



GOVERNMENT OF PAKISTAN

Pakistan Export Strategy Logistics

2023-2027



This Logistics sector strategy is part of the National Priority Sectors Export Strategy (NPSES) initiative which contributes to the implementation of Pakistan's Strategic Trade Policy Framework (STPF) 2020-2025.

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A light green world map is centered in the background, overlaid with a network of thin white lines and small white dots, suggesting global connectivity and logistics. The text is centered over this background.

Pakistan Export Strategy

Logistics

2023-2027

Forewords

Message from the Ministry of Commerce

Increasing international trade is not only a means of boosting economic growth and the nation's welfare but also contributing to strengthening international relations. The stabilization of economic and political affairs paves the way for reinforcing friendly relations based on mutual interests with a wide range of trade partners. Trade is thus one of the most important forms of exchange between countries and fostering this will lead to connections such as foreign investments, better employment opportunities, and scientific and technical exchanges, all of which will contribute to Pakistan's growth and prosperity.

The Government of Pakistan has taken a series of initiatives to promote exports to achieve sustainable and inclusive economic growth, poverty reduction, and improvement in the living standard of the Pakistani people. This is also aligned with the Government's vision of the Strategic Trade Policy Framework (STPF) 2020-25 for "Pakistan to become a dynamic and efficient domestic market as well as a globally competitive export-driven economy". In this context, the Ministry of Commerce supported the preparation of the Logistics Export Strategy, a priority export sector under the STPF, which will bring visible benefits to the economy of the country and generate tremendous employment opportunities. This sector export strategy has been formulated with close consultation of all the stakeholders; and the Ministry of Commerce appreciates all those involved in the process, particularly the private sector.

As a priority export product within the framework of the STPF 2020-25, Logistics presents a new services' export avenue and an opportunity for Pakistan. The strategy encompasses country's existing strengths, constraints, and foreseeable

potentials in this sector. All activities in the framework of designing Strategies has outlined a detailed 5-year Plan of Action to tackle issues and facilitate export procedures, and as identified by all the stakeholders of the Logistics sector in Pakistan.

Despite challenges in the international trade scenario and the global business environment, I am confident that this initiative will serve as an action-oriented blueprint to enhance trade performance, and to develop a coordinated mechanism with participation from both, the public and private sector, increasing its competitiveness in the international market.

To maintain the momentum sparked by the consultations, the Ministry of Commerce is committed to play constructive and facilitative role, while making it our top-priority to execute the activities and reforms proposed in the Plan of Action in consultations with the stakeholders. We are particularly committed to continue keeping the private sector in the driving seat for the implementation process through the Sector Specific Council on Logistics. The Government of Pakistan is fully committed to promoting export-led economic growth and would encourage all to join hands and work together in making the vision of a flourishing Logistics sector a reality.

Joint private sector foreword for the logistics industry

Logistics is an elevated priority for the Islamic Republic of Pakistan, because facilitating trade and transport is at the core of stimulating economic development and a precondition of national competitiveness. Pakistan's growth and development prospects are inextricably linked to its ability to better integrate into world markets. For the country to leverage its geographic proximity to many emerging markets and increase its exports and integration into global value chains means more and better jobs. However, this is partly dependent on an efficient logistics system.

In this context, this strategy document details the conditions for achieving the industry's ambitions. It emphasizes key reforms required for the industry to reach new heights. The provision of efficient logistics services will be possible through legislative amendments – the Customs Act, 1969, the Customs Rules, 2001, and the transshipment rule amendment, as well as improvements in the trucking fleets, all of which have been captured in the plan of action activities. Additionally, the strategy also considers a key intervention – the creation of the conditions (land and logistics zones) for the private sector to lead development of cold

storage solutions and multi-user facilities across the country and provide value-added services.

The strategy design successfully engaged with and consulted the sector stakeholders and facilitated extensive and fruitful discussions between the public sector and private sector. This allowed for a realistic evaluation of the challenges and opportunities logistics in Pakistan currently faces, while defining the best way forward.

Stakeholders of Pakistan's logistics industry hail this document as a long-awaited strategy that will create a cohesive regulatory framework to fully optimize the enormous potential of Pakistan's logistics industry. The advancement of the industry will be a prominent enabling factor to facilitate the growth and expansion of the other mature and priority sectors identified as part of the Strategic Trade Policy Framework (STPF) initiative.

This strategy is a collective endeavour of the industry stakeholders to define priorities, coordinate and monitor activities and implement plans of action in the course of the next five years. The development of the logistics sector as a key trade support function of the STPF is strongly welcomed by private stakeholders.



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Zahoor Iqbal Awan
Secretary General, FOAP

Acknowledgments

The Logistics Export Strategy forms an integral part of Pakistan's STPF. It was developed under the aegis of the Government of Pakistan and the leadership of the Ministry of Commerce (MoC) and the Trade Development Authority of Pakistan (TDAP), in close collaboration with the Ministry of Maritime Affairs and the Ministry of Communications, the Pakistan National Committee of the International Chamber of Commerce (PNC-ICC), the Pakistan International Freight Forwarders Association (PIFFA) and the Fleet Operators Association of Pakistan (FOAP).

The document benefited particularly from the inputs and guidance provided by the sector stakeholders that steered the strategy's formulation, namely the following key sector institutions.¹

Institutions
Ministry of Science and Technology
Agility Logistics Pvt Ltd
Board of Investment
SMEDA
Karachi Port Trust
Gwadar Port Authority
National Highway Authority
Ministry of Planning, Development & Special Initiatives
All Pakistan Shipping Association
Pakistan Ship's Agents Association
Federation of Pakistan Chambers of Commerce and Industry
Ministry of Communications
Pakistan Customs
Mercantile Marine Department
Karachi Cargo Services Pvt Ltd
Asian Development Bank

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1.– The full list of public–private stakeholders that participated in the consultations and their names is available in Annex II.

Note for the reader

In the context of the present strategy, logistics is seen as a trade support function (TSF) with a specific focus on agricultural and perishable products, and not as a standalone industry aiming to export its services beyond Pakistan. The strategy complements Pakistan's National Freight and Logistics Policy and provides concrete recommendations on the activities specific to the trucking sector, cold chain and policy regulations in Pakistan.

In order to boost export growth, the Ministry of Commerce (MoC) has developed the Strategic Trade Policy Framework (STPF) 2020-25, which was approved in November 2021. ITC provided technical support to MoC and the Trade Development Authority of Pakistan (TDAP) to design selected sector export strategies of the STPF priority sectors. This initiative, called the National Priority Sectors Export Strategy (NPSES), focused on 10 of the 18 STPF priority sectors through a consultative process.

The logistics strategy was developed on the basis of a participatory approach, during which more than 40 Pakistani industry leaders, small business owners and public sector representatives held consultations to reach consensus on key sector competitiveness issues and priority activities. These inclusive consultations were held in a hybrid model owing to the travel restrictions imposed due to the COVID-19 pandemic.

Besides in-depth qualitative and quantitative research and services map analysis, these consultations were complemented by visits and interviews by the national consultants with domestic firms to guide the strategy.

The logistics strategy builds on the ongoing initiatives in areas of private sector development, regional integration, investment and economic empowerment of youth. Equally importantly, the functional strategy is complemented by an effort to establish the proper implementation responsibilities among key stakeholders early on to ensure timely implementation of activities, whether by the public sector, private sector or international development agencies. This strategy's principal output is an endorsed, coherent and comprehensive document with a five-year detailed plan of action (PoA) and an implementation management framework.

This document was approved as the official strategy for the Logistics trade support function 2023-2027 by the Logistics Sector Specific Council and endorsed by the Ministry of Commerce of Pakistan.

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Acronyms and abbreviations

Unless otherwise specified, all references to dollars (\$) are to United States dollars (USD).

BOI	Board of Investment	IFC	International Finance Corporation
BOT	Build-Operate-Transfer	ITC	International Trade Centre
CAREC	Central Asia Regional Economic Cooperation Program	LPI	Logistics Performance Index
CIS	Commonwealth of Independent States	LTL	Less than Truck Load
CBU	Completely built unit	MoC	Ministry of Commerce
CPEC	China–Pakistan Economic Corridors	NTP	National Transport Policy
COGS	Cost of goods sold	NFLP	National Freight and Logistics Policy
FDI	Foreign Direct Investment	OECD	Organisation for Economic Co-operation and Development
FEU	Forty-foot equivalent unit	PNC-ICC	Pakistan National Committee of the International Chamber of Commerce
FOB	Free On Board	PoA	Plan of action
FBR	Federal Board of Revenue	SME	Small and medium-sized enterprises
FOAP	Fleet Operators Association of Pakistan	TDAP	Trade Development Authority of Pakistan
GDP	Gross domestic product	TEU	Twenty-foot equivalent unit
GVC	Global value chains	TIR	Transports Internationaux Routiers
GVW	Gross vehicle weight		



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EXECUTIVE SUMMARY

The present strategy outlines a proposed path for the development of the logistics industry in Pakistan. It is a five-year endeavour that was defined through a consultative process between public and private sector stakeholders. The strategy addresses constraints in a comprehensive manner and defines concrete opportunities that can be realized through the specific steps detailed in its plan of action (PoA). The logistics function strategy is an integral part of Pakistan's Strategic Trade Policy Framework (STPF).

Strategically located in South Asia, at the crossroads of the fastest-growing region in the world, Pakistan is the gateway to the People's Republic of China through the China–Pakistan Economic Corridors (CPEC), its). Furthermore, Pakistan's alignment for efficient delivery of cargo to Central Asia, Eurasia, the Commonwealth of Independent States (CIS) countries, the Middle East, the Islamic Republic of Afghanistan, the Islamic Republic of Iran, and India gives it great leverage as a land transit country. The CPEC will not only benefit Pakistan and China, but will also have a positive impact on the region. The relationship will result in enhanced regional connectivity through improved road, rail and air infrastructure, which will translate into higher trade volumes, increased production of energy and enhanced cooperation regionally. Areas of cooperation can include streamlined regional connectivity, greater investment opportunities, faster socioeconomic development, increased trade opportunities and more meaningful human resource development.

Fully aware of this potential, Pakistan aims to transform into South Asia's leading maritime, logistics and distribution hub to support the national economy. However, to get there, Pakistan needs to tackle long-lived roadblocks that have prevented it from achieving this goal.

As a response to these issues, the strategy will focus on fostering the right regulatory environment and implementing enabling procedures and guidelines for provision of efficient logistics services. These actions will create the conditions for the private sector to lead the development of the logistics sector, attract the investment needed to install proper facilities across the country (cold storage solutions and multi-user facilities), invite third-party logistics companies to offer enterprises flexibility, and provide value-added services. This will include allowing inter-port movement,

streamlining and introducing efficiency in all regulatory authorities' processing frameworks with integration of technology through government initiatives like the national single window. A concerted effort also needs to be made towards facilitation of the allied services, such as a move towards proper implementation of the Transports Internationaux Routiers (TIR; International Road Transport Convention) in Pakistan by removing roadblocks that currently deter transporters from participating.

Modern technologies have transformed the logistics industry by facilitating trade-related operations and growing opportunities for intraregional markets, e-commerce and services for integrated connectivity. By encouraging large, medium and small global trading companies to use Pakistan as a major distribution hub, the country can become a connecting point for South and Central Asia, especially because some of these countries are landlocked and do not have access to the sea. The potential lies in the development of warehouses, building cold chain facilities, proper roadways, integrating international buyer–seller, consolidations points providing front-end services to clients, air/sea transfers and value-addition services. Developing logistics is the best way to expand indirect export revenue and provide backward and forward links for industries that would expand export processing, agriculture and manufacturing in Pakistan. Allocating land for cold storage and forming the ecosystem to attract more foreign direct investment will create the conditions for the private sector to lead the development.

Strengthening the logistics sector will strongly contribute to bringing further revenue to Pakistani agricultural producers and manufacturers. Ultimately, this strategy's implementation will lead to:

- Growth in exporting through reduced uncertainty and improved connections;
- Expanded downstream activities for increased domestic value added and export diversification;
- Enhanced efficiency and sustainability in natural resource usage;
- A sustainable income secured for rural populations;
- An improved national image through the development of a national logistics brand.

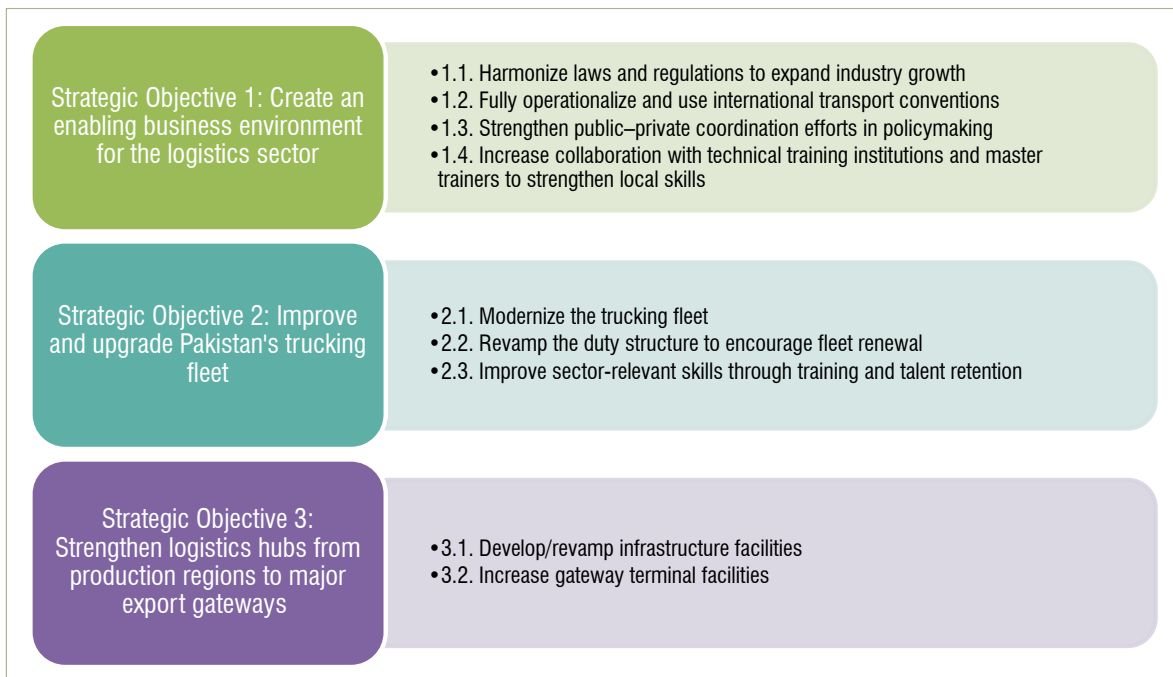
VISION AND STRATEGIC OBJECTIVES

In line with the strategic approach presented above, the following is a delineation of the proposed vision, agreed on by all stakeholders. For coherence, it draws on the National Freight and Logistics Policy document as follows:

“ To drive economic growth and trade in Pakistan by increasing the country’s competitiveness through an integrated, seamless, efficient, reliable and cost-effective freight transport and logistics network, leveraging best-in-class technology, processes and manpower. ”

The strategic plan of action (PoA) responds to this vision by addressing key constraints and leveraging opportunities in a comprehensive manner. Emphasis

is on the following strategic objectives. To this end, particular efforts will be made to realize the following three strategic and operational objectives.



IMPLEMENTATION MANAGEMENT

Transforming Pakistan into a leading maritime, logistics and distribution hub will depend heavily on the industry’s ability to implement activities defined in this strategy. Stakeholders will need to coordinate actions, monitor progress and mobilize resources for strategy implementation to achieve its targets. Implementation will succeed only if an adequate regulatory environment is fostered, and operational procedures and guidelines for provision of efficient logistics services are followed.

The following key areas of intervention are priorities to facilitate the strategy’s implementation:

- Urgently implement operational procedures and guidelines for provision of efficient logistics services (amendments to the Customs Act, 1969, Customs Rules, 2001, transshipment rule amendment(s), and the Foreign Exchange Manual issued by the State Bank of Pakistan);
- Create the conditions (land and logistics zones) for the private sector to lead development of cold storage solutions and multi-user facilities across the country and provide value-added services.

DEFINITIONS AND GLOSSARY TERMS

Logistics is the overarching term used to describe the transport, storage and distribution of goods in all their forms. As an economy develops, the contribution of transport reduces as the other services grow; however, they cannot develop without a strong transport sector. This is shown in the case studies that follow in the document. One definition of logistics is provided below:

'The management of inventory in motion or at rest. Inventory is in motion during transportation. Inventory is at rest awaiting production of finished goods or distribution at the final point of sale.' (United Nations Economic and Social Commission for Asia and the Pacific, 2002)

The core logistics components include:

1. Customer service;
2. Transportation;
3. Freight forwarding services;
4. Inventory management, including returns;

5. Information flow and order processing;
6. Warehousing;
7. Cross-docking and intermodal exchanges;
8. Materials handling;
9. Protective packaging: value-added services;
10. Support services such as certification, inspection and testing, etc.

In the context of the present strategy, logistics is seen as a trade support function (TSF) for the National Priority Sectors Export Strategy (NPSES) priority sectors (with a specific focus on agricultural and perishable products), and not as a standalone industry aiming to export its services beyond Pakistan. Upon successful implementation of this strategy and achievement of a sufficient national level of efficiency, the industry could consider expanding in the longer term. However, the priority in this short five-year term will be upgrading logistics functions at the national level servicing the export sectors.

There are numerous terms used interchangeably in logistics, which often lead to confusion. This section provides the definitions of everyday logistics terms.

CARGO OPERATIONS

Exchange of trailer refers to a change of a truck's motor tractor. In this case, the cargo remains untouched on the trailer and only the front part of the truck changes.

Lift-off/lift-on is the switch of transport units (e.g. containers) from one trailer to another trailer. This is usually done with a crane where the whole container (rather than its cargo) is moved to another transport unit (e.g. trailer, ship or rail wagon, etc.).

Transshipment refers to the whole process of changing the vehicle/container/cargo regardless of the method (transloading, lift-on/lift-off or exchange of trailer) and is, therefore, a more generic term.

Transloading refers to the physical movement of cargo from one unit to another (e.g. from one container into another). Transloading is often done with manual labourers, but forklifts or other equipment could also be used.

VEHICLE WEIGHTS

Axle weight is the total weight placed on each axle (front and rear).

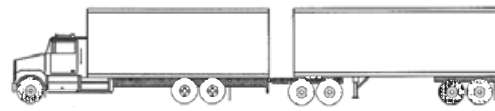
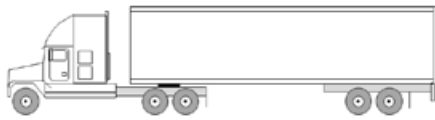
Gross vehicle weight (GVW) refers to the total maximum weight at which a vehicle is allowed to operate. This includes the vehicle (with fuel), any equipment and the cargo.

Tare weight is the total weight of tractor and trailer when the vehicle is empty, meaning the piece of equipment without cargo. Tare weight can also be called unladen weight.

TRUCK SIZES AND WHEELING CONFIGURATION

The size of trucks used and their axle configuration are important, because this defines which regulation applies to them (i.e. to determine how much cargo may carry).

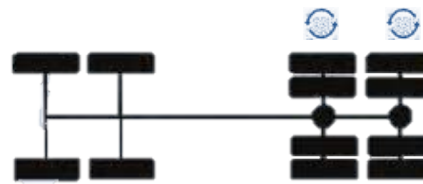
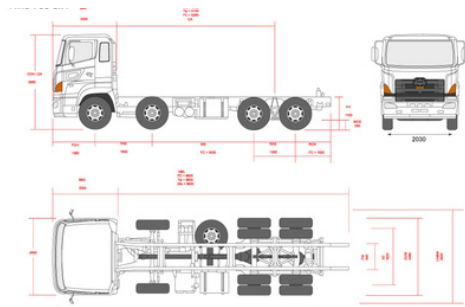
Semi-trailer (left) and drawbar trailer combination (right)



Multi-axle, 12-wheel rigid truck

8x4

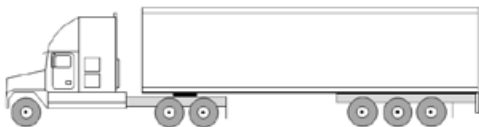
12-wheeler



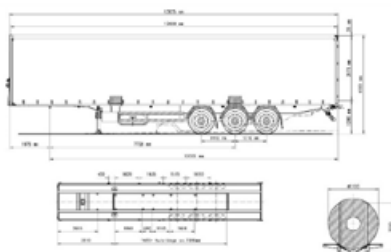
5-axle articulated semi-trailer



6-axle articulated semi-trailer



Tri-axle semi-trailer (without tractor)





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STAKEHOLDERS IN THE LOGISTICS AND TRANSPORT SERVICE CHAIN¹

The transport and logistics industry carries out all functions under the movement and storage of goods. However, even though there are several distinct stakeholders in the industry, most are concentrated in one or two subsectors and work with other service providers to cover the areas they do not provide themselves.

Freight forwarders organize shipments for individuals or corporations to get goods from the manufacturer or producer to a market, customer or final point of distribution.² Freight forwarders are often distinguished by the number of assets they hold, such as transport equipment and loading equipment, etc. Their profit base comprises the margins from all transactions they make on behalf of their customers.

Transport operators manage trucks, trailers and other vehicles. They can own their own fleet or lease them out. They need to work these assets to pay for depreciation, fixed costs and running costs and then produce a profit. While freight forwarders benefit from complicated processes, transport operators are interested in reducing delays and making the process as smooth as possible.

Customs brokers are individuals or firms licensed by customs authorities to enter and clear imported goods through customs on behalf of the importer. There are two categories of customs brokers: (i) for import and export clearance only; and (ii) for transit clearance.³

Other logistics service providers cover all other added-value services that turn transportation into logistics. The services generally relate to the storage and handling of cargo as an add-on to the transport function. In many countries, the warehousing and order picking function is dominant.

1.– 'Transport and Logistics in Lao PDR: Impact of the ASEAN Economic Community' (2014). Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ).

2.– See: <https://www.infoplease.com/dictionary/freight-forwarder#ixzz2FhueT97J>.

