loan subsidy)	■	■		■	■
7	Credit Guarantee	Government underwrites the risk of short-term borrowing, reducing the cost of credit needed for operations	■				
8	Government Supported Venture Capital Fund	Reducing the cost of borrowing for start-ups or ventures into new riskier areas of business	■			■	
9	Trade Finance	Low-cost export (or import) credit and credit guarantee					■
10	Financial Support for Capital and Technology Acquisition	Reduced cost of borrowing, credit guarantee, or tax and duty remissions for purchase of capital, or acquisition of technology, including IPR	■	■	■		■
11	Financial Assistance for Operating/Investing in Foreign Markets	Reduced cost of borrowing or incentives to support overseas operations or investment by local firms, or enabling access to cheaper infrastructure/services in overseas markets	■		■		■
12	Local Content Subsidy	Financial reward for use of local intermediates in production	■	■			
13	Local Value Addition Incentive	Financial reward for local value-addition					
14	Local Labour Incentive	Financial reward for the use of local labour					
15	Local content for procurement	Local content conditions for government procurement		■			
16	Technology transfer linked to procurement	Procurement conditions require technology transfer		■			
17	Social Insurance Relief/Support	Government support towards meeting social insurance/support obligations	■	■			■
18	Employment Generation Incentive	Financial reward linked to generating a certain number of jobs; could be linked to sector or region					
19	Subsidies Linked to Meeting Environmental Objectives	Cost of meeting obligations related to environmental requirements are subsidised by government	■	■	■		
20	Export Subsidy	Financial reward linked to export performance	■		■		■
21	Export Licensing, Quota or Ban	Export limitations to help local firms have cheaper access to inputs	■	■	■	■	■
22	Import Licensing, Quota or Ban	Import limitations to reduce competition for local firms	■			■	
23	Duty Remission on Imports	Reduced taxes and duties on imports to reduce cost of imported inputs. Can be					

		linked to performance requirements, including exports					
24	Tax Remission on Inputs	Reduced indirect taxes on domestic purchase of materials and services; can be linked to performance requirements, including exports					
25	Subsidies Linked to Skill Development	Investment in skill development supported by government through direct grants/reduced taxes/or financial incentives linked to some performance requirement (PR) w.r.t. skill development					
26	Subsidies Linked R&D	Investment in R&D supported by government through direct grants/reduced taxes/or financial incentives linked to some PR w.r.t. R&D					
27	Subsidies Linked to Technology Transfer	Financial reward for transfer of technology					
28	Subsidies Linked to Product Development	Financial reward for successful development and commercialisation of new products					
29	Subsidies Linked to Meeting Product Standards	Financial support for compliance with improved or specific product standards					
30	Industrial Park Schemes	Government supported infrastructure that reduces costs of operations and reduces time for commencement of new operations					
31	Transport Subsidies	Government support for lowering logistics costs of business operations					
32	Social Infrastructure Subsidies	Government support for public housing/infrastructure/education/health that reduces the effective cost of labour					

Source: Authors' compilation based on the GTA database

China, the EU, and the US – big economies with the potential to influence the global market – accounted for about 75 per cent of the distorting trade measures. Australia and Canada are also among the world's top subsidisers. Most government programmes are implemented at the sub-national level. Sub-national subsidies account for 90 and 82 per cent of programmes in China and the US respectively. (World Bank, 2023)

Since the 2008 global financial crisis, attention has shifted towards non-tariff measures (NTMs), as both developed and developing countries have been increasingly using these trade policy tools to protect domestic producers. However, there are concerns about the potential misuse of such measures for protectionist purposes, especially during economic downturns. International forums like the G20 have also stressed the importance of avoiding excessive use of NTMs to prevent trade restrictions. Understanding the impact of NTMs, particularly sanitary and phytosanitary (SPS) measures and technical barriers to trade (TBT), on global trade, development goals and social well-being – especially in developing countries – has become increasingly important (Basu et al., 2012)

4.2 The Rise of Industrial Policy Interventions and Protectionism in China.

China has emerged as a key player in driving global trade. Since joining the World Trade Organization (WTO), the country has leveraged the benefits of a market economy while maintaining its designation as a non-market economy (NME). Government interventions, including state-owned enterprises, tax waivers and subsidies have propelled China's economic transformation from a low-income economy in the 1990s to a developing country and, with its current trajectory, a developed nation by 2035. However, these measures have had detrimental effects on countries with limited resources, technology and industrial capacity.

4.2.1 China's Political System Allows Flexibilities that are Impossible Elsewhere

It is important to understand why the Chinese system is fundamentally different from those of largely market-oriented, democratic polities. Governments in democratic and transparent jurisdictions are subject to fiscal accountability rules. These rules apply across jurisdictions, i.e., central, regional and municipal levels of government, as well as to public sector entities (such as state-owned enterprises or SoEs). Even more importantly, such accountability is actively enforced through the legislature, as well as through the due process of audits. Transparency is ensured through the public disclosure of budgets and expenditures and public reports of government auditors.

In addition, most democratic jurisdictions have some form of right to information and transparency laws that require public disclosure of information related to government expenditure, with a very few carve-outs related to national security and defence-related matters. Last but not the least, the presence of proactive media organisations provides additional layers of accountability and transparency in democratic systems. It needs to be highlighted that all these institutionalised transparency and accountability-related measures are present in all lower- and middle-income countries that are members of the G20 other than China (i.e., India, Brazil, South Africa, and Indonesia).

Another important aspect of such accountability is that benefits to specific firms or entities cannot be extended at the discretion of officials. Such direct or indirect disbursement of benefits needs to be done following due process. All of this means that there is enough paper trail (and in the modern era, a digital document trail) to identify industrial policy interventions. Moreover, most such interventions would be systemic, as opposed to tailor made and transactional for individual firms or recipients.

On the other hand, officials in non-market and non-democratic jurisdictions have much greater discretion. Having much greater ownership or control over factor and input markets, there is greater freedom to transfer benefits, monetary or in kind, on a transactional basis to individual firms. There is also far less legislative accountability. Furthermore, public reporting requirements and rights of citizens to hold governments (or governmental entities) accountable and transparent are effectively absent.

So, for example, a municipal administration in a non-market economy that owns significant amounts of public urban land can chose to transfer parcels to individual firms at low or no cost at the discretion of the senior officials of that municipal authority. While any terms and conditions of such a transfer would be recorded in some form of a contract or lease agreement, it is highly unlikely that such a document would be available in the public domain or be part of official public documents. Boullenois et al. (2025) point out China's practices are difficult to track. This is especially true of local governments that play a key role in disbursing grants and tax incentives, and China is unwilling to share details about them.

To use another example, an SoE can be directed by an internal memo from its parent authority to provide inputs at below market price to a particular firm. Let us consider an example where a large SoE in the inorganic chemicals business provides heavily discounted inputs for the manufacture of active pharmaceutical ingredients (API). Due to the absence of reliable records, it is challenging to identify, monitor, or gather credible evidence on such interventions – whether to initiate a dispute under WTO rules or for inclusion in the GTA database. Nevertheless, the potential consequences could be significant, including substantial trade distortions through predatory pricing and the suppression of competition in the API sector across multiple regions. As Boullenois et al. (2025) observe, assessing the provision of below-market inputs is particularly difficult due to limited data, and China's use of below-market borrowing and equity is notably more widespread than in other economies. This is largely because of the significant weight of state ownership in China's banking system and widespread state investment in companies.

4.2.2 Commanding Heights of the Chinese Financial System: State Control of China's Banking Sector

According to Mark Wu (2016), the commanding heights of state control over the financial sector is unique to China. No other G20 economy has a comparable system that comes close to this near-complete ability of the Chinese state to direct financial institutions and drive their investment and lending decisions. The core of this state-dominated financial system is the so-called "Big Four" commercial banks. These are the Bank of China (BOC), the Industrial and Commercial Bank of China (ICBC), the China Construction Bank (CCB), and the Agricultural Bank of China (ABC). Though these big four ostensibly compete with one another, they all remain firmly in the hands of the Chinese state. Again, a single entity acts as the controlling shareholder for the banks. That entity is Central Huijin Investment Ltd. ("Central Huijin"). Central Huijin is managed today as a wholly-run subsidiary of the China Investment Corporation. The state can order the big four to direct funds to serve its policy objectives or, in many cases, use an informal 'nudge' by senior officials without any formal directions.

Mark Wu (2016) underlines that the Chinese state also controls nine of the next 10 largest banks. It is just not large banks – the state controls even the smaller, regional banks. As Wu (2016) points out, this again is done through layers. An investment bank or fund controlled by a provincial or municipal government might be one of the shareholders of such regional banks,

and several such government investment funds in combination would control the majority stake of the almost all commercial banks in China.

China's massive SOE industrial complex also has a role in controlling the financial sector. The core of the Chinese SOE eco-system is the State-owned Assets Supervision and Administration Commission of the State Council, or SASAC. SASAC is the world's largest controlling shareholder today. SASAC often has a controlling or dominating stake in regional or municipal investment banks. In essence, again, the execution of the 'commanding heights' is through layers and networks.
Most democracies would not have the ability to create such complex webs of governance to manage the 'commanding heights' of the industrial and financial sectors. There would be legislative impediments and political transaction costs. Political competition and different priorities and agendas at the national and regional levels would lend itself to a coordination failure in any attempt to build such a system. Most importantly, the nimbleness in decision making and the ability to manage such networks effectively is not possible in a system that lends itself to legislative oversight, transparency, and the independent accountability of bureaucrats.

4.2.3 Evidence of Pervasive State Support to Industry in China is Overwhelming

The pervasiveness of state support by large non-market actors like China has been established by several macro level studies. For example, Lardy (2019) shows that direct subsidies to Chinese listed companies have grown substantially from 5 per cent of listed firms' profits in 2010 to almost 14 per cent in 2015. Further, from 2007 to 2018, total government subsidies for Chinese listed companies surged over sevenfold. Bickenbach et al. (2024A) have estimated that government subsidies are omnipresent in China, and more than 99 per cent of listed firms in China received direct government subsidies in 2022.

An analysis by the OECD (2023) provides evidence that companies in China can obtain government support from the different jurisdictions where they operate. The OECD report also establishes that industrial firms from China receive disproportionately more support overall than firms based in other jurisdictions covered in the analysis. Chinese firms were also the largest recipients of tax concessions as a share of their revenue: 0.75 per cent of annual revenue, against 0.32 per cent for OECD-based firms, 0.28 per cent for India-based firms, and 0.47 per cent for firms based in other jurisdictions covered. Rotunua and Ruta (2024) find evidence of an increase in subsidy utilisation in China and other major economies between 2009 and 2022. Their results indicate that the subsidies promoted Chinese exports and limited imports. These effects have been magnified by supply chain linkages. Subsidies given to upstream industries significantly expand the exports of downstream industries.

According to research from the Stanford Centre on China's Economy and Institutions (SCCEI) and the Asia Society Policy Institute's Centre for China Analysis (CCA), China's industrial policy interventions accounted for at least 1.7 per cent of its GDP in 2019. When considering

a broader definition of industrial spending, including government procurement of goods from Chinese firms, the total expenditure reached approximately 5 per cent of GDP.

