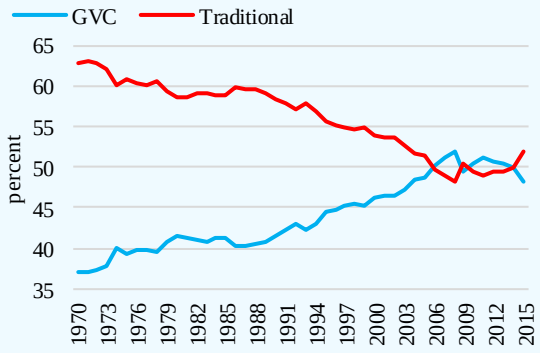
Special Section 1: Global Value Chains (GVCs) – Implications for Pakistan

S1.1 Introduction

Global Value Chains (GVCs) had been the most prominent force behind globalization and world GDP growth during 1995-2008.[1] Over the past two decades, the scale and patterns of global trade have become organized around and governed by the GVCs. This is evident from the fact that GVC-related trade accounts for 48.1 percent of the total global trade (**Figure S1.1**).

Figure S1.1: Decomposition of International Trade between Traditional Networks and Global Value Chains



Data source: World Bank (2019); Johnson and Noguera (2017)

In light of the above, this section intends to: (i) highlight the importance of GVCs and comment upon the emerging trends with regards to their structure and organization; (ii) present stylized facts about the current position of Pakistan in the GVCs; and (iii) elaborate upon the policy implications and the way forward for the country to enhance its integration with the global production networks. In particular, the section makes the case that without increasing its share in the GVCs, it will be challenging for Pakistan to achieve sustainable export-led growth.

S1.2 Importance of Global Value Chains

GVCs are enterprise networks in which the production of a certain commodity/service crosses at least one border, and typically many borders, before final assembly or provision. For instance, production design and engineering elements of the iPhone are finalized in the US, while the assembling and packaging is outsourced to countries like China and Vietnam; these, in turn, use components shipped from countries such as South Korea and Japan to produce the final output. The product would then be re-exported to the US (and other destination economies) to be marketed and sold in its final form.

The reason that GVCs have become so important over the past two decades is that they have provided the means for countries to overcome indigenous resource

[1] Source: Measuring and Analyzing the Impact of GVCs on Economic Development, Washington DC, World Bank (2017).

dependency by enabling them to import raw material and intermediate inputs and adding value to them via further processing. This has had a two-fold impact. First, the countries have been able to develop those industries in which they might have a competitive advantage, even if resources for the same were not available domestically at all, or if the local resources were of an inferior quality or in less abundance (*backward integration*). Second, it allows countries to export locally manufactured/processed items in raw or unfinished form (*forward integration)* in which they might not have a competitive advantage over the full value addition cycle. This leads countries that are integrated with the GVCs to achieve sustainable growth patterns in their exports that are also more aligned with the overall global demand.

As mentioned before, GVC participation has allowed many countries to increase their exports, even when local availability for the required resources of production were negligible or absent. For instance, despite having negligible local raw materials (cotton or synthetic fiber), Bangladesh has consistently expanded its garment export base – a process within the overall textile value chain where it had competitive advantage in terms of cheaper labor. This, in turn, led the country to import intermediate goods from economies that had a competitive advantage in producing those (for example, Pakistan and India for fabric and yarn). As Bangladesh's participation in the GVCs rose, it was able to consolidate its presence in Europe and North America's apparel markets.[2] Today, Bangladesh is the second biggest exporter of apparel and clothing accessories in the world, second only to China. It is important to recall here that garments alone account for over 85 percent of Bangladesh's total exports, and have been the major engine of growth for the economy. The increasing integration of its firms with GVCs has thus helped the country become the fastest growing economy in South Asia over the past couple of years.

Vietnam is another success story. In the mobile manufacturing segment, for instance, Vietnam focuses primarily on production of outer structures and final assembling, and imports high-tech components such as semiconductors, displays and turnkeys from countries like the US, Taiwan, Korea and China. Those countries have competitive advantages in producing technology-intensive products

[2] Alongside integration with the GVCs, factors such as liberal investment and trade policies, focus on addressing structural problems, and overall macroeconomic stability also figured prominently in Bangladesh achieving consistently high export and economic growth. According to the World Bank's Bangladesh Development Update (2019), economic "output growth will be supported by strong macroeconomic fundamentals, faster implementation of public investments in megaprojects, continued movement of labor away from low productivity sectors in agriculture, higher domestic demand aided by remittances, and continued export growth as production shifts from China."

and services (design elements and engineering), while Vietnam has an edge in labor-intensive and scale-based operations, such as assembling and packaging. This led Vietnam to become the third-largest smartphone exporter in the world, and to get highly integrated with Samsung's value chain, producing 40 percent of the firm's mobile devices. Similarly, countries like Taiwan, China and South Korea were able to focus on their core competencies and further solidify their shares in the higher-end stages of the manufacturing chain.