3.– Customs brokers must always be approved by the national customs authority and are usually required to have a bond or financial guarantee lodged with customs in order to operate. Most countries also require the brokerage to employ qualified persons to complete customs declarations and only these qualified persons are permitted to approach customs or lodge a clearance request.



GLOBAL LOGISTICS CHAIN RESHAPED BY THE PANDEMIC

The global COVID-19 pandemic has not only had a huge impact on the lives of people across the world, but it has also had a significant impact on global freight movements. This has been especially profound in countries that are exporting manufactured goods and perishable food to Europe and North America. Freight transport rates have been heavily impacted by the lack of airfreight capacity, and the subsequent modal shift to sea freight has come at a time of high pressure. This is due to merchants moving to restock as both demand and availability increases.

Approximately 40%–50% of global airfreight is moved as belly cargo on long-haul passenger planes. This could be 40–60 tons of cargo on a Boeing 777-300ER. In developing economies, this was often used to carry perishables and high-demand garments to Europe, the United States of America and the Middle East. Without this capacity, the demand for freighter aircraft has been intense, requiring older planes (parked in the desert) to come back into service. Some airlines have been flying passenger planes with cargo only, even selling the space in overhead bins and putting cargo on seats, such has been the demand and the freight rates needed to make it viable.⁴

Sea freight rates have more than doubled since 2019.⁵ The rate for a forty-foot equivalent unit (FEU) from Shanghai, China to Long Beach, United States dipped to \$1,700 in early 2020 as demand dried up, down from its normal rate of \$4,000. However, in May 2021, the rate rose to as much as \$14,000 on the spot market. For a container with 10 tons of garments, this is a demand surcharge of \$1,000 per ton of freight. Freight rates from Asia are also at historic highs, with mega carrier CMA-CGM adding a \$3,000 surcharge per FEU to any contracted rates. This does not even guarantee uplift, even at rates of \$12,000–\$14,000 to Northern Europe.

These developments in the global freight market are being felt in all the countries competing for export markets. It brings freight rates to the forefront as countries compete for similar markets, and the cost of freight can be the differential between products with a similar free on board (FOB) price. It reinforces the importance of achieving economies of scale in transport. When freight rates can increase by more than 300% on major shipping routes, it shows that lean and efficient shipping and freight is essential to compete in the global market. International airfreight and shipping rates are less about distance and more about demand. This can see freight rates on shorter routes using smaller vessels (or aircraft) being higher than those on routes where larger vessels (or aircraft) can be deployed. When port draft is not sufficient for mother vessels to call, feeder vessels are used to connect with the large ships at transshipment ports such as Singapore, Colombo, or Dubai. This involves extra handling and port costs and can mean longer transit times and so the higher costs.

The bottom line is that the pandemic has resulted in higher international freight costs that are not related to distance and this makes the FOB price from Pakistan more important than before.



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4.– 'As Passengers Disappeared, Airlines Filled Planes With Cargo'. *NY Times*, 2020. Accessed at <https://www.nytimes.com/2020/05/25/business/coronavirus-airlines-cargo-passengers.html>.

5.– 'With high demand, container shipping rates spiking again'. *Arkansas Democrat-Gazette, Inc.* Accessed at <https://www.arkansasonline.com/news/2021/may/04/with-high-demand-container-shipping-rates-spiking/>.

The growing importance of decarbonization in global logistics

In 2015, the United Nations (UN) adopted the 2030 Agenda for Sustainable Development. This includes 17 sustainable development goals (SDGs), addressing global challenges that human society is confronted with, including ending poverty and hunger, lifting well-being, diminishing inequality, reducing climate change, preventing environmental degradation, and ensuring sustainable consumption and production.

Recent developments in climate change (e.g. sudden floods and flash fires) and the increase of carbon dioxide (CO₂) emissions worldwide have shown that global efforts to decarbonize the targeted economic sectors (energy, agriculture, vehicle and transport) need to be intensified.

Decarbonization refers to the process of reducing or eliminating carbon dioxide intensity from energy sources by using technologies and life cycle assessment, as well as mandatory and voluntary measures to lower carbon dioxide emissions (Levitt, 2010; Noussan et al, 2020). The decarbonization initiatives conducted in various countries are closely associated with the following SDGs.

1. SDG Goal 7, 'affordable and clean energy', with the aim to collaborate across the industry and with governments to improve the intermodal and transmodal transfer systems, increase energy efficiency and upgrade fleets to enable use of alternative, less carbon-intensive fuels. Also included is to drive the use of renewables, and to partner with manufacturers to improve the design and energy performance of vehicles, vessels and aircraft. Collaborate with industry bodies, the energy sector, academia and governments to make coordinated investments in research and development of next generation bio-fuels, thereby increasing the speed at which they become commercially viable.
2. SDG Goal 13, 'climate action' by developing disaster response capacity of transportation hubs (e.g. airports and ports) in countries at high risk of extreme climatic events. Engage with governments and other stakeholders to reduce transit delays at land border checkpoints, ports and airports. Inform public policies on urban design and transportation

infrastructure (including multimodal enabling transport corridors) to accelerate the transition to more sustainable cities and transport networks.

Much of the research on decarbonizing relates to Organisation for Economic Co-operation and Development (OECD) member countries and the developed world. However, solutions that suit these countries might not be directly transferable to emerging economies, such as Pakistan, and these are exactly the places where most of the forecasted growth for road freight transport will take place (International Transport Forum, 2018). In developing countries, the widespread use of second-hand vehicles is of key concern. Reducing the fleet age and increasing the efficiency of their use would deliver great benefits. The introduction of newer and larger vehicles (e.g. standard heavy truck sizes from Europe or the United States) would also have a significant impact. This is associated with improvements to diesel quality and reduction of 'black carbon' emissions (Miller and Jin, 2018). Increasing driver training and maintenance levels would also contribute to lowering emissions.

More than four-fifths of world merchandise trade by volume is currently transported by sea, generating approximately 3% of total CO₂ emissions (International Maritime Organization, 2020).⁶ The International Maritime Organization's (IMO) 2014 analysis of the CO₂ emissions from international shipping by the International Maritime Organization (IMO) showed that these emissions could grow by 50%-250% by 2050 globally, depending on future economic growth and energy developments.

The IMO has, thus committed to slashing total annual greenhouse gas emissions by at least 50% by 2050, compared with 2008, and to fully decarbonize the sector by the end of the century. The shipping industry is facing up to the challenge, developing new fuels and stronger, environmentally friendly practices.⁷

6.– Shipping's share of global emissions in 2018: 289% (up from 276% in 2012). Source: Fourth International Maritime Organization (IMO) GHG Study 2020. July 2020.

7.– Lloyd's List. 'Decarbonisation'. Available from <https://lloydslist.maritimeintelligence.informa.com/hot-topics/decarbonisation>.

Common weak links in developing economies' logistics networks

Logistics is understood as a network of services that support the physical movement of goods, trade across borders and commerce within borders. It comprises an array of activities beyond transportation, including warehousing, brokerage, terminal operations, and related data and information management. The global turnover generated by these networks exceeds \$4.3 trillion, so a better understanding of their operation is no trivial issue (World Bank, 2018). For individual countries, logistics performance is key to economic growth and competitiveness. Inefficient logistics raises the cost of doing business and reduces the potential for both international and domestic integration. The toll can be

particularly heavy for developing countries trying to compete in the global marketplace.

In developing economies, the logistics agenda appears more prominent than it was a decade ago, as interventions expand with changes in demand, changes in industry and the increasingly central role of sustainability related concerns. Moreover, countries are also realizing that logistics challenges can lead to higher costs than necessary for customers at all levels, not only for exporters, but for importers and domestic consumers as well. Therefore, the issues can be simplified as follows to show the effect on the wider economy (Table 1).

Table 1: Key logistics challenges and solutions in developing economies

Domestic transport network	<ul style="list-style-type: none"> • Difficulty in moving less-than-truckload (LTL) shipments across the country raises the cost of transport to a level where the cost burden on the product is unnecessarily high without access to consolidation services.
Economy of scale in transport	<ul style="list-style-type: none"> • This is critical to keep transport costs under control. Small vehicles cost a lot more than big trucks (per ton) to operate. Encouraging the use of larger trucks and consolidating shipments will reduce the cost per kilo carried.
Wastage of perishable products in transit	<ul style="list-style-type: none"> • The cost of waste is borne by the other products and makes them less competitive and reduces incomes for producers.
Post-product assembly and storage	<ul style="list-style-type: none"> • Having storage and consolidation points that give time to achieve economies of scale in transport will reduce costs and wastage.
Delays, and export and border clearance	<ul style="list-style-type: none"> • Time is a major cost in transport, and vehicles that are in queues are not earning money. There is no reason for delays while export cargo waits in queues for inspection and clearance. Any delays add to the cost and reduce the competitiveness of exports.
Cold chain	<ul style="list-style-type: none"> • The lack of a cold chain to protect products greatly reduces the ability to export perishables and to distribute domestically, and for import substitution as well.
Transport associations	<ul style="list-style-type: none"> • Where small and medium-sized enterprises (SME) operators join associations to set rates on certain routes, competition is prevented, and an artificial rate structure develops as a negative.

Source: Author compiled.

ECONOMIES OF SCALE IN SUPPLY CHAINS

Achieving economy of scale is critical to success in most businesses; none more so than in the transport of farm produce. Agricultural produce is a commodity where the cost of transport is often higher than the farm-gate value of the product being shipped. To obtain the best price for their produce, growers and traders are drawn to central markets and further afield. The distances involved in doing so mean that the cost of transport is the major cost in the supply chain and, therefore, achieving economies of scale in transport is fundamental to the process. If the cost of transport exceeds the potential selling price for the product, the producer is left with nothing. It is essential to strive for economies of scale and this could mean that one entity takes control of the transport process and allocates costs on a pro rata basis to its users. In developed economies, this is a private sector function, with specialist logistics providers taking the risk. However, in less developed economies looking to exploit agricultural potential, the risk and management will need to be taken by the concerned authorities.

Most small growers cannot produce enough product (at the demanded quality and at a specific point in time) to fill more than a van load of one ton. This puts them at a logistics disadvantage from the start. They cannot ship one ton of agricultural produce long distances and hope to compete with those shipping much larger quantities. Therefore, smaller growers have little alternative than to sell to traders, who are then able to achieve economies of scale in transport through consolidating shipments. These small producers are often illiterate and most do not have bank accounts and are only able to trade in cash. They do not have the ability to pay for transport in advance unless they are part of a cooperative that has its own small vehicle to take their produce to market or to the local traders.

In 'logistics-friendly' countries, manufacturers and traders outsource logistics to third-party providers (who arguably benefit from economies of scale and are generally technically better at delivering these services), thus allowing companies to focus on their core business.

ROLE OF LOGISTICS IN GLOBAL VALUE CHAINS

Logistics is a cross-sectoral function and plays a prominent role in global value chains (GVCs) connecting countries, spreading technology and promoting best

practice around the world. According to ITC calculations based on the Trade in Value Added (TiVA) data, transportation and storage (ISIC⁸ 49-53) value-added accounted for approximately 8% of the total exports in 2018. The role of logistics in GVC is thus notable for the variety of lead firms involved in it, including major shipping, express delivery and freight forwarding firms, and the range of local operators they partner with. Increasingly, logistics in GVCs is extending their reach into developing countries.

Manufacturing and agriculture both depend on being able to ship goods to consumers quickly, cost-effectively and reliably. The GVC model that has become so important in sectors such as pharmaceuticals, engineering goods or agrifood is impossible to implement without a strong transport and logistics sector in the countries involved. Studies show that countries with better logistics performance tend to specialize more in manufacturing GVCs (Shepherd, 2013). Delays that are related to poor transport and logistics performance can be costly: an extra day can reduce exports by at least 1% and can impede export diversification.

Manufacturers

Logistics service providers are deeply involved in the mechanics of international trade transactions. It is difficult for a manufacturer to export at a competitive price or import at a competitive cost if the logistics is dysfunctional. High prices, poor service and a lack of certainty in transport and logistics translate into the effective isolation of a country from world markets. Goods typically cross multiple borders during the production of the final product, with parts and components being assembled in various countries before being brought together in a different country for final assembly. The result is a complex network of producers and assemblers, all performing related functions before the final product is shipped to the consumer, again maybe in a different country.

Developing regions such as South Asia are experiencing rapid improvements in overall performance. Improvement is taking place from a low baseline. However, the rate of change demonstrates that countries are succeeding in developing and implementing reforms that are positively received by private sector operators on the ground. These reforms can be expected to boost logistics development and, by extension, make the business environment more favourable for manufacturing GVCs.

8.- ISIC: International Standard Industrial Classification.

Traders in agricultural supply chains

Logistics performance is also key for ensuring effective participation in agrifood value chains. Furthermore, perishable products suffer particularly from delays, one of the most significant factors leading to post-harvest losses. OECD research has found that a 10% improvement in transport and trade-related infrastructure quality can increase developing countries' agricultural exports by 30% (OECD, 2013).

Most agricultural supply chains in developing economies are disintegrated. This means that, within the supply chain from producer to consumer, many sales transactions and ownership changes take place. Traders and buying agents take over the role of aggregation and sell, with a profit margin, to the next biggest trader. Traders fulfil the important function of aggregation, as they take over the costly activity of sourcing the produce. In some cases, they maintain small collection facilities where farmers can drop off their products. During that activity, they make a first quality check of the produce and, based on that, buy the product from the farmers. They are often also the main access to finance for farmers, as they provide advances in the beginning of the season or also throughout when money is short. They also maintain relationships with the buyers.

Agricultural traders often attract a poor reputation with growers, as they are perceived as taking advantage of growers' vulnerability and profiting from it. However, the trader is the one taking the risk and

organizing the transport to the market or buyers. They pay for the transport and take the risk that the produce will achieve the predicted or promised price on arrival, having already paid the growers for the produce. They depend on the vehicle being fully used to achieve the economy of scale required to get the unit cost to a competitive level.

COLD CHAIN

Having an end-to-end cold chain opens many possibilities for export. However, unless the produce is sourced close to the airport or point of export, the benefits will not be felt in regional areas. The airfreight capacity is available to take perishable cargo to international markets. It is the domestic leg of the journey that needs to be upgraded to a point where perishable produce can reach the airport or point of export. Proper cold chains allow for added-value services to be carried out closer to origin in the supply chain and this leads to rural processing jobs. How to establish domestic cold chains is a dilemma for many developing countries wishing to raise local producers' participation levels. It is often left to major trading houses or the food production companies of the destination countries to invest in cold chains. However, these are not common user facilities and are usually established to ensure supply from contract growers for the parent company, and are not available to others.

The common development trajectory for national logistics services

As the market evolves, the role of information becomes more important and the need for storage reduces in-sourcing⁹ and distribution logistics.¹⁰ Information gives visibility to advanced sales, orders and demand. The better the transactions become, the less storage is needed. This reduces the drop size¹¹ order each time and the need for storage reduces. Therefore, the future demand for old-fashioned warehousing is reducing as non-agricultural products move to a pull versus push model:

- **Push-based supply chain strategy** is usually suggested for products with small demand uncertainty, as forecasts will provide a good direction on what to produce and keep in inventory and for products with high importance of economies of scale in reducing costs.
- **Pull-based supply chain strategy** is usually suggested for products with high demand uncertainty and with low importance of economies of scales, which means aggregation does not reduce costs and, consequently, the firm would manage the supply chain based on realized demand.

9.– In-sourcing logistics: processing all orders internally, without outsourcing any part of the process.

10.– Distribution logistics, also known as sales logistics, deals with the planning, realization, and control of the movement of goods.

11.– Drop shipping is a form of retail business wherein the seller accepts customer orders, but does not keep goods sold in stock. Instead, in a form of supply chain management, it transfers the orders and their shipment details to the manufacturer, a wholesaler, another retailer or a fulfillment house, which then ships the goods directly to the customer.

THE NEED TO IMPROVE LOGISTICS PERFORMANCE

Key critical points that attract multimodal transport and logistics operators are cost of operations and turnaround time. Despite some progress in improving its logistics performance, Pakistan still lags behind its main competitors. The World Bank's Logistics Performance Index (LPI) ranked Pakistan 122 among 160 countries in 2018, well behind all but the Kingdom of Bhutan in South Asia (Table 2). This index includes efficiency of the clearance process, the quality of trade- and transport-related infrastructure, the overall level of competence and quality of logistics services, and some other critical factors. As the economy matures, the share of logistics to gross domestic product GDP reduces as other sectors grow.

Improving logistics performance is thus an important lever with which to increase the country's competitiveness, safeguard its comparative advantage and diversify its exports basket. Doing so would also help move the rural economy into high-value agricultural production, an important transition for a country in which agriculture will continue to play an important role in the economy.

Many agrifood exporters encountered problems with transport of their shipments. Most commercial freight is transported by road, but the trucks and containers are inadequate. This leads to significant delays, which is a serious problem when exporting perishable goods. Only small quantities are shipped by air due to the high cost for exporters (ITC, 2020). Diversification into high-value agriculture has been slow in Pakistan, and the physical infrastructure and value chain inefficiencies are some of the constraints slowing diversification.

Table 2: Logistics Performance Index (LPI) of South Asian countries

Country	LPI score	LPI rank	Customs	Infrastructure	International shipments	Logistics competence	Tracking and tracing	Timeliness
India	3.18	44	2.96	2.91	3.21	3.13	3.32	3.50
Maldives	2.67	86	2.40	2.72	2.44	2.55	2.77	3.18
Sri Lanka	2.6	94	2.58	2.49	2.51	2.42	2.79	2.79
Bangladesh	2.58	100	2.30	2.39	2.56	2.48	2.79	2.92
Nepal	2.51	114	2.29	2.19	2.36	2.46	2.65	3.10
Pakistan	2.42	122	2.12	2.20	2.63	2.59	2.27	2.66
Bhutan	2.17	149	2.14	1.91	1.80	2.35	2.35	2.49

Source: Logistic Performance Index, World Bank, 2018.

LOGISTICS SECTOR'S CONTRIBUTION TO THE ECONOMY

The logistics sector benefits the economy in two main ways:

- It is usually a major employer of semi-skilled staff and supports a significant subsector of skilled workers. The more developed the logistics sectors, the higher the support level required. This is particularly the case with modern trucks and buses, which need specialist mechanics, auto electricians and vehicle inspectors.
- The other benefit of a well-developed logistics sector is to the industries they serve. Countries with highly developed value chains demand high-quality logistics in support.

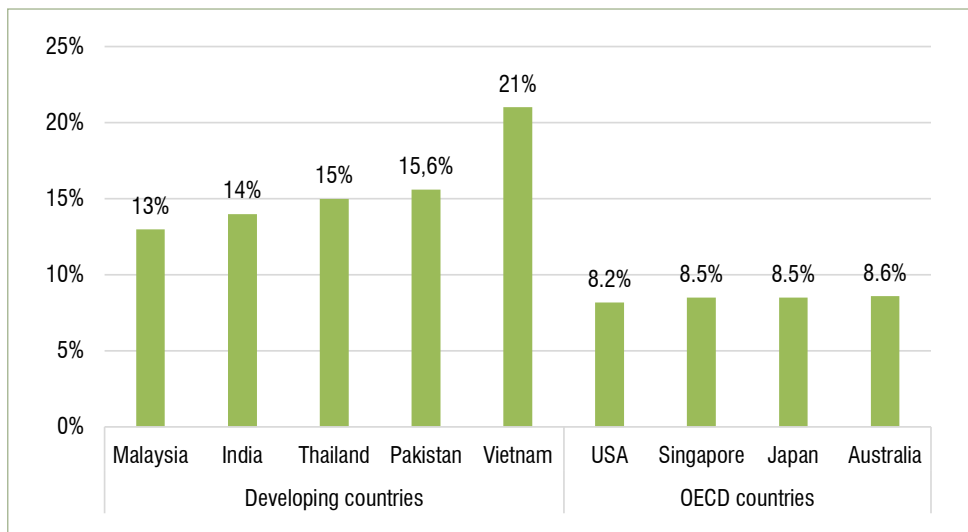
The logistics sector's contribution to GDP is a measure of the level of activity in the sector. This contribution to GDP tends to reduce as an economy develops, and is usually due to growth in other sectors. The transport and logistics sector contribute an average of 12.8% of GDP for the Asia-Pacific region, which is slightly ahead of the 11.6% that it contributes to global GDP. Where statistics are available, the figure for leading economies of the Asia-Pacific region, such as Australia, Japan and the Republic of Singapore, have contribution levels of 8.5% to 8.6%. However, the transport sector's contribution to developing economies is generally much higher. Low labour costs alone do not attract investment if the cost of export is high. Domestic transport costs, free on board (FOB) costs, and customs delays on inputs and exports all go to the cost of goods sold (COGS) and affect the competitiveness of a country's exports.

Some of the Association of Southeast Asian Nations (ASEAN) developing countries, such as the Socialist Republic of Viet Nam and the Republic of Indonesia, have contributions of 20% and 24% respectively to their GDP. Transport and logistics operations tend to be relatively more labour intensive in developing countries than in developed ones, due to differences in production technology. As low-income countries grow their economies towards middle-income status, the size of the transport and logistics sector (as measured by its contribution to GDP) tends to increase (Shepherd, 2011). One possible reason is that there is increased development of specialized transport and logistics firms, which leads to greater (low-cost) outsourcing opportunities for manufacturers that previously had to conduct such activities in-house (and at high cost), including labelling, packaging, etc. Contribution peaks as economies mature, and then reduces as other industries grow, often due to support from the logistics sector.

The Kingdom of Thailand is an example where the contribution was more than 18% in 2012 and is now down to approximately 15%, despite growth in the sector. At the same time, having a strong logistics sector made the development of other industries and service possible in Thailand (Figure 1).

Thailand is ranked 32nd in the World Bank’s Logistics Performance Index (LPI) and is the 3rd highest in Asia. Viet Nam is ranked 39th. In both cases, the logistics sector is a major contributor and employer to the economy as well as a huge support function for investment and exploitation of their other comparative advantages. In both cases, local logistics capacity was low until Japanese manufacturers saw the need to bring in their own logistics services providers, as they could not get good-quality local providers. This led to a rapid modernization of the sector and a dramatic increase in local logistics capacity within a decade. To a certain extent, a two-tier logistics sector developed, but local operators were increasingly forced to improve their standards as the new entrants, often joint ventures, set high standards at competitive process.