The extent of Chinese subsidies has been assessed by analysing the countervailing duty determinations from the US Department of Commerce and financial reports from subsidiaries of state-owned enterprises. The subsidy rates ranged from 0.57 per cent to 44.93 per cent, with an average rate of 18.6 per cent and a median rate of 14 per cent (United States-China Economic and Security Review Commission, 2008). Despite this heavy investment in industrial production, China remains reliant on low-value manufacturing, which demands high energy consumption and contributes to significant pollution. Consequently, social dissatisfaction has been rising. Nevertheless, China is transitioning from being merely the "workshop of the world" to an innovation-driven economy, focusing on high-value products and services (Branstetter & Li, 2022).

To bolster its competitive edge in key strategic industries, China has introduced the "Made in China 2025" initiative. This plan aims to establish China as a global leader in high-tech manufacturing by providing extensive government funding, supporting state-owned enterprises and facilitating the acquisition of advanced technologies (Macbride & Chatzky, 2019). Under this project, a hundred billion euros in subsidies and other financial support mechanisms have been announced (European Union Chamber of Commerce in China, 2017). These measures grant domestic businesses significant advantages by restricting foreign companies, compelling them to share technology and engaging in intellectual property theft and cyber espionage. Unlike economies with independent judicial systems, China leverages state control to employ competitive tactics that others cannot (Macbride & Chatzky, 2019).

Local authorities play a pivotal role in determining which companies receive the "high and new technology enterprises" designation, which comes with reduced tax rates, low-interest loans, and other benefits (Bailey et al., 2011; Dia et al., 2023). Targeting emerging strategic sectors, China has heavily subsidised the domestic electric vehicle (EV) industry, reducing demand for imported EVs. Research indicates that for every 1,000 Chinese Yuan (CNY) increase in subsidies for domestic EVs in a given city and month, registrations of imported EVs declined by approximately 2 per cent (Zhang et al., 2024). While China enforces stringent trade and investment restrictions on high-tech products, it remains more open to simpler goods. Unlike the EU and the USA, which primarily restrict the import of basic goods, China's trade barriers focus on protecting high-tech industries (GTA, August 2024).

Subsidies and tax incentives are also prevalent in Western economies, including the EU and the USA. However, a unique feature of China's purchase subsidies for battery electric vehicles (BEVs) is that they are directly granted to manufacturers rather than consumers. Moreover, these subsidies apply exclusively to domestically produced EVs, thereby disadvantaging foreign competitors (Bickenbach et al., 2024B). Among the largest recipients of these subsidies is Chinese new energy vehicle (NEV) manufacturer BYD, which received €1.6 billion for 1.4 million vehicles, followed by Tesla, which received €0.4 billion for 250,000 BEVs. The next ten largest recipients up to 2022 were all Chinese firms.

Since 2021, China has prioritised retaining low-tech manufacturing jobs and production. The 14th Five-Year Plan (2021) sought to maintain manufacturing's share of GDP, reversing previous strategies that emphasised the services sector. In a May 2023 meeting of the Central Commission on Financial and Economic Affairs, Xi Jinping outlined the vision for an advanced industrial system that maintains control over all industries, from high-end to low-end. Rather than phasing out traditional industries, China seeks to modernise them through technological advancements, ensuring competitiveness across the board. The strategy is not only focused on high-tech innovation but also on achieving dominance across all levels of production, reducing reliance on foreign imports, and insulating itself from trade disruptions (Andrew, October 2023).

China's trade policies, characterised by subsidies throughout the manufacturing and procurement processes, preferential treatment for domestic businesses, restrictions on foreign enterprises and enforced technology transfer have created substantial challenges for developing and least-developed countries. These nations, which rely on low-tech, resource-dependent industries, find themselves unable to compete effectively in the global market, significantly hindering their economic growth and development.

Table 2A in the Annex lists the multiplicity of instruments that are transaction-specific (i.e., extended to individual firms or investment projects) that are frequently used at the lower levels of government (provincial or municipal) in China with minimum documentation and transparency. It is the sum total of these thousand interventions that provided Chinese manufacturing with an unfair advantage over other countries, especially other developing nations, and helped create overcapacity in many sectors to the detriment of a competitive global market. By unfairly capturing a lion's share of the opportunities created by the globalisation of manufacturing, it has also hindered the realisation of the fundamental principles of equity and global development enshrined in the WTO. As a result, the objectives outlined in the Marrakesh Agreement establishing the World Trade Organization, referred to above, have not been substantially achieved.

4.3 The Double Whammy for India and Other Developing Economies

Developed nations and China have implemented policies that create an uneven playing field, restricting the ability of India and other developing economies to compete and grow in international markets. These nations deploy industrial policies, non-tariff measures (NTMs), and subsidies that distort trade in their favour, placing developing countries at a disadvantage. While such practices have historical roots, dating back to mercantilist policies and further solidified during the Industrial Revolution, they have become more pronounced in the modern global economy. Regulatory interventions like the Sherman Antitrust Act in the US and similar measures in Europe sought to curb domestic monopolistic practices, but did not prevent these economies from leveraging their economic might to dominate international trade.

Beyond trade barriers, developing countries also face structural challenges exacerbated by digital and environmental disparities. The rapid advancement of digital economies in developed nations has not benefited developing economies. Instead, these countries bear the environmental consequences while lacking the resources to leverage digital technologies effectively (Digital Economy Report, UNCTAD 2024). Without substantial international support, low-income countries struggle to integrate into the digital economy, further reinforcing economic disparities.

Foreign direct investment (FDI) and reshoring initiatives in developed economies have further marginalised developing nations. The US has aggressively pursued policies to boost domestic manufacturing in strategic sectors, such as semiconductors and electric vehicle (EV) batteries. Legislative measures like the Inflation Reduction Act (IRA), CHIPS and Science Act, and Buy American provisions have catalysed a manufacturing revival, adding over 360,000 jobs and increasing domestic production by 53 per cent in 2021 (Reshoring Initiative, 2022). Similarly, Germany's Industry 4.0 programme, France's subsidies to encourage pharmaceutical reshoring, and the UK's "Reshore UK" initiative exemplify protectionist strategies that disadvantage external competitors (Oleksandr & Andrii, 2020).

China and OECD nations have also implemented high non-tariff barriers (NTBs) to reduce reliance on foreign inputs, shifting approximately 13.3 per cent of global imports – equivalent to 2.7 per cent of global GDP – towards domestic production. However, this move has resulted in a long-term global GDP contraction of 4.5 per cent and a 13.7 per cent decline in global imports (Cerdeiro et al., 2024). Developing economies, particularly those in Southeast Asia, have borne the brunt of these policies. Countries like Indonesia and India, which maintain trade relationships beyond China and the OECD, have experienced significant economic setbacks due to declining export demand and restricted market access.

Furthermore, the effectiveness of reshoring policies in improving economic resilience remains questionable. The COVID-19 pandemic revealed weaknesses in global supply chains, and the shift toward reshoring has reduced the benefits of international diversification. (Bonadio et al., 2021). While friend-shoring – favouring allies in trade partnerships – has been proposed as an alternative, studies suggest it could lead to real GDP losses of up to 4.7 per cent in some economies (Javorcik et al., 2024). The reconfiguration of GVCs, such as Apple's shift towards Taiwan and Vietnam, highlights how these strategies often exclude developing nations from critical supply chains (Paché, 2022).

In sum, the policies adopted by developed nations and China constitute a double whammy for developing economies. On the one hand, they impose restrictive industrial and trade policies that limit market access for developing countries. On the other, they leverage their economic strength to dominate both high-tech and low-tech manufacturing, leaving little room for emerging economies to compete. Reshoring and friend-shoring strategies further marginalise developing countries by redirecting global investments and trade flows towards a select group of advanced economies. Without substantial structural changes in global trade policies, developing economies will continue to face systemic barriers to growth and industrialisation.

5. Developing Countries and Policy Flexibility: Reassessing WTO Special and Differential Treatment

Developing countries face several challenges in their quest for industrialisation and economic diversification. To counter such limitations, the WTO Agreements contain special provisions, "special and differential treatment" (S&D), which give developing countries special rights and enjoin developed countries to treat developing countries more favourably than other members of the WTO. These special provisions include, for example, lengthier periods to implement agreements and commitments or measures to increase trading opportunities for developing countries. These provisions are incorporated across multiple WTO agreements that include the General Agreement on Tariffs and Trade (GATT) 1994, the Agreement on Agriculture (AoA), the Agreement on Subsidies and Countervailing Measures (ASCM), the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), Sanitary and Phytosanitary Measures Agreement (SPS), Agreement on Technical Barriers to Trade (TBT), Agreement on Trade-Related Investment Measures (TRIMs), etc. The total number of such provisions amounts to 157 (WTO, WT/COMTD/W/271).

However, these provisions have often fallen short in effectively addressing the multifaceted challenges faced by developing nations. Many developing countries have not reaped the anticipated economic advantages. The Uruguay Round marked a shift in S&D focus from differing levels of obligations to adjustment periods for compliance. This transition has led to repeated grievances from developing nations about not receiving the expected benefits from the agreements made during these negotiations. The lack of clear definitions and criteria for what constitutes a developing country within the WTO framework has led to ambiguities in the application of S&D provisions. (Baachus & Manak, 2020; Hoda, 2021). This section of the paper examines the key challenges faced by developing countries, such as India, in relation to selected WTO agreements and principles, including special and differential treatment (S&D). It also explores potential solutions to address these issues.

5.1 Special and Differential Treatment (SDT)

The GATT specifically took into account the need to help developing countries catch up with industrialised countries. The Marrakesh Agreement (2020) reinforces this by emphasising developmental objectives, stating that trade should raise living standards, ensure full employment and promote economic growth. To support this, SDT was incorporated into WTO agreements during the Uruguay Round, recognising economic disparities among members and the role of trade in bridging the development gap across areas like infrastructure, technology, industrialisation and digital connectivity.

The principle of SDT is a core element of the World Trade Organization (WTO) framework and is reflected in various forms across all WTO agreements, including TRIPS, TRIMS, ASCM, GATT and others. Each agreement offers different flexibilities under SDT provisions, which will be examined in detail in the following sections. However, many WTO members have expressed concern that these flexibilities are often insufficient, limiting the ability of developing countries to effectively utilise SDT measures when needed. Moreover, SDT has

become a point of contention within the WTO. Developed countries such as the United States (US) and members of the European Union (EU) have raised questions about which countries should be eligible for such preferential treatment. They argue that some nations – particularly those that are members of the G20 or have large and growing economies – may no longer require the same level of special consideration, thus challenging the fairness and relevance of current SDT classifications. For instance, in a 2019 WTO submission (WT/COMTD/W/27), the US argued that the self-declared developing status is outdated and unfair as it gives certain countries undue advantages.

A related memorandum asked the USTR to identify nations no longer deserving SDT. In another submission (WT/GC/W/764), the US proposed limiting SDT to countries meeting criteria like OECD or G20 membership, high-income classification, or significant global trade share with SDT granted through sector-specific negotiations. The EU echoed similar concerns, stating that broad SDT eligibility weakens negotiations and benefits relatively wealthy nations over those truly in need (European Commission, 2018). Many countries, led by China and India, rejected the US proposal, defending self-declared developing status as a fundamental WTO principle. They emphasised the importance of per capita indicators in assessing development and argued that significant economic and human development gaps still exist. In their WTO submission, they noted that despite some progress, the development divide has widened, and developing members continue to face major challenges. Diluting SDT, they argue, would undermine the principles of equity and fairness central to the WTO's diverse membership.