In overall terms, GVCs have therefore resulted in substantial returns for both the advanced and emerging economies, as well as for the firms and the consumers. In developed economies, GVCs provide access to more competitively priced inputs, higher variety of goods and services, and economies of scale. For emerging economies, GVCs are viewed as a fast-track towards industrialization – where countries join existing supply chains instead of building them anew. GVC participation also helps attract more investment in the emerging economies; however, the relationship is not like-for-like, as investments also crucially depend on broader policy and institutional frameworks of an economy.

For firms, the trade, investment and knowledge flows underpinning GVCs provide mechanisms for rapid learning, innovation, and industrial advancement. Meanwhile, productivity rises as businesses relocate the least efficient production stages to concentrate on core activities. Furthermore, as a cost-saving technique, offshoring potentially raises profits that can be utilized for pursuing innovation.

S1.3 Restructuring of GVCs and Emerging Opportunities for Pakistan

While countries like Vietnam and Bangladesh have reaped substantial returns in terms of export and economic growth over the past two decades via participation in the GVCs, Pakistan has been unable to establish a similar presence in the global production and supply networks. However, the following key developments pertaining to GVCs currently underway provide the country with an opportunity to realign its trade activities and improve integration within the existing and emerging global value chains.

First, the manufacturing activities around the world are becoming more services-oriented. Trade flows in value-added terms reveal that transport logistics, communication, and financial services play important roles in GVCs. Resultantly, the value created by services as intermediate inputs represent over one-third of total GVA of global manufacturing, and services exports figures in gross terms

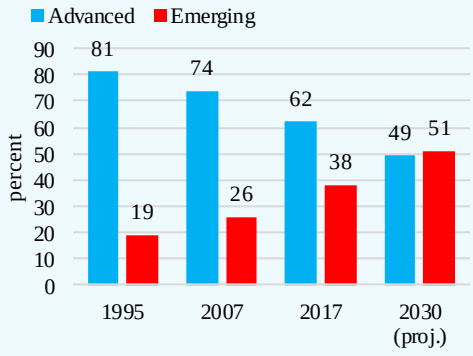
(43 percent) vastly understate the exports of services in value-added terms (21 percent).[3]

Second, information technologies are undergoing a revolutionary transformation. Businesses and consumers alike are transitioning from the usage of social media, analytics, and cloud computing to areas such as distributed ledger technology, artificial intelligence, reality augmentation, and quantum computing. Together, these developments stand to facilitate and increase the transfer and accessibility of information exponentially, thereby enabling more processes and activities to be fragmented and/or outsourced.

Third, with consumption patterns changing and becoming more personalized, the GVCs are also undergoing a transformation, from mass production towards mass customization. This is resulting in the creation of multiple value chains for similar products, with input materials being sourced from various locations instead of relying on suppliers from a single geographical location. The wage increases in production countries such as China are also pushing firms to relocate to alternate destinations to keep their competitive edge intact.

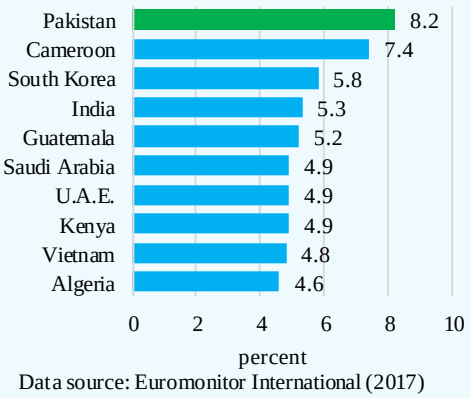
Fourth, the gradual rise in demand in the emerging economies, particularly China and India, is increasing the attraction of such destinations not only as an outsourcing market but also as a selling one. This rerouting of value chains is expected to continue over the next decade and beyond as emerging economies are

Figure S1.2a: Share in Global Demand by Type of Economy



Data source: McKinsey Global Institute (2019)

Figure S1.2b: Fastest Growing Retail Markets Annual Growth Forecast 2016-2021



Data source: Euromonitor International (2017)

[3] OECD. The Future of Global Value Chains – Business as Usual or a New Normal? September 2017.

expected to achieve 50 percent share in total global demand by 2030 fueled by consistently high retail market growth rates (**Figure S1.2**).

Keeping in view these developments, Pakistan must utilize this opportunity and deepen the linkage of its manufacturing activities with the global value chains to steer its exports towards a sustainable growth trajectory, akin to Bangladesh's performance in the textile sector (**Figure S1.3**). In this backdrop, the following sub-section analyzes the potential of Pakistani firms to reorient their businesses within the established chains pertaining to textiles, electronics and ICT sectors. In the long run, the country holds the potential to target even the middle- to higher-end segments of the GVCs, given that the right mix of policies is adopted (discussed in subsequent sub-sections).