Figure 1: Logistics contribution to GDP (%)



Source: ITC.

The non-transport activities in logistics are often referred to as added-value services. These are the handling, storage and distribution functions that grow the logistics sector. In a less developed economy, pure transport usually accounts for at least 80% of the sector total. As the sector develops, this is reduced to approximately 50%–55%. However, this happens by having a strong and competitive transport sector that can support production and an environment where added-value services are in demand and the sector grows.

COST OF LOGISTICS IN AN ECONOMY

The current logistics cost, modal transportation mix and the level of sector’s organization (organized/un-organized/fragmented) help to determine the cost of logistics. The cost of transport is determined by asset usage and demand more than it is by distance. While fuel is a cost determined by distance, the age and condition of the vehicle, it is only one of the cost elements. Costs are fixed, such as the depreciated cost of the

assets, drivers, registration, insurance or interest, or they are considered as variable costs, such as fuel, tyres, maintenance, driver allowances and tolls, etc.

The major factor of transport costs are vehicle capacity (economy of scale) and usage. Larger vehicles are cheaper to operate on a per ton basis than small trucks. They are more efficient in terms of fuel consumption and have fewer emissions per ton than small trucks. It is often a false economy to restrict the size of delivery vehicles, as it means more trucks and more journeys are required to move cargo.

Multimodal is a mix of transport modes. However, it is often the interchange between those facilities that can add considerable cost and lessen the benefits. Every time freight is handled, it costs money, and the unnecessary offloading and reloading can be expensive if facilities and equipment must be paid for.

Consolidation as a tangible solution to cost inefficiencies

Putting multiple shipments together from different shippers to different consignees is known as consolidation or groupage. It is the method of operation used in airfreight and trucking. The normal method is for the freight operator to sell the space to customers on a per kilo or cubic metre basis. The space is sold at a higher rate than the sum of the total equally divided. There is always an over-recovery of costs, as it is very rare for a truck or plane to be full. Anything more than 80% is good usage, because there are usually multiple product types in the consolidation that do not stack well together, creating space that needs to be paid for. So, depending on the model, the space is charged at premium prices (factor of 1.25 or higher).

In a developed market, this consolidation is done by the transport operator. However, the consolidation of temperature-controlled freight is relatively sophisticated and requires a level of market maturity that is not found in developing countries. It is seen in dry freight, but often only on specific routes between major centres.



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In most developing economies, the consolidator is taken by the buyer/trader. This is usually a large vertically integrated trading house that develops its supply chain from the farm gate to a processing facility and on to the urban area for distribution or export. They control the end-to-end cold chain or production flow using their own or dedicated facilities. They must set up and control the operation themselves, as there is often no common user alternative and no third-party transport or storage capacity for them to use.

In the absence of third-party operators selling the service, a body such as a trade association or growers' cooperative or local government would need to act as the consolidator. They would buy the transport capacity by booking refrigerated trucks and then sell the space to members or shareholders who want to ship their product. The body would be responsible for managing the purchase and resale of the transport capacity to stakeholders on a per kilo, cubic metre or pallet basis.

The value of the transport and logistics sector to a country's economy is both direct, in terms of employment and revenues generated, and indirect, in terms of the value that its services add to the products and services of the agriculture and manufacturing sectors. The relationship between logistics performance and higher income demonstrates the sector's contribution to productivity and economic development. The cost of logistics as a percentage of GDP can be up to 25% in some developing economies – compared to 6%–8% in OECD countries. Better efficiency in the sector can, therefore, boost competitiveness and stimulate economic growth in emerging markets. However, the COVID-19 pandemic has had a significant impact on global freight movements, causing disruptions in the supply chain.

PAKISTAN'S LOGISTICS TO LIVE UP TO THE COUNTRY'S STRATEGIC LOCATION

Logistics as a pillar of growth for Pakistan's exports

Logistics is the turning wheel behind any country's economy to help enter the global supply chain industry, which is rapidly digitalizing and creating a new generation of consumers. Moreover, it plays an even larger role in countries that enjoy a geostrategic advantage such as Pakistan. Pakistan's logistics industry contributes 15.6% to the country's GDP and employs 5.4% of its workforce. This sector is becoming one of the most important accelerators of trade and industry in developing and developed countries. Specifically, an efficient supply chain network has the potential to increase rural income manifold, which can lead to a multiplier effect on the overall economy.

The industry plays a pivotal role in ensuring positive sustainable changes in the economy and, therefore, is one of the key indicators when assessing the rate

of a country's development. Enhancements in the logistics network would yield reduced transportation costs with higher efficiencies, enabling Pakistan's products to become significantly competitive in the global marketplace.

An efficient and reliable logistics network coupled with a transparent and consistent cross-border trade facilitation process is a key driver of export competitiveness in a country. It acts as an enabler for expanding foreign markets for indigenous goods. An efficient logistics system will also encourage investments in a country, especially foreign direct investment (FDI), thereby positively impacting international trade. A reliable, efficient and cost-effective logistics infrastructure for commercial goods is, therefore, critical to Pakistan's continued economic growth.

Toward trade-oriented connectivity policy

A robust logistics sector has a dual role in the economy. As mentioned previously, logistics in Pakistan is reported to account for 15.6% of the economy (World Bank/International Finance Corporation, 2019). This can be viewed as a cost of logistics or a contribution from logistics to the wider economy. It can also be seen as a measure of the capacity of logistics to support other sectors.

An efficient and reliable logistics network can be a key contributor to robust economic growth in Pakistan.

Freight and logistics holds all the potential and the promise to facilitate domestic and foreign trade, promote global competitiveness, enhance incomes and reduce regional economic disparity. The sector is one of the most important enablers of trade in the country. Specifically, An effective network serves as the driving force behind a country's export competitiveness, and provides connectivity to the global economy, with the potential to facilitate domestic and foreign trade, enhance incomes and reduce economic disparities across geographies.

In the light of ever-increasing growth supported by logistics in Pakistan, priority services sectors were identified under Pakistan's Strategic Trade Policy Framework. One of these priority services sectors included logistics. However, under this sector strategy, the logistics sector has been evaluated as a trade support function (with a specific focus on agricultural and perishable products) and not as a standalone industry aiming at exporting its services beyond Pakistan. Upon this strategy's successful implementation and achievement of a sufficient national level of efficiency, the industry can consider expanding in the longer term. However, the priority in the short five-year term will be upgrading logistics function at the national level, servicing the export sectors.

Therefore, the logistics services sector strategy focuses in detail on the agricultural sector, with policy spillovers into the manufacturing sector. For example, improving trucks' fuel economy will reduce transport costs. Given that transport costs represent almost 25% of the total product costs, this would translate into lower prices

for food and other manufactured products. Moreover, issues concerning logistics, such as storage facilities and development of cold chains, will help reduce farmers' food losses. This would lead to an enhancement of productivity of both the farmer and the industry and consequently towards a higher export surplus.

Fundamentals of Pakistan's logistics sector

Pakistan's logistics sector is an integral part of trade. The freight and logistics sector is poised with tremendous potential, owing to its domestic market with more than 220 million people and international strategic geographic location. The government is improving the transport infrastructure through investment programmes under the CPEC and the Central Asia Regional Economic Cooperation Program (CAREC), and is facilitating business by acceding to and agreeing with international trade and transport conventions. In addition, in 2018, the government adopted the National Transport Policy, recognizing multimodal logistics as one of the cross-cutting sectors and setting out the strategic directions for change of the freight and logistics sector. However, major gaps within the current set-up, such as outdated infrastructure, inefficient systems, lack of good-quality human resource and unnecessary bureaucratic red tape, have resulted in an inefficient and disjointed system. The sector has seen growth, but, due to the culture of family owned enterprises, the existence of large-scale operations and joint ventures is limited.

EFFECTIVE BUSINESS ECOSYSTEM IS A PREREQUISITE FOR GROWING LOGISTICS AS A STANDALONE SECTOR

Logistics service providers also face hurdles in the business environment, limiting their ability to grow and deliver modern and sophisticated services. Service providers lack access to financing, with access to limited or only costly options for financing fleets and other

assets. Moreover, the informality in the sector gives rise to information asymmetries that curtail access to bank financing by logistics service providers. Another downside is that small operators do not have access to some of the more lucrative segments of the market, which could incentivize them to modernize their fleets and operating practices.

Therefore, for the logistics sector to grow beyond basic transport and storage, it needs to develop, with government support, a range of services that enable and support the transport of goods. These services are particularly necessary for the export of goods where there is a high level of certification, inspection and packaging required to meet international standards. In many cases, they are not specific to international movements or even to logistics, as they may fall into other services sectors, such as the following.

Testing laboratories

Most countries require a suitably recognized laboratory to certify that samples of products for export meet their national requirements for one or more categories. The laboratories must be certified and accepted under mutual recognition agreements by the destination countries.

Inspection certification

Several international organizations provide the service of verification on quality, packing, loading and condition of the product on departure from origin. The service is often used to trigger payments, exercise letters of credit and confirm details to the buyer. The service is generically known as Standard Global Services (SGS).

Export packing

The packing of cargo for shipment by air and sea on a consolidated basis is very important to ensure that it is not damaged in transit. The airline will not pack the cargo; it is done by specialist packers who then hand over the cargo ready to fly or be stuffed into a container.

Packaging materials

Adding value to agricultural export will require packaging to protect the product during transport and often straight to the shelf. The packaging materials need to be available close to the source to minimize transport costs. The materials used can be plastic, cardboard, paper, or packaging manufactured from renewables such as sugar cane or elephant grass. A successful packaging material sector will not only support agricultural exports, but will also create local employment. It can be developed into an eco-friendly or green industry by using recycled or degradable materials.

Pallets and crates

Larger shipping crates, containers and pallets are needed to protect the cargo in transit and reduce damage and waste. These are usually made of wood, which could require fumigation, or from plastic, which is more expensive and needs to be sourced and returned. As with packaging, if the materials used can be recycled or degradable, it can become a support industry with export potential.

Warehousing

Due to the long free time allowed at the ports, there has been no immediate need for warehousing facilities near the ports (NFLP, 2020). Nonetheless, modern warehousing structures are being developed to meet Pakistan's needs in trade activities. These structures include multimillion dollar state-of-the-art temperature-controlled units with optimized shelf and space and fast cargo retrieval systems. Unfortunately, most of these units are in urban centres (such as Karachi, Lahore, Peshawar and Islamabad, etc.) and cater to domestic cargo for local consumption. While those located near the seaports and dry ports cater to export cargo, their main clientele is still the local market. The absence of modern warehousing units in Pakistan's agricultural belt has resulted in huge losses to the agricultural industry, resulting in financial loss to farmers and not allowing the country to export the surplus and gain foreign exchange. Currently, there are only a few big players in the warehousing industry, with limited presence of cold storage facilities. Lack of warehousing along the route results in cargo being transported from point of origin to destination non-stop, resulting in stress on transport operators.

Cold chain logistics

Pakistan is extremely underdeveloped with regards to cold chain logistics, with only a few units available for storage. Refrigerated foodstuffs such as dairy, fruits and vegetables and many processed foods requiring specific temperatures are spoiled due to poor storage, handling and/or transportation. With limited cold storage units (apart from set-ups by firms to cater to their products) existing mainly in Karachi, of which only a handful are modern state-of-the-art set-ups, the transport and storage of temperature-sensitive goods is limited. Given the lack of storage facilities along the transport route, these goods are often under-produced to only cater to the local market.

Cold storage supply chains are primarily absent given the high costs of maintaining such facilities and those that do exist are in and around the port and industrial areas. As a result, it is estimated that more than 40% of all perishable items are spoiled due to inadequate storage facilities, improper handling and transportation. Transport network

Pakistan's transport network, although not as sophisticated and extremely skewed, has improved significantly in the past 10 years. Composed of three modes of transport (air, rail and road), the industry has seen competition and growth in all modes except for rail. The introduction of many private airlines and trucking fleets has resulted in the creation of a more competitive and efficient transport system. Unfortunately, even with a large rail network, the system is underused for cargo. Freight transport in Pakistan is primarily via road, with 94% of freight cargo being transported via road.

Air

World Bank data on air transport of freight indicates that Pakistan transported approximately 193 million tons per km of freight in 2019. Often, these are goods that require urgent delivery, lightweight high price tag items, perishable food, drugs, vaccines, pharmaceutical products and luxury products, etc. These goods are often carried in the belly of passenger planes.

Railway

Many developing countries use their railway system to transport bulk cargo, as it is a reliable and cost-effective system to move large quantities. According to Railway Board, Ministry of Railways, Pakistan specializes in bulk transport of goods. These goods are mainly primary inputs, which includes coal, rock phosphate, fertilizer and container. For these commodities, Pakistan railways is the priority choice. The transportation

of 5.3m tons in 2019 was a by jump from 2012 where Railway transported only 0.2m tons.

Supply chain management

Supply chain management is primarily handled by freight forwarders, a largely self-regulated group of companies of all sizes. These organizations thrive at

satisfying their customers' demands while minimizing cost and maximizing their profitability. While third-party logistics is very infrequent in Pakistan, the existence of supply chain management through freight forwarders is quite prevalent. There are more than 500 companies registered to handle logistics activities for companies and individuals from transport to documentation to government requirements and processing.

Box 1: Decarbonization in transport in Pakistan

Pakistan is one of the world's most vulnerable countries to climate change. As climate-induced extreme events have brought the world to the climate tipping point, disruptive technologies have given a new momentum to global efforts to achieve carbon neutrality by mid-century. The argument for decarbonization is driven by the learning that higher economic growth rate can be achieved without proportionately increasing carbon emissions. In fact, the opposite has been witnessed in several countries: reducing carbon emissions accelerates economic growth, attracts private sector investments, promotes start-ups and entrepreneurs, and creates new jobs, particularly small and medium-sized enterprises (SMEs). The number of jobs created by renewable energy in China and India is high, and there is no reason to think that it cannot create green jobs in Pakistan as well. Post-COVID-19 stimulus packages around the world are being designed to make recovery climate-smart and inclusive to ensure just transition.

From 1994, Pakistan's carbon emissions increased by 123% in 2015. These emissions are projected to increase by approximately 300% by 2030, and the energy and agriculture sectors account for an estimated 90% of total emissions. Pakistan can reduce up to 20% of its 2030 greenhouse gas emissions by decarbonizing the transport and agriculture sectors. Studies show that 46% of emissions coming from the energy sector was from transport, which relies on oil for 92% of its energy and thus particularly hard to decarbonize. Transport emits approximately 23% CO₂ and will reach 40% by 2030 and 60% by 2050 (Sims et al., 2014).

Simply looking at the average age of the truck fleet or the emission standards in place, it is quite clear there is a huge gulf between developed and developing countries (e.g. Pakistan), with much lower standards and higher average vehicle ages in the latter. In fact, many used trucks in the developed world are sold to the developing world, including Pakistan, where they spend the rest of their life cycle. Due to a lack of engineers, qualified staff, spare parts and other issues (e.g. infrastructure supply quality), the vehicles operate at lower performances and higher energy consumption than might otherwise be the case.

Pakistan: Important geoeconomic location, and gateway to China

Given that 63% of the global trade is Asian, Pakistan is positioned perfectly to leverage its geostrategic location. Pakistan the gateway to China through the CPEC and its alignment for efficient delivery of cargo to Central Asia, Eurasia, the Commonwealth of Independent States (CIS) countries, the Middle East, Afghanistan, Iran and India gives it great leverage as a land transit country. The CPEC will not only benefit Pakistan and China, but will also have a positive impact on the region. The relationship will result in enhanced regional connectivity through improved road, rail and air infrastructure, which will translate into higher trade volumes, increased production of energy and enhanced cooperation regionally. Areas of cooperation could include

streamlined regional connectivity, greater investment opportunities, faster socioeconomic development, increased trade opportunities and more meaningful human resource development.

Main line 1 (ML1) Pakistan's eco-booster thanks to CPEC. Under CPEC, one of the biggest projects is revamping a railway line called ML1. The 1,687 kilometres railway line between Karachi and Peshawar passes through crucial areas of the country i.e., where 78% population and 80% of the industries lie. It is estimated that the railway line will cut the travel time between Peshawar and Karachi in half as trains will move at a higher speed shortening the time for cargo. Currently, just 4% of the nation's freight traffic relies on

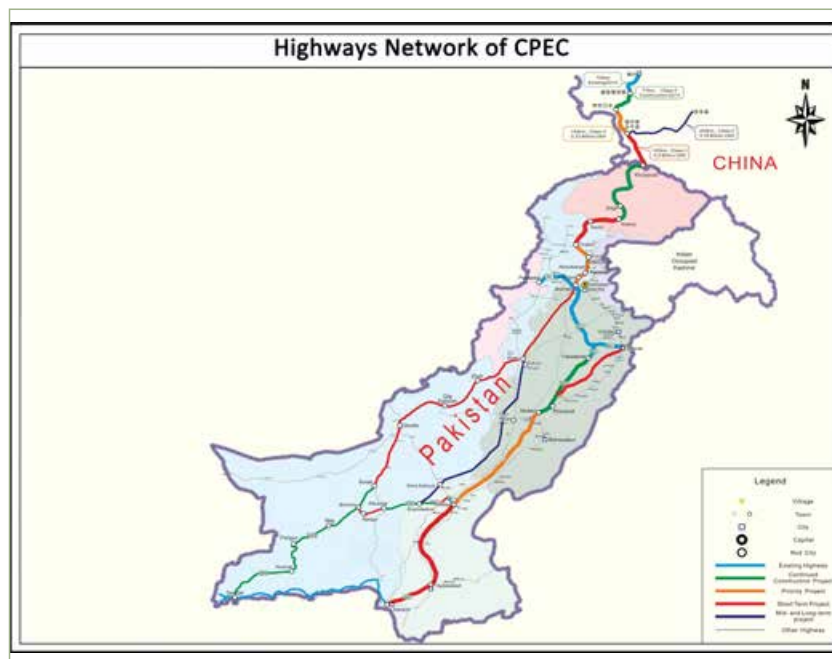
the Pakistani Railway system, but following the completion of this project, that percentage is anticipated to rise to 20%.

By shifting more traffic from the nation's highways and freeways to the more effective railway line, the government will be better able to achieve its green climate ambitions. The rapid expansion of motorways and dual carriageways linking major cities during the past ten

years, combined with improvements to the train system, is expected to make cross-country travel easier and faster.

The completion of the ML-1 would be a significant step toward creating a cogent transportation grid in Pakistan that is quick, secure, and gives potential travellers more options for the type of transportation they would like to use.

Figure 2: CPEC infrastructure network



Source: CPEC Authority, Ministry of Planning, Development, & Special Initiatives.

STATUS OF ROAD FREIGHT VEHICLES IN PAKISTAN

Approximately 206 billion tons-km of cargo is moved through the road network every year, which accounts for 90% of the country's freight cargo. Even though the road network is inadequate and disjointed and vehicles are outdated, resulting in unnecessary delays in the movement of goods, vehicles are still used as the primary mode of transport. The road network is sufficient for vehicle movement; however, the movement of cargo from Karachi to Peshawar, for example, becomes a challenge due to the broken road network in Sindh. While the road network continues to expand on a steady basis, lack of maintenance has resulted in irreparable breakdowns throughout. The trucking fleet is not only old, but is also environmentally unfriendly, with the majority of trucks being Euro II or below. As

a result, very few companies are willing to make large investments into a new trucking fleet. Updating and implementing the trucking policy (of 2007), and strictly adhering to the axle load limit policy set out under the National Highways Safety Ordinance (NHSO) are requisites for the industry to flourish.

The lack of enforcement of these laws means that, on average, most trucks in Pakistan easily 40%-45% payload above the legal limits set by the government, which are already higher than international standards. Table 3 shows a comparison between the recommended weight for Pakistan and other Asian economies.

Keeping consistency in weight standards is challenging. Pakistan is now the only country in the region where trucks still fail to abide by the limits set by the government on axle load limits. For example, for a six-axle tandem-tridem, India allows 55 tons¹²

12.- See advisory regarding revision of safe axle. Available from https://morth.nic.in/sites/default/files/Advisory_regarding_revision_of_safe_axle_1.pdf.

and Afghanistan allows only 49 tons per axle, while Pakistan's legal axle load is 58.5 tons.

The permissible weight and the overload weight are presented in Figure 3. The cost of these overladen vehicles is borne by the truck drivers, truck owners, transport industry and infrastructure authorities (such as the National Highway Authority), as most of the roads, highways and motorways are being eroded and damaged by overweight trucks, increasing the cost of maintenance. There is thus urgency for the enforcement of the legislation on legal axle load limits for trucks.



Source: Ameer Hamza.

Table 3: Maximum permissible weights of a freight road vehicle, by country

Country	Maximum gross weight, tons		Maximum axle load, tons	
	Rigid vehicle	Articulated vehicle/road train	Group axle	Single axle
Pakistan	27.50	65.50	31.00	12.00
Afghanistan	24.00	49.50	31.00 ⁱ	8.00
Indonesia	37.00	56.00	30.00 ⁱ	10.00
Islamic Republic of Iran	34.00	44.00	27.00 ⁱ	13.00
Thailand	30.00	50.50	25.50 ⁱ	11.00
Cambodia	30.00	40.00	24.00 ⁱ	10.00
China	31.00	49.00	24.00 ⁱ	10.00/11.50 ⁱⁱ
Viet Nam	34.00	48.00	24.00 ⁱ	10.00
Sri Lanka	21.30	42.50	22.00 ⁱ	10.00
Bangladesh	30.00	44.00	22.00	10.00
Malaysia	27.00	51.00	21.00	12.00
India	49.00	55.00	21.00 ⁱ	11.50
Lao People's Democratic Republic	27.20	49.60	20.40	9.10
Japan	25.00	36.00	20.00	10.00
Myanmar	21.00	38.00	*	10.00
Nepal	*	*	*	10.20
Philippines	29.70	41.00	*	13.50
Republic of Korea	*	40.00	*	10.00
European Union	32.00	44.00	24.00	10.00/11.50 ⁱⁱ

Source: United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), 2020

Notes:

ⁱ For tridem axle

ⁱⁱ For powered axle

* Data not available

Legend:







■ The highest value

■ The lowest value



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Figure 3: Permissible axle loads by truck type

		Permissible GWV (in tons)	45% Overload
2-axle single (Bedford)		17.5	25.38
2-axle single (Hino/Nissan)		17.5	25.38
3-axle tandem		27.5	39.88
5-axle single tandem		48.5	70.33
6-axle single tridem		58.5	84.83
6-axle tandem, single tandem		61.5	89.18

Note: Axle load limits by the National Highways Safety Rules 2000, National Highway Authority of Pakistan.