While criticising the US proposal as arbitrary in categorising developing countries, Kwa & Lunenburg (2019) state that "*G20 is not a trade grouping but a summit-level conference that was originally conceived to develop a collective response to the global financial crisis rather than to solve trade issues. G20 includes countries with major differences in their levels of development measured by a variety of socio-economic and human development indicators*." The study further highlights that the language used also suggests that the US could come up with further conditions in the future in each set of negotiations. For instance, *"countries with x% of exports in a sector will not avail of S&D. Whilst some small developing countries may not hit the 0.5% of world trade mark, individual countries could have quite high shares of exports in a particular product. Potentially, they could be excluded from S&D for that product, e.g., Burkina Faso and Benin have each over 3% of the global cotton export share."*

Many developing countries joined the WTO because SDT was a foundational element of its rules; without it, they might not have become members. Changing SDT to the US model (no SDT for some, conditional SDT for others) would remove the unrestricted rights to SDT treatment for all developing countries without any qualification. This change would contradict fundamental provisions in the Marrakesh Agreement and existing mandates, including those in the Doha Development Agenda (DDA) It also raises legal questions for current and future negotiations, especially when they conflict with existing WTO agreements.

5.2 Agreement on Subsidies and Countervailing Measures (ASCM); Evolution of Disciplines on Subsidies: From GATT 1947 to ASCM

Effective industrial policy in developing countries seeking to develop a robust industrial base required government support in the form of subsidies. But such subsidies can distort markets and provide unfair advantage. This inherent challenge of allowing countries to pursue legitimate developmental objectives through the use of subsidies while at the same time minimising its trade distorting effects was recognised in GATT (1947). Article 26.4 of the GATT stipulated that all subsidies that either result in an increase in exports or a decrease in imports should be reported by countries, i.e., a transparency requirement. Countries would also seek consultations in case such subsidies led to serious injury to their industry. In addition, provisions prohibiting export subsidies were added in 1955.

It is interesting to note that while a prohibition on export subsidies was introduced into the GATT in 1955, this did not extend to primary products 13[11] but obligated GATT members to not use subsidies in primary sectors in a manner that result in the subsidising member having a dominant share of the world export trade. Thus, GATT had recognised the fundamental principle that industrial policy could not be developed and applied on a scale that leads to over-concentration of production and exports of a product in a single country. This underlying principle is central to our policy recommendations that follow later.

The Tokyo Round of the GATT in 1979 improved upon existing GATT provisions by including provisions related to the imposition of countervailing duties (CVD) by GATT members in response to subsidies that they deem unfair and the disciplines that need to be adhered to when such CVD is imposed. These provisions were part of the Tokyo Round Subsidies code that also clarified and expanded on the meaning of what constitutes serious injury to include:

a. injury to the domestic industry of a GATT member due to subsidies applied by another member
b. injury to the export opportunities of a GATT member due to subsidies provided by another member leading to import substitution in the subsidising member's domestic market
c. injury to the export opportunities of a GATT member due to subsidies provided by another member that provides an unfair advantage to exporters of the subsidising member in third country markets.

However, the Tokyo Round Subsidies code was not adopted by all members, resulting in it being a plurilateral agreement among just 24 GATT members.

The Agreement on Subsidies and Countervailing Measures (ASCM) that emerged from the Uruguay Round as a part of the WTO, therefore, was the first binding agreement on subsidies related disciplines that included all GATT member states. The ASCM categorically prohibits subsidies contingent upon export performance or the use of domestic content. Subsidies that

[11] Articles 26.2 to 26.5 of the GATT 1947

are not linked to export performance or use of domestic input requirements are allowed. However, in cases subsidies cause injury to the domestic industry of another WTO member or compromise their export interests, ASCM provides the right to WTO members to seek remedies through consultation and dispute settlement. In other words, ASCM puts in place severe limitations on the use of subsidies as industrial policy.

5.2.1 The effect of ASCM related limitations for developing countries

ASCM severely limits policy instruments available to developing countries to pursue legitimate objectives of developing a manufacturing base and creating the kind of employment that would allow them to reduce poverty and close the massive income gap with wealthier nations to some extent. The current ASCM framework restricts subsidies, especially those labelled trade-distorting, disproportionately impacting developing nations. Critics, like Bacchus and Manak (2020), argue that this rigid, one-size-fits-all approach neglects their developmental needs. Additionally, weak S&D provisions and complex notification requirements strain their limited institutional capacity, often leading to disputes and penalties. As Hoda (2021) points out, the lack of tailored flexibility in the ASCM stifles industrialisation and economic transformation in developing countries. Let us discuss some of these issues in detail in this section.

ASCM prohibits all forms of policies that require the use of domestic content. Such policies have historically helped develop complete manufacturing ecosystems as opposed to mere assembly type industries that can migrate quickly to another geography when labour cost advantages reduce and have limited spillovers in terms of technology transfer and development of advanced worker and management skills. Developing countries, especially those with large domestic markets, could use such local content requirements to develop not just assembly activity, but also component manufacturers and ancillary activities that grew local capability and scale in that industrial sector. Arguments that such policies often failed to achieve the above objectives can be countered by several counter examples of where they did succeed. In other words, like any policy initiative, success depended on the effectiveness of policy design, quality of implementation and getting the timing right.

ASCM also prohibited policies that directly or indirectly rewarded export performance. While developing countries did get some transition time as part of special and differential treatment,[12] this has now expired. Export promotion incentives can help local firms invest in new technology, customise products as per the requirements of specific export markets or improve product standards, among other things.

In a world of defined by GVCs where large MNCs that serve as lead firms often have disproportionate bargaining power, such incentives can often help local firms, especially SMEs, meet the twin challenges of downward pressure on margins negotiated by lead firms

[12] Developing countries were given eight years from the time of ASCM coming into force (till 2003) to phase out these subsidies. Some developing countries with very low per capita incomes were allowed to have such policies in effect until they crossed the per capita threshold of USD 1000 (adjusted to 1991….)

and fluctuating input and credit costs. The inability to meet theses twin challenge can result in firms being forced out of business or opting out of exports and focusing on less volatile domestic market opportunities. Both situations prevent the growth and development of local capabilities that can use global opportunities to grow in scale and competence.

It needs to be understood that while ASCM prohibits subsidies rewarding the use of domestic content and direct and indirect export incentives, it proscribes a much wider array of subsidies that represent effective industrial policy action and makes them subject to countervailing action. To be precise, ASCM states that subsides become actionable and subject to countervailing action when they are specific or demonstrate specificity. Subsidies will be considered specific when they are explicitly targeted at a specific industry or a wider sector. Even when these subsidies are not explicitly targeted at a specific industry or sector but effectively leads to support for a particular industry or a group of enterprises, that subsidy programme will be considered to be specific for the purposes of the ASCM.

Almost all forms of industrial policy in practice, apart from general infrastructure development or human resource development programmes, therefore, will qualify as specific under ASCM. Even if not intended as such, most industrial policy programmes will, for practical purposes, end up supporting a specific set of sectors and be significantly used by a relatively small number of enterprises. This would be especially true in developing countries where fewer firms have the scale and entrepreneurial ability to absorb subsidy programmes and leverage them to scale up. For example, India's PLI programme, and all the industrial policy programmes used by Japan, Korea, the EU member states, Taiwan, Australia, the US and Mexico all through the 1960s to the late 1990s would meet the specificity criteria as would the vast majority of instruments currently being used by the major economies listed in Table 2.

From an economic perspective, the limitation on targeted support automatically prevents the role out of industrial policy that would allow governments in developing countries to support scaling up of specific sectors or even some lead firms that might be critical for achieving the economies of scale that provide effective competitiveness. This would permanently hobble the ability of relatively smaller developing country firms to move up the value chain or attain the ability to effectively compete and gain market share from dominant MNCs across sectors. As we have shown in Figure 15, Forbes 2000 remains dominated by firms from developed countries or China.

It is interesting to note that Article 2.1 (b) of the ASCM establishes that any subsidy programme that does not have an objective criteria or conditions under which such subsidy is granted, and does not allow automatic qualification (i.e., without the use of discretion) for such subsidy, will by default be considered as specific. It further establishes that such programmes must be clearly spelled out in law, regulation or other official documents, to be capable of verification. Article 2.1(c) also stipulates that the use of discretion to favour particular industries or firms would qualify such industrial policy programmes as actionable specific subsidies. This definition would cover most of the policy instruments in Annexe I that list the micro-level transactional interventions that non-market economies like China implement without being detected.

So ASCM recognises the principle that discretion, especially the use of discretion that is not accountable or transparent due to lack of proper documentation or record, is not desirable and all such programmes should be proscribed. But it does not establish any disciplines that help in the enforcement of this principle or even acknowledge the challenge of enforceability when it comes to non-market economies. The burden of proof lies entirely with the injured party. We shall take up the ramifications of this in the last section on conclusion and policy recommendations.

5.2.2 Creating a 'Caste-System' of Scale while Denying Recourse to 'Affirmative' Action through Industrial Policy

A footnote included in the ASCM text defines automatic, horizontal criteria that are not considered to be specific and are, thus, non-actionable, as those that consider neutral conditionalities such as the size of an enterprise or the number of people employed. Since Article 2.1 (c) already proscribes programmes that concentrate interventions that are largely used by a few firms, this neutral criterion is effectively meant to include SMEs. To elaborate, most developing or even developed countries are unlikely to have the fiscal capability to provide meaningful support to a very large number of large firms given that the average quantum of support needed to be meaningful for a large firm would be substantial.

Thus, ASCM creates a 'caste-system' in industrial policy that denies any recourse to affirmative action to correct historical wrongs. The vast majority of the currently listed Fortune 2000 firms (except those in 'new' sectors like IT and digital services) were beneficiaries of the kind of industrial policy that is now proscribed by the ASCM. The Chinese firms in that list were beneficiaries of a non-market eco-system where the ASCM failed to provide for an effective discipline of enforcement.

Having created dominant large firms across the widest range of industries, ASCM now limits industrial policy only to SMEs in market oriented, transparent developing country eco-systems. Having used the very same instruments now considered as unfair and trade distorting to build dominance, developed countries are now denying the right to developing countries to catch-up, and limiting them to support SMEs. Effectively, this means a vast majority of developing country firms will remain SMEs or small firms compared to the scale and ability of the firms of developed countries.

Under ASCM, subsidies will be deemed to be actionable if they account for more than 5 per cent of the value of the per unit output of the subsidised entities or are designed to cover the operating losses of an individual firm or an industry or programmes of debt forgiveness or those that support debt repayments. However, even such subsidies will be deemed to be actionable under ASCM only when its application by one WTO member state causes injury to

the domestic industry of another or distorts trade by making the subsidised entities more competitive relative to imports in their home market or in third country markets.[13]

Such subsidies will also be considered actionable when the effect of the subsidy is an increase in the world market share of the subsidising member for a particular product as compared to the average share it had during the previous period of three years and such increase can be ascribed to the effect of the subsidy.[14] This provision defeats the very purpose of industrial policy, helping create global champions that can alter the status-quo in any sector in terms of market shares.