Figure S1.3a: Textile Raw Material Imports

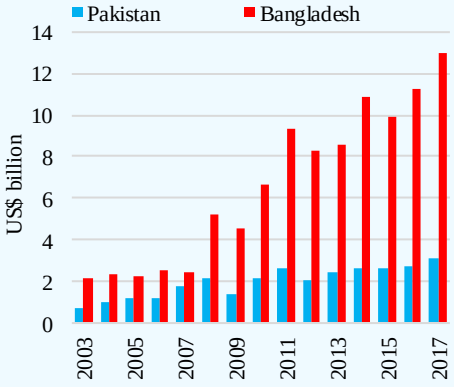
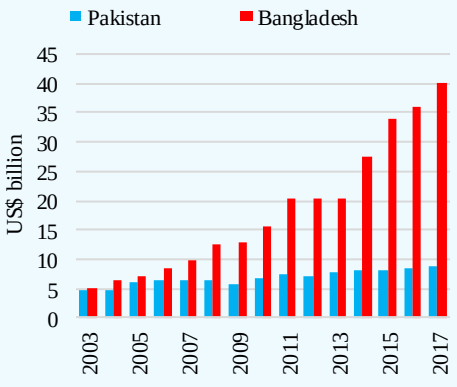


Figure S1.3b: Textile Finished Goods Exports



Data source: International Trade Centre

S1.4 Where does Pakistan Stand?[4]

At present, Pakistan stands among those economies that could not realize maximum benefits of integrating into GVCs across different sectors. The following stylized facts present the prominent features of the value added content of Pakistan's exports and their level of participation in global production networks.

- The value added profile of Pakistan's exports shows that the country has remained unable to achieve adequate level of foreign value addition to its exports. As shown in **Figure S1.4**, the domestic value-added content (i.e.,

[4] The data referred to in this section has been extracted from the EORA database. Formal citation is: Casella, B.R. Bolwijn, D. Moran and K. Kanemoto (forthcoming). Improving the analysis of global value chains: the UNCTAD-Eora Database. Transnational Corporations 26(3). New York and Geneva: United Nations.

value added of intermediate goods that are produced locally) predominantly constitutes Pakistan's exports. In contrast, the share of foreign value-added content of exports, which corresponds to the value added of inputs that were imported in order to produce intermediate or final goods/services to be exported, is quite small. Furthermore, during the span of 20 years (1995-2015), the share of foreign value added in exports inched up by only 0.7 percentage points.

Figure S1.4a: The Value Added (VA) Components of Exports, 1995, 2005 and 2015 (percent share)

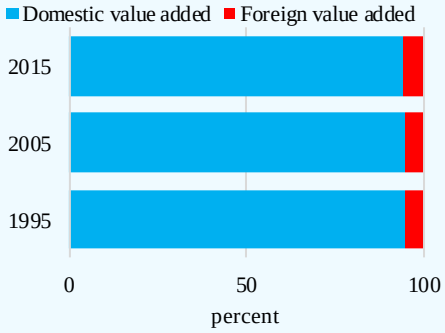
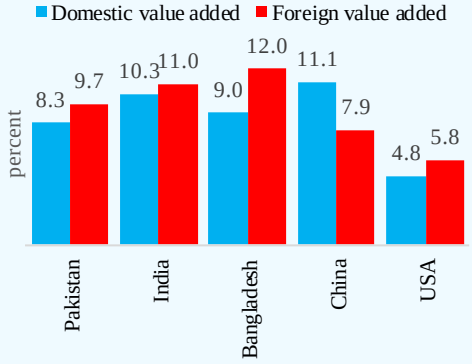


Figure S1.4b: Percentage Change in VA Components of Exports, 2005 - 2015



Data source: UNCTAD-Eora Global Value Chain Database

- This phenomenon is also reflected in the overall composition of GVC participation of Pakistan, which is the sum of backward and forward participation in global exports. The data suggests that the share of backward participation in exports (the share of imported intermediate inputs the country used to produce exports), only reached 5.6 percent in 2015 (**Table S1.1**). This signifies two main characteristics of Pakistan's trade paradigm:

  i. Exports have been concentrated in low value added products and primary commodities, which do not usually require processing of imported inputs; and
  ii. The country has imposed strong trade policy distortions in the form of tariff and non-tariff barriers on imports – Pakistan's tariffs on intermediate goods are four times the average in East Asia.[5] This ultimately results in higher production costs for exporting firms and erode their competitiveness in the global market.