Source: United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), 2020.

The industry argues that the reason for the lack of immediate implementation of the axle load limit regime is that there are not enough trucks to carry cargo, which could lead to inflationary pressures – increases in the industry's cost of transportation of raw materials and finished goods.

It is true that, when the policy is implemented, costs could increase in the short term, but this increase will also encourage investments for purchasing higher-quality, technologically efficient trucks to cover the loss in revenue. Moreover, in the medium to long term, policies geared towards encouraging domestic production of semi knocked down vehicles (SKDs) and completely knocked down (CKD) vehicles, and importing of completely built units (CBUs) of more than 400 HP, will reduce the existing demand and supply gap.

OVERVIEW OF PORTS INFRASTRUCTURE IN PAKISTAN

Pakistan's two major seaports, Karachi Port and Port Qasim, handle 95% of all international trade and are facilitated by 14 dry ports and the newly developed Gwadar Port. Within these three seaports, there are five container-handling terminals with varying handling capacities (see Table 4).

Pakistan shares six land border stations with its neighbours, Iran (Taftan and Area 250), Afghanistan (Torkham and Chaman), India (Wagah) and China (Sost), all of which are active only part of the year due to weather conditions or regional security.

Table 4: Profile of Pakistan's ports at a glance¹³

Characteristic	South Asia Pakistan Terminals (SAPT)	Karachi International Container Terminal (KICT)	Pakistan International Container Terminal (PICT)	Qasim International Container Terminal (QICT)	China Overseas Port Holding Company (COPHC)
Draft (m)	16.5	13.5	13	12.8	14.5
Area (hectares)	85	26	20	25	-
Berths	4	3	2	3	1
Super post-Panamax cranes	-	-	-	2	5
Quay gantry crane/shore cranes	11	11	6	51	-
Rubber-tyred gantry cranes	31	29	20	40	5
Reach stackers (height)	5 (6 high)	8 (5 high)	8 (5 high)	7 (5 high)	1 (5 high)
Empty handlers (height)	3 (7 high)	5 (ND)	3 (5 high)	3 (high)	2 (not defined)
Storage capacity (TEUs)	23 000	-	13 500	24 630	4 000
Reefer container plugs	480	480	405	1 000	400
Rail connectivity	Yes (off-dock railway facility for cleared cargo)	No	Yes (to Afghanistan)	Yes (circular railway)	Yes (planned for 2022)
Current operational capacity (TEUs)	2.1 million	0.920 million	0.7 million	1.2 million	100 000
TEUs handled in 2019	942 420	590 175	551 152	1 157 059	504
Capacity used (%)	47.1%	64.1%	78.7%	96.4%	0.5%

Source: Author compiled, ITC.

STATE IN THE DIFFERENT MODES OF TRANSPORTATION

The logistics sector plays an important role in trade by offering integrated, cost-effective solutions accommodating to the changing demands of local businesses. Currently, the largest transport sector, rail, has less than 2% of the total market share, while 94% (more than 206,000 million tons per kilometre) of all freight transport is done by road. This over-reliance on the road network has resulted in congestion and fast deterioration of the road network in the country, not to mention that it is also one of the most expensive modes of transports, which translates into higher-priced goods.

Under the CPEC, Pakistan has seen significant investment in its national highway and motorway networks. The trucking industry, with approximately 500,000 registered trucks and pick-ups, is generally comprised of inadequately trained drivers transporting uninsured goods on old trucks that are in great disrepair.

Unfortunately, most operators lack the financial capability to modernize their trucks, hire properly trained drivers and only carry cargo that is insured.

The alternative, rail transport, has approximately 200 freight stations with 16,436 freight wagons and is far behind in competition. According to a World Bank research study, a single freight train has the capacity to replace 100 trucks with one gallon of fuel transporting one ton of goods over 250 miles compared to only 90 miles on the road.¹⁴ Waterways are yet to be used as a mode of transport, despite the natural connectivity provided by the Indus River.

There are 139 airfields and 32 airports, of which six are major international airports. However, airfreight is limited, with domestic airlines giving preference to passengers over freight and global players such as DHL, UPS and FedEx providing expensive solutions.

13.– Hasan, S. & Hasan, M. (2020). 'Transshipment'.

14.– Ministry of Communications (2020). National Freight and Logistics Policy.

COSTING OF DIFFERENT ELEMENTS AND BENCHMARKING WITH REGIONAL AND GLOBAL BEST PERFORMERS

In 2020-21, Pakistan imported 2,660 prime movers in new/used form as completely built or knocked down kits. More than 50% of these units were imported from China and mostly in new form. The average unit price of a new truck is \$32,062 and for used it is \$18,796; the import of new units is significantly more than for used ones. The average duties and taxes on new units was \$7,675 more than that of used units. This is due to the tax regime on such units being based on the unit price of the import, irrespective of whether it is old or new. However, this increased amount does not seem to influence the import of trucks. While the need to replace the current old and outdated truck fleet is dire, the import of trucks (whether new or old) does not support the demand.

FACILITATING TRADE AND TRANSIT FROM PAKISTAN

Pakistan's ports are a major gateway to Afghanistan, as well as transit trade routes to the far west of China, and increasingly to Iran. However, in the absence of rail connectivity, transit trade is reliant on the road transport sector for the foreseeable future. Road transit, in turn, needs a customs guarantee system that allows cargo to transit from the port of entry to the destination country without the need for customs clearance in the transit country. The TIR system is globally accepted by 71 countries, including Pakistan, Afghanistan, Iran and China. TIR has been around for 70 years and affords protection to the transit and destination countries from the loss of duty and tax if cargo goes missing in transit and fails to clear customs. The guarantee is provided by the International Road Transport Union (IRU) in Geneva through the transport associations of the member countries, who sell the guarantee to their member companies on a trip-by-trip basis.

While TIR has had issues in the past, it is generally accepted as the best available transportation guarantee of transit to multiple countries. The primary issue in Pakistan is the access to the TIR system and the affordability of the guarantee by the local trucking companies. In Pakistan, the body that assesses the eligibility for TIR is the National Authorization Committee headed by the Director of Transit Trade Pakistan Customs

and includes the Ministry of Commerce, Ministry of Communications, Ministry of Interior, and the Pakistan National Committee of the International Chamber of Commerce (PNC-ICC).¹⁵

Moreover, the steps required to apply for the eligibility of TIR coverage is more onerous than many other countries, where the issuing of TIR carnets is handled by the national trucking association, who are also available to assist their members through the application process. Membership or an association accredited to the IRU is usually taken as a basis for eligibility and the risk is often shared between members, and the carnets are made available on a cost-plus basis to members that meet the criteria. Insurance is also usually offered via the association, which is also responsible for the monitoring and administration of the system in the country.

However, in Pakistan, insurance is not offered by the national association, but is arranged by the TIR applicant in the name of the Directorate of Transit Trade Pakistan Customs, which has to be submitted to the PNC-ICC for onward submission to customs as per an additional protocol signed between customs and the PNC-ICC. Furthermore, the PNC-ICC charges a non-refundable \$1,000 fee for each application as well as a \$2,500 refundable security deposit against one truck at the time of admission. Then there is the application process, which could be too complicated for small businesses. The requirements are geared toward larger corporations that have proven experience in international transport and proven knowledge of the customs law, and are registered with the Securities and Exchange Commission of Pakistan under the Companies Act, 2017 (XIX of 2017) and with Chamber of Commerce and Industry. In addition to this, there is also lengthy tax and reporting requirements. Together, these act as barriers for the SME transport companies to become players in the transit trade, as the administrative burden is beyond the ability of many of the potential applicants, even if the costs are not. This is why there are only five admitted parties to the TIR, two of which are in the process of obtaining their licences, and two are beginning the application. Therefore, for the TIR to be successful in Pakistan, there is a need to increase this number and to expand the number of qualified carriers.

For Pakistan to better exploit its potential as a gateway and transit country for its neighbours, it needs to increase the potential pool of trucking operators that can undertake the work using TIR. This would increase

15.— The PNC-ICC is a host national committee of the International Chamber of Commerce (ICC) and an associate member of the International Road Transport Union (IRU), and is a registered Association of Persons (AOP) in Pakistan functioning as an international trade and investment facilitation body. The PNC-ICC is the designated national guarantees and issuing association for the TIR system in Pakistan. This is as per the TIR Rules for Pakistan under S.R.O. 1066(1)/2017 dated 20 October 2020 and S.R.O 1433(1)/2020 dated 30 December 2020. The TIR rules for admissions were amended as per the PNC-ICC's recommendations to further ease admissions.

competition and lead to more competitive transport pricing that would have a beneficial effect on transit volumes. To increase the number of trucking companies capable of TIR operations, the involvement of the Fleet Operators Association of Pakistan (FOAP) should be considered. By capacity building via the association

and the use of shared resources for application and administration, and even insurance, smaller operators could be upgraded to the levels required. This would have a positive effect on the long-distance transport industry as a whole and not just on the numbers capable of offering transit under TIR.

Pakistan's logistics industry contributes 15.6% to the country's GDP and employs 5.4% of its workforce. In the light of ever-increasing growth supported by logistics in Pakistan, logistics was identified as a priority services sector under the Strategic Trade Policy Framework (STPF). However, under this sector strategy, the logistics sector has been evaluated as a trade support function with a specific focus on agricultural and perishable products and not as a standalone industry aiming to export its services beyond Pakistan. The priority in the short five-year term will be upgrading logistics function at the national level, servicing the export sectors. Therefore, for the logistics sector to grow beyond basic transport and storage, it needs to develop, with government support, a range of services that enable and support the transport of goods.



LOGISTICS SERVICE MAP AND COMPETITIVENESS DIAGNOSTIC

A new approach for service map-based connectivity

Pakistan's logistics activities can be divided into two categories –: logistics operations and commercial hub activities/processing zones.

LOGISTICS OPERATIONS

Logistics operations are primarily comprised of three main activities: inbound logistics, operations and outbound logistics. During inbound logistics, cargo is transported in the form of containerized or open bed cargo, warehoused or placed in an allocated area for inventory control. This can be considered as the incoming activity of all cargo that is to become part of the logistics process. Once cargo is received, it will be moved to a facility for assembly (in cases where a final product must be created), deconsolidated (in cases where multiple consignees are sharing one shipment) and/or packaged to move to its next destination. During operations, all activities that need to take place on the inbound cargo take place.

Finally, during outbound logistics, the cargo is again containerized or moved as bulk cargo, warehoused and consolidated. Once it is ready to be shipped, it undergoes customs and other government agency procedures and is then finally shipped outside the country. Some steps within the operations tend to move at a slower pace compared to the rest of the process.

However, any goods entering or leaving Pakistan, whether in raw, intermediary or finished form, must adhere to some, if not all, the processes.

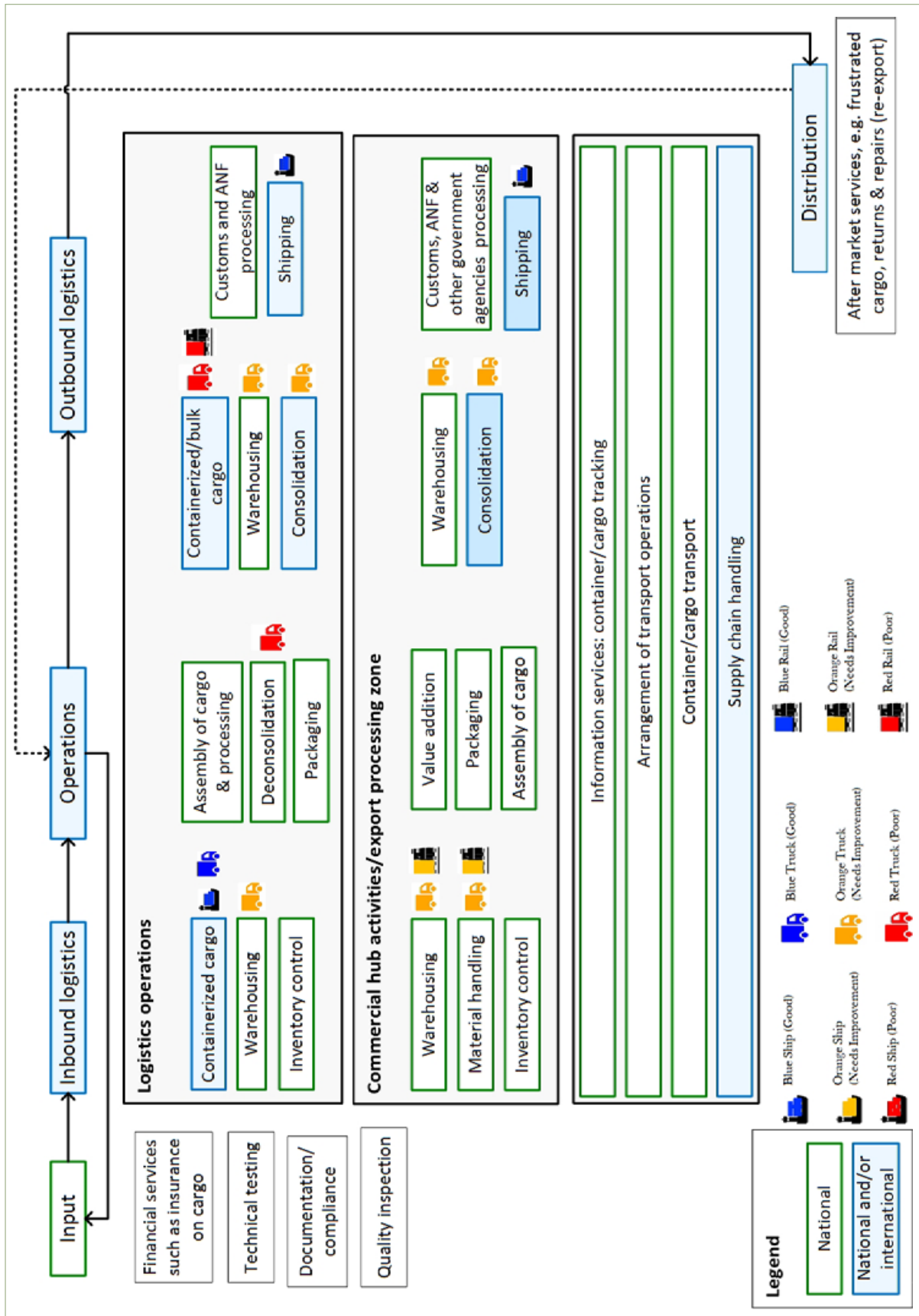
COMMERCIAL HUB ACTIVITIES/PROCESSING ZONES

As previously stated, this activity is also divided into inbound, operations and outbound. During inbound commercial hub activities/processing zones, once goods are received, they are warehoused, handled and inventory is taken. Goods requiring value addition are isolated, processed and then packaged for onward movement. Once a significant amount of cargo has been processed, it is assembled and moved towards outbound to ship/move the consignment to its destination. As previously, these goods also undergo scrutiny by government organizations before being shipped to their destination.

However, logistics is not this simple. To facilitate all these activities, steps such as financial documentation and insurance, testing, compliance and quality inspection assist in smooth transition throughout the process. Support services such as container/cargo tracking, arrangement of transport operations, transport and supply chain handling assist companies interested in any of these functions to be carried out by a third party.

Figure 4 includes two main types of services provided in Pakistan: overall logistics operations and commercial hub activities, including export processing zones. Even though the nature of activities for each of them is the same, each type of service has its own specificities and constraints.

Figure 4: Logistics service map schematic



Source: ITC generated.

Institutional and policy support ecosystem diagnostic

Pakistan's logistics sector is governed by multiple federal and provincial agencies with some new and a few outdated policies. New policies such as the National Transport Policy, 2018 and the National Freight and Logistics Policy, 2020, while approved, are yet to be implemented. Several provincial and federal policies are outdated and no longer suffice, while many simply serve the purpose of distributing similar powers to

multiple agencies. Table 5 shows relevant policies and the key institutions mandated to act upon the policies.

Major logistics are the government organizations responsible for transportation, whether by air (Pakistan Civil Aviation Authority), sea (Ministry of Maritime Affairs) or land (Ministry of Railways). In addition, the Ministry of Communications and the provincial transport entities play a pivotal overarching role.

Table 5: Policies and the key institutions responsible for their implementation

Policy	Key institution
National Freight and Logistics Policy, 2020	Ministry of Communications
National Transport Policy, 2018	Ministry of Planning, Development & Reform
TIR Rules, 2017	Federal Board of Revenue
Trucking Policy 2007	Ministry of Industries and Production and Ministry of Communications
Customs Rules, 2001	Federal Board of Revenue, Pakistan Customs
Merchant Shipping Ordinance, 2001	Ministry of Maritime Affairs
PSQCA Act, 1996	Ministry of Science & Technology
Civil Aviation Rules, 1994	Pakistan Civil Aviation Authority
Pakistan Civil Aviation Authority Ordinance, 1982	
The Customs Act, 1969	Federal Board of Revenue, Pakistan Customs
Provincial Motor Vehicle Ordinance, 1965	Provincial transport departments
Carriage of Goods and Sea Act, 1925	Ministry of Maritime Affairs
The Ports Act, 1908	
Railways Laws, 1890	Ministry of Railways
The Bills of Lading Act, 1865	Federal Board of Revenue, Pakistan Customs

Source: ITC generated.

On the private sector side, the sector is organized around a few key sector associations such as the Fleet Operators Association of Pakistan (FOAP), the Pakistan International Freight Forwarders Association (PIFFA), the Pakistan Ship's Agents Association (PSAA) and All Pakistan Custom Agent Association (APCAA).

ANALYSIS OF THE NATIONAL FREIGHT AND LOGISTICS POLICY

The National Freight and Logistics Policy (NFLP) as released in 2020 gives an overview of the current situation in Pakistan and a timetable for improvements. It

is a comprehensive document that identifies most of the problems and produces an action plan with proposed solutions, and allocates these to the relevant government ministries that will be responsible for the implementation. Analysis of the policy is made considering its relevance in support of exports, but also regarding the Pakistan Business Council (PBC) report, 'Understanding the Bottlenecks and Opportunities in Value-Added Exports of Fruits and Vegetables'. This is both a recent and comprehensive study into the issues faced in growing exports in the sectors and the points raised in the report are a good summation of the issues that are facing the sector in Pakistan. The following is an excerpt taken from the report:

Upgrading logistics infrastructure

- Limited access and availability of refrigerated trucks damages 10% of the produce during transportation.
- Key reasons for losses include long travel times due to poor road network, poor packaging, unhygienic carrying conditions and inadequate facilities (temperature control, etc.).
- While transporting commodities via railroad is cheaper, the limited availability of space and long delivery times do not make it a preferred mode of transportation.
- Transportation of horticulture commodities is done through open-body pickups and trucks. During long distance travels, produce is subjected to high temperatures. Delays caused by road congestions cause produce to lose its freshness, resulting in spoilage.
- There is a need to introduce temperature-controlled vehicles (reefers). However, the cost of transportation through reefers is significantly higher than open vehicles due to higher vehicle operating cost, and no load on the return journey.
- The open body trucks often find goods to carry back to the point of embarkation. This discourages the use of reefers/refrigerated vans for transporting horticulture produce due to high transportation cost.
- An improved cold chain system will help reduce losses during transportation from farms to the market or to ports and improve the shelf life of the product.
- High upfront investment cost, and seasonal use does not justify investments into purchasing reefers by farmers and pack houses. There are reefers available for rent, but their payment structures are very expensive, making them unfeasible for most farmers and operators.
- The cold chain system will develop based on market forces and demand. Farmers and firms will obtain them when they find that the costs justify returns.

One concern that is not directly raised in this policy is that of achieving economies of scale in transport. Simply moving to refrigerated transport and the availability of reefers for rent will not have the cost benefit needed unless they are large reefers with good usage to get the unit costs down.

Review of the policy action items

The policy actions listed in the NFLP 2020 is a comprehensive list of proposed actions covering transport by road, rail, maritime transport, air, inland waterways, urban, rural and e-commerce. In addition, it also covers the structural issues in logistics. Analysis of the list of actions confirms that it has a wide-ranging policy



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coverage and that the individual action items covered go down to a good level of detail.

Therefore, this gap analysis concentrates on what could be strengthened and looks at where there are possible gaps in agency responsibility and where multiple actions should be brought together under one agency. The lead implementer identified in the policy could be considered as having a narrow focus and most of the benefits from the actions would be realized outside their area of responsibility.

The policy actions are grouped together as complementary actions that need to be considered together.

Vehicle fleets

There are several good action items, but they are somewhat fragmented and there is no overall agency in charge. The country needs new trucks and specifically semi-trailers as a priority. There is no mention of a vehicle scrapping programme to take old, dirty, fuel-thirsty vehicles with a high cost per ton-kilometre out of the system. Old vehicles burn a lot of lower-quality fuels.

New full-size semi-trailers can consume less than half the fuel per ton-kilometre than older rigid vehicles. They have fewer emissions, burn cleaner fuel and can offer a lower unit price per ton for agricultural produce. Until Pakistan can upgrade its trucking fleet, it will be at a comparative disadvantage in terms of transport costs from the farm gate to processing or export. The costs incurred in the 'first mile' of the agricultural supply chain will be magnified as margin is added to margin until the produced is exported.

It is suggested that all action items for fleet renewal and upgrading to semi-trailers be coordinated by one agency.