Two observations emerge from this. First, it takes us back to the point about ASCM creating a 'caste-system' of scale without recourse to the concept of natural fairness that allows developing countries the policy space to develop their own champions through focused industrial policy action similar to the ones used by developed countries.[15] Second, it underlines the ineffectiveness of the ASCM and WTO disciplines related to industrial policy in general since, all through the 2000s, Chinese firms rapidly increased their world market share, both in terms of exports and output, and did not face any substantive action. But developing democracies like India were severely impeded from using targeted industrial policy to help their firms achieve global scales due to the threat of countervailing action, which their transparent, accountable systems were easily susceptible to, all the while when some of the EU, US and Japanese firms were also recipients of the kind of discretionary and non-transparent government support from the Chinese government that helped Chinese firms gain market share globally.[16]

5.2.3 Design of Non-Actionable Subsidies: Practical Application Favour Developed Economies

Non-actionable subsidies that WTO member states are allowed under ASCM[17] are, for all practical purposes, of the type that would be fit the purpose for developed countries where developmental priorities have changed now that their firms are at the apex of GVCs.

Subsidies that support fundamental scientific and technology-related R&D are non-actionable. State support for such R&D is largely possible in developed countries that have the fiscal space to go beyond the needs of basic primary, secondary, and tertiary education. Since such support does not lead to guaranteed outcomes as primary R&D is largely exploratory and experimental,

[13] Article 6 of the ASCM
[14] Article 6.3 of ASCM
[15] One could further argue that this is even more egregious, given that many of the global champions, especially in Europe, were not just beneficiaries of an active industrial policy that would fall foul of ASCM principles, but also of a colonial system that provided these firms with cheap raw materials and captive markets well into the 1960s when Africa started to decolonise.
[16] A comprehensive list of Chinese government incentives and support schemes, which are also open to foreign firms, is available at https://www.china-briefing.com/doing-business-guide/china/taxation-and-accounting/tax-incentives-in-china
[17] As per Article 8 of the ASCM

it is more challenging for developing countries that have pressing immediate needs for their resources to allocate funds for such activities. It also needs to be noted that developed countries have over the years developed university eco-systems and research networks where such funds can be most effectively utilised. This is not to say that large developing countries do not have institutional capability for such research. But the scale, depth and diversity of specialisation for such primary R&D is much more in developed countries.

An interesting corollary to this is that, given this comparative advantage in primary R&D of developed countries, large firms located in developing countries often spend part of their R&D budget in programmes where developed country universities and research institutions are involved directly or as partners. Essentially, this R&D expenditure by developing country firms in developed economies further deepens the advantage these institutions have. ASCM disciplines, thus, can often indirectly help revenue generation and services exports from developed country R&D eco-systems. However, some of this is changing due to the development of global capability centres (GCC) in developing countries like India (Banerjee. P et al, 2025).

By privileging fundamental research over commercial product development and innovation, the carve-out for R&D included in ASCM is not fit for purpose for the bulk of shop-floor level product customisation, quality improvement and innovation that are typically more common and useful for developing country settings.[18] ASCM limits support for R&D expenditure on applied industrial research, and product development and improvement to 75 per cent and 50 per cent of expenditure respectively, while completely excluding routine or periodic alterations to existing products, production lines, manufacturing processes, services and other on-going operations even though those alterations may represent improvements.

The other carve-out for industrial policy related measures in ASCM relates to the development of backward regions.[19] This is, again, not fit for purpose for industrial policy seeking to help develop scale and competitiveness. Such industrial policies will more often than not focus on regions that have already achieved some level of industrial eco-system development and build on it. Projects in such already developed areas will benefit from scale-economies, network effects and existing supply chain infrastructure and services. Not surprisingly, projects in such already developed areas are also typically considered more commercially viable, thus ensuring that the return on every dollar spent on government support is higher than for projects in less developed regions.[20] The whole concept of the incremental growth of industrial clusters is based on these fundamentals.

[18] Footnotes to Article 8.2 of ASCM
[19] Article 8.2 (b) of the ASCM
[20] This not to say that programmes for the development of backward regions are unimportant in the overall scheme of development, or that there would not be examples where industrial policy has been successful in such regions and have given good returns for the government support provided. We are simply underlining the fact that most successful industrial policies build up on existing clusters.

Exceptions have also been made in the ASCM for government support for green transition, i.e., adapting to new environmental requirements. This is indeed a useful carve-out and can be leveraged by developing countries. However, limitations imposed by TRIMS and TRIPS, discussed below, will impede effective technology transfers from developed country firms to developing country entities. Having discussed the limiting features of the ASCM from a developing country perspective, let us examine to what extent the ASCM provides some effective relief to developing countries through S&DT provisions for developing countries.

Special and Differential Treatment in ASCM: Neither Here nor There

The only ASCM related special and differential provisions available to developing countries today are de-minimis thresholds that apply to actionable subsidies. Article 27.10 of the agreement limits any investigation and countervailing action on subsidies if it is clearly determined that the total value of subsidy contribution accounts for 2 per cent or less than the total per unit value of the product (for developed countries, it is limited at 1 per cent). This is called the de-minimis threshold. In other words, a very marginal extent of subsidy is allowed. Article 27.10 also limits any investigation and countervailing action in instances where the share of such subsidised products is 4 per cent or less of total imports of the like product. Essentially, it puts limitations on countervailing actions by developing countries if the volume of imports of subsidised products is low.

These special and differential provisions are completely inadequate for any meaningful industrial policy design that uses policy tools that are actionable under the ASCM. For example, the de-minimis threshold is not just extremely low, the difference in the threshold between developed and developing countries is also very marginal.

Making ASCM fit for purpose

Developing countries need to push for relief from the limiting provisions of the ASCM so that they can pursue their legitimate objective of industrial growth. However, such relief from these limiting provisions cannot be extended for all countries, neither can they be in perpetuity. If relief is provided for all countries, developed nations will use their deeper pockets to further entrench their dominance and deny developing countries any chance to achieve greater prosperity and attain a bigger share of the gains from global growth. Any proposal needs to consider the challenge of monitoring non-market economies abusing and violating the system and find ways to hold such economies accountable to global rules. This is an urgent need given that developed countries have aggressively resorted to industrial policies that are often inconsistent with ASCM principles[21] as their dominant firms face a rising challenge, especially from Chinese firms across industrial sectors, and in important, technologically sophisticated sectors in particular.

The Africa group has so far presented the most comprehensive submission from a developing country perspective to the WTO (WT/GC/W/880). The African Group advocates a

[21] Programmes like the Inflation Reduction Act (IRA) or CHIPS Act, and sector specific programmes related to semi-conductors by EU member states are just some examples.

restructuring of the ASCM to grant developing countries more policy flexibility in fostering industrialisation and confronting global issues such as climate change. Key proposals include urging a reconsideration of special and differential treatment provisions outlined in Article 27 of the ASCM, which have lapsed, to better support economic development in developing countries. Specific reforms suggested include the reinstatement of non-actionable subsidies, revising restrictions on local content requirements and adjusting criteria governing actionable subsidies.

The proposed solutions include the following:

1. Reinstating Article 8 of the ASCM, which would empower these nations to provide subsidies for industrial growth, technological innovation and eco-friendly practices to combat climate change.
2. Revising Article 27 of the ASCM that seeks to grant developing countries greater flexibility and special treatment.
3. Expanding subsidy flexibility under the ASCM that could enable subsidies for regional economic growth, technology research and sustainable industrial practices, including measures to alleviate high transport costs
4. Establishing clear criteria and procedures for flexibility aims to ensure resilient and sustainable development outcomes
5. Balancing trade rules to allow for developmental policy measures while maintaining predictability, which is vital to address global challenges like climate change and fostering economic development.

While all of these are constructive policy suggestions, this paper provides simpler and more specific recommendations in the concluding Section X of this paper.

5.3 Trade-Related Investment Measures (TRIMs)

The fundamental argument behind having TRIMS as one of the WTO agreements is that conditionalities on investors that limit their right to import and use foreign products freely in their business operations is a violation of the WTO member states GATT obligations related to national treatment (Article III of GATT) and elimination of quantitative restrictions (GATT Article XI). The agreement on TRIMS, therefore, requires WTO member states to not put in place measures that are inconsistent with the obligation of national treatment provided for in paragraph 4 of Article III of GATT 1994 and the obligation of general elimination of quantitative restrictions provided for in paragraph 1 of Article XI of GATT 1994. Table 3 below lists the kind of measures proscribed by TRIMS.

Table 3: Illustrative list of proscribed TRIMS

TRIMS Agreement Provision	Provision pertains to	Example of measure	Measure violates
Para 1 (a)	Local content requirements	The purchase or use by an enterprise of products of domestic origin or from any domestic source	Internal measure in violation of GATT art. III (national treatment)
Para 1 (b)	Trade Balancing requirements	An enterprise's purchase or use of imported products is limited to an amount related to the volume or value of local products that it exports	Internal measure in violation of GATT art. III (national treatment)
Para 2 (a)	Import Restrictions	General import restrictions related to product used in local production	Border measure in violation of GATT art. XI (quantitative restrictions)
Para 2 (a)	Trade Balancing requirements	Import restrictions related to the volume or value of local production that an enterprise exports	Border measure in violation of GATT art. XI (quantitative restrictions)
Para. 2(b)	Foreign exchange balancing requirements	Measures that restrict an enterprise's access to foreign exchange for imports to an amount related to the foreign exchange inflows attributable to the enterprise	Border measure in violation of GATT art. XI (quantitative restrictions)
Para. 2(c)	Domestic sales requirements	The exportation of products is restricted in terms of particular products, volume or value of products, or volume or value of local production	Border measure in violation of GATT art. XI (quantitative restrictions)

Source: Taken from UNCTAD (2007)

While this might sound benign and innocuous, countries (and regional governments) have historically applied such performance requirements as a policy instrument to optimise returns from investment and promote industrial development. A casual look at the investment promotion playbooks of European and East Asian economies from the 1960s right up to the time of the Uruguay round would confirm the widespread use of measures requiring the use of local content, which ensure that foreign investors procure a significant share of their intermediate inputs from domestic sources. Since such local content requirements incentivise partnerships with local suppliers, they lead to significant technology spillovers and skill development, allowing developing countries firms to move up the value chain. The dependence

on a local supplier base as opposed to imports also helps create additional jobs and helps develop a range of ancillary industries.

Such measures, if well designed and implemented well, would significantly improve the multiplier effect of investment in terms of job creation and value-addition. Kumar (2003) has argued that well-conceived performance requirements that have clear objectives and are effectively enforced are not only able to meet the objectives but may also bring significant favourable externalities to the host countries. The kind of investment measures proscribed by TRIMS are the ones that were strongly recommended and pushed by development economists all through the first four decades after World War II. It, therefore, comes as no surprise that many countries have used these performance requirements as a tool to maximise the benefits from foreign direct investment (FDI).[22] Governments of both developing and developed countries took recourse to performance requirements to counteract the trade distorting practices of dominant MNCs and to promote economic development and growth. These were particularly common in the automotive, chemical and petrochemical, and computer and informatics sectors.[23]

Developing nations often rely on Trade Related Investment Measures (TRIMs), such as local content requirements and export performance measures, to attract foreign investment while ensuring it aligns with their developmental goals. These measures help build domestic capacity, create jobs and foster linkages between foreign investors and local industries. However, the TRIMs Agreement restricts such policies, limiting developing countries' ability to use investment measures as tools of economic growth. Rodrik (2008) argue that these restrictions disproportionately affect developing nations, which lack the infrastructure and competitive industries to integrate into global markets without protective measures. Similarly, Wade (2003) highlights how rigid TRIMs rules undermine industrial policy flexibility, hindering the ability of developing countries to nurture infant industries and achieve sustainable development.