[5] World Bank 2020. World Development Report 2020: Trading for Development in the Age of Global Value Chains. Washington DC: World Bank

- In case of forward participation, which reflects the share of intermediate goods in Pakistan's exports that are used as inputs in exports of other countries, Pakistan's performance is relatively better. As shown in **Table S1.1,** 27 percent of Pakistan's exports are used as inputs in exports of other countries. Most of these exports originate from primary agricultural commodities and low-tech manufacturing sectors (such as cotton yarn and fabric), and are shipped to China, Bangladesh and Turkey, which produce and export value-added finished products to high-end garment stores such as Zara, Marks & Spencer and H&M.[6]

Table S1.1: GVC Participation Index*

Percentage share in total exports

	Total GVC participation*		Backward participation**		Forward participation***	
	1995	2015	1995	2015	1995	2015
Singapore	80.5	70.7	68.9	57.9	11.7	12.7
Malaysia	65.5	63.3	48.4	35.5	17.1	27.8
UK	52.2	58.9	26	25.3	26.2	33.7
Vietnam	44.9	57.1	27.5	35.6	17.4	21.5
France	49.6	55.9	24.7	28.2	24.9	27.7
Germany	47.3	55.5	24.7	33.2	22.6	22.3
Turkey	43.9	51.8	19.1	28.5	24.8	23.3
Japan	39.1	46.8	9.1	19.4	30	27.5
USA	38.4	44.5	9.3	13	29.1	31.5
China	32.4	42.8	11.6	13.8	20.8	29
India	33.1	40	9.4	14	23.7	26.1
Pakistan	**26.7**	**33.2**	**4.8**	**5.6**	**22**	**27.6**

* GVC Participation index is a sum of share of backward and forward participation in exports
**Backward participation shows share of imported intermediate inputs the country is using in exports
***Forward participation shows share of intermediate inputs the country is exporting to other countries
Data source: UNCTAD-Eora Global Value Chain Database

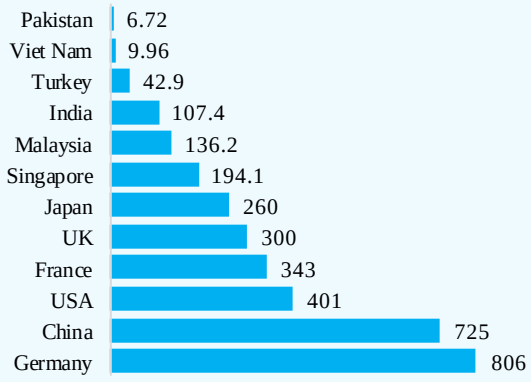
- During 2000-15, Pakistan could only increase its GVC participation by US$ 6.7 billion (**Figure S1.5**). The country exhibited the lowest rate of GVC participation as percent of exports in 2015. This shows the low presence of Pakistani companies in the network of coordinated transactions among different layers of firms on a global scale.

- The value-added content of Pakistan's exports is predominantly concentrated in a single sector – textiles and wearing apparels – which represent 60 percent of domestic value addition in the country's exports. It has also added the

[6] For instance, the share of Pakistan in overall Bangladesh imports of denim fabric was recorded at 24.7 percent in 2018.

highest content of foreign value addition of 3.8 percent to its exports, in the form of chemical and dyes, high quality cotton, man-made fiber (MMF), etc.

Figure S1.5: Change in Total GVCs -2000-2015 (US$ billion)



Data source: UNCTAD-Eora Global Value Chain Database

- In 2015, over 50 percent of Pakistan's exports went to five countries: China, USA, Germany, Saudi Arabia and the UK. In addition, most of the exports to these countries were textiles and apparel products, with the highest share of 85.1 percent in total exports to China and the lowest of 48.7 percent in case of Saudi Arabia.

Box S1.1: Strategies to Improve Participation of Existing Exporting Sectors in GVCs

In order to increase participation along the GVCs, a low-hanging fruit can be to target sectors where domestic players already have established global relationships, such as textiles and Business Process Outsourcing (BPO). This strategy would not only provide an opportunity to deepen the present relationships, but also allow firms to branch out and diversify both their product base (towards higher value-added items) and geographic sources/destinations. Going forward, however, Pakistan must tap sectors, such as light engineering, appliances manufacturing and services, whose shares in GVC trade are consistently rising.

In light of the above, this section builds upon the prospects of Pakistan's current exporting sectors to engage in the evolving GVCs, using the World Bank and Duke University's Global Value Chains Center studies for exporting sectors including textiles, medical devices and offshore services.[7]

a. Textiles

During FY19, Pakistan's apparel exports (comprising knitwear and readymade garments) fetched US$5.4 billion; exports had risen steadily over the last two decades and grown by nearly 200 percent since FY00. However, the sector could not tap the growing demand in the product categories offering higher unit values, like those based on man-made fiber (MMF); instead, exports are concentrated in cotton-based products, which fetch lower unit prices. Besides, the sector also lacks some vital links in the value addition processes that, if focused upon, could generate more earnings as compared to conventional processes. For instance, firms are clustered around low value stages of Original Equipment Manufacturers (OEMs), and the second tier Cut, Make & Trim providers (CMTs); active participation is missing at the most value added stages of GVCs i.e., Original Brand Manufacturers (OBMs) and Original Design Manufacturers (ODMs). The absence of links with OBMs and ODMs explains the lack of product diversity and upgradation in the country's apparel sector.

[7] This section also draws heavily from discussions with stakeholders in the relevant industries.