Action	Description	Agency	Remarks
Establish a truck renewal programme	Develop in consultation with the industry a truck fleet renewal programme to modernize the fleet in line with international standards by providing incentives to the industry for modern vehicles and setting a sunset clause for older vehicles.	<ul style="list-style-type: none"> Ministry of Industries and Production Ministry of Communications 	There is no mention of access to finance. This is the major issue for SME operators. They do not have the ability to borrow through formal lending channels.
Recognize semi-trailers as transport vehicle	Set up registry for semi-trailers and classify them as transport vehicles.	<ul style="list-style-type: none"> Provincial excise department National Transport Research Centre 	A move to semi-trailers is a critical factor in achieving economy of scale and reducing unit costs, especially in the agricultural sector. This item is listed as an administrative action and should be elevated to be part of a national policy with central government agency responsibility.
Review of import duties on vehicles	The import duty on the completely knocked down (CKD) and completely built unit (CBU) shall be reviewed to encourage the transport sector.	<ul style="list-style-type: none"> Federal Board of Revenue Ministry of Commerce 	Import duties on new trucks need to be minimized to encourage fleet renewal. The Board of Revenue is responsible for raising income, so has a vested interest in keeping duty and tax in pace. The duty structure needs to be such that the ability to purchase a new, clean and efficient truck with a high payload is not being prevented by taxes.

Vehicle legislation and enforcement

Pakistan allows a maximum limit of 12 tons for a single axle, 11.5 tons for a double axle and 11 tons for a triple axle. These limits are at the high end of international standards. The maximum weight for a 22-wheeled

semi-trailer is 58.5 tons, which is also at the high end of gross vehicle weight found elsewhere. The maximum gross vehicle weight in most Association of Southeast Asian Nations (ASEAN) countries is 49-50 tons on six axles. The NFLP raises the issue.

Action	Description	Agency	Remarks
Enforcement of axle load regime	Re-enforce the axle load regime, but offering necessary transition period before rigid enforcement.	Ministry of Communications	It is commonly reported that vehicles are carrying up to 100 tons, which is more than double their design weight and is extremely dangerous. The trucking association and the chamber of commerce has asked for a grace period and a phased enforcement of the regulations. The trucks are not designed to be safely capable of running at the weights they are being asked to carry. It is either illegal or it is not. It is highly dangerous and reinforces the need to reform the sector. The chamber of commerce claims that there will be an immediate shortage of 200,000 trucks if the law is fully enforced. This makes the need for a fleet renewal programme more urgent.

Not addressed in the policy: Future vehicle shortage

After the implementation of the axle policy, chambers of commerce estimate that there will be an additional requirement of close to 200,000 trucks. Domestic truck production is currently approximately 9,000–10,000 units; thus, a dire need to import vehicles will present itself, which is estimated to cost \$12 billion to \$15 billion.¹⁶

Industry bodies have claimed that an extra \$4 billion to \$5 billion will be needed to import oil for the additional trucks on the road once the law is implemented.

However, their calculations do not account for current vehicles that are already using 50%–60% more fuel due to the prevalent overloading practice.¹⁷

The Federation of Pakistan Chambers of Commerce and Industry (FPCCI) calculates that agriculture will be hurt the most from the reduction in the supply of DAP fertilizer (diammonium phosphate), due to the availability of fewer trucks to carry it. Exporters of fruits will be hit the hardest, with an annual estimated cost of PKR 88 billion.¹⁸

16.– Source: Awais Chaudhry, General Secretary of the All-Pakistan Goods Transport Owners Association. Accessed at <https://www.globalvillagespace.com/state-implementation-of-axle-load-policy-mandatory-awais-chaudhry/>.

17.– Source: Najma Minhas, Global Village Space, December 2019. 'Implementation of Axle Load Limit Regime: When and How?' Accessed at <https://www.globalvillagespace.com/implementation-of-axle-load-limit-regime-when-and-how/>.

18.– PKR = Pakistani rupee.

Cold chain facilities

The Pakistan Business Council (PBC) report 'Understanding the Bottlenecks and Opportunities in Value-Added Exports of Fruits and Vegetables' highlights

the lack of cold chain facilities as a major impediment to developing exports in the sector. Under the road transport sector, the NFLP has one action item to address this shortcoming.

Action	Description	Agency	Remarks
Establishment of warehousing and cold storage supply chains	Permit and promote warehousing and cold storage facilities at strategic locations to increase the quality of logistics operations, particularly of perishable goods, and enhance the timeliness of logistics operations.	<ul style="list-style-type: none"> Ministry of Communications Private sector associations 	<p>For such a major issue that is raised in several reports, there seems to be an acknowledgment of the lack of cold storage facilities rather than any plan to deal with the issue. There is no mention of several import points, such as:</p> <ul style="list-style-type: none"> Who will own or build the facilities? Will they be public or private sector? Who will operate the facilities? Will this be on a commercial or a subsidised cost model? How will micro, small and medium-sized enterprises get access to such facilities?

If there was existing commercial demand, the private sector would have already invested in such facilities. This indicates that potential operators do not see a potentially viable business case for investment. Indeed, there is demand, but the high storage and handling costs and poor rate of return dissuade the private sector from commercial investment. However, this is not an issue specific to Pakistan. It is common in many countries trying to export agricultural commodities and reduce post-harvest losses.

The action items need to be expanded to include the business and operating model. There is no doubt that there is a need for these facilities, but the concern remains on the operation, and how or if the investment would be on a commercial or a national infrastructure basis. There is a fine balance between investing in large and expensive projects with high operating costs that no one can afford to use and providing facilities that can operate on a transactional basis with enough income to cover their costs.

Additionally, the issue of refrigerated transport is not addressed in the policy. Furthermore, there is no action plan for critical areas such as:

- Refrigerated transport capacity;
- Access to and affordability of refrigerated transport;
- Consolidation services to allow smaller shippers to share space;
- Achieving economies of scale by using large vehicles.

The issue of logistics support services is also not covered. There is no mention of issues that are critical to the export process, such as:

- Added-value packaging and export packing;
- Availability of affordable packaging;
- Inspection and certification services.



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All these ancillary activities are needed in conjunction with cold storage facilities to reduce the level of post-harvest waste and to have produce export ready. The large private sector product traders must incorporate these services into their facilities. Without them, the facilities will not be able to become part of any cold chain.

Rail transport

There are 11 action items for the Ministry of Railways in the NFLP. Most cover technical needs or infrastructure upgrades or investments. From the perspective of this analysis, only four are directly relevant to the movement of exports and specifically perishable cargoes. These are as follows.

Action	Description	Agency	Remarks
Establish cargo-handling facilities	Establish cargo-handling facilities at strategic locations across the country. In particular, facilities for handling perishable goods will be established to facilitate the cold storage supply chain.	Ministry of Railways	These are all necessary steps, but they lack detail. A cold chain needs to be cold from end to end and operate on a definite schedule. The products are perishable and their value deteriorates with time. These points tend to recognize the existing shortcomings more than offer a solution that would make shippers want to use the rail service for perishable produce. There needs to be a transport product offering that can encourage some of the perishable agricultural producers to use the rail system. It is thought unlikely that Pakistan Railways can play any part in perishable exports in the short to medium term. Moreover, there is no effective system of insurance in Pakistan. Generally, neither the trucker nor the product dispatchers buy insurance cover for their goods. It is especially true for those owners who have old trucks, as is the case for most in the industry. Compulsory insurance by both parties is something that the government should implement. It will also have the added benefit that it will develop a new segment for the general insurance sector in Pakistan.
Transform Pakistan Railways to a commercial entity	Pakistan Railways Freight Transportation Company has been made fully functional. All the freight transport has been landed to Pakistan Railways Freight Transportation Company		
Setting market-driven rail freight tariffs	Adopt market-driven rail freight tariffs based on the market dynamics and implement a dynamic revenue management system for rail cargo.		
Extended operating hours	Extend the operating hours of railway stations that have high freight volumes for enhanced operations and onward inland distribution, particularly along the Karachi–Lahore route to permit the transfer of goods between road and rail.		

Air transport

Action	Description	Agency	Remarks
Develop cool ports	Develop ecosystem for handling of perishable goods at the airport; in particular, establish 'cool ports', including temperature-controlled warehouses that allow storage and rapid handling of time- and temperature-sensitive items requiring air transport. Medicine and fruits and vegetables could be targeted. Perishables are an important component of airfreight. These perishables offer huge export potential for the country. However, a whole ecosystem has to develop at village level to tap into this potential. The Ministry of National Food Security & Research should target ecosystems and supply chain systems for the export of products such as dairy and horticulture produce.	<ul style="list-style-type: none"> Ministry of National Food Security & Research Civil Aviation Authority 	This action highlights the need for the cold chain to start at the village level. If the first thought of the cold chain is at the airport consolidation centre, much of the produce will have already been lost or the shelf life greatly reduced. The involvement of the Ministry of National Food Security & Research is needed in the development of the cold storage facilities mentioned in the road sector and for rail terminals. It must be an integrated approach with a seamless end-to-end cold chain from farm gate to export.

Maritime transport and inland water transport

While the need for improved port and intermodal facilities is raised, there is no specific reference to cold chain facilities in these sections. It could be assumed that, due to the slower speed of waterborne transport, the provision of cold chain facilities would be superfluous at the ports. Most of the produce using water transport would be frozen and would already be under continuous cold chain conditions such as refer containers.

Globally countries exhibiting high logistics performance are generally correlated with lower cost of exports and imports. Karachi Port Trust (KPT) is part of value driven supply chain system connected to the entire logistics flow of goods. Presently at KPT all cargo i.e. import/export is transported through road and railways.

To maximize the port efficiency new and efficient modes of logistics such as inland waterways needs to be considered after proper feasibility assessment. This mode of transportation not only increases the port efficiency but also helps to resolve major problems of heavy road traffic including pollution in the city.

Recommendations

The Pakistan Business Council (PBC) report concludes with a list of recommendations designed to 'Develop a National Horticulture Development Framework which prioritizes productivity and exports'. It states:

Increasing exports from the horticulture sector will require Pakistan to develop a cohesive horticulture policy framework. There is currently no provincial or federal policy which promotes horticulture production and exports. The existing agricultural policy environment is

fragmented with provincial governments pursuing various province specific developmental priorities without a cohesive national framework.

Under the proposed recommendations, there are two that are particularly relevant to logistics and would be expected to be covered in detail as part of the NFLP.

Establishment of cold chain infrastructure

Pakistan has limited reefer trucks, which are expensive to operate, rent and purchase. The high cost associated with reefers, along with quality constraints, limits their adoption for the domestic market. It is not financially viable for farmers to purchase trucks during harvest. It can be expected that, once there are more companies that invest in exporting horticulture commodities and processed food, the cold chain for transporting perishable and non-perishable commodities will develop alongside. Presently, there is limited domestic demand and the margins to justify investment in a high-quality cold chain are unavailable. To grow exports of commodities, the civil aviation and sea port authorities should invest in or provide space to the private sector to construct cold storage for produce in transit at the exit terminals.

Credit line for processing units

The State Bank of Pakistan should establish credit lines at concessional rates for establishment of new medium-sized pack houses, processing units, cold storage and reefer trucks, etc., and for replacing obsolete and inefficient processing machinery with efficient processing lines.

While these issues are identified in the NFLP, the action points are generally lacking in detail and, in some cases, are spread across multiple government agencies with no coordination among them.

There are no action points that specifically address the likelihood of a vehicle shortage that will be exacerbated by the enforcement of axle weight regulations. This enforcement must be done, as running on excess weight is both illegal and dangerous. There is no room for tolerance of illegal acts and overloaded trucks are not a victimless crime, as people can die as a result.

The effect of enforcement on fruit and vegetable exports will not be direct, as it will be on industries such as cement and construction due to the voluminous nature of produce. The trucks tend to max out for volume before they reach their maximum legal weight. However, the industry will be subjected to the same price pressure for trucking, as industries that can pay more will attract more of the available trucking capacity. The following section focuses on the most pressing competitiveness constraints.

COMPETITIVENESS CONSTRAINTS

To remain realistic and resource-efficient, this strategy will not be able to focus on all the issues affecting the logistics services map. An informed selection of the most important issues was made. To assess relative importance, criteria used are the level of difficulty and the ease of resolution (both in terms of cost and time involved). Extensive stakeholder consultations, field visits and review of literature have revealed several constraints in the logistics sector that challenge its short- and medium-term growth. To ensure that the strategy is efficient and precise, only the most critical bottlenecks are detailed below.

Constraints are identified along three dimensions – policy, institutional and enterprise.

- Policy constraints refer to legislative and regulatory bottlenecks that limit effective functioning of the trade support function in line with international best practice.
- Institutional constraints refer to supply-side issues related to trade and investment support institutions' (TISIs) service delivery to enterprises, specifically in terms of the capacities and resources available to institutions to achieve effective service delivery.
- Enterprise constraints refer to demand-side issues related to logistics infrastructure.

The Government of Pakistan, along with the private sector, has created many policies to enhance the logistics industry, but implementation of such policy has often failed. More recently, the cabinet approved the National Freight and Logistics Policy, 2020. However, implementation of this policy is still pending as the Planning Commission reviews and meets with relevant stakeholders. If policies are implemented, the relevant agencies are often unable to enforce them due to a lack of resources are unable to enforce them. Thus, the government is not the only one to blame. Many private sector entities have been able to get away with bare minimum resources, making them lose motivation to bring about radical changes within their organization. This has resulted in Pakistan's freight cargo being moved on overloaded, outdated trucks and broken roads, and being handled by employees with limited skill sets. Without government incentives, the industry is rarely pushed to invest its own resources in upgrading its fleet and human resource. Table 6 presents a list of some of the important policy and industrial constraints that are hindering the industry's growth.

Table 6: Longlist of competitiveness constraints

Constraints	Root causes	Ease of resolution (Grade 1-5; 5-very difficult)	Urgent action needed (Grade 1-5; 5-very urgent)
Policy level			
Overall inconsistent government policies	Policies are frequently changed without notice.	4	5
Multiple government agencies overseeing the same mandate; single body should regulate transport industry	As the industry's needs grew, oversight of various aspects was divided among multiple government entities due to a lack of resources.	4	5
Lack of implementation of National Freight and Logistics Policy, 2020	Delay in implementation, although the policy has been approved, due to bureaucratic red tape.	1	5
Outdated policies	<p>Policies currently in place are outdated, resulting in slow-paced organic growth of the industry and an inability to meet international standards:</p> <ul style="list-style-type: none"> • Trucking Policy, 2007 • Provincial Motor Vehicle Ordinance, 1965 • Railways Act, 1890 • The Ports Act, 1908 • Carriage of Goods and Sea Act, 1925 • Merchant Shipping Ordinance, 2001 • Pakistan Civil Aviation Authority Ordinance, 1982 • Civil Aviation Rules, 1994 • Bill of Lading Act, 1865 	2	5
Lack of implementation of the TIR Rules, 2017	Government entities slow to trust private sector. Fear of smuggling and pilferage.	3	3
Lack of enforcement on policies already in place	Government departments do not have enough resources to enforce rules and regulations already in place.	5	5
Lack of a policy to recognize freight forwarders as an industry	Lack of consensus on which ministry would govern the industry.	2	4
Cumbersome federal and provincial policies to get certification for shipment	Shipments to the Middle East often require document verification by their respective embassies. Verification from government organizations (i.e. phytosanitary, etc.) often take long to be processed.	5	4
Failure to implement National Highway Authority road compliance and maintenance policy	Lack of resources to ensure compliance and maintenance work required.	5	5
Customs and border procedures are not trade friendly, resulting in delayed times	Departments not fully integrated. Processing time (physically and electronically) is long, resulting in unnecessary delays in cargo clearance.	5	5
State Bank of Pakistan's banking procedures oversight causing delays in fund transfers	Strict rules implemented to comply with anti-money laundering policies.	5	5
No soft loans or favourable loan terms to boost the logistics industry	Government does not recognize logistics as an industry; therefore, no favourable loan terms and/or soft loans are made available.	2	5
Fleet operators do not have easy access to semi-trailer finance, as they are not recognized as vehicles	Semi-trailers are not recognized as transport vehicles.	4	5
Institutional level			
Low-skilled workforce, resulting in limited human resource skills in the trucking sector	Budgetary constraints result in low-skilled workforce in the trucking sector.	3	5

Constraints	Root causes	Ease of resolution (Grade 1-5; 5-very difficult)	Urgent action needed (Grade 1-5; 5-very urgent)
Lack of knowledge among exporters on logistics procedures	Limited exposure to logistics procedures for export; e.g. procurement, order handling, transportation, distribution, warehousing, inventory management, handling, storage, packaging, and clearing of the export goods.	2	5
Old truck fleet not suitable for long distance	Lack of financial resources to upgrade fleet.	5	5
Overloading of trucks beyond their axle limit, resulting in accidents and quick deterioration of the road network	Limited number of trucks and high transport rates, resulting in companies overloading to get maximum benefit.	5	5
Bonded carriers often don't have dedicated fleets; therefore, they often share fleets	Registration records at time of registered bonded carrier firm is not automated; therefore, duplication of truck numbers goes undetected.	1	5
Informal trucking association	Lack of literacy among single-truck owners. The majority of truck drivers originate from rural areas, frequently as a second chance job since it has limited skills entry barriers and drivers learn on the job. These drivers are mostly hired on a casual basis and disposed similarly, according to a study by the Pakistan Institute of Labour Education & Research (PILER).	5	3
Limited tracking options	There are several tracking options, but only two are government approved. Required for insurance purposes.	1	5
Lack of warehouse facilities catering to individual users	Resource-constrained clientele who do not have the ability to pay for warehousing on a pay per use basis. Currently, trucks move from origin to destination without stopping (other than to refuel or for the trucker to take a break at a truck stop).	5	2
Lack of warehouse facilities outside the major cities	Demand for warehousing for agricultural products is not profitable, because agricultural companies and/or farmers unable to pay warehousing costs.	5	2
Lack of cold storage facilities outside the major cities	Demand and resources to make this a profitable venture for businesses.	5	3
Lack of robust cold supply chain	Privately run supply chain catering to the needs of large companies already exists. SMEs unable to pay for an end-to-end solution due to the high costs of existing cold chain services, which mostly serve international companies.	5	5
High testing fees	Lack of adequate testing laboratories, and limited or unsuitable testing facilities since Pakistan lacks in internationally certified labs.	4	4
Lack of sufficient railway track coverage and old, relatively slow trains with poor quality freight containers	Railway freight trains, locomotives and train tracks not entirely functional. Frequent breakdowns in existing trains and tracks, resulting in unreliability of delivery time.	5	5
Resource constraints to increase fleet	Majority of trucking firms do not have the required resources to upgrade or increase fleet. Government loans and incentives not available.	5	5
Enterprise level			
Development of third-party logistics (3PL) facilities is lacking	Family-owned businesses prefer to hire their own human resource as a cost-effective solution to oversee end-to-end procurement and manufacturing, etc.	2	3
Limited track and trace of goods	Limited options to track goods en route, as only a few companies are approved by the government for tracking.	1	3
Drivers' licences for heavy duty vehicles are fake	The issuance process is not practical or streamlined.	2	5

Deeper discussion of selected key issues

Top issues emerging from the longlist above are presented in a detailed format below. These are based on stakeholder consultations.

TOP ISSUES AT POLICY LEVEL

Lack of enforcement on policies already in place

Pakistan has created several overlapping policies on logistics in the past two decades. However, while the creation of policies is rapid, their enforcement is abysmal and, as time passes, these policies become outdated and redundant. This can start with the following points of action:

1. The consolidation of redundant policies governing logistics with subsequent identification of one governing body to ensure updating and implementation will streamline the industry. Currently, the functions governing logistics are disjointed and distributed among multiple ministries, resulting in disregard of the industry itself.
2. Updating all policies to ensure that they are no longer outdated and are up to par with global transport requirements.
3. Enforcement of policies moving forward to ensure that the industry adheres to certain rules and regulations.

» Relevant activities in the PoA for policy level: 3.1.1; 3.1.3; 3.1.5; 3.1.6.

TOP ISSUES AT INSTITUTIONAL LEVEL

Old truck fleet not suitable for long-distance travel

The current truck fleet is old and not suitable for long-distance travel. Therefore, the industry is in dire need of revamping the current fleet. To ensure the current industry, the following relevant points of action have been identified:

1. Reduce the duty and tax on new trucks to encourage fleet renewal:
 - a. Zero duty on new heavy tractor units and semi-trailers;
 - b. Zero duty tax on new refrigerated trucks and trailers of more than 15 tons GVW;

- c. A duty of 5% on second-hand tractors, semi-trailers and large rigid reefers up to four years old.
2. Incentivize through favourable loans/tax concessions on buying new trucks to upgrade the fleet.
3. Produce a comprehensive goods vehicle scrapping programme that will:
 - a. Allow zero duty and tax certificates for new or second-hand replacement vehicles;
 - b. Free road tax and licensing for replacement imports for three years;
 - c. Transferable/tradable certificates for scrapped vehicles.
4. Provide better access to finance:
 - a. Low-cost financing for new or near-new imports to replace scrapped vehicles;
 - b. Develop truck leasing products for SME operators with concessional interest.

» Relevant activities in the PoA for institutional level: 1.1.1; 1.1.2; 1.1.3; 1.1.4; 1.1.5; 2.1.3; 2.2.1.

Lack of knowledge among exporter on logistics procedures

Some of the root causes for the lack of knowledge among exporters on logistical compliance is the absence of proper guidelines, limited awareness, and inadequate capacities to follow the procedures. Moreover, burdensome documentary requirements and customs procedures result in delays and escalate clearing charges. In the absence of a unified transport ministry, additional coordination efforts between different stakeholders further slows down implementation of the policies hindering logistics industry development (NFLP, 2020).

Furthermore, there is no formal public–private dialogue or collaboration between different industries and various components of the logistics industry. This impedes the development of the sector. Policies and coordination need to be aligned among all stakeholders to ensure that the needs of the logistics sector are met. Increasing awareness among exporters on policies and promoting the strengths of the Pakistani logistics industry is vital to facilitate logistics in the country for distribution and value-added service.