TRIMS was pushed by developed countries like the US, the EU and Japan during the Uruguay round against strong opposition from developing countries. One could argue that these developed countries were largely batting for their MNCs and not for their regional and local governments, many of whom share the same interests and concerns in being able to leverage investment as a tool to maximise local development. This, in itself, is ironic from a political-economic perspective and goes to the root of the problem of special interest groups being able to push their interests in international rule making at the expense of both developed and developing country developmental needs.

[22] UNCTAD (2007) Elimination of TRIMS: The Experience of Selected Developing Countries.
[23] UNCTC (1991) The Impact of Trade-related Investment Measures on Trade and Development

5.3.1 Reviewing TRIMS in Light of Lack of Substantive Special and Differential Treatment in TRIMS

There are currently no substantive SDT provisions available under TRIMS for developing countries. Provisions related to transition periods have been exhausted. Developing country members are allowed to temporarily deviate from TRIMS obligations to meet balance of payment-related challenges.[24]

Hence, there is a pressing need for a review of the flexibilities under the TRIMs Agreement to enhance special and differential treatment, ensuring these provisions align more with the developmental and industrialisation policies of developing countries. Developing countries have submitted proposals for reform of the TRIMs Agreement, the most recent and detailed being the submission by the Africa Group.[25] Specific policy recommendations include adapting TRIM rules to allow more policy space for strategic development initiatives that support domestic and regional capacities, industrial diversification and technological advancement.

Enhancing resilience in supply chains is crucial, especially in light of global crises, to bolster industrialisation and economic growth in developing countries. Promoting local production and technology transfer initiatives is vital for enhancing industrial capabilities and contributing to sustainable development goals. By implementing these recommendations, developing countries can create an enabling environment for industrialisation, promote sustainable development and effectively leverage TRIMs to support economic growth and structural transformation. We shall take up some key recommendations related to TRIMS in the concluding section of this paper.

Kumar N (2003)[26] contrasts the difference in the approach of using performance requirements (PRs) between developed and developing countries. Developed countries often use PRs to address concerns related to socio-economic and sustainability concerns such as income distribution, public health or labour rights. For example, the European Union's regulations on acceptable vehicle emission levels act as performance requirements to protect the environment and public health. On the other hand, developing countries typically use PRs to attract investment, promote technology transfer, and build local capabilities, such as through tax incentives for companies that set up production facilities. Kumar underlines that PR requirements continue to be valuable development tools, especially for less industrialised nations and recommends flexibilities under the TRIMs Agreement that provides longer transition periods or exemptions to developing countries based on their relatively low levels of industrialisation.

[24] TRIMS Article 4
[25] WT/GC/W/880
[26] United Nations Conference on Trade and Development (2003) (Chapter IV)

6. Conclusion and Policy Suggestion

The preamble of GATT 1947 clearly states that the founding members of the GATT recognise that the primary objective of the rules-based trading system, i.e., the GATT, is 'that their (GATT members') relations in the field of trade and economic endeavour should be conducted with a view to raising standards of living, ensuring full employment and a large and steadily growing volume of real income and effective demand". The preamble to the Marrakesh Agreement establishing the WTO in 1994 further expands on this objective to include "the need for positive efforts designed to ensure that developing countries, especially the least developed among them, secure a share in the growth in international trade commensurate with the needs of their economic development".

Thus, the founding documents of GATT and WTO both acknowledge that a fundamental principle of the rules-based global trading system is to ensure free and fair trade that leads to equitable outcomes. Equitable is not the same as equality. It is well understood that some countries will do better than others due to historical advantages, natural endowments or implementing the right sets of policies. Equitable refers to the absence of unfairness and imbalance, where gains are not cornered by the few at the expense of the many.

Our discussion in Sections 1, 2, and 3 emphasises that even after 30 years since the formation of the WTO, the global situation in terms of both trade and overall developmental outcomes is very far from this vision of equitability. While industrialised countries have mostly held on to their dominance, especially in technology-intensive industries, a very significant amount of the incremental gains from the expansion of global trade have been captured by just one WTO member state – China. As we have discussed in Section 4.2, the non-market nature of the Chinese state allowed it to by-pass WTO disciplines that restricted the policy space for industrial policy for other developed and developing countries. While other developing market economies, including large countries like India, Indonesia and Brazil, have been much less successful in leveraging trade for poverty elimination and employment generation in a relative sense, their adherence to WTO rules has often limited their ability to implement the kind of strategic industrial policies that fuelled China's economic transformation.

This is an important nuance. Many economists would argue that in absolute terms, most developing countries are better off today than 30 years ago. While being factually correct, this assertion ignores the inherent ever-widening gap between a handful of economies that dominate global value-chains, global exports and global manufacturing, and the rest. This has implications for the ability to generate jobs for a majority of the world's youth who happen to be citizens of precisely those countries with relatively very insignificant shares of global exports and manufacturing output. Besides the obvious socio-economic impact arising from sub-optimal numbers of job creation that meets the aspirations of the majority of the world's youth, it will also impede successful transitions to a more sustainable means of production and the adoption of sustainable means of consumption.

While this imbalance has been acknowledged by senior policymakers in multilateral institutions, no concrete solutions are forthcoming from within such institutions.[27] Instead, the rise of China and the hollowing out of moderately well-paid jobs[28] in western industrialised countries (especially the US) due to deindustrialisation has now led to a return to industrial policy at a large scale in the EU, the US, and Japan.

The vast majority of developing countries are now being squeezed by the twin pressures of continued trade distortion by Chinese industrial policies, which exacerbates existing levels of concentration due massive overcapacities in the Chinese industrial eco-system, and the return of aggressive industrial policy in industrialised economies.

It can be argued that the full range of trade remedies are available to all developing countries to prevent or manage the fallout of trade distortive measures by China or industrial policies in industrialised nations that are inconsistent under WTO rules. This argument misses out on three very important aspects of great pertinence to this discussion. First, pursuing trade remedies is a detailed and time-consuming process, and is often resource intensive.[29] As was indicated in section 4.2, doing so with regard to trade distorting actions in non-market economies is even more complicated. A case-by-case approach that is unfettered by robust requirements for transparency and accountability to legislatures and citizens provides a significant degree of discretion in such systems. An illustrative list of such micro-level case-by-case interventions are provided in Table A2 of the Annex. Even well-resourced and funded developed country agencies have found pursuit of information related to subsidies challenging and resource intensive.[30] It stands to reason that this would be even more difficult for developing country agencies that typically have much lesser resources (Illy. O. ,2012).

Second, relative economic power renders remedial action by developing countries less effective since developing countries share in the export basket of a wealthier and larger economy that is a dominant player in global trade would tend to be relatively low. This means that the imposition of CVD will have a relatively minor impact on the overall exports and sectoral performance of the wealthier and larger economies. On the other hand, the share of such wealthier, larger and dominant players on global trade in the export basket of developing countries tends to be quite high. This means that CVD imposed by these powerful economies

[27] As examples, please refer to the blog by IMF Deputy Managing Director, Dr. Gita Gopinath, available at https://www.imf.org/en/Blogs/Articles/2019/07/17/blog071719esr-rebalancing-the-global-economy, and comments by WTO Deputy-Director General Johanna Hill available at https://www.wto.org/english/news_e/news24_e/ddgjh_09oct24_e.htm

[28] This refers to largely jobs that were directly or indirectly related to manufacturing. These were better paying than more lower end service-related occupations, but less remunerative compared to highly skilled occupations in technology, finance or professional services related occupations. A detailed discussion can be found in Autor and Dorn (2013)

[29] For a detailed discussion of the complexities in identifying and calculating industrial subsidies, please refer to OECD (2023) Government Support in Industrial Sectors: A Synthesis Report, OECD Trade Policy Paper No. 270

[30] Brown and Hillman (2019) WTO'ing a Resolution to the China Subsidy Problem, Peterson Institute for International Economics, Working Paper No. 19-17, and Chad P. Bown and Soumaya Keynes, 'US Trade Policy before Trump, with Ambassador Michael Froman', Trade Talks podcast episode 93 (July 19, 2019).

will have a significant impact on sectoral exports and, overall, on the industry of the developing country.

Thus, developed economies or dominant players can ignore the imposition of CVD by a developing country whose share in sectoral exports might be no more than 2 or 3 per cent at most. In fact, a 2 or 3 per cent share would be attributable to very large developing countries in most cases. Table A3 in the Annex tabulates the number of sectors where India and Brazil, two of the largest developing economies, have 3 per cent plus share. We see that there are only 15 sectors where either of these 2 economies have a share greater than 3 per cent.
On the other hand, economies like EU, US and China have several sectors where their share is more than 3%. It needs to be noted that most countries have legal provisions that allow the imposition of CVD based on preliminary findings. The economic justification for this is that if trade distortions due to subsidies of the exporting country is not addressed pro-actively, injury to domestic industry will continue and might lead to permanent incapacitation.

While aggrieved exporters from the subsidising countries have the right to appeal to courts to challenge a CVD if they consider it to be unjustified, three points need to be recognised in this context:

- The relative ability of managing complex legal procedures in a foreign country and the costs associated means that relatively smaller firms in developing countries are unlikely to have the resources to pursue such legal means of redress.
- Legal procedure for redress in most legal systems typically involves a writ petition to a higher court to review the decision made by a lower court or statutory body, which means potentially even higher costs and complexity. Large MNCs that mostly originate from dominant countries have highly developed legal teams and dedicated public affairs divisions to manage such issues. This is not true for most firms (even larger firms) in developing countries.[31]
- Non-market economies are unlikely to have transparent legal systems where exporters from subsidising countries can seek legal recourse.

Third and most importantly, trade remedies will only address injury to domestic industry through imports to prevent further decline in their share of manufacturing output and export or help protect their existing export market shares in other countries. It will not address the challenge of providing developing countries the abilities to push for substantive improvements to their competitiveness and expand their manufacturing sectors to increase both their share of global output and exports. Thus, trade remedies are no panacea to address long-standing structural inequities in the global trading system where one set of rules allowed a few countries to become dominant players, and then the rules of the game were changed in a manner that prevented others from using the same tools to push their economies forward (Chang, H-J,

[31] The first author served as the Head, Public Policy, for a global MNC and was responsible for South Asian countries in that capacity. He has had first-hand experience of this wide gulf between Fortune 2000 firms and even larger developing country firms in their relative abilities to deal with legal and policy complexities in other countries.

2002).

The Evolution of Developed Country Responses to Two Decades of Trade Distortion by China

Developed industrial countries did not face a serious challenge to their dominance of manufacturing sectors, especially the technology intensive components of it that mattered to their firms and policymakers till after the financial crisis of 2008. The initial rise of China was largely confined to labour-intensive sectors (for example apparel, toys or footwear), or labour-intensive aspects of GVCs in sophisticated sectors associated with final assembly (electronics and engineering). While unfair practices by China ensured that other developing countries, including large economies like India, Indonesia or Brazil, were pre-emptively shut off from having a fair chance of developing these export sectors and leveraging the gains from trade, this had a minimal impact on developed countries.