Being the world's 5th largest cotton producer, Pakistan has relatively easier access to a major input for apparel-making, which facilitates backward linkages in the value addition process. In addition, the sector also has a competitive edge over regional peers in the form of: i) low labor wages; ii) GSP+ access to EU markets; iii) domestic ownership of firms and their vertical integration; and iv) an extensive network of supportive institutions at each stage of the value chain.[8] Realizing these benefits, the apparel sector has achieved moderate success in product upgradation: in 2016, the country stood 3rd in unit value associated with denim-trouser export and 6th in terms of quantum exports. Some of the country's leading firms have started to contribute in the supply chain of global brands such as Target, the Gap, Levi's, and C&A etc.

b. Medical Devices

Pakistan has a long history of exporting surgical instruments, exhibiting an edge in the manufacturing of metallic instruments. Besides low wage labor, established capacities for a wide range of products and a geographically concentrated production hub in a single city – i.e. Sialkot – assists the industry to cater to the growing global demand.[9]

However, Pakistan does not currently have a strong foothold in the medical devices industry. In terms of the sector's linkages with the GVCs, 98 percent of the local participation is concentrated in the precision metal instruments segment (**Table S1.1.1)**. Resultantly, the leading firms (MNEs) that dominate the global medical devices business did not actively invest in Pakistan's domestic industry, and instead set up their production facilities in Malaysia (Penang), Mexico (Baja California), and the Dominican Republic (Santo Domingo) etc. This MNE investment significantly contributed to the product and process upgradation of local industries in those countries.

Table S1.1.1: Presence of Pakistan's Firms in Medical Device GVCs

Research & development	Component manufacturing	Assembly	Distribution	Marketing & sales	Post-sales services
Prototype	Software dev.	Assembly	Capital equipment	Cardiovascular	Training
Process development	Electronic/elec. comp.	Packaging	Therapeutic devices	Orthopedics	Consulting
Regulatory approval	Precision metal works	Sterilization	Surgical & medical Inst.	General surgery	Complains management
Sustaining eng.	Plastic extrusion		Disposables	Infusion systems	Maintenance/repair
	Weaving knit. text.		Consumables	Others	

Highlighted cells indicate areas where Pakistani firms have a presence in the GVCs
Data source: World Bank and Duke University's Global Value Chains Center

Since Pakistan has basic infrastructure to tap the growing demand in the medical devices industry, diversification and inter-sectoral upgradation in products and processes will be key to increase

[8] The export-oriented sectors in Pakistan, including textiles, are also provided with concessionary borrowing facilities such as SBP's Export Finance Scheme (EFS) and Long Term Financing Facility (LTFF).

[9] Currently, few firms in the medical device industry have ventured into relatively advanced product markets, such as endoscopic instruments, liposuction accessories, biopsy punches and implantable staples.

Table S1.1.2: Pakistan's Exports of ICT Services Value Chain

	In million US$			CAGR (FY06-19) (percent)
	FY06	FY10	FY19	
a. Information Technology Outsourcing				
Software consultancy services	18.1	31.4	354.6	25.7
Export / Import of computer software	46.7	124.2	279.5	14.8
Other computer services	5.9	29.6	155.0	28.5
b. Knowledge Process Outsourcing				
Research and development services	3.8	5.2	17.3	12.4
Legal services	5.8	18.3	19.0	9.5
Accounting, auditing, bookkeeping, and tax consulting services	17.3	4.0	34.7	5.5
Business and management consulting and public relations services	47.2	87.5	144.8	9.0
Advertising, market research, and public opinion polling	20.0	20.9	108.8	13.9
c. Business Process Outsourcing				
Call centers	0.0	16.6	98.7	NA
d. Vertical Activities				
Financial services	70.1	89.7	107.8	3.4
Insurance and pension services	28.6	41.8	45.0	3.6

Data source: SBP

participation in the GVCs. The current initiatives of setting up SEZs and EPZs (with customary benefits such as tax holidays, duty free exports/imports, equity ownership etc.) may attract leading firms, entailing positive spillover for the local industry. Lastly, product diversification in new segments, such as apparatus used in minimally invasive surgeries, disposable items, medical textile items, therapeutics and implantable devices, may assist the local industry in carving out a sizeable share in the upscale GVCs.

c. ICT Services

ICT services are one of the most promising areas for Pakistan's future exports. The sector, which was almost non-existent in the early 2000s, grew extensively during the last decade. This is evident from the double-digit growth in exports of segments such as software consultancy services, call centers and other software and computer services during FY06-FY19 (**Table S1.1.2**).

The latest available estimates suggest that in terms of revenues, the market size of global offshoring services ranges from US$262 billion to US$1.3 trillion (as of 2017). The global value chain of offshore services has three horizontal segments: Information Technology Outsourcing (ITO), Business Process Outsourcing (BPO) and Knowledge Process Outsourcing (KPO), and a vertical segment that pertains primarily to the financial sector. In terms of magnitude, ITO dominates with 52 percent of total deal values in 2017, followed by KPO with 18 percent share.[10]

In comparison to mature markets like India, Philippines, Sri Lanka, Mexico etc., Pakistan's share in global offshore services exports is minimal, at 0.1 percent. Most of the activities of Pakistan's offshore services firms are concentrated around low value added services in ITO and BPO, which have a cumulative share of 65 percent in total offshore services; very few firms are active in vertical and knowledge process outsourcing.