» Relevant activities in the PoA for institutional level: 1.2.1; 1.2.2; 1.2.4; 1.3.1; 1.4.1;

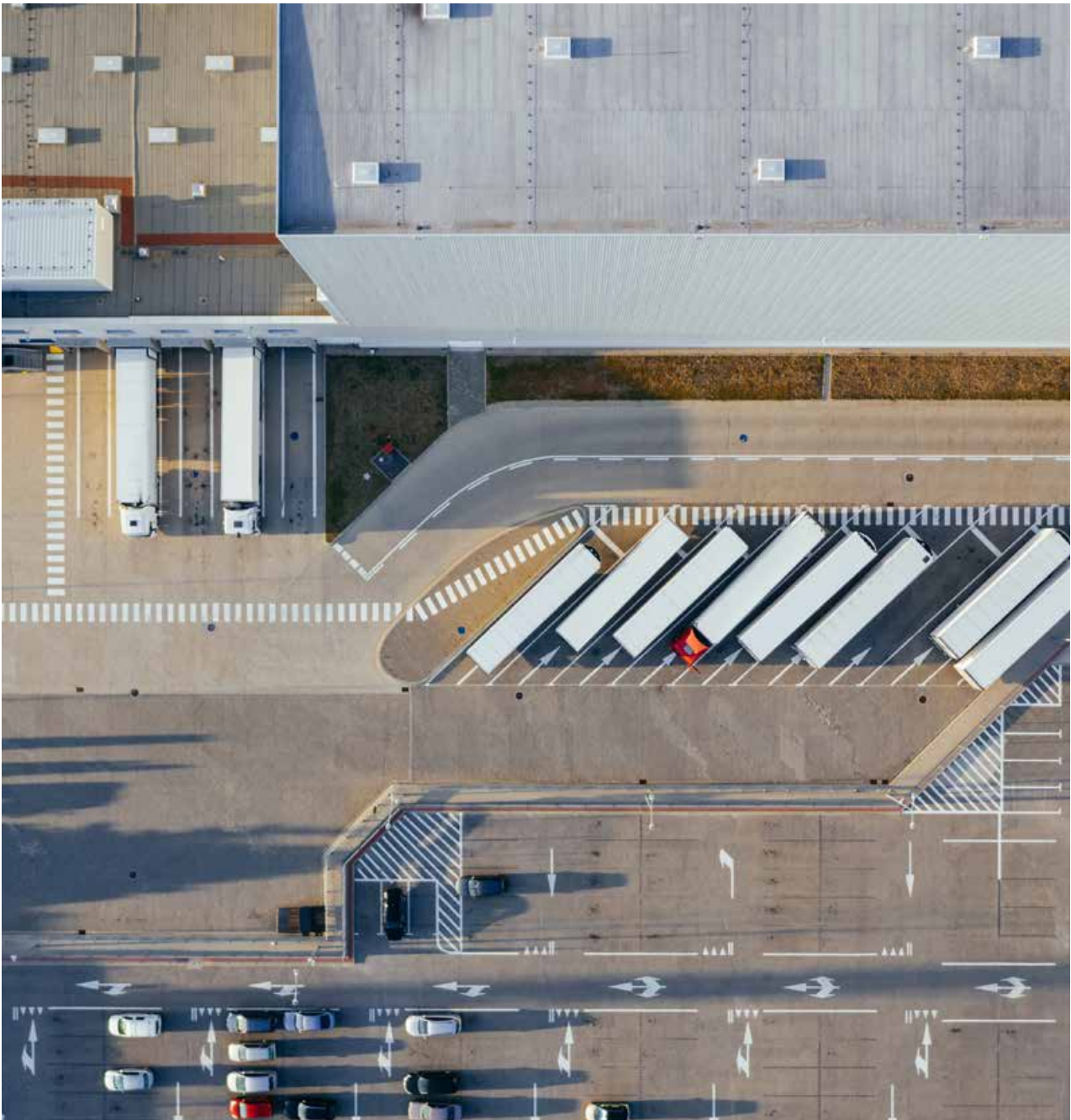
TOP ISSUES AT ENTERPRISE LEVEL

Limited track and trace of goods

To ensure that overloading, pilferage and other illegal activities do not take place, a robust track and trace system for goods in transit needs to be put in place. This track and trace activity will assist in oversight of cargo movement.

- » Relevant activities in the PoA for enterprise level: 1.3.3.

By solving some of the key competitiveness and growth constraints, Pakistan's logistics sector can position itself strongly to support the development of other agricultural and manufacturing sectors, including increased export growth. What is required is setting some strategic objectives for the short to medium term to drive sector transformation, and prioritization of some key actions.



THE WAY FORWARD

Strategically located in South Asia, at the crossroads of the fastest-growing region in the world, Pakistan is the gateway to China through the CPEC. Its alignment for efficient delivery of cargo to Central Asia, Eurasia, the Commonwealth of Independent States (CIS) countries, the Middle East, Afghanistan, Iran and India gives it great leverage as a land transit country. Fully aware of this potential, Pakistan aims to transform into South Asia's leading maritime, logistics and distribution hub to support the national economy.

STRATEGIC FORESIGHT

To overcome the competitiveness challenges preventing this ambition being reached, the strategy will focus on fostering the right regulatory environment and implementing enabling procedures and guidelines for provision of efficient logistics services. These actions will create the conditions for the private sector to lead development of the logistics sector, attract the investment needed to install the proper facilities across the country (cold storage solutions and multi-user facilities) and provide value-added services. To set its goals, the strategy process did not only consider current capabilities and constraints, but also the future shifts/opportunities for Pakistan's logistics sector. Industry stakeholders were provided with strategic foresight tools to evaluate future orientations and opportunities for upgrading trajectories. Figure 5 captures the summary of stakeholders' analysis of future trajectories along two curves.¹⁹ The first assesses today's ways of doing things and which of those will remain strong and competitive into the future (i.e. will remain as residual assets for Pakistan). The second assesses the current innovations and trends already seen in Pakistan and globally, and how these will influence the future strategic orientation of Pakistan's logistics sector (i.e. tomorrow's way of doing things). Some key messages that emerge from this exercise are the following:

- Some compelling **residual assets** for Pakistan would include the availability of affordable talent, continued growth of e-commerce and continued demand for an efficient logistics service to support the growing industry demands.
- Some compelling **strategic future shifts** for Pakistan's industry – evolution of technology in warehousing, routing of traffic through Gwadar, environmental

sustainability, including phasing out of Euro II fuel, and the rapid rise in international freight rates are broad and interconnected megatrends that will drive profound changes in the logistics sector.

Deriving from this, the section below examines these specific drivers that are most likely to steer the changes in the sector in the future. Pakistan is gradually losing market access due to several factors based on changed consumer demands, which mostly focus on animal welfare, social and environmental compliance.

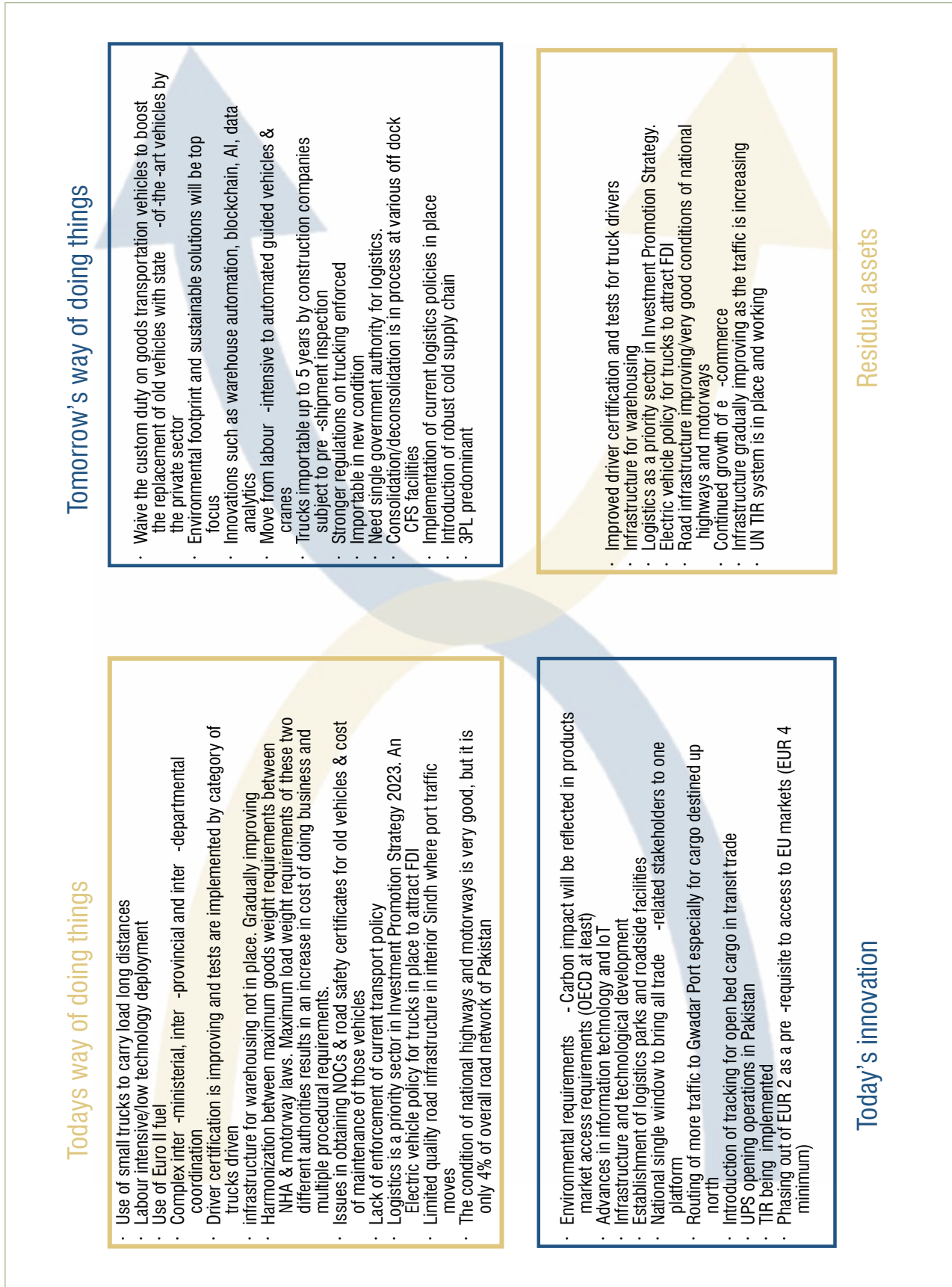
Future services chain

Improvements within the logistics function constitute a critical prerequisite for unlocking Pakistan's export competitiveness. Keeping this in perspective, the future services chain of logistics (Figure 6) as a functional strategy addresses significant challenges that adversely affect the export value chain.

The following constitute key elements of the future state, which are addressed through the cross-sector's strategic plan of action:

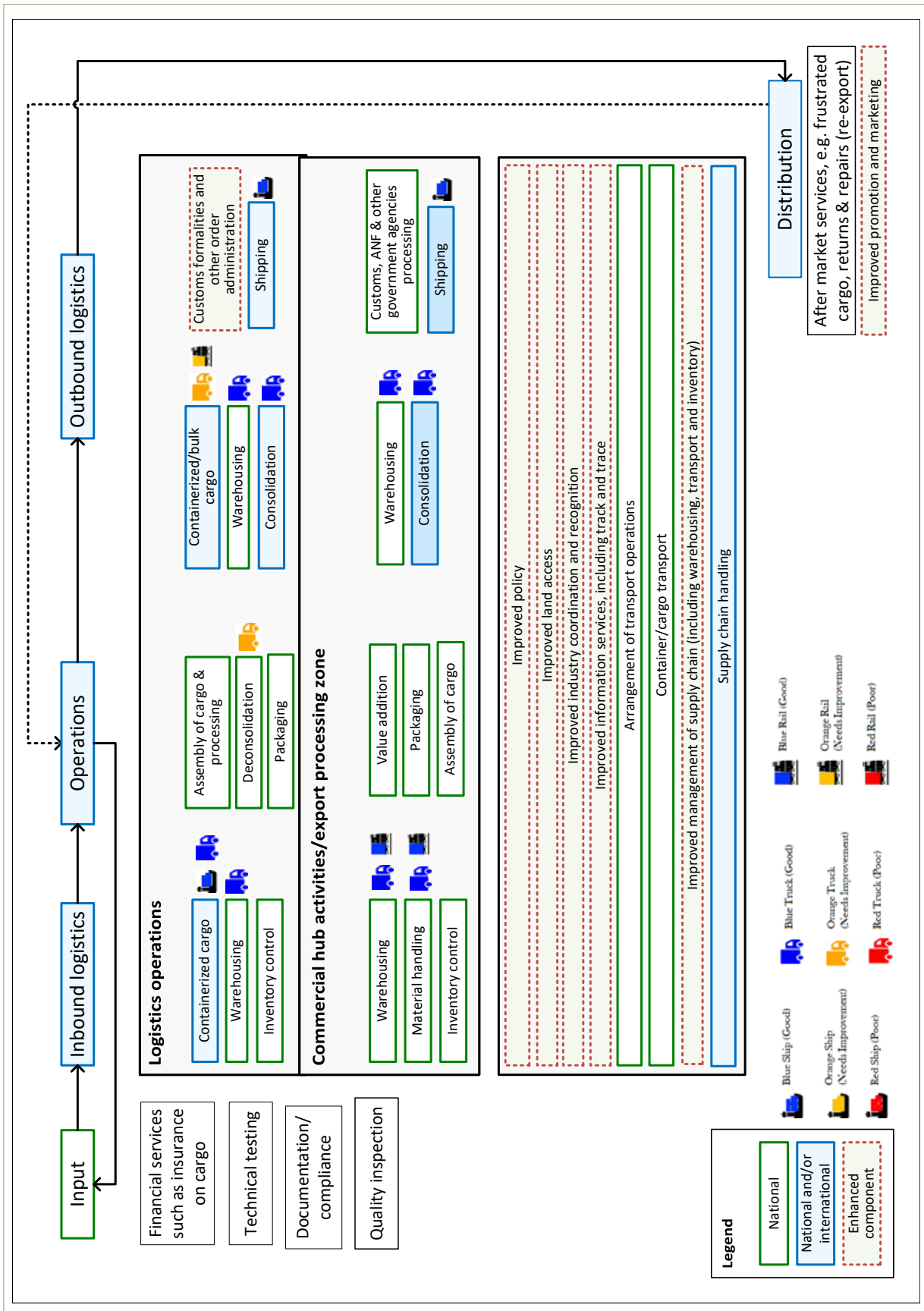
- Strengthened dialogue between all concerned parties to increase coordination and fulfilment of expectations on various fronts;
- Improved government policies to provide exporters with relevant and updated information on export procedures, regulations, operations and changes, and in the process reduce expenditure of time, money and effort for Pakistani exporters;
- Improved land access to neighbouring countries and strengthened organizational set-up within enterprises, so as to formalize and develop expertise in the trade logistics function, and also develop efficiency gains through reduced delays and costs;
- Simplified and rationalized administrative procedures (documentation, charges, processes and elimination of domestic obstacles) that are implemented at all ministries and based on best practices followed globally;
- Development of trucking fleets and rigorous implementation of TIR at the cross-sector level, focusing on identification of new export routes and transport mechanisms that would result in efficiency gains for exporters.

Figure 5: Ride Two Curves exercise



Source: ITC, adapted from the Institute for the Future.

Figure 6: The future services chain for logistics



Source: ITC generated.

The strategic framework

This strategy's objective is to create a tangible action plan that can enhance exports from Pakistan across a range of sectors, including fresh fruit and vegetables and meat products. The problem for these product groups is that they are primarily sourced in rural areas and rely on the domestic transport network to reach export gateways from where they can be shipped by air, sea or road to the destination countries. This means that an action plan that is solely focused on the international component of the supply chain cannot be developed. Agricultural produce must first navigate the domestic transport network in order to be shipped out from the gateways. This reality has led the major players in the large export trading companies to develop their own private cold chains and transport networks. However, this does not help the wider agribusiness sector or allow the benefits of export demand to be more widely shared.

Many reports have identified the key bottlenecks and areas where post-harvest waste losses are high. These are generally acknowledged in the NFLP 2020, which has made extensive recommendations for improvement. However, many of these recommendations are at a high level and lack the detailed steps needed to enable the necessary actions. This strategy document identifies specific actions that will support the NFLP's stated goals.

THE VISION

Logistics stakeholders expressed their unifying vision to bring Pakistan to the next level of performance and sophistication. The following delineates this strategy's proposed vision and strategic approach to develop the logistics sector. The vision statement was agreed on by all stakeholders, and is taken from the NFLP document to maintain coherence. It is as follows:

“ To drive economic growth and trade in Pakistan by increasing the country's competitiveness through an integrated, seamless, efficient, reliable and cost-effective freight transport and logistics network, leveraging best-in-class technology, processes and manpower. ”

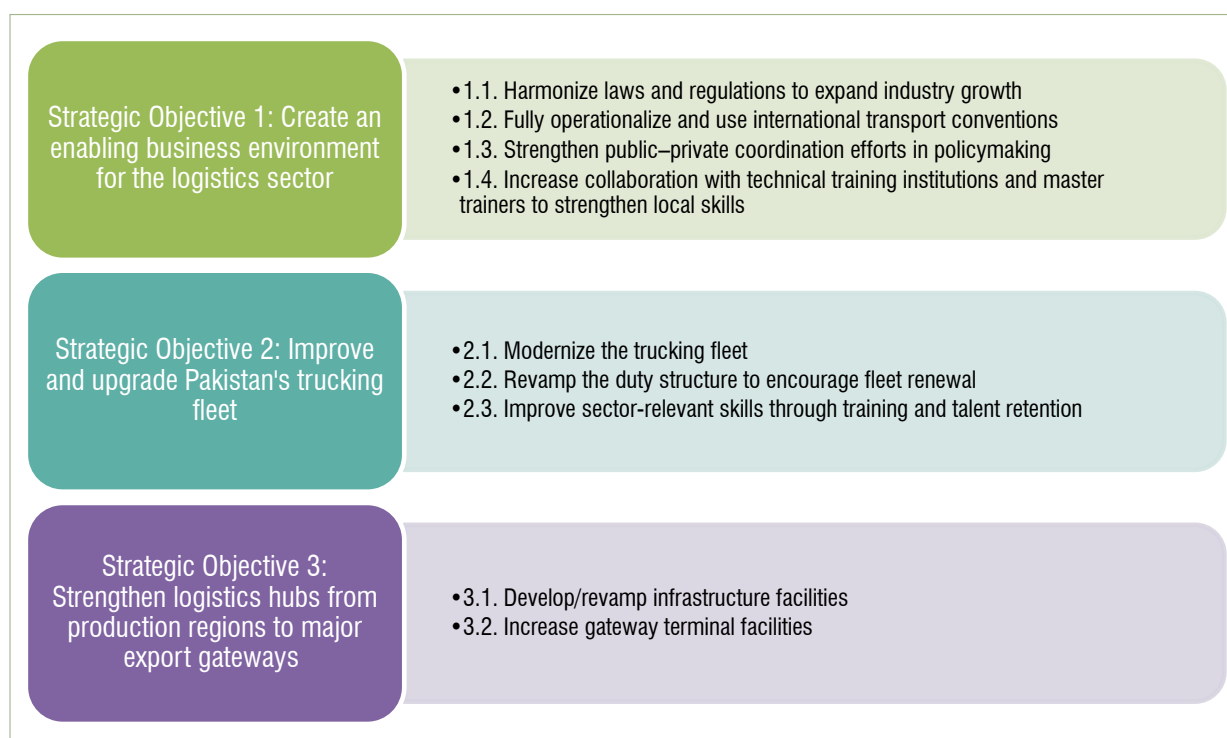
THE STRATEGIC OBJECTIVES

Unlocking the potential of Pakistan's logistics industry will require fostering an adequate regulatory environment and implementing enabling procedures and guidelines for provision of efficient logistics services. This will help to create the conditions for the private sector to lead development of the logistics sector, attract the necessary investment to install the proper facilities across the country (cold storage solutions and multi-user facilities) and provide value-added services. The targeted efforts detailed in the strategy's plan of action (PoA) will address the constraints identified earlier.

The PoA will respond to this vision by addressing the sector's constraints and leveraging opportunities in a comprehensive manner. The PoA will be structured around the following strategic objectives, agreed with all sector stakeholders.



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Overhauling the trucking industry

The need to completely revamp Pakistan's trucking industry cannot be overemphasized, from a domestic distribution perspective as well as being an essential part of the export value chain. Even without the need to enforce weight laws, the trucking industry suffers from underinvestment, an ageing fleet, low vehicle capacity, high running costs and widespread disregard for existing regulations. This results in high unit costs due to a shortage of larger vehicles that reduce the opportunity for economies of scale, which means that producers and traders will continue to have high unit costs unless something urgent is done.

More efficient vehicles (both light and heavy duty) require less energy, thus saving money on fuel and releasing less carbon dioxide, which contributes to climate change. Most of the truck fleets in Pakistan are old and poorly maintained. Driver training and technologies can render significant fuel savings.

Newer, energy efficient trucks require less fuel to burn, which is important, because fuel costs are one of the largest component of trucks' operational costs. A new semi-trailer of 25-30 tons will get 3.2-3.5 km per litre as opposed to only 2–2.2 km per litre on an older, heavily loaded rigid of 15-17 tons. This accounts for at least 33%–50% less fuel per ton-km.

Measures that could be put in place to help overhaul the truck industry:

1. Reduce the duty and tax on new trucks to encourage fleet renewal with heavy prime movers of 400+ HP:
 - » Zero duty and tax on new semi knocked down (SKD) heavy tractor units;
 - » Zero duty and tax on reefer semi-trailers;
 - » Zero duty and tax on new large, refrigerated rigids of 15-ton GVW and above;
 - » A duty of 5% on new road-ready tractor units (CBU) of more than 400 HP;
 - » A duty of 5% on second-hand tractor units of more than 400 HP up to four years old;
 - » A duty of 5% on second-hand rigid reefers of more than 15 tons GVW up to four years old;
 - » Zero tax and duty on components exclusive to trailer manufacturing and assembly.
2. Vehicle scrapping programme:
 - » Zero duty and tax certificates for imports to replace scrapped vehicles;
 - » Free road tax and licensing for replacement imports for three years;
 - » Transferable/tradable certificates for scrapped vehicles.