Most of these labour-intensive activities had already been offshored from these economies to East and SE Asia and, starting in the 1990s, to China. It mattered little to the developed world where they imported these products from. What mattered was that their consumers got the cheapest deal possible. In fact, many mainstream economists argued that Chinese subsidies were essentially beneficial for the global economy since it subsidised consumption in the rest of the world and helped control inflation.[32] Such an analysis underplays the fact that China was cornering a disproportionate share of the pie through such subsidisation, and ensuring their move away from developing countries, especially SE Asian nations, prematurely before they could attain economies of scale that allowed successful transition to industrial activities up the value chain.

This relative apathy to Chinese state-led distortion started to change after the global financial crisis of 2008. By this time, the absolute impact of the so-called 'China Shock' started to be felt in much of the United States as well as Europe.[33] This was also the time that the Chinese state started to pro-actively target high-tech industries and parts of the GVC that the firms and governments in the industrialised economies considered of strategic importance and critical to their continued dominance of the global economy. The initiation of the Trans-Pacific Partnership (TPP) discussions around 2008 and President Obama's so called 'Pivot to Asia' were initial responses fuelled by this increasing need to counter Chinese competition. The Chinese buying spree of tech-intensive mid-size and even some large firms, especially in Europe with the goal of technology acquisition, also created a sense of alarm (Hanemann and

[32] Examples include Jaravel, X and E Sager (2019), 'What are the Price Effects of Trade? Evidence from the U.S. and Implications for Quantitative Trade Models', CEPR Discussion Paper No. 13902 and Bai, Liang and Sebastian Stumpner. 2019, "Estimating US Consumer Gains from Chinese Imports." American Economic Review: Insights, 1 (2): 209–24.

[33] The China shock refers to the loss of manufacturing jobs due to increased Chinese competition in developed economies. For example, Caliendo et al. (2019) 'Trade and Labor Market Dynamics: General Equilibrium Analysis of the China Trade Shock', Econometrica, 87(3), find that the China trade shock resulted in a reduction of about 0.55 million US manufacturing jobs, about 16 per cent of the observed decline in manufacturing employment from 2000 to 2007

Huotari ,2016). A major breaking point came with the Chinese acquisition of Kuka, the German company that was seen as the leader in industrial robotics (Kygne, J ,2016).

By the mid-2010s, the trade conflict between China and rest of the industrialised world was out in the open. An important nuance that is often missed is that the US policy of blocking nominees to the WTO Dispute Settlement Appellate body started under President Obama.[34] This policy was continued under President Trump's first administration and under President Biden. It is precisely the undermining of the WTO Dispute Settlement system that enabled industrialised economies to adopt aggressive industrial policies without having to formally contend with the full ire of the rules-based system they had been at the forefront of setting up.

In a way, the undermined WTO dispute settlement system levelled the playing field between China, whose opaque systems could not anyway be made fully accountable to WTO, and the other large dominant economies, whose democratic, market-oriented systems made them vulnerable to accountability within a rules-based system. With the system itself becoming essentially non-functional, they could also 'get away' with their version of distortion. There is need for policymakers to understand the sequence of a combination of events starting from around 2008-09 in industrialised economies. These include the following:

- The undermining of the WTO dispute settlement system
- The change in intellectual positioning from aggressive championing of free trade to more nuanced approaches, acknowledging the need for industrial policy and holding non-market economies accountable in well-known think-tanks and multilateral institutions such as Brookings, Mercatus Centre, OECD, and World Bank among others
- The initiation of 'environment focused' subsidy programmes and border measures (including discriminatory taxes) such as the Carbon Border Adjustment Measures that can be justified under WTO rules using the 'sustainability and environmental' exceptions
- Launch of comprehensive industrial policies in the US, the EU, and Japan in this period
- Trade protectionism measures initiated under President Trump's first administration, left largely undisturbed under Biden, and now given fresh impetus under Trump's second administration. It needs to be noted that even the EU has initiated some protectionist measures vis-à-vis China, for example for electric vehicles (EVs).

The shock to global supply chains due to the global pandemic brought a sense of urgency to global MNCs that had been less convinced than their governments about the dangers of over-concentration of production in China. The clear danger of putting most of their eggs in one basket became clear. While President Trump's tariffs in his first administration led to shifting of some production out of China to Vietnam and Mexico (Freund et al., 2023), the pandemic brought general consensus that led to the development of what has popularly been called the

[34] Please see Charnovitz, Steve (2016), 'The Obama Administration's Attack on Appellate Body Independence Shows The Need for Reforms', International Economic Law and Policy Blog available at https://worldtradelaw.typepad.com/ielpblog/2016/09/the-obama-administrations-attack-on-appellate-body-independence-shows-the-need-for-reforms-.html

'China plus one' strategy and its integration into both government policies using a range of incentives and the corporate policies of large MNCs.

The Policy Framework to Address Global Imbalance: The Developed Country Systemic Solution

While developed countries were contending individually with their national level responses to the rise of China, a need was felt for a co-ordinated systemic response that would amend global trade rules to make these more effective in dealing with the challenge arising from China and its non-market system. The leaders of the United States, the EU and Japan decided to come together for a joint response to China's unfair trading practices and the shortcomings of existing WTO rules to effectively address these issues, especially the issue of industrial subsidies.

The trade minsters of these three economies came together in December 2017 and announced a programme of trilateral co-operation. The US representative in these discussions was Robert Lighthizer, who has been a consistent critic of the WTO system's ability to manage the process of integration of a large non-market economy like China and is credited with being one of the key architects of US trade policy under President Trump.[35] The three parties later formalised the grouping to focus primarily on "non-market-oriented policies and practices that lead to severe overcapacity". The programme of reforms developed by this trilateral group represents the substance of the developed country response to the crisis arising out of the 'China Shock". We summarise the salient points of this programme.[36]

- Make substantive changes to ASCM to ensure that the agreement can effectively hold accountable trade-distorting subsidies that have slipped through the cracks of international trade rules. Specifically, expand the list of prohibited subsidies beyond those that are directly or indirectly linked to export performance and those contingent upon the use of domestic inputs.

  The suggested additions to the list of prohibited subsidies include programmes that are
  a. Unlimited guarantees
  b. Support ailing or sick industries without a timebound and effective restructuring plan that ensures sustained overcapacity
  c. Subsidies to firms that cannot obtain financing from independent commercial sources that are operating in sectors or industries with known overcapacity.
- The trilateral group has also proposed imposing CVD on actionable subsidies. The current rules require that a WTO member must show that a foreign subsidy has harmed or threatens to harm its interests for CVD to be imposed. The trilateral group proposal reverses the burden of proof for certain types of subsidies. These types of subsidies include the following:

[35] Robert Lighthizer's book' No Trade Is Free: Changing Course, Taking on China, and Helping America's Workers', 2023, Broadside Books, provides insights on the economic and political thinking behind trade policy positions taken by the first Trump administration, as well as the initiatives being taken in the second Trump administration since January 2025.

[36] We draw heavily from 'Trade Trilateral Targets China's Industrial Subsidies', January 22, 2020, Centre for Strategic and International Studies (CSIS) for this sub-section

a. Excessively large subsidies
b. Subsidies to uncompetitive firms
c. Subsidies that create overcapacity without commercial participation
d. Subsidies that lower domestic input prices for exports

- In all instances where a subsidy has not been notified by a WTO member as is required under WTO rules, but is counter-notified by a WTO member state, such subsidies will be considered to be prohibited by default and allow trade remedies by affected member states accordingly. This is an interesting proposition. A key challenge with non-market economies is that much of the government support is under the radar. This modification would allow a WTO member that investigates and establishes the existence of government support that was not reported to WTO to impose CVD with minimum procedural requirements.
- Another proposal relates to the use of base prices to establish the presence and extent of trade distorting support and, therefore, the CVD rate. Specifically, the ASCM would be amended to allow WTO members reject the home market price of the subsidised product where non-market economies are involved. Instead, affected member states would be allowed to construct a price to establish the extent of CVD.
- Two other areas of discussions in the trilateral group were related to the issue of forced technology transfer and remedies associated with that, and the definition of a 'public body' under ASCM.
- The latter is especially important since the 'commanding heights' of finance and overall political control exercised by the Chinese state allows them to direct or informally 'nudge' private firms within China to provide below market price inputs to downstream firms, extend credit at below market rates or provide other forms of support that would qualify as a subsidy. Thus, developing a broader definition of a 'public body' is essential to meet the challenge posed by a non-market system like China

While several of these proposals would also be of interest to developing countries when it comes to strengthening the disciplines to control the abuse of the system by non-market economies, it fails to address the issue of extending flexibilities to developing countries that have been left behind and are facing grave inequities in the global economy. In fact, several of the proposals, if accepted without any flexibilities for such developing countries, would further limit their ability to provide meaningful support to their firms and propel their growth and employment generation abilities.

The other problems are definitional. There are currently no agreed upon criteria on what constitutes overcapacity in a sector, the meaning of a large subsidy (should it be absolute or relative and, if relative, then to what – a global yardstick or one that considers national contexts?) or how a firm is to be judged as being uncompetitive. Establishing whether commercial transactions were carried out in market terms or represent hidden subsidisation can also be complicated. While legal precedence for many of these issues exist within case laws and investigations of national courts or statutory bodies, there is no globally agreed consensus. This does not mean that serious attempts to reform ASCM and TRIMs in a manner that makes them more effective against abuse by non-market economies should not be pursued. But

genuine reform can only happen if developing country democracies are equally on-board that reform agenda and it is not restricted to the 'trilateral'. Times have changed since the Uruguay round. A handful of developed countries are unlikely to be successful in pushing through a narrow agenda that reflects their interests while ignoring the needs of large developing countries. Such a comprehensive agenda for reform must include two equally important aspects. One aspect is focusing on institutional reforms of the ASCM and TRIMS. The other aspect is focusing on extending genuine special and differential treatment to developing countries with flexibilities that allow for the implementation of industrial policies that help these economies expand their manufacturing and their stake in the global markets.

The Way forward: A Positive Agenda for Developing Countries for Industrial Policy

There is an emerging consensus that the current levels of concentration of manufacturing activity and exports are unsustainable. Both the G7 countries represented by the trilateral group, and developing countries, as represented by the submissions to the WTO by the Africa Group and others, have articulated these concerns. While the trilateral group has clearly identified abuse of global rules by China as the main reason for such global imbalance, for the rest of the developing world, there is a much wider menu of concerns.

As underlined earlier, developing countries that have largely open and rules-based systems, are subject to strict restrictions on the conduct of their industrial policy due to the global rules that emerged out of the Uruguay round. Both the ASCM and TRIMS prohibit or restrict the use of policy tools that, if properly wielded, would ensure development of local industrial eco-systems that can be globally competitive and create a pathway to middle-class jobs essential for these countries to reduce the development and wealth gap between them and the developed world.

As discussed previously, developed countries and the manufacturing powerhouses of East Asia that used industrialisation and exports to move a majority of their populations out of poverty through the 1970s and 1980s had full access to the use of these tools in their developmental stage. Restoring the same rights with checks and balances can only unleash the same forces of competitiveness and globalisation seen in the last two decades of the twentieth century that played such a major role in reducing global poverty.