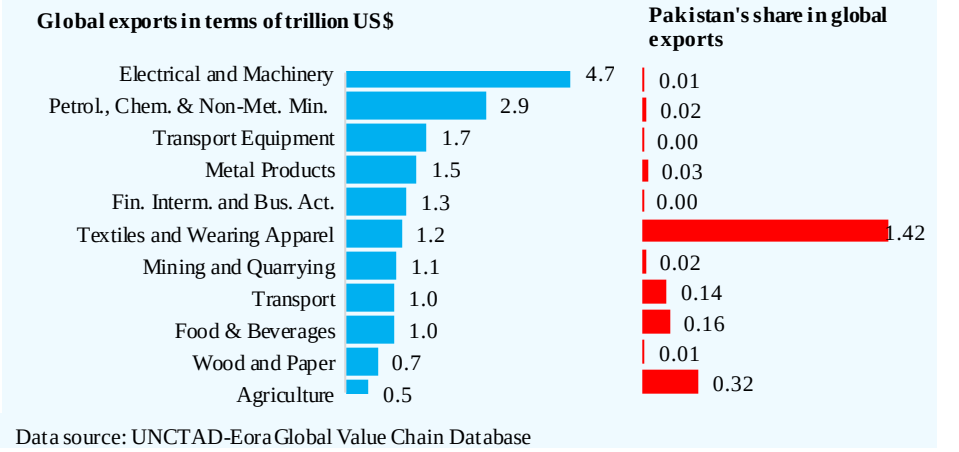
[10] 'Global IT-BPO Outsourcing Deals Analysis,' Annual Analysis for 2017, KPMG (2017).

S1.5 Policy Implications and the Way Forward

To increase traditional exports, countries have relied on updating their investment policies, signing free trade agreements and bilateral investment treaties with strategic partners, becoming a part of regional trade associations, and loosening FDI and labor regulations, etc. However, a key distinction in terms of GVC exports is that they require liberalization of a country's import policy, particularly pertaining to raw and intermediate products and services. This is vital to ensure businesses' participation in both backward and forward value chain processes.

Currently, sectors such as electrical & machinery, petroleum, chemical, mineral, transport equipment, metal products and financial intermediaries & business activities, capture the first five positions in terms of global export revenues. However, Pakistani firms have marginal presence in these sectors at the global level (**Figure S1.6**).

Figure S1.6: Exports of Major Sectors and Pakistan's Share in Global Exports (2015)



Data source: UNCTAD-Eora Global Value Chain Database

Given the level of innovation, automation techniques and human skills that some high-tech industries require, it would be challenging for Pakistan to pursue them over the short- to medium-term. As mentioned before, the existing base of infrastructure in the country's current exporting sectors (textile, leather, and offshore services etc.) may be utilized effectively to tap GVCs in the low value added segments in the first stage. The participating firms may eventually venture into more complex processes, once fully realizing their comparative advantage in the existing products and processes. Furthermore, the importance of human capital development cannot be overstated. Particularly, the labor-intensive and low-skilled manufacturing activities in which Pakistani firms trade the most in the GVCs, are the most susceptible to disruption under the ongoing global automation

and digitization drive. More importantly, if the country aspires to become a noteworthy participant in the high-growth areas such as ICT and financial intermediation services, substantial investment would be required to prepare the workforce for the evolving demands of those industries.

Designing an adequate and effective institutional framework is necessary to facilitate growth of domestic businesses

As illustrated in detail in the Annual Report of FY19, a major reason for the constrained investment and business climate in Pakistan is the difference between the *de jure* and *de facto* policy environments for domestic investors.[11] In particular, the existing investment landscape is deficient in terms of facilitation for local businesses, partly due to issues on the contract enforcement and dispute resolution fronts, as well as inadequate guidance and policy communication practices of the relevant supervisory and regulatory government authorities. This results in investors finding it hard to carry out and expand their business activities over the medium- to long-term. The unfavorable tax environment also merits a special mention, with domestic firms facing cumbersome documentation procedures, incidences of corruption, and an overall lack of ease on the tax administration front.

Encouragingly, substantial improvement in the business climate has been observed over the past couple of years. This is evident from the 39 point jump in Pakistan's standing in the World Bank's Ease of Doing Business rankings, from 147th in 2017 to 108th in 2019. However, it is vital now for the government to ensure that these improvements are not only maintained but also built upon further. Here, emphasis should be on the establishment of clear communication and policy advocacy channels for businesses; enhanced cooperation between federal and provincial authorities to minimize policy uncertainties and complexities; targeted incentive programs for domestic firms showing growth potential as well as integration capability within the GVCs; and a stronger role of the state bodies to lead investments in sectors deemed important for long-term objectives.