3. Access to finance:

- » Low-cost financing for new or near-new imports to replace scrapped vehicles;
- » Develop truck leasing products for SME operators with concessional interest.

The major issue in truck financing for SMEs and owner operators is their lack of proper records and accounting. Many operate in an unofficial economy, and this makes it difficult for them to obtain formal loans. If the loans can be handled through trucking cooperatives or associations, they could have a shared level of security for the loans.

- » **POA-related activities:** Activities under Strategic Objective 2 are focused on improving Pakistan's truck fleet: Activities 1.1.2, 1.1.3 and 1.1.7.

Box 2: Implement a tax moratorium

Local truck assemblers will benefit from a five-year tax moratorium on the import of parts such as air suspensions, lifting axles, trailer curtains (for use in agriculture) for assembling trailers from semi knocked down vehicles (SKDs), and imports of CBU prime movers of more than 400 HP.

The moratorium will encourage the construction of semi-trailers locally and allow for trade to flourish, preventing the creation of trade barriers and burdensome customs duties or tariffs. In addition to the moratorium, loans similar to the Temporary Economic Refinance Facility (TERF) financing scheme provided by the State Bank of Pakistan will also help SMEs to modernize and kick-start the manufacturing sector.

Recognize semi-trailers as transport vehicles

Road transportation is the primary mode of transportation of goods due to wide inland connectivity in many regions and the cost advantages it offers compared to other modes of transport. Increasing manufacturing activities, urbanization, the need for effective transportation and widening of the rural area road networks are major factors fuelling the growth of the semi-trailer market. Despite the importance, semi-trailers are not recognized as transport vehicles in Pakistan, hindering access to financing for SME fleet operators, among other detrimental effects.

While semi-trailers are not suited to being imported as complete units, the market in Pakistan comprises many local players who have the capacity to assemble

customized trailers. There is a need to further encourage the production of semi-trailers locally. It forms a relatively low-technology industry, capable of creating jobs and expanding into cold chain, refrigerated semi-trailers and refrigerated curtain sides. Moreover, it supports the implementation of the TIR convention, which requires trailers to operate.

Once an independent registry for semi-trailers is set up, and they are classified as transport vehicles, the association can be included in the Pakistan Automotive Manufacturers Association (PAMA).

- » **POA-related activities:** 2.1.6.

Enable the 'last mile' cold chain

The issue of who owns and operates any cold chain is important when the level of investment is considered. As previously discussed, the cold chain is usually run by the private sector to ensure their supply chain in the case of agricultural trading or export companies, or by logistics service providers where they see the demand. The costs and margin are recovered through transactional charges, which then go to the COGS. This is acceptable when the product has a high selling price and can carry the logistics costs, as in the case of exported

meat or added-value produce. When the produce is in plentiful supply, the cold chain's extra costs can make that produce uncompetitive in the market. Saving the 30% of post-harvest losses by using a cold chain is only viable if there is a market for the 30% and if that extra volume does not force the market price down.

The need to establish agricultural cold chains is not specific to Pakistan. Many developing countries have the same need. The problem is usually that the transactional charges needed to justify the investment often

outweigh the benefits when the return on capital is factored in. However, in countries where these facilities have been built and operated by the public sector (e.g. Lao People's Democratic Republic), they have often fallen into disrepair and become problematic. *Clearly, there is a role for a private sector or FDI to lead in installing and operating cold chain facilities.*

Cold storage operation is a specialized business requiring expertise in refrigeration and materials handling. The problem is getting the specialist companies to set up in developing countries that might have political risks. The International Finance Corporation (IFC) has identified this as a specific sector and has a Temperature-Controlled Logistics (TCL) investment

programme. The IFC is currently exploring opportunities to create third-party TCL markets in various emerging economies. This includes Pakistan, where the IFC reports:

The amount of food waste totals approximately five million tons of fruits and vegetables, valued in the range of US \$600-800 million. Without TCL services, high-value perishable harvests such as mangoes cannot reach the export markets where they would command their highest price. Investment in TCL infrastructure will reduce waste and increase profitability for food producers in Pakistan.²⁰

In the past 15 years, the International Finance Corporation (IFC) has invested \$63.6 million in support of pioneering temperature-controlled logistics (TCL) companies in Asia. Three projects have shown valuable insight into developing the sector: Snowman Logistics in India, Shanghai Zhengming Modern Logistics Company in China, and Preferred Freezer Services (formerly Antara) in Viet Nam.

- Investments in the TCL sector are often done in phases, supported by a sequence of smaller steps. The commitment grows with the business and the company's absorption capacity.
- Regulatory barriers can be burdensome. Plans are often delayed by long waits for permits. Often, approvals are required from local municipal authorities who may not be familiar with TCL building practices.
- Finding the right market niche with the required service level and infrastructure is a challenge. Careful niche selection is critical, because it impacts project revenue streams.

- Competition from the unorganized sector is especially steep in small and remote markets.
- Risk can be mitigated with multi-user, multi-product facilities that can target a diverse customer base.
- Customers are not always willing to pay a premium for high-tech services.
- The demand for organized, modern third-party TCL services in emerging markets evolves over time. A patient, long-term approach is required for development impact and sound financial outcomes.

The IFC has partnered with specialist private sector operators to enable financing and reduce their risk. The partner companies were local, not multinational. They have local management and ownership and a strong awareness of the local market conditions and customer needs.

Source: International Finance Corporation (IFC). 'Temperature-Controlled Logistics: Learning from Experience'.

» POA-related activities: 3.1.2.,3.1.3.

20.– Source: International Finance Corporation (IFC) (2020). 'Temperature-Controlled Logistics; Piloting Investments'. Accessed at <https://www.ifc.org/wps/wcm/connect/2a75ee3e-9a76-42a5-b850-3472390b09a3/IFC-TCL-Notes-TCLPiloting-web.pdf?MOD=AJPERES&CVID=npCOEew>.

Develop Pakistan as an important transshipment hub

Transshipment is still at an infant stage in Pakistan, which is believed to be losing the opportunity. If Pakistan is to capture a sizable portion of the global transshipment market, there is an urgent need for modification of the current regulations to make them facilitative towards legitimate business practices. There are several low-hanging fruits within Pakistan's reach in terms of transshipment by sea and land if the country can quickly implement an efficient trade policy framework. The current section presents short-, medium- and long-term goals that, if implemented, will provide significant growth in transshipment for Pakistan.

Efficient handling of frustrated and auction cargo by customs: On average, frustrated cargo constitutes of approximately 20% of the annual cargo that comes into Pakistan.²¹ Due to cumbersome customs procedures and inefficiencies, these containers commonly sit at the port for months, if not years, waiting to be re-exported or disposed of. Such cargo should be a source of added revenue for the port, especially since they are operating below capacity. However, the importer/exporter is unable to pay the large demurrage charges, which then must be waived by the terminal operators, causing them significant revenue loss.

Auction boxes have an even longer dwell time on the port, usually spanning years. This is mainly due to reluctant customs officials who often do not dispose of seized or abandoned cargo in a timely fashion for fear of not generating the market value for the seized/abandoned goods.

To counter both issues, Section 82 of the Customs Act, 1969 should be strictly implemented, which mandates customs authorities to dispose of frustrated and auction cargo within 30 days. Currently, customs decides randomly – in some cases, they have expedited auctions on a need basis (perishable items, animals or other goods that need to be disposed of).

Frustrated cargo can be disposed of in a timely manner if the documentation and procedural requirements are streamlined and amendments are made in the Web Based One Customs (WeBOC) system so that dependence on the paper-based One Customs

is eliminated. When it comes to auction containers, a time bar should be enforced for their timely disposal. Moreover, an e-auction management system will also ensure an expeditious and transparent process for the disposal of the abandoned goods.

Implementation of the TIR Convention in Pakistan: Pakistan is a signatory to the Transports Internationaux Routiers (TIR) Convention.²² However, the widespread implementation is missing from Pakistan due to several reasons. These include unaligned documents with the international TIR protocol, and lack of adoption of e-Bills to facilitate cross-border cargo. However, the regulations pertaining to an additional bank guarantee of PKR 15 million along with a 30-day qualification process through a multi-agency committee has now been amended with the S.R.O. 1433(I)/2020,²³ wherein the PKR 15 million guarantee is no longer a bank guarantee, but an insurance guarantee from at least an A-rated company as per the revised TIR Rules.

TIR can play a pivotal role in transshipment of goods by land to Asian and Central European countries, which is in major demand since transportation by land reduces costs by 40%–45%. To keep local bonded carriers who cannot meet the TIR requirements relevant, movement of cargo meant for Pakistan can remain their exclusive responsibility.

Proper implementation of the TIR Convention is reliant on the use of heavy tractors and semi-trailers using the TIR customs transit system, which provides for fast and efficient international transport. If Pakistan wants to leverage and thrive in this international agreement, it must build the capacity of the tractors and semi-trailers sector, starting with recognizing semi-trailers as vehicles (related to Activity 2.1.6 in the plan of action).

Addressing government inefficiencies at the port: Acquisition of technology and workforce efficiency through international on-dock terminal facilities is not sufficient. Pakistan needs to rethink its ports management. One of the major hurdles in being competitive is how government port institutions such as the Karachi Port Trust (KPT) and Port Qasim Authority (PQA) are

21.– Hasan, S. & Hasan, M. (2020). 'Transshipment: A New Frontier for Pakistan's Economy'.

22.– The TIR Convention establishes an international customs transit system with maximum facility to move goods in sealed vehicles or containers from a customs office of the departure country to a customs office of the destination country without the requirement for inspections at intermediate borders, while providing customs authorities with the required security and guarantees. Internationally, more than 33,000 international transport operators have been authorized by their competent national authorities to access the TIR system, using approximately 1.5 million TIR carnets per year. Truckers making use of the TIR procedure obtain an internationally harmonized customs document referred to as a TIR carnet. The security payment system is administered by the International Road Transport Union (IRU). If a vehicle transits the country without any goods leaving the bond, no taxes are due. TIR is mainly used for transit in Pakistan.

23.– See <https://download1.fbr.gov.pk/SROs/2021151311230147sro1433.pdf>.

operated. Due to inefficiencies of government-hired port employees, the private terminal operators are forced to hire additional resources that do the job, meaning that the labour force and the costs double every time. In addition to this, government port labour, known as 'dock worker gangs', have to be hired under the Karachi Dock Labor Board scheme for an entire eight-hour shift ahead of time. This means that, if a vessel is delayed, they will be paid not only for the number of hours they are engaged with the vessel, but also the time they spent waiting for the vessel to arrive. In addition to the issues of an inefficient workforce, rates charged by dock worker gangs are not competitive in nature. Therefore, instead of adding value and making Pakistan's ports more attractive, the archaic labour practices in the country have the opposite effect (related to Activity 1.4.2. in the plan of action).

Gwadar Port designed over an area of 64 hectares with transshipment in mind: The port has the capacity to handle a 300,000 ton vessel, which cannot be handled by any other port in Pakistan. The port is currently working on a rail network system that will connect Gwadar to China via Quetta and Afghanistan. Additionally, to make the port logistics truly multimodal, an airport in Gwadar is under construction and is also planned

to handle the transshipment of cargo. Gwadar Industrial Zone under the Gwadar Free Zone Act is the country's largest industrial zone. Despite its limited market access, Gwadar has features that are not offered elsewhere in Pakistan. Gwadar is especially equipped to handle bulk cargo. Its bagging plant has the capacity to bag 15 tons of bulk cargo; i.e. urea with the bagging speed of approximately 1,800 bags per hour weighing 50 kg each. The facility currently has storage capacity for 4,000 twenty-foot equivalent units (TEUs) in Phase I, with an expansion plan of 30,000 TEUs in the later phases. The facility also has 400 plug-in points for reef-er containers.²⁴ In terms of container handling equipment, the China Overseas Ports Holding Company (COPHC) has five rubber-tyred gantry cranes, five super Panamax cranes, one reach stacker and two empty handlers. With the current infrastructure, Gwadar can handle throughput of 100,000 TEUs. Although Gwadar is currently fully operational, it is only equipped at the bottom levels due to a lack of market demand. Gwadar Port's container throughput was 504 containers in 2019.²⁵ However, the COPHC has elaborate expansion plans once market demand arises.

» **PoA-related activities:** 1.1.4, 1.2.1, 1.2.2, 1.4.2, 2.1.6 and 3.2.1.

To achieve the vision and strategic objectives discussed, a robust, actionable and realistic strategic plan of action (PoA) is required. This is provided in the section below, and constitutes the heart of this strategy.

The PoA is structured along the three strategic objectives and the operational objectives described above. For each objective, the PoA outlines detailed activities and their implementation modalities, which include:

- **Priority level:** Priority 1 being the highest and 3 the lowest.
- **Period:** The desired time-frame of the activity.
- **Reform or project:** Defines whether the activity entails a legal action.
- **Targets:** Quantifiable targets that allow completion monitoring of the activity during the implementation stage.
- **Leading implementing partners:** One single accountable lead institution per activity. (The institution can also have a technical role or can solely have an oversight and coordination role.)
- **Supporting implementing partners:** Any institution that should be involved at any stage of the activity's implementation.

24.– China Overseas Ports Holding Company (COPHC) (2019). 'Gwadar Port – A Deep Sea Port Exploring Global Opportunities'.

25.– Hasan, S. & Hasan, M. (2020). 'Transshipment: A New Frontier for Pakistan's Economy'.

IMPLEMENTATION FRAMEWORK

The objective of the logistics service strategy for Pakistan is to create an enabling environment to realize its potential and benefit the country's image by driving economic growth and trade in Pakistan by increasing the country's competitiveness through an integrated, seamless, efficient, reliable and cost-effective freight transport and logistics network, leveraging best-in-class technology, processes and workforce. Achieving this ambitious objective will depend on the industry's ability to implement the activities defined in this strategy. To structure sector development, it is recommended that the following interventions be implemented with priority:

- Improve and upgrade Pakistan's trucking fleet;
- Strengthen logistics assistance from production regions to major export gateways through a robust cold chain facility;
- Create enabling logistics support services driven by public-private coordination.

MANAGING FOR RESULTS

It is the translation of priorities into implementable projects that will contribute to achieving the substantial increase in export competitiveness and export earnings envisaged under the strategy. These will be driven by reforming the regulatory framework, optimizing institutional support to exporters, and strengthening private sector capacities to respond to market opportunities and challenges. Allocation of human, financial and technical resources is required to efficiently coordinate, implement and monitor overall implementation.

Successful execution of activities will depend on stakeholders' abilities to plan and coordinate actions in a tactical manner. Diverse activities must be synchronized across public and private sector institutions to create sustainable results. Therefore, it is necessary to foster an adequate environment and create an appropriate framework for the strategy's successful implementation.

Key to achieving the targets will be coordination of activities, monitoring progress and mobilizing resources for implementation. To that effect, industry representatives recommended that a public-private sector specific council for the logistics sector be rapidly established, operationalized and empowered. The sector specific council is to be responsible for overall coordination, provision of policy guidance and the monitoring of industry development along the strategic orientation.

LOGISTICS SECTOR SPECIFIC COUNCIL

It is recommended that a logistics sector specific council be rapidly established by the MoC and effectively organized by the TDAP and MoC to support the industry with the capacity to steer its development strategically. The sector specific council is to be facilitated by a secretariat coordinated by the TDAP, and supported and advised by the FOAP, PNC-ICC and the Pakistan International Freight Forwarders Association (PIFFA).

Industry representatives recommend that the fruits and vegetables sector specific council be composed of the following members:

- Pakistan Civil Aviation Authority;
- Pakistan National Shipping Corporation;
- Karachi Port Trust;
- Port Qasim Authority;
- All Pakistan Shipping Association;
- Pakistan Ship's Agents Association (PSAA);
- All Pakistan Custom Agent Association;
- Pakistan International Freight Forwarders Association;
- Fleet Operators Association of Pakistan;
- Agility Logistics Pakistan (Karachi);
- SereneAir;
- Pakistan Railways;
- National Logistics Cell;
- Pakistan International Airlines;
- Air Blue.

It is recommended that the sector specific council be empowered to meet quarterly and to implement the following functions:

- Create a shared understanding of key market challenges and opportunities facing the sector;
- Set goals and targets that, if achieved, will strengthen the sector's competitive position and enhance Pakistan's overall capacity to meet markets' changing demands;
- Propose key policy changes to be undertaken and promote these policy changes among national decision makers;
- Support the coordination, implementation and monitoring of activities in the sector by the government, private sector, institutions or international organizations to ensure alignment to goals and targets, as required to contribute to resource identification and alignment.

As part of the Strategic Trade Policy Framework (STPF) and the sector strategy design process, it has been recommended that an *inter-ministerial and multi-industry private sector* council be organized and structured to address overall challenges to and opportunities in Pakistan's trade performance. It is recommended that chairs of the sector specific council be members of the council to consult on key trade thematic areas, ranging from policy to regulations and trade negotiations.

KEY SUCCESS FACTORS FOR EFFECTIVE IMPLEMENTATION

The presence of the sector specific council to oversee the strategy's implementation is a key success factor, but it is not sufficient to effectively fulfil its assigned functions.

Private sector support and participation in implementation

The private sector clearly expressed its willingness to contribute, directly or in partnership with public institutions, to the strategy's implementation. Their implementation efforts can range from providing business intelligence to institutions to contributing to project design, promotion and branding, and policy advocacy, etc. In brief, the private sector's practical knowledge of business operations is essential to ensuring that the strategy remains aligned to market trends and opportunities.

Proactive networking and communication

The key implementing institutions detailed in the PoA need to be informed of the strategy's content and the implications for their 2022–26 programming. This networking and communication is essential to build further ownership and to provide institutions with the opportunity to confirm the activities they can implement in the short to long term. It will be important for the TDAP, MoC and members of the sector specific council to reach out to relevant institutions nationally to create awareness and support for the logistics industry's development.

Resources for implementation

The sector specific council, in collaboration with the TDAP and the Secretariat at MoC, will need to leverage additional support for efficient implementation. Effective planning and resource mobilization is indispensable in supporting strategy implementation. Resource mobilization should be carefully planned and organized.

As the logistics industry is a priority of the Strategic Trade Policy Framework (STPF), the Government of Pakistan should define annual budget allocations and support to drive the industry's growth. This commitment will demonstrate clear engagement towards strengthening the sector and will encourage private partners to support development. In addition to national budget support, resource identification will require the Board of Investment to effectively target foreign investors in line with the strategy's priorities, such as the attraction of more commercial farmers. Investment flows to Pakistan should also be considered as a valuable driver of strategy implementation and overall industry development.

The various implementation modalities detailed will determine the success of the strategy's implementation. However, high-level support from the government, in collaboration with strong championship by the private sector, will be the real driver of successful strategy implementation.

PLAN OF ACTION (2023-2027)

Strategic objective	Operational objective	Activity	Priority (1 = Highest)	Period					Reform of project	Targets	Leading implementing partner	Supporting implementing partners
				2023	2024	2025	2026	2027				
1: Create an enabling business environment for the logistics sector	1.1. Harmonize laws and regulations to expand industry growth	1.1.1. Update the Customs Act, 1969 and the Customs Rules, 2001 for efficient handling of frustrated and auction cargo by customs. Consult with the sector specific council on the recommendations and assign a delegation in charge of the legal process to enact updates.	1					Reform	<ul style="list-style-type: none"> At least two rounds of assessment on the policies conducted Customs Act, 1969 updated 	Federal Board of Revenue	<ul style="list-style-type: none"> Planning commission along with all relevant agencies as per policies reviewed 	
		1.1.2. Review, update and formally implement the Trucking Policy, 2007. The sector specific council and the Cabinet Committee on Transport and Logistics (under the Ministry of Maritime Affairs) to be the possible forum to bring together all stakeholders at an operational level.	1					Reform	<ul style="list-style-type: none"> Trucking policy updated and implemented Sector specific council to review the implementation every two years 	Ministry of Communications	<ul style="list-style-type: none"> Fleet Operators Association Of Pakistan (FOAP) Sector specific council 	
		1.1.3. Update the S.R.O 72(KE)/2009 ²⁶ on fuel transition for trucks from Euro II to at least Euro IV with a roadmap to move to fuel EURO V or better by 2026.	1					Reform	<ul style="list-style-type: none"> Statutory notification updated. At least two rounds of review assessment conducted Comprehensive policy roadmap developed to move to Euro V 	Ministry of Climate Change	<ul style="list-style-type: none"> Ministry of Commerce Ministry of Industries & Production Federal Board of Revenue 	
		1.1.4. Amend the transshipment rule to allow transshipment of less than container load (LCL) cargoes, which are forwarded to the country of origin in the form of 'grouped shipments': <ul style="list-style-type: none"> S.R.O 685(I)/2020;²⁷ S.R.O 03(I)/2021;²⁸ S.R.O 218 (I)/2020;²⁹ S.R.O 1538 (I)/2019.³⁰ Consult with the sector specific council on the recommendations and assign a delegation in charge of the legal process to enact amendments.	2				Reform	<ul style="list-style-type: none"> At least two rounds of assessment on the policies conducted Transshipment rules amended 	Pakistan Customs (Federal Board of Revenue)	<ul style="list-style-type: none"> Planning Commission Ministry of Maritime Affairs Ministry of Commerce Sector specific council 		

26. – See <https://www.yumpu.com/it/document/read/46322181/sro-72ke-2009-pakistan-standards-and-quality-control-authority>.

27. – See [https://download1.fbr.gov.pk/SROs/20208516829169SRO685\(I\)2020dated05.08.2020InternationalTransshipmentRulesamendment.pdf](https://download1.fbr.gov.pk/SROs/20208516829169SRO685(I)2020dated05.08.2020InternationalTransshipmentRulesamendment.pdf).

28. – See <https://download1.fbr.gov.pk/SROs/202117131122138sro-03-2021.pdf>.

29. – See <https://download1.fbr.gov.pk/SROs/2020630146581287OSRO218of2020.pdf>.

30. – See [https://download1.fbr.gov.pk/SROs/20191291612328979SRO1538\(I\)2019.pdf](https://download1.fbr.gov.pk/SROs/20191291612328979SRO1538(I)2019.pdf).