As a matter of fact, such flexibilities would also be in the interests of developed countries. Reducing concentration of global manufacturing in a few countries and spreading it across geographies is in the interest of developed countries as well. As opportunities from global manufacturing spreads, a rising middle-class in these countries will become an important market for the products and services from developed countries. Unlike non-market eco-systems, a rising middle-class in more open, transparent developing economies would allow developed economy firms to genuinely participate in their markets. Most importantly, addressing the aspirations of the populations in these developing countries will address the immigration crisis that is fuelled as much by economic disparity as it is by geopolitical unrest.

Developed countries will have to consider the interests of large developing market economies such as India, Indonesia, Vietnam, Brazil, South Africa, Egypt, Nigeria and others as important partners in this process of re-calibration of rules and institutions. The largest concentrations of populations that are still below middle-class aspirational levels of income are to be found in these countries. They also represent the bulk of the world's youth – i.e., future consumers of the global economy in absolute numbers. The ability to successfully navigate the green transition would also need these countries to balance income inequities and meet the aspirations of their citizens. Otherwise, no such programme would be politically sustainable.

It needs to be pointed out that the set of recommendations that follow is not a rejection of a rules-based system, or indeed most of the principles that emerged out of the Uruguay round. They are only suggesting a fair application of these rules and principles that are in sync with the wider objective of both the GATT and the founding principles of the WTO as represented by the Marrakesh declaration. These recommendations are also congruous with many of the objectives outlined in trilateral discussions.

We provide an outline for such reforms, including proposed criteria to qualify for special and differential treatment, as well as for specific flexibilities that could be extended to developing or LDC member states. Our recommendation is that these proposed flexibilities should extend to both ASCM and TRIMS, allowing member states to deviate from ASCM and TRIMS obligations.

1. Development of objective criteria for special and differential treatment: The starting point for such criteria must be the recognition of the fact that concentration of economic activity in a few geographies is not sustainable from a developmental perspective or commitment by parties to a rules-based system. A rules-based system that denies the aspirations of a large group of countries will eventually degenerate. The criteria for SDT could include an absolute criterion based on income inequities and the criticality of transition out of poverty in absolute terms, i.e., number of people whose developmental aspirations need to be addressed in the WTO member state in question.[37]
    a. Per capita income is below one-fourth of the high-income average[38] in nominal terms or
    b. More than 50 per cent of the population lives below USD 6.85 per person per day, which is the World Bank's defined poverty line in upper-middle income economies.

2. In addition, to this absolute criterion for qualification for SDT, flexibilities for industrial policies will also be subject to sector specific criteria. Government support that directly or indirectly targets a particular sector would only be allowed if the subsidising WTO member state's global share of manufacturing capacity in that HS heading is:

[37] Such per capita based criteria have precedence in ASCM the form of the Annex VII, where developing countries with relatively low per capital GNI (India among them) were given extended application of Special and Differential Treatment

[38] Average nominal GDP per capita (current) for countries categorised as high-income as available in the World Development Indicators Database, which for the latest available data (2023) is USD 48752. One-fourth of that will be roughly USD 12188.

a. Less than or equal to 1.2 times its share of global GDP in nominal terms, and
b. Share in global exports is also less than 3 per cent or 1.2 times its share of global GDP, whichever is higher.[39]

3. Flexibility will be allowed for a maximum of three years from the time a WTO member state breaches the sectoral shares mentioned above.[40]

4. Other WTO developing and LDC members will be provided further assurance for concerns related to potential injury to their domestic industries through the use of safeguards against import surges from WTO member states enjoying flexibilities by allowing them to impose safeguards in the face of import surges without having to show domestic injury. Departing from existing principles in the Agreement on Safeguards, WTO member states should be allowed to impose safeguard duties on non-MFN basis, i.e., limited to imports from the subsidising member state(s). But the imposition of such safeguards would be strictly temporary, and subject to other objective criteria such as the minimum quantum of import surge. Such objective criteria could be refined on the basis of discussions between WTO member states.

5. During the period for which flexibilities will be allowed, there must be understanding on the part of dominant economies that transitions will always lead to some level of injury to dominant players. In other words, dominant economies and dominant players in individual sectors will be impacted by the proactive industrial policy of 'late industrialisers' as they pursue economic opportunities from industrial expansion. This would mean that dominant players will be subject to very strict and stringent criteria as to what would constitute injury for their industries.

6. The flexibilities discussed above should be operational for a maximum of 15 years for developing countries and 25 years for LDCs. After these transition periods, global rules should return to what is the current status-quo.

A combination of the reforms proposed by the trilateral group that holds non-market economies accountable and the flexibilities for developing countries and LDCs based on the recommendations above can effectively address the challenges confronting both developed and developing countries due to the over-concentration of manufacturing. While the trilateral proposal has some definitional and other challenges, these proposals can be further improved upon to address these concerns.

[39] Such types of sectoral performance criteria have precedence in ASCM; for example, Article 27.6 considers export competitiveness in a product to exist if a developing country member's exports of that product have reached a share of at least 3.25 per cent in the world trade of that product for two consecutive calendar years.
[40] Points 2 and 3 focus on the need for full relaxation of the definition of serious prejudice as defined in Article 6, Para 3(d) of the ASCM, up to a certain point. That is, accept that developing countries and LDCs should be allowed to use industrial policy tools with no restrictions to increase their share in global exports and output up to a point, and in a manner that is consistent with meeting the overall goals of equitable development and reducing over-concentration of any sector of manufacturing in a very few economies.

Accepting the principles of SDT and flexibilities that allow policy space for industrial policy for developing countries would also bring back equitable development to the centre of the debate on how to reform the global trading system. A free and fair-trading system that optimises the location of economic activity and allows the efficient operation of GVCs is in the interest of every democratic, market economy. The longer-term goal of shared global prosperity built upon a rules-based system respected by all participants can only be achieved if all market economies, whether developed or developing, come to a working compromise that addresses the concerns of both sides. Market economy member states of the WTO have an opportunity to hit the reset button and work together towards the objectives set out in its foundational documents.

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Annex 1

Table A1: Sector-wise Comparison of China with India, Brazil, and Indonesia across 65 Sectors

S.NO	ISIC Class	Sector	2025						
			Production USD billion		China x times bigger producer		China x times bigger producer		China x times bigger producer
			China + HK	India		Brazil		Indonesia	
1	13	Textiles	719	67	**10.7**	23.83	**30.2**	17.99	**40.0**
2	2100	Pharmaceuticals	768	75	**10.1**	37.80	**20.3**	9.32	**82.4**
3	2410	Iron and Steel	1297.7	215.5	6.02	74.73	**17.4**	30.80	**42.1**
4	2030	Synthetic Fibre	201.3	14.7	**13.72**	1.24	**162.8**	0.50	**399.7**
5	2630	Communication Equipment	581.8	23.2	25.1	20.17	**28.8**	N.A.	N.A.
6	2640	Consumer Electronics	200.4	3.9	**52.04**	7.28	**27.5**	3.60	**55.7**
7	2432	Non-Ferrous Metals	1242	65	19	43.03	**28.9**	22.84	**54.4**
8	3100	Furniture	135	5	**26**	12.79	**10.6**	2.71	**49.7**
9	2310	Glass and Glassware	175	5.6	**31**	7.44	**23.5**	2.56	**68.3**
10	2011	Basic Chemicals	624	55	11	14.34	**43.5**	40.72	**15.3**
11	2012	Fertilisers	280	29	9.4	39.47	7.1	5.82	**48.1**
12	2811	Engines and Turbines	123.9	6.4	**19.5**	1.91	**64.7**	3.15	**39.4**
13	2821	Agricultural Machinery	126.2	9.8	**12.8**	23.74	5.3	0.31	**407.6**
14	2822	Machine Tools	91	3.1	29	3.37	**27.0**	0.83	**110.1**
15	2824	Mining and Construction Machinery	156.8	8	**19.5**	10.57	**14.8**	0.81	**193.5**
16	1410	Wearing Apparel	263.0	19.8	**13.3**	18.21	**14.4**	18.51	**14.2**
17	2220	Plastic products	589.2	53.3	**11.1**	46.46	**12.7**	8.79	**67.0**
18	2610	Electric components & boards	895.3	3.6	**250.8**	2.05	**436.7**	8.24	**108.7**
19	2620	Computers and peripheral equipment	586.4	4.1	**141.6**	12.57	**46.7**	N.A.	N.A.
20	2710	Electric motors & electricity distribution	965.9	18.6	**51.79**	15.49	**62.4**	1.49	**646.1**
21	2720	Batteries & accumulators	285.7	6.8	**42.20**	2.61	**109.5**	4.50	**63.4**
22	273	Wiring & wiring devices	605.8	17.6	**34.44**	19.02	**31.9**	4.02	**150.8**
23	2740	Electric lighting equipment	158.5	3.8	**41.94**	0.97	**163.1**	2.76	**57.4**
24	2750	Domestic appliances	560.5	5.2	**108.58**	12.91	**43.4**	2.71	**206.5**
25	2790	Other electric equipment	42.2	5.4	7.76	2.02	**21.0**	1.09	**38.9**
26	2812 &2813	Fluid power, compressors, valve	232.7	11.1	**20.94**	8.16	**28.5**	1.02	**227.3**
27	2817	Office equipment, power tools, oven	710.0	12.9	**54.92**	16.76	**42.4**	1.22	**582.3**

28	282	Other special purpose machinery	511.7	11.1	**46.05**	4.06	**126.0**	0.78	**653.6**
29	2910	Motor vehicles	976.0	69.8	**13.98**	74.82	**13.0**	15.89	**61.4**
30	2511	Structural metal products	464.9	13.5	**34.33**	8.56	**54.3**	4.77	**97.5**
31	2920	Coachwork, trailers & semitrailers	26.9	3.7	7.21	24.87	1.1	0.67	**40.2**
32	309	Transport equipment nec	116.0	29.8	3.90	10.03	**11.6**	11.64	10.0
33	2013	Synthetic resins	448.1	30.0	**14.92**	51.73	8.7	2.03	**220.9**
34	2021	Pesticides, agrochemicals	83.5	12.4	6.71	43.21	1.9	1.15	**72.3**
35	2022	Paints & varnishes	184.3	14.1	**13.05**	8.74	**21.1**	1.48	**124.9**
36	2023	Soaps, cleaning & cosmetic	156.4	19.9	7.86	26.20	6.0	5.71	**27.4**
37	2029	Other speciality chemicals	79.5	17.2	4.62	14.14	5.6	3.86	**20.6**
38	2814	Bearing, gears and driving elements	127.6	6.6	**19.21**	2.59	**49.2**	0.87	**146.0**
39	2816	Lifting and handling equipment	167.7	2.9	**57.61**	4.44	**37.8**	0.24	**705.5**
40	241 &243	Metallurgy, machinery, & casting	34.3	1.2	**29.76**	0.63	**54.3**	N.A.	N.A.
41	2825	Machinery for food beverages and tobacco	43.2	1.9	**22.89**	2.23	**19.4**	0.08	**539.3**
42	2930	Autoparts & accessories	854.1	75.3	**11.35**	39.84	**21.44**	19.93	**42.9**
43	3011	Ship building	164.4	5.3	**31.17**	3.79	**43.41**	2.40	**68.6**
44	3020	Railroads and equipment	116.2	5.7	**20.57**	2.94	**39.51**	2.08	**55.8**
45	3030	Aircraft and spacecraft	141.6	5.1	**27.60**	6.99	**20.26**	0.85	**167.3**
46	10	Food products	1980.1	230.2	8.60	460.44	4.30	159.4	**12.4**
47	110	Beverages	398.9	16.9	**23.67**	55.42	7.20	5.39	**74.0**
48	1200	Tobacco Products	180.4	5.9	**30.34**	8.67	**20.81**	19.76	9.1
49	1511 &1520	Leather & footwear	173.9	7.9	**21.96**	15.14	**11.48**	10.60	**16.4**
50	1610, 1621, 1622, 1623, 1629	Wood products excluding furniture	265.0	4.2	**62.90**	14.37	**18.44**	4.35	**60.9**
51	1701	Paper & pulp	354.5	24.2	**14.65**	70.29	5.04	21.84	**16.2**
52	1811 &1820	Printing & reproducing recorded media	114.0	5.7	**19.88**	7.77	**14.67**	4.15	**27.5**
53	1910	Coke oven products	61.2	5.9	**10.44**	0.02	**2799.94**	0.77	**79.0**
54	1920	Refined petroleum products	736.8	174.5	4.22	201.80	3.65	31.73	**23.2**
55	221	Rubber products	251.1	19.8	**12.67**	23.92	**10.50**	13.87	**18.1**
56	2393	Pottery, China, Earthenware	402.2	8.7	**46.40**	9.19	**43.76**	6.06	**66.3**
57	2394 &2395	Cement, concrete, lime	402.7	38.0	**10.59**	23.04	**17.48**	10.77	**37.4**
58	239	Other mineral products	242.4	11.9	**20.42**	9.75	**24.85**	1.31	**184.7**
59	2520	Weapons and ammunition	32.3	0.9	**34.25**	1.48	**21.83**	0.35	**93.6**
60	259	Other fabricated metal products	336.6	23.0	**14.66**	35.07	9.60	9.28	**36.3**