Attracting and integrating with MNEs must be a priority

It is widely held that a major reason for the increased GVC-related trade activities over the past two decades is the rising popularity of multinational enterprises (MNEs).[12] These corporations, with their dispersed and vertically integrated

[11] For details, please see Chapter 7 titled "Factors Constraining Investments in Pakistan: Beyond the Macroeconomics" in the SBP's FY19 Annual Report on the State of Pakistan's Economy.
[12] See, for example, Baldwin, R. (2016), The Great Convergence, Information Technology and the New Globalization, Harvard University Press and Dicken, P. (2015), Global Shift: Mapping the Changing Contours of the World Economy, Seventh edition, Guilford Press, New York.

operational footprints, are particularly important for the developing economies. This is because they provide an opportunity to easily integrate in the already established global production networks. According to recent estimates, MNEs account for around one-third of the global output and 80 percent of total world exports.[13] In particular, of the production by foreign affiliates of MNEs – which grew from US$ 7 trillion to US$ 20 trillion between 2000 and 2014 – around 60 percent consists of intermediate goods and services to be used for production of final products across the various GVCs.

Encouragingly, the government has introduced various reforms to improve and broaden the scope of the Board of Investment (BOI) in the areas of grievance handling, dedicated country- and sector-specific task forces, investment tracking services and policy advocacy channels, etc. The efforts on this front have been acknowledged in the World Bank's Doing Business rankings as well. If such measures are continued, they would attract investors and MNEs into the country going forward.

Pakistan needs to liberalize its trade policy

Pakistan was late in initiating trade liberalization policies compared to the regional economies at the start of the century.[14] This had a twofold impact. First, higher tariffs meant that the input costs were higher than for peer economies, resulting in lost competitiveness. Second, by the time the country finally started rationalizing the tariff lines, many of the competitors had already forged international trade relationships with buyers and suppliers; this meant that Pakistan missed the first-mover advantage just when complex GVCs were gaining traction.

While the tariff liberalization process in Pakistan since the start of the 2000s has been substantial, the applied rates are non-uniform across sectors. This has meant that some industries, such as automobile and steel, have continued to enjoy higher protection, which fueled an anti-export bias. The protectionist policy stance is also augmented by the imposition of various regularity duties (RD) on imported items – a measure that was initially adopted as a temporary tool to tackle the balance of payments crisis of FY08, but gained in scope and applicability over

[13] Cadestin, C., De Backer, K., Desnoyers-James, I., Miroudot, S., Ye, M., & Rigo, D. (2018). Multinational Enterprises and Global Value Chains: New Insights on the Trade-Investment Nexus. OECD Science, Technology and Industry Working Papers, 2018(5), 0_1-36. The estimates provided in the study were obtained by taking into account the MNEs' "arms-length" trade (i.e. trade between MNEs and final consumers or non-MNE firms), intra-firm trade (i.e. trade within MNEs between affiliates or with the parent company) and trade between companies that have no ownership link but are associated through franchising, licensing or other forms of contractual relationships.

[14] World Bank. 2006. Pakistan - Growth and Export Competitiveness. Washington, DC.

time as a revenue-generating tool for the government. Hence, there is an urgent need to correct this trend.

According to the World Economic Forum's Competitiveness Index rankings of 2019, Pakistan stands at 138th position in terms of *trade openness* out of 141 countries. By contrast, regional competitors such as Vietnam and Bangladesh stand at 91st and 119th positions, respectively, and fare better in indicators like the prevalence of non-tariff barriers, trade tariff rates, tariff complexity, and border clearance efficiency.[15] Pakistan's ranking is particularly weakened by below-par performance in the *trade tariffs* sub-index, where Pakistan ranks at 139th out of 141 economies.

From the policy perspective, the authorities should strive to streamline and rationalize trade tariffs by committing to a minimal and uniform structure in order to encourage export-orientation. Furthermore, policy coordination between the trade policy setting authorities (such as the Ministry of Commerce) and para-tariff implementation bodies (such as FBR) is vital to strike an efficient balance between trade liberalization and the revenue generating objective of the government. This would bring much needed clarity and transparency to the import policy, thereby reducing uncertainty and improving businesses' confidence and access to competitive inputs for value-addition and re-exporting purposes.

Focus should be on trade logistics and facilitation

Faster and smoother trade flows are important with regards to conventional trade activities, and they become even more so under the GVC model. Pakistan can vastly improve its trade potential in the GVCs by enhancing the state of trade-related infrastructure and service provision in the country. At present, Pakistan performs poorly amongst selected peer economies in terms of *customs*, *infrastructure*, *international shipments* and *logistics competence*, and *timeliness* (**Table S1.2**). Cumbersome documentation requirements, delays in clearance, high port traffic, and poor record of timeliness has led to a fall in the country's ranking in the World Bank's Logistics Performance Index to 122nd in 2018, from 110th in 2010.