Strategic objective	Operational objective	Activity	Priority (1 = Highest)	Period					Reform of project	Targets	Leading implementing partner	Supporting implementing partners
				2023	2024	2025	2026	2027				
1: Create an enabling business environment for the logistics sector	1.1. Harmonize laws and regulations to expand industry growth	1.1.5. Rewrite/amend the obsolete Ports Act, 1908 ³¹ to enable structured growth and sustainable development, and to attract investments in the port sector by an effective administration and management. Consult with the sector specific council on the recommendations and assign a delegation in charge of the legal process to enact amendments.	2					Reform	<ul style="list-style-type: none"> At least two rounds of assessment on the policies conducted Ports Act, 1908 amended 	Ministry of Maritime Affairs	<ul style="list-style-type: none"> Planning Commission Sector specific council 	
		1.1.6. Draw up local regulations based on international best practices, e.g. EU regulations on driving time and rest period ³² in the road transport sector to improve working conditions and road safety. This includes: <ul style="list-style-type: none"> Defining the minimum age requirement for trucks; Setting a maximum amount of daily driving; Mandatory break requirements; Installation of tachographs. 	1				Reform/project	<ul style="list-style-type: none"> 60% of the surveyed drivers report better working conditions 	Ministry of Communications	<ul style="list-style-type: none"> Provincial government Provincial police Provincial excise department Fleet Operators Association Of Pakistan (FOAP) 		
		1.1.7. Amend the Import Policy Order, S.R.O. 345(I)/ 2016, ³³ to encourage the imports of heavy prime movers that are not locally produced, e.g. more than 400 HP.	1					Reform	<ul style="list-style-type: none"> Policy amended to 400+ HP prime movers 	Ministry of Commerce		
		1.1.8. MOU between PNC-ICC and FOAP to facilitate the seamless execution of S.R.O. 1433 (1)/ 2020 ³⁴ .	1					Reform	<ul style="list-style-type: none"> Policy amended 	PNC-ICC	Fleet Operators Association Of Pakistan (FOAP)	
		1.1.9 Develop and enforce shipping policy setting up rules of business for shipping lines to avoid hidden charges, including: <ul style="list-style-type: none"> Regulations for transshipment charges ; Amendment of bill of lading after sailing ; Impose a single exchange rate determined by the State Bank of Pakistan (SBP) for all shipping lines. (<i>Link with Activity 3.1.1. of the processed food and beverages strategy</i>)	1				Reform	<ul style="list-style-type: none"> Rules of business for shipping lines amended 	Ministry of Maritime Affairs	Pakistan Customs (FBR)		
		1.2. Fully operationalize and use international transport conventions	1	1.2.1. PNC-ICC to engage with the Fleet Operators Association Of Pakistan (FOAP) in expanding the TIR system in Pakistan. This can be done if the PNC-ICC allocates to the Fleet Operators Association Of Pakistan (FOAP) a certain number of TIR carnets to be distributed among its members. The Fleet Operators Association Of Pakistan (FOAP) will then give out the licences to its members and guarantee proper usage of the licence in return.					Project	<ul style="list-style-type: none"> Fleet Operators Association Of Pakistan (FOAP) given 10 licences each year 	PNC-ICC	Federal Board of Revenue

31.- See <https://phkh.nhsr.c.pk/sites/default/files/2019-07/Ports Act Pakistan 1908.pdf>.

32.- See <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM:c00018>.

33.- See https://www.phclondon.org/ecw/london/downloads/import_policy_order_2015-2018.pdf.

34.- See <https://download1.fbr.gov.pk/SROs/2021151311230147sro1433.pdf>.

Strategic objective	Operational objective	Activity	Priority (1 = Highest)	Period					Reform or project	Targets	Leading implementing partner	Supporting implementing partners
				2023	2024	2025	2026	2027				
1: Create an enabling business environment for the logistics sector	1.2. Fully operationalize and use international transport conventions	1.2.2. Build the Fleet Operators Association Of Pakistan (FOAP) 's capacity as a joint intermediate agency assisting the PNC-ICC and the Federal Board of Revenue (FBR) in approvals to issue TIR carnets.	2					Project	<ul style="list-style-type: none"> Fleet Operators Association Of Pakistan (FOAP) processes TIR application requests 	FBR	<ul style="list-style-type: none"> Fleet Operators Association Of Pakistan (FOAP) PNC-ICC 	
		1.2.3. The Fleet Operators Association Of Pakistan (FOAP) to negotiate and obtain a robust joint insurance guarantee from at least an A-rated company, which it can sell for each TIR carnet it licenses out to its members.	3					Project	<ul style="list-style-type: none"> Joint insurance obtained by Fleet Operators Association Of Pakistan (FOAP) 	Fleet Operators Association Of Pakistan (FOAP)	FBR	FBR
	1.2.4. Create a trade centre in Karachi to house all international trade-related organizations such as the International Road Transport Union (IRU), which will serve as a knowledge-sharing and gathering hub for regional connectivity.	3					Project	<ul style="list-style-type: none"> Trade house created in Karachi 	Ministry of Commerce	Ministry of Commerce	<ul style="list-style-type: none"> TDAP PNC-ICC 	
	1.2.5. Remove the self-imposed restriction by banks in Pakistan on the verification of documents and their processing for imports and exports which indicate transit through Iran. SBP should issue a general circular to all banks clarifying this.	1					Reform	<ul style="list-style-type: none"> Restrictions on certifying documents transiting through Iran removed 	State Bank of Pakistan	State Bank of Pakistan	<ul style="list-style-type: none"> State Bank of Pakistan Supporting: Ministry of Commerce, PNC-IC 	
	1.3. Strengthen public-private coordination efforts in policymaking	1.3.1. Build mutual understanding and cooperation between the public and private sectors through workshops, training programmes and regular meeting of the advisory committee on the sector to spread awareness about trade-related training and changes in regulations.	2				Project	<ul style="list-style-type: none"> Outreach programme held twice every year 	Ministry of Commerce	Ministry of Commerce	<ul style="list-style-type: none"> Pakistan International Freight Forwarders Association (PIFFA) Fleet Operators Association Of Pakistan (FOAP) 	
	1.3.2. Establish a department within the TDAP dedicated as a one-stop agency responsible for all export logistics and documentation services.	1				Project	<ul style="list-style-type: none"> One-stop agency established under TDAP 	Trade Development Authority of Pakistan	Ministry of Commerce	<ul style="list-style-type: none"> Ministry of Commerce Federal Board of Revenue 		
	1.3.3. Provide technical support to design a robust track and trace (integrated risk management system) enforcement system for flow of information about the importers and exporters by creating connectivity between all seaports, dry ports and in between regions.	3				Project	<ul style="list-style-type: none"> Connectivity between all customs units with the introduction of the risk management system 	Pakistan Customs (FBR)	Ministry of Maritime Affairs	<ul style="list-style-type: none"> Ministry of Maritime Affairs Pakistan Civil Aviation Authority 		

Strategic objective	Operational objective	Activity	Priority (1 = Highest)	Period					Reform or project	Targets	Leading implementing partner	Supporting implementing partners
				2023	2024	2025	2026	2027				
1: Create an enabling business environment for the logistics sector	1.4. Increase collaboration with technical training institutions and master trainers to strengthen local skills	1.4.1. Prepare a training module on protective packaging for exporters, packers and processors in all major production regions to upskill on the ease of handling, the transportation and storage costs, as well as quality control of the product.	2						Project	<ul style="list-style-type: none"> Training module prepared At least one training workshop held each year 	<ul style="list-style-type: none"> Ministry of Commerce and Industries Enterprises Development Authority (SMEDA) United Nations Office on Drugs and Crime TDAP National Logistics Cell (NLC) 	<ul style="list-style-type: none"> Ministry of Maritime Affairs
	1.4. Increase collaboration with technical training institutions and master trainers to strengthen local skills	1.4.2. Increase efficiency of the ground staff at ports through training on better port management using the International Labour Organization (ILO) guidelines on training in the port sector and the ILO Portworker Development Programme.	1						Project	<ul style="list-style-type: none"> 60% of staff trained 	<ul style="list-style-type: none"> Karachi Port Trust Port Qasim Authority Gwadar Port Authority ILO 	<ul style="list-style-type: none"> Ministry of Maritime Affairs
2: Improve and upgrade Pakistan's trucking fleet	2.1. Modernize the trucking fleet	1.4.3. Launch an internship programme for students in the supply chain and logistics to obtain relevant education and practical experience. This can be achieved through associations such as Fleet Operators Association Of Pakistan (FOAP), the Pakistan International Freight Forwarders Association (PIFFA), the Federation of Pakistan Chambers of Commerce and Industry (FPCCI) and the Pakistan Ship's Agents Association (PSAA), providing practical training and experience to students in the subject areas on a short-term basis.	1						Project	<ul style="list-style-type: none"> Pilot internship programme launched with at least 20 students 	<ul style="list-style-type: none"> Fleet Operators Association Of Pakistan (FOAP) Pakistan International Freight Forwarders Association (PIFFA) Federation of Pakistan Chambers of Commerce and Industry (FPCCI) Pakistan Ship's Agents Association (PSAA) National Logistics Cell (NLC) 	<ul style="list-style-type: none"> Higher Education Commission, Pakistan
	2.1. Modernize the trucking fleet	2.1.1. Federal financial sector authorities and banks to collectively develop and implement low-cost financing schemes; e.g. truck owners can exchange their old vehicle for a down payment or reduced costs for the import of a new or semi-new (less than five years old) vehicle to replace scrapped vehicles.	1						Reform	<ul style="list-style-type: none"> At least 1000 of vehicles participating in the programme per year 	<ul style="list-style-type: none"> State Bank of Pakistan Commercial banks National Transport Research Centre 	<ul style="list-style-type: none"> Ministry of Finance
		2.1.2. Create an automated system to verify truck registration numbers when a new bonded carrier is being added or upon licence renewal. Information of those already licensed can also be entered into the system.	2						Project	<ul style="list-style-type: none"> Automated system to verify truck registration numbers created 	<ul style="list-style-type: none"> Provincial enforcement agencies (i.e. police; Frontier Corps) Provincial excise 	<ul style="list-style-type: none"> Pakistan Customs (FBR)

Strategic objective	Operational objective	Activity	Priority (1 = Highest)	Period					Reform of project	Targets	Leading implementing partner	Supporting implementing partners
				2023	2024	2025	2026	2027				
2. Improve and upgrade Pakistan's trucking fleet	2.2. Revamp the duty structure to encourage fleet renewal	2.2.2. Produce a comprehensive goods vehicle scrapping programme that will: <ul style="list-style-type: none"> • Allow zero duty and tax certificates for new replacement vehicles; • Free road tax and licensing for replacement imports for three years. • Transferable/tradable certificates for scrapped vehicles. 	2					Project	<ul style="list-style-type: none"> • Goods vehicle scrapping programme introduced and set in operation 	Federal Board of Revenue	<ul style="list-style-type: none"> • Ministry of Commerce • Provincial excise • Traffic police 	
		2.3.1. Set up or upgrade a training school for truck drivers by developing relevant curricula, deploying the RoadMasters Skills Profile programme and training of trainers programme. The facilities should be equipped with: <ul style="list-style-type: none"> • Latest infrastructure, including advanced driver training systems, driver testing labs and driver simulator; • Training will be provided by seasoned professionals in classrooms and on-campus driving ranges. • Training will emphasize vehicle maintenance, defensive driving, eco-driving motor vehicle laws and regulations, trip planning and map reading, cargo handling, size/weight laws, and vehicle accident prevention and response. 	1					Project	<ul style="list-style-type: none"> • Driving and training school set up • At least 1,000 truck drivers receive training each year 	Fleet Operators Association Of Pakistan (FOAP)	<ul style="list-style-type: none"> • Pakistan National Institute of Defensive Driving (PNIDD) • National Highway Authority (NHA) • National Highways & Motorway Police (NHMP) • National Transport Research Centre (NTRC) 	
	2.3.2. Develop programmes to retrain and relicense existing truck drivers and prepare them for a modernized trucking industry.	1					Project	<ul style="list-style-type: none"> • 1,000 drivers receiving new/improved skills due to training each year 	National Transport Research Centre (NTRC)	<ul style="list-style-type: none"> • Pakistan National Institute of Defensive Driving (PNIDD) • National Highway Authority (NHA) • National Highways & Motorway Police (NHMP) • Fleet Operators Association Of Pakistan (FOAP) 		
	2.3.3. Ensure accreditation of the training facilities set up in connection to the Fleet Operators Association Of Pakistan (FOAP) through an internationally accredited training institute.	2				Project	<ul style="list-style-type: none"> • Fleet Operators Association Of Pakistan (FOAP) training facility becomes internationally accredited 	National Transport Research Centre (NTRC)	<ul style="list-style-type: none"> • Higher Education Commission, Pakistan • National Highways & Motorway Police (NHMP) • Fleet Operators Association Of Pakistan (FOAP) 			

Strategic objective	Operational objective	Activity	Priority (1 = Highest)	Period					Reform of project	Targets	Leading implementing partner	Supporting implementing partners
				2023	2024	2025	2026	2027				
3: Strengthen logistics hubs from production regions to major export gateways	3.1. Develop/revamp infrastructure facilities	3.1.1. Develop publicly accessible cold storage reception and consolidation network facilities at strategic rural locations/nodes, particularly to cover the flow of agricultural products from production regions to major export gateways at international airports and seaports. <i>Link with Activity 3.1.2 of the fruits and vegetables strategy PoA. Link with Activities 3.1.3 and 3.1.4 of the processed food and beverages PoA.</i>	1					Project	<ul style="list-style-type: none"> All publicly accessible cold storage reception and consolidation facility modernized by 2025 	Ministry of National Food Security & Research	<ul style="list-style-type: none"> Provincial government Provincial Department of Agriculture National Transport Research Centre (NTRC) 	
		3.1.2. Provide electricity for cold chain at a concessionary rates not only for exports of fruits, vegetables, meats and other perishables but also for domestic consumption. This would incentivize the use of cold trucks and refrigerated containers	1					Project	<ul style="list-style-type: none"> Increased use of cold trucks and refrigerated containers for exports and domestic use. 	Ministry of Energy (Power Division)	<ul style="list-style-type: none"> Provincial government Provincial Department of Agriculture Ministry of National Food Security & Research 	
		3.1.3. Change costing and pricing model of the refrigerated transport network for agricultural products in specific, predefined routes to make it more affordable towards a cost-plus pricing model. The Government of Pakistan to underwrite some of the risk and the costs associated with operating certain cold chain routes for specific agricultural products (protected routes).	1					Project	<ul style="list-style-type: none"> Costs associated with agriculture-specific cold chain routes underwritten 	Ministry of Communications	<ul style="list-style-type: none"> Ministry of National Food Security & Research Food Security & Research TDAP FBR Ministry of Commerce National Transport Research Centre (NTRC) 	
		3.1.4. Attract investment to increase freight network between ports, airports and commercial hub zones to facilitate fast transfer of cargo and establish an integrated multimodal connectivity network. Public-private partnerships can be set through the build-operate-transfer (BOT) model. Government releases the land and legal clearance, and private companies invest in hard infrastructure. This can be achieved through investment promotion activities in targeted countries. The following steps are required: <ul style="list-style-type: none"> Prepare investment profiles for investors in target countries; Carry out investment promotion activities in selected countries, including roadshows and business-to-business meetings. Engage foreign representatives, diplomats and embassy representatives to support and plan promotional visits. 	2				Project	<ul style="list-style-type: none"> Investment profiles prepared One road show per year in targeted country organized Business-to-business (B2B) meeting with 5-7 investors in each country organized per year 	Board of Investment	<ul style="list-style-type: none"> Ministry of Commerce Ministry of Communications Trade missions National Transport Research Centre (NTRC) 		

Strategic objective	Operational objective	Activity	Priority (1 = Highest)	Period					Reform or project	Targets	Leading implementing partner	Supporting implementing partners
				2023	2024	2025	2026	2027				
3: Strengthen logistics hubs from production regions to major export gateways	3.2. In-crease gate-way terminal facilities	3.2.1. Build up Karachi Port for increased transshipment to central Asia.	3						Project/ reform	Ministry of Commerce	<ul style="list-style-type: none"> Ministry of Maritime Affairs Ministry of Industries & Production Ministry of Planning, Development & Special Initiatives Federal Board of Revenue Port authorities National Transport Research Centre (NTRC) 	
		<ul style="list-style-type: none"> Identify need for bonded bulk storage and handling facilities; Reduce time to obtain a transshipment permit by simplifying the procedures, particularly for multimodal shipments. 										<ul style="list-style-type: none"> A transit trade gateway community system set up and in operation
		3.2.2. Develop an operational cost model with a common service level agreement for operators to include handling charges' structure.	3						Project/ reform	Ministry of Maritime Affairs	<ul style="list-style-type: none"> Port authorities National Transport Research Centre (NTRC) 	
		3.2.3. Scope out an improvement plan to develop high-quality container port infrastructure, and increase in operational efficiency resulting in improved performance index ranks of Karachi Port and Port of Qasim. This can be done by increasing the ports' efficiency, including through an online management system and an e-auction management system for auction cargo.	3						Project/ reform	Ministry of Maritime Affairs	<ul style="list-style-type: none"> Port authorities National Transport Research Centre (NTRC) 	
	<ul style="list-style-type: none"> Measures of throughput volumes; Container movements per crane; Container movements per hour; Berth usage; Activity-based costing; Vessel and cargo revenues; Service revenues; Labour costs. 						<ul style="list-style-type: none"> Improvement in the container port performance index ranking Karachi to be in the Top 50 ports Port Qasim to move to Top 100 in rank 					

ANNEXES

Annex I:

Prime movers

Table 1: Imports of prime movers in Pakistan

Gross vehicle weight/ CBU	Euro emission standard	Condition	Quantity	Avg. unit value	Average customs duty	Average sales tax	Regulatory duty	General sales tax	Additional customs duty	Additional sales tax	Income tax	Federal excise duty	Total amount in duties and taxes (USD)		
Not specified	Not specified	New	513	34 596	1 707	6 145	0	0	–	–	1 117	–	9 481		
			372	26 162	1 320	4 847	–	–	959	2 715	280	–	10 121		
337			23 914	5 198	4 226	–	–	182	88	1 055	–	10 750			
< 20 tons		Used	> 5 tons	950	2 963	298	562	0	0	183	0	77	0	1 121	
5 < 8 tons			19	14 802	4 165	3 109	–	–	244	549	1 493	–	9 560		
8 < 20 tons		Euro II	New	296	20 215	1 639	3 148	–	–	–	–	518	–	5 306	
CBU 2 axle				31	13 288	2 862	2 836	–	–	1 115	655	1 085	–	8 552	
CBU above 2 axle		Euro III		24	32 516	6 655	7 184	–	–	2 329	1 146	2 782	–	20 097	
Other				Not specified	7	67 263	18 465	15 356	–	–	3 856	2 710	5 962	–	46 349
Not specified		Euro II & Euro III			29	25 920	3 187	5 231	–	–	1 789	924	2 010	–	13 140
	30			34 697	4 936	6 994	–	–	3 117	1 450	2 671	–	19 168		
	Euro III	3		47 948	9 355	10 099	–	–	3 274	1 782	3 921	–	28 431		
	Euro V & Euro VI	Used		7	17 150	3 555	3 626	–	–	–	640	1 408	–	9 228	
	Not specified	Used		New	26	55 262	11 907	12 920	–	–	2 548	2 268	4 990	–	34 634
				Used	16	24 436	4 763	4 845	–	–	956	859	2 064	–	13 487

Source: ITC.

Table 2: Origin, condition and quantity

Origin	Euro emission standard	Condition	Quantity
Austria	Not specified		3
Brazil	Euro III		3
China	Euro II	New	31
	Euro II & Euro III		30
	Euro III		24
			1 479
European Union	Not specified	Used	7
		New	2
France			5
			2
Germany	Euro V & Euro VI	Used	7
Iran			1
Japan		New	796
		Used	15
South Korea	Not specified	New	36
Thailand			209
			5
United Arab Emirates		Used	3
United Kingdom			2
Total			2 660

Source: ITC.

Table 3: Taxes and duties

Condition	Quantity	Total amount in duties and taxes (USD)
New	2 618	19 347
Used	42	11 672

Source: ITC.

Annex II:

List of participants in the public–private consultations

Name	Title	Organization
Arzish Azam	Advisor to Minister of Science and Technology	Ministry of Science and Technology
Farzana Noshab	Senior economics officer	Asian Development Bank
Malik Moin Ahmed Chishti	CEO	Agility Logistics Pvt Ltd
Faisal Khokhar	Director	Board of Investment
Saima Azhar	Deputy director	TDAP
Ishtiaque Saleh	Manager	Small and Medium Enterprises Development Authority (SMEDA)
Raja Hassanien Javed	General Manager of Outreach	SMEDA
Ishtiaque Saleh	Traffic officer	Karachi Port Trust
Capt. Gul Mohammad	Director of Operations	Gwadar Port Authority
Asif Azam	Deputy director	National Highway Authority
Sara Gul	Research officer	Industries and Commerce Section, Ministry of Planning, Development & Special Initiatives
Ghazala Abid	Chief	Industries and Commerce Section, Ministry of Planning, Development & Special Initiatives
Capt. Ibrahim Zahir Khan	Secretary general	All Pakistan Shipping Association
Habibullah Abdul Latif	Secretary general	Pakistan International Freight Forwarders Association
Muhammad Hanif Lakhany	Vice president	Federation of Pakistan Chambers of Commerce & Industry
Shahbaz Latif Mirza	Director (road transport)	Ministry of Communications
Nabeel Siraj	Assistant collector	Pakistan Customs
Muhammad Tahir	Administrative officer	Mercantile Marine Department
Mohsin Dharsi	CEO	Karachi Cargo Services Pvt Ltd
Zulfiqar Ali	Director (policy)	Board of Investment, Pakistan
Mohammed Rajpar	Chairman	Pakistan Ship's Agents Association
Zahoor Iqbal Awan	Secretary general	Fleet Operators Association of Pakistan
Khayam Husain	Managing director	Automobile Corporation of Pakistan
Javaid Basini	Secretary general	PNC-ICC
Salman Ali	Research associate	MoC
Sumair Ahmad	Research associate	MoC
Muhammad Amir Khan	Product officer	TDAP

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