



Technical Assistance Consultant's Report

Project Number: 52188-001
December 2023

TA 9630: Assessing Economic Corridor Development Potential
Among Kazakhstan, Uzbekistan, and Tajikistan

A Prefeasibility Study of a Trade and Logistics Center in Sugd
Province of Tajikistan

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For Asian Development Bank

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ABBREVIATIONS

3PLs	-	third party logistics
AAGR	-	average annual growth rate
ABBAT	-	Association of International Automobile Carriers of The Republic of Tajikistan
ADB	-	Asian Development Bank
AEO	-	Authorized Economic Operator
API	-	Advance Passenger Information
BCP	-	border crossing point
CAPEX	-	capital expenditures
CAREC	-	Central Asia Regional Economic Cooperation
CBM	-	coordinated border management
CEO	-	chief operating officer
COVID-19	-	coronavirus disease
DCF	-	discounted cash flow
EBIDTA	-	earnings before interest depreciation and tax
EoDB	-	ease of doing business
EPC	-	engineering procurement and construction
FEZ	-	free economic zone
FTZ	-	free trade zone
GBAO	-	Gorno-Badakhshan Administrative Province
GDP	-	gross domestic product
ICIC	-	International Center for Industrial Cooperation
IRR	-	internal rate of return
KLC	-	Khujand Logistics Center
MTPA	-	million ton per annum
NPV	-	net present value
NWC	-	net working capital
OPEX	-	operating expenses
PPP	-	public private partnership
PRC	-	People's Republic of China
PwC	-	PricewaterhouseCoopers Pvt Ltd
SEZ	-	special economic zone
SFEZ	-	Sugd Free Economic Zone
SPS	-	sanitary and phytosanitary
SPV	-	special purpose vehicle
STKEC	-	Shymkent-Tashkent-Khujand Economic Corridor
TLC	-	trade and logistics center
VAT	-	value added tax
VGf	-	viability gap funding
WTC	-	World Trade Center

In this report, "\$" and "US \$" refers to US dollars.

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EXECUTIVE SUMMARY

Tajikistan is an active participant of the Shymkent-Tashkent-Khujand Economic Corridor (STKEC) initiative. The geographic focus of the initiative is at present on Shymkent city and Turkestan province of Kazakhstan, Tashkent city and Tashkent province of Uzbekistan and Sugd province (including Khujand city) of Tajikistan. With technical assistance of the Asian Development Bank (ADB), a road map for the STKEC development was formulated in 2019-2020. As part of its continuing support for STKEC development, in 2021 ADB engaged PricewaterhouseCoopers Pvt Ltd (PwC) India and associated firms in Central Asia to conduct pre-feasibility studies of (i) an International Center for Industrial Cooperation on the border between Kazakhstan and Uzbekistan and (ii) a Trade and Logistics Center (TLC) in Sugd province of Tajikistan. This report presents the findings of the second study.

Country context. Although Tajikistan's economy grew rapidly during the past decade, manufacturing and services remain underdeveloped. The country's exports are highly concentrated in primary commodities such as metals, ores and cotton. Despite Tajikistan's significant potential to export fruits, vegetables and nuts, these products comprise a small fraction of the country's exports. The exports of transport services are also well below their potential. At the same time, Tajikistan's import dependency ratio is high for a number of essential food products, including wheat and vegetable oil. The geographic concentration of the country's merchandise trade, including food imports, is also high. The overall supply and domestic prices of many food products are characterized by substantial fluctuations.

Provincial context. Sugd province is one of Tajikistan's major administrative units. Located in the northwest of the country, its borders eight provinces of Uzbekistan (including densely populated Tashkent, Samarkand, Fergana, and Namangan provinces) and Batken province of the Kyrgyz Republic. Due to its location and comparatively good transport connectivity, Sugd province serves as a gateway for Tajikistan's trade with Uzbekistan, Kazakhstan, the Russian Federation and many other countries. As is the case with Tajikistan as a whole, Sugd province has considerable potential to produce and export fresh fruits and vegetables, processed food products and textile. Nevertheless, manufacturing and services (including trade-related business services) are underdeveloped in the province, and mineral products and cotton comprise the bulk of its exports.

Overview of logistics sector. Tajikistan's logistics sector is at an early stage of development. There is a lack of multimodal logistics centers and cold storage facilities in the country, including in Sugd province. The existing logistics centers serve road shipments only. Most of them lack modern equipment and facilities and provide a limited range of logistics services. Sugd province does not have a modern logistics center that offers a full range of logistics services (sorting, grading, packaging, cold storage, etc.) for food products. Due to their limited supply, many logistics services are relatively expensive in Tajikistan.