Digitization of customs procedures, liberalizing transport services and further investment in road, railway and port physical infrastructure can go a long way towards addressing this deficit. Add in the changing demand dynamics that call for increased customization and reduced delivery times, and the need for an

[15] Global Competitiveness Report 2019: *How to End a Lost Decade of Productivity Growth*. World Economic Forum.

efficient logistics and clearance mechanism becomes paramount. In fact, this is primarily the reason many economies are transitioning towards adopting multinational transport corridors to standardize and streamline customs and logistics operations along the value chains. This leads to the next requirement, which is increasing Pakistan's trade integration with the regional economies.

Table S1.2: Adjusted Logistics Performance Index Rankings*# - A Regional Comparison

	LPI Rank	Customs	Infra-structure	Int. shipments	Logistics	Timeliness	Change in 2018/2010 LPI ranking
China	27	30	24	18	27	29	0
India	42	43	48	38	39	50	3
Vietnam	45	51	54	45	40	47	14
Philippines	64	70	71	39	64	83	-16
Pakistan	95	104	100	79	80	112	-12
Bangladesh	100	120	109	99	94	108	-21

*The Adjusted LPI combines the four most recent (2012, 2014, 2016 and 2018) LPI surveys to generate a "big picture" to better indicate countries' logistics performance.
#Ranking out of 163 countries
Data source: World Bank Logistics Performance Index

Pakistan has to increase trade integration with regional economies to reap welfare and trade gains

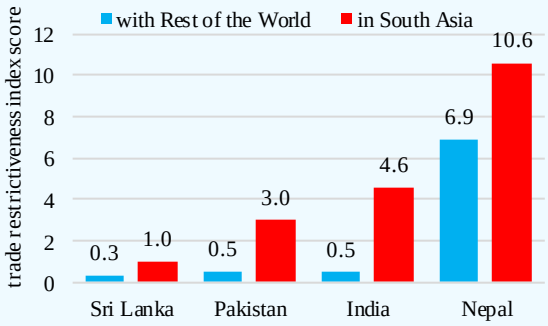
Perhaps the near-absence of regional trade is one of the weakest links in Pakistan's overall trade dynamics. Other than China, Pakistan's trade relationships with regional economies are substantially below-par. In particular, the intraregional trade between the South Asian economies, marred principally by chronic geopolitical tensions, has been found to be less than one-third of the potential, with the gap widening each passing year.[16] Not surprisingly, evidence shows that the share of regional GVC trade between South Asian economies in the total global GVC trade has been just 0.8 percent, the lowest between 1990 and 2015, according to the EORA database. For comparative purposes, intra-regional trade of Europe and Central Asia accounts for 43.1 percent of the total worldwide GVC trade. High trade barriers merit a particular mention here. South Asian economies enact trade restrictive policies to a greater extent on their regional counterparts compared to the rest of the world (**Figure S1.7**).

Encouragingly, progress under the China-Pakistan Economic Corridor (CPEC) provides Pakistan with the opportunity to link closely with the Central Asian and

[16] Unlocking the Potential of Regional Economic Cooperation and Integration in South Asia: Potential, Challenges and the Way Forward, SSWA Books and Research Reports, UNESCAP South and South-West Asia Office (2018).

other Belt and Road Initiative (BRI) member states. However, the South Asian states must also loosen their trade policy stances with respect to each other in order to net substantial welfare and trade gains.

Figure S1.7: Incidence of Trade Restrictiveness in South Asian Economies (2011)*



* 0 = being least restrictive
Data source: UNCTAD

Finally, the services sector exports of the country must be enhanced

Although the services sector's share in the country's GDP and labor force has continued to increase, its exports have not risen commensurately. However, with the *servicification* of the manufacturing sector underway across the globe, the importance of the services sector is rising with respect to the GVCs.[17] In this regard, Pakistan must strive to increase its services exports to improve integration with the global production networks.

Recently, there has been palpable progress on this front. The Ministry of Commerce has recently introduced the draft E-Commerce Policy, while the SBP has released the draft Electronic Money Institutions Guidelines. Both stand to work under the ambit, and complement the associated objectives, of the Digital Pakistan Policy released by the Ministry of IT and Telecom. Likewise, numerous incubators and accelerators are increasingly financing and facilitating startups under the domain of 4IR (cloud computing, data analytics, ICT, 3D-printing, and reality augmentation, etc.). In the medium- to long-term, the direct benefit of such efforts would be an increase in the country's IT exports, while indirectly the focus on technological advancement would result in increasing the productivity and competitiveness of the manufacturing and agricultural products. Both these developments are vital to ensure a sustainable and meaningful integration of the domestic firms in the GVCs going forward.

[17] Raei, F., Ignatenko, A., & Mircheva, B., Global Value Chains: What are the Benefits and Why Do Countries Participate? IMF Working Paper No 19/18 2019.