61	2651 &2652	Measuring, testing, watches & clocks	257.0	3.3	**77.28**	3.52	**72.95**	N.A.	N.A.
62	2660	Irradiation, electromedical, electrotherapeutic	62.0	1.2	**51.91**	1.36	**45.55**	0.25	**248.8**
63	2670	Optical & photographic	39.1	0.5	**84.26**	0.07	**584.37**	0.71	**55.1**
64	2651	Measuring, testing, navigating, control	246.9	2.7	**90.39**	3.06	**80.80**	N.A.	N.A.
65	2652	Watches & clocks	10.1	0.6	**17.01**	0.47	**21.64**	N.A.	N.A.

Source: S&P IHS Markit Database of Standard & Poor, for 65 industrial sectors using International Standard Industrial Classification (ISIC) version 4

Note: The cells highlighted in red represent the sectors where the size is 10X more than China for the mentioned countries.

Table A2: List of micro- and macro level case-by-case interventions by China

Category	Type of Support	Macro (overall approach, Policy level) or Micro (firm-specific)
Ensuring economies of scale through state influence on commercial decision-making	Procurement: Ensuring Chinese firms and foreign firms operating in China procure goods and services from designed firms, helping them to develop economies of scale, ensuring that they are not competing with foreign goods and services. Although formal levels of access remain open or liberal. None of this is formal policy, but individual firm or even transaction-level management by an all-powerful state apparatus.	Micro
	Ensuring pricing policies of both SoEs and private firms in a manner to influences the competitiveness of Chinese firms. Essentially, this ensures that Chinese manufacturers have access to low-priced intermediate inputs for production. None of this is policy, but individual firm and transaction-level management by a powerful state apparatus	Micro
Lowering the cost of credit and mitigating risk	Subsidised loans through formal state-controlled banking channels on a case-by-case basis, unrelated to any formal policy	Micro
	Risk mitigation through risk guarantees provided through state-owned financial institutions at a very low cost	Micro

	State nudge Chinese entities (Both SoEs and private) to extend credit to selected suppliers or buyers to help their businesses and lower the overall credit burden	Micro
Case by case tax incentives	Tax holidays for selected firms	Micro
	Exemption from certain local or provincial taxes	Micro
Non-Tariff Measures	Imposition of China specific national standards at variation from international standards	Macro
	Use of security	Can be both Micro or macro
Intellectual Property Theft	Actively developing and sponsoring an ecosystem for intellectual property theft (Macro level)	Macro
	Pressure and coercion for technology transfer (Micro	Micro
	Lack of transparency in the legal process for enforcement of IPR violations by Chinese entities (Micro)	Macro
Lowering cost of factors of production and Inputs	Land: Most land owned by state agencies and low/no cost land can be made available on a case-by-case basis	Micro
	Electricity (SoE): Firm-specific tariffs, no transparent stated policy	Micro
	Transport: Special rates available at state-run logistics facilities and transport operations on a case-by-case basis	Micro
	Upstream subsidies: Heavily subsidizing sectors that are major intermediate inputs for key industries	Macro
Unfair Labor practices that ensure low wage rates	No rights for unionization or collective bargaining	Macro
	Tightly controlled geographic mobility of labour	Macro
	Subsidizing the cost of labour through state-sponsored housing/transport allowance	Macro

Source: Authors compilation based on the following studies, Naughton, B. (2021), Boullenois et al., (2025), Center, S. (2024), Bickenbach et al., (2024A) and Szamosszegi et al., (2009)

Table A3: Global Export Share (%) by Sector: China + HK, India, and Brazil (67 Sectors) in 2025

S.NO	Sectors	2025		
		Percentage Global Exports		
		China + HK	India	Brazil
1	Textile	39.4	6.8	2.3
2	Pharmaceuticals	2.5	3.5	0.2
3	Iron and Steel	20.4	2.7	1.9
4	Synthetic Fibre	34.6	4.1	0.3
5	Communication Equipment	50.6	3.8	0.04

6	Consumer Electronics	35.3	0.2	0.04
7	Non-Ferrous Metals	10.8	1.2	0.6
8	Furniture	32	1.2	0.4
9	Glass and Glassware	28	1.4	0.3
10	Basic Chemicals	20	5	1.0
11	Fertilizers	14	0.2	0.4
12	Engines and Turbines	30.3	2.3	0.9
13	Agricultural Machinery	11.7	0.9	1.5
14	Machine Tools	15.3	0.8	0.2
15	Mining and Construction Machinery	18.2	2	0.6
16	Wearing Apparel	29.0	3.6	0.1
17	Plastic products	26.9	1.6	0.3
18	Electric components & boards	25.0	0.3	0.1
19	Computers and peripheral equipment	31.5	0.2	0.02
20	Electric motors & electricity distribution	18.6	1.5	0.2
21	Batteries & accumulators	34.9	1.0	0.2
22	Wiring & wiring devices	18.7	0.9	0.4
23	Electric lighting equipment	59.4	0.7	0.1
24	Domestic appliances	33.6	0.4	0.2
25	Other electric equipment	41.9	0.7	0.7
26	Fluid power, compressors, and valves	18.6	1.7	0.7
27	Office equipment, power tools, oven	35.4	0.7	0.2
28	Other special-purpose machinery	14.0	1.0	0.2
29	Motor vehicles	7.7	0.8	0.7
30	Structural metal products	26.7	2.1	0.2
31	Coachwork, trailers & semitrailers	17.6	0.7	0.5
32	Transport equipment nec	37.4	4.4	0.2
33	Synthetic resins	11.3	1.0	0.6
34	Pesticides, agrochemicals	23.4	5.3	1.4
35	Paints & varnishes	13.2	5.7	0.6
36	Soaps, cleaning & cosmetics	6.4	1.4	0.8
37	Other specialty chemicals	10.6	1.3	0.6
38	Bearing, gears, and driving elements	16.5	3.6	0.6
39	Lifting and handling equipment	21.0	1.7	0.4
40	Metallurgy, machinery, & casting	34.2	2.8	1.2
41	Machinery for food, beverages, and tobacco	21.5	2.4	3.7
42	Auto parts & accessories	9.6	1.9	0.8
43	Ship building	32.0	2.8	0.5
44	Railroads and equipment	12.8	1.0	0.3

45	Aircraft and spacecraft	2.5	1.5	1.4
46	Food products	4.7	2.4	6.6
47	Beverages	2.5	0.2	1.2
48	Tobacco Products	11.7	3.5	6.3
49	Leather & footwear	31.3	2.5	0.9
50	Wood products excluding furniture	20.1	1.0	2.5
51	Paper & pulp	12.4	1.1	5.8
52	Printing & reproducing recorded media	17.8	1.4	0.3
53	Other durable manufacturing products	27.1	2.9	0.4
54	Repair & installation machinery	NA	NA	NA
55	Coke oven products	3.7	4.7	0.8
56	Refined petroleum products	5.1	7.3	1.3
57	Rubber products	18.9	2.9	0.9
58	Pottery, Chins, Earthenware	33.4	5.2	1.0
59	Cement, concrete, lime	12.1	2.5	0.2
60	Other mineral products	17.3	3.7	2.3
61	Weapons and ammunition	1.7	1.2	2.1
62	Other fabricated metal products	29.7	1.9	0.7
63	Measuring, testing, watches & clocks	12.0	0.6	0.2
64	Irradiation, electromedical, electrotherapeutic	7.8	0.7	0.2
65	Optical & photographic	24.4	0.8	0.2
66	Measuring, testing, navigating, and controlling	11.2	0.7	0.2
67	Watches & clocks	15.8	0.1	0.01

Source: S&P IHS Markit Database

Note: The yellow cells highlighted represent the sectors where the global export percentage is greater than 3 percent.

About the authors

Dr Pritam Banerjee is Head & Professor at the Centre for WTO Studies. He brings versatile expertise in areas such as trade in goods, trade in services, trade facilitation, logistics and digital trade. He has held senior roles in prestigious organisations, including the World Bank, Asian Development Bank and Deutsche Post DHL Group. Dr Banerjee's career, therefore, has included stints in academia, private sector, and multilateral development banks, that enable him to bring a diversity of experience and perspective on trade policy issues. He has also been a member of several government taskforces and committees, including the National Committee on Trade Facilitation (NCTF).

Email ID: headwto@iift.edu

Dr Zaki Hussain is a Senior Research Fellow (Economics) at the Centre for WTO Studies. He brings nearly a decade of experience in international trade, trade policy analysis, industry regulation and the Indian steel sector. Having worked extensively with leading government institutions and industry bodies, Dr Hussain specialises in evaluating bilateral trade agreements, assessing trade impacts, and analysing regulatory frameworks – particularly across key sectors of the Indian economy. His research contributions include high-impact policy studies, publications in peer-reviewed journals, and collaborative projects focused on strengthening India's global trade competitiveness.

Email ID: zaki_cws@iift.edu

Ms Kanika Karwal is serving as a Young Professional (Economics) at the Centre for WTO Studies. She holds a Bachelor's degree in Economics (Hons) from Atma Ram Sanatan Dharma College, University of Delhi, and has completed her Master's in Economics with a specialisation in Trade and Finance from the Indian Institute of Foreign Trade (IIFT) in 2023.

Email ID: kanika_cws@iift.edu

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5th to 8th Floor, NAFED House, Siddhartha Enclave, Ashram Chowk, Ring Road, New Delhi – 110014

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