Economic rationale. There is strong economic rationale for setting up a modern TLC in Sugd province. The establishment of a TLC that can provide multimodal logistics and other trade-related business services (including cold storage, freight forwarding and advisory services) will generate considerable economic benefits for Sugd province and Tajikistan as a whole. Notably, it will improve the availability, affordability and quality of logistics services and lower trade costs. By doing so, it will foster the development of SMEs, e-commerce and boost exports of transportation and logistics services. It will also help Tajikistan and, in particular, Sugd province expand the production and exports of horticulture products and manufactured goods, diversify the composition and direction of exports, mitigate supply chain risks for food products, and reduce seasonal fluctuations in food prices. The establishment of a TLC in Sugd province will be consistent with development priorities of the central government of Tajikistan and the local government of the province. It will contribute to the development of the STKEC.

Services to be provided by TLC. It will provide a broad range of modern multimodal logistics and other services that facilitate exports, imports and domestic distribution of food and other

products. These will include—but will not be limited to—sorting, grading, packaging, labeling, weighing, cargo handling and warehousing (including cold storage) services. The TLC may host businesses that provide freight forwarding, last-mile delivery, legal, financial, market intelligence, consulting and other trade-related services. It may also host exhibitions, fairs, and workshops. To facilitate trade and enhance the attractiveness of the TLC for customers, it is desirable that the government agencies in charge of customs, food safety, phytosanitary and veterinary controls set up their offices and, as appropriate, laboratories and provide clearance and/or certification services at the TLC.

Land area requirements. Taking into account the profile and projected volume of cargo flows in Sugd province, the total land area requirement for the TLC is estimated at 80 hectares. This includes 64 hectares for warehousing (including cold storage) and value-added services, 7 hectares for a truck terminal and 4 hectares for buildings (including an expo center).

Location assessment. The study team has visited and evaluated the three possible locations for the TLC: (i) the Sugd Free Economic Zone (SFEZ), (ii) the Khujand Logistics Center, and (iii) the Sadaf Industrial Zone. The team has evaluated these sites by developing and applying an assessment framework that consists of 7 parameters and 40 sub-parameters. Of the three locations, **the SFEZ has been ranked as the most suitable for the TLC.** The SFEZ has the total area of 320 hectares, of which 210 hectares are available. However, the SFEZ lacks last-mile railway connectivity, even though it has better land features, overall external connectivity and internal infrastructure than the Khujand Logistics Center and the Sadaf Industrial Zone. Therefore, another possible location with even better transport connectivity (including railway connectivity) is worth considering, given the importance of good transport connectivity for the TLC.

Institutional models. The two alternative institutional models are proposed for establishing and managing the TLC within the SFEZ: (i) a government-led model and (ii) a public-private partnership (PPP) model. Under the first model, the administration of the SFEZ will develop and manage the TLC, set rental rates for the TLC facilities and receive the rental revenue. Under the second model, the SFEZ administration and a private investor (or investors) will establish the TLC as a separate legal entity. This entity will lease the land for the TLC from the SFEZ administration. It will develop, operate and maintain the TLC-specific infrastructure and facilities, set the rental rates for TLC facilities and receive the rental revenue. The SFEZ administration will operate and maintain the infrastructure and facilities shared by the TLC and other SFEZ residents.

Financial analysis. The required capital expenditure on the TLC is estimated at US\$43.5 million, with US\$25.5 million to be borne during the first phase of the construction, and US\$18.0 million required for the second phase.¹ The two financing scenarios are considered: (i) 100% financing through a loan from a multilateral bank (Scenario 1) and (ii) hybrid financing through equity investment and a commercial loan. The second scenario is analyzed without (Scenario 2A) and with (Scenario 2B) viability gap funding. The project is financially viable under Scenarios 1 and 2B and unviable under Scenario 2A. The results of the financial analysis are highly sensitive to changes in underlying estimates and assumptions, in particular those concerning the operational expenditure and the warehouse rental rate.

Key external enablers. Several enablers that are external to the TLC are needed to facilitate its establishment, enhance its financial viability, boost its economic benefits, and minimize its adverse effects (such as increases in traffic congestion and air pollution in Khujand city). These external enablers include (i) amendment of the legal and regulatory framework for the establishment and operation of the TLC, (ii) development of complementary transport and logistics infrastructure, and (iii) international trade and transport facilitation. The detailed report captures the list of the necessary/recommended actions pertaining to these enablers.

¹ The first phase will mostly entail construction of an office building (buildings), infrastructure and facilities for logistics services. The second phase will involve expansion of the office space and logistics facilities and construction of facilities for exhibitions, fairs and workshops if there is sufficient demand for such space and facilities.

I. INTRODUCTION

A. Background

1. In 2018, the Asian Development Bank (ADB) approved \$0.8 million technical assistance (TA) to assess the potential for developing a transnational economic corridor among Kazakhstan, Uzbekistan and Tajikistan, with geographic focus on Shymkent city and Turkestan province of Kazakhstan, Tashkent city and Tashkent province of Uzbekistan and Sugd province (including Khujand city) of Tajikistan.² In 2019-2020, a road map for the development of the Shymkent-Tashkent-Khujand Economic Corridor was formulated in consultation with key stakeholders, including central and local government officials, development partners and the business community.³ The road map identifies six thematic focus areas for STKEC development: (i) improvement of road and railway transport connectivity; (ii) modernization of border crossing points (BCPs) and border management; (iii) development of horticulture value chains; (iv) modernization of sanitary and phytosanitary measures and development of food quality certification services; (v) development of regional tourism; and (vi) development of special economic zones and industrial zones.⁴

2. In 2021, ADB mobilized an additional \$1 million for a second phase of the TA. In November 2021, ADB engaged PricewaterhouseCoopers Pvt Ltd (PwC) India and associated firms in Central Asia (the consulting firm) to conduct pre-feasibility studies of an International Center for Industrial Cooperation (ICIC) on the border between Kazakhstan and Uzbekistan and a Trade and Logistics Center (TLC) in Sugd province of Tajikistan, and to carry out capacity building activities in support of STKEC development.

3. A series of virtual inception workshops were conducted with multiple stakeholders (both public and private sector) in Tajikistan on 8-16 December 2021. Bilateral consultations with government agencies of Tajikistan were undertaken virtually in February-April 2022 to seek their feedback, guidance, and support on specific issues and needs related to the pre-feasibility study of the TLC.

4. From October 27 to 29 2022, the project team visited Tajikistan for face-to-face meetings and conducted site visits across potential options for TLC development. At Sugd province, the team visited Khujand city, and met with Mr. Firdavs Sharifzoda, Mayor of Khujand city; Mr. Anvar Yakubi, Deputy Chairman of the Sugd province; Mr. Sharifjon Akhmedov, Head of the Investment and State Property Management Department; Mr. Hakinzoda Hakimjon, Head, Regional Department for Economic Development and Trade and Mr. Ilyosiddin Kamoliddinzoda, Head of the Sugd Free Economic Zone (SFEZ). Furthermore, the team visited three prospective sites for the TLC—the SFEZ, the Khujand Logistics Center (KLC) and the Sadaf Industrial Zone.

5. The team visited Dushanbe from 30 October to 1 November 2022, and met with Mr. Sherali Kabir, Minister for Industry and New Technologies and Mr. Yusuf Majidi, Deputy Minister of the Ministry of Finance; Mr. Dilshod Sharifi, Head of International Economic Department from Ministry of Economic Development and Trade; Mr. Kodirov Sayfullo, Head of International Relations Department from Ministry of Transport; Mr. Mirzoshoeva Sulhiya Hoshimovna, Head, International Customs Cooperation Department; Mr. Nashimjon Anvarov, First Deputy Chairman of the Tajikistan Chamber of Commerce and Industry and Mr. Mahmatali Shokirov, President of the Association of International Automobile Carriers of Tajikistan (ABBAT).

² ADB. 2018. Technical Assistance for Assessing Economic Corridor Development Potential Among Kazakhstan, Uzbekistan, and Tajikistan. Manila.

³ 'Oblast' was used in the TA report and the road map to refer to an administrative region within Kazakhstan, Uzbekistan or Tajikistan. 'Province' is used instead in this report.

⁴ ADB. 2020. A Road Map for Shymkent-Tashkent-Khujand Economic Corridor Development. Manila.

B. Purpose and Structure of this Report

6. This report provides a pre-feasibility study of a TLC in Sugd province of Tajikistan. It includes discussion on the preliminary model, design, and recommendations for the TLC. The results are derived from the analysis conducted in the prior months and incorporated the information and data provided by various stakeholders in Tajikistan, as well as the data and information assembled through desktop research and literature review. The target audience of the report includes government officials, development partners and the business community.

7. The rest of the report is organized as follows. Chapter 2 provides context and economic rationale for the TLC. These include relevant country context and provincial context, logistics sector development status, logistics services demand projections, and the economic rationale for the establishment of the TLC. Information in this chapter provides important basis and justifications for the design and concept plan of the TLC.

8. Chapter 3 provides the concept plan for the TLC, including components and functions, location assessments and identification, land area estimation, zoning plan and institutional structure for the TLC. The concept plan for the TLC including design components are high-level concepts derived from consultations with multiple stakeholders of Tajikistan, which remain to be reviewed by the stakeholders.

9. Chapter 4 provides financial analysis of the TLC, with block cost estimate followed by financial feasibility assessment of the TLC. It makes assumptions by estimating the capital expenditures and the revenue projection of the project. The operating expenditure is then estimated, followed by three different financing scenarios. The net present value and the internal rate of return is then estimated to offer a preliminary assessment of the financial viability of the TLC.

10. Chapter 5 highlights the need for hard infrastructure development particularly transport connectivity, and soft infrastructure development particularly policy reforms desired to facilitate trade in the Sugd province in general, and to enable the smooth functioning of the TLC in particular. Policy and regulatory interventions for the development and functioning of the TLC are also outlined.

11. The appendices list additional information and data that are relevant to the chapters of the report for reference.

II. CONTEXT AND ECONOMIC RATIONALE

12. This chapter examines the context and assesses the need for the establishment of a Trade and Logistics Center (TLC) in Sugd province of Tajikistan. It provides an overview of the economy of Tajikistan and, in particular, Sugd province, focusing on those economic features of the country and the province that are particularly relevant to the establishment of a TLC in the province. The chapter then provides an overview of the logistics sector in Tajikistan, including Sugd province, as well as cargo demand projections for logistics services in the province. The final section of the chapter discusses what potential economic benefits setting up a TLC in Sugd province will produce and how it will be aligned with economic development priorities of the central government of Tajikistan and the local government of Sugd province, as well as the STKEC.

A. Country Context

13. Tajikistan is a landlocked mountainous Central Asian country with a population of 10.5 million people (as of end-2022).⁵ It borders Afghanistan, the People's Republic of China (PRC), the Kyrgyz Republic and Uzbekistan. Although the Pamir Mountains cover over 90% of its territory, more than one-third of its land is agricultural and can be used for crop and/or livestock production. Tajikistan is rich in natural resources such as gold, silver, rare metals, rivers with considerable hydropower potential, and ecotourism sites.⁶ Nonetheless, due to the growing challenges in the region, realizing the existing potential for ensuring economic development in the country remains a challenging task. With per capita gross national income of US\$1,150 in 2021 (according to the World Bank's Atlas methodology) and per capita gross domestic product (GDP) of US\$1,064 in 2022, Tajikistan is classified as a lower-middle income country.⁷

14. **Recent growth performance and structure of economy.** Tajikistan recorded robust economic growth in 2011-2022. Its real GDP grew at an average annual rate of 7.1% during this period. Industry, which is dominated by mining, was the main engine of growth. Industrial gross value added expanded at an impressive 11.6% on average per annum between 2010 and 2021 (Table 1). Gross value added produced in agriculture, which accounts for about 45% of total employment, rose at an annual average rate of 6.5% over the same period. Manufacturing and services remained relatively underdeveloped, generating 15.6% and 35.3% of nominal GDP, respectively, in 2020.

Table 1: Tajikistan—Sectoral Growth Performance and Share in GDP and Employment, 2010-2021 (%)

	Average annual growth rate of gross value added, at constant prices	Share in GDP at current prices		Share in total employment	
	2011-2021	2010	2020	2010	2019
Agriculture ¹	6.5	19.6	24.0	52.5	44.7
Industry ²	11.6	25.0	33.8	15.6	15.8
Services	5.2	45.1	35.3	31.8	39.5

¹ Includes forestry and fishing.

² Includes construction.

Source: World Bank's World Development Indicators (WDI) database, <https://datatopics.worldbank.org/world-development-indicators/> (accessed 4 May 2023) and the study team's computations.

⁵ The International Monetary Fund's (IMF) estimate from the World Economic Outlook Database, April 2023, <https://www.imf.org/en/Publications/WEO/weo-database/2023/April> (accessed 5 May 2023). (accessed 4 May 2023).

⁶ World Bank. 2018. *Tajikistan - Systematic Country Diagnostic: Making the National Development Strategy 2030 a Success - Building the Foundation for Shared Prosperity*. Available at <https://www.worldbank.org/en/country/tajikistan/publication/scd> (accessed 4 May 2023).

⁷ World Bank. New World Bank Country Classification by Income Level: 2022-2023, <https://blogs.worldbank.org/opendata/new-world-bank-country-classifications-income-level-2022-2023> (accessed 4 May 2023).

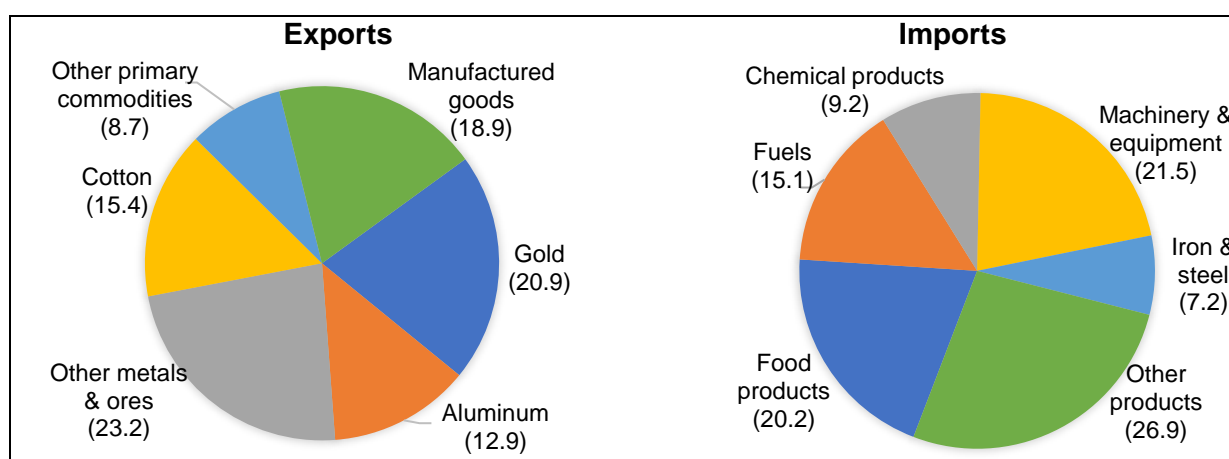
15. Tajikistan has considerable potential for the production and export of horticulture products. Thanks in part to abundant sunshine, fruits and vegetables produced in Tajikistan have superior taste and nutritional qualities. Moreover, many of them ripen 10–20 days earlier than in other parts of Central Asia. This creates opportunities for exporting horticulture products from Tajikistan to other Central Asian countries and beyond. Accordingly, horticulture is a leading subsector within agriculture in Tajikistan. It accounts for around 30% of the total harvested area and approximately 60% of the gross value of crop production in the country.⁸

16. **Employment.** The Republic of Tajikistan is taking effective measures to create a sufficient number of jobs in the country. However, given the significant growth of the country's population, the country faces certain difficulties.

17. **Merchandise trade.** A member of the World Trade Organization (WTO) since 2013, Tajikistan participates extensively in international trade in goods. The value of its merchandise exports and imports grew at an average annual rate of 5.0% and 5.7%, respectively, in 2011-2022. The ratio of merchandise exports and imports to GDP reached almost 70% in 2022.⁹

18. Despite Tajikistan's significant potential to produce and export fruits, vegetables and nuts, these products comprise a small fraction (about 2%) of the country's merchandise exports. Primary commodities such as gold, aluminum, other metals, ores, and cotton make up around 80% of the Tajikistan's exports of goods (Figure 1). The large share of a few primary commodities in merchandise exports makes Tajikistan's economic performance highly sensitive to fluctuations in world prices of these commodities.

Figure 1: Tajikistan—Three-Year Average Share of Selected Products and Product Groups in Merchandise Exports and Imports, 2019-2021 (%)



Source: UNCTADstat, <https://unctadstat.unctad.org/EN> (accessed 4 May 2023) and the study team's computations.

19. Food products, fuels, machinery, and other manufactured goods account for the bulk of Tajikistan merchandise imports (Figure 1). The country's import dependency ratio is over 50% for several essential food products, including wheat, sugar and vegetable oils.¹⁰ The heavy dependency on imports of essential food products makes Tajikistan vulnerable to disruptions in supply chains for these products. The Coronavirus Disease 2019 (COVID-19) pandemic, the current situation in the region, and the resulting disruptions in global supply chains have highlighted these vulnerabilities of Tajikistan's economy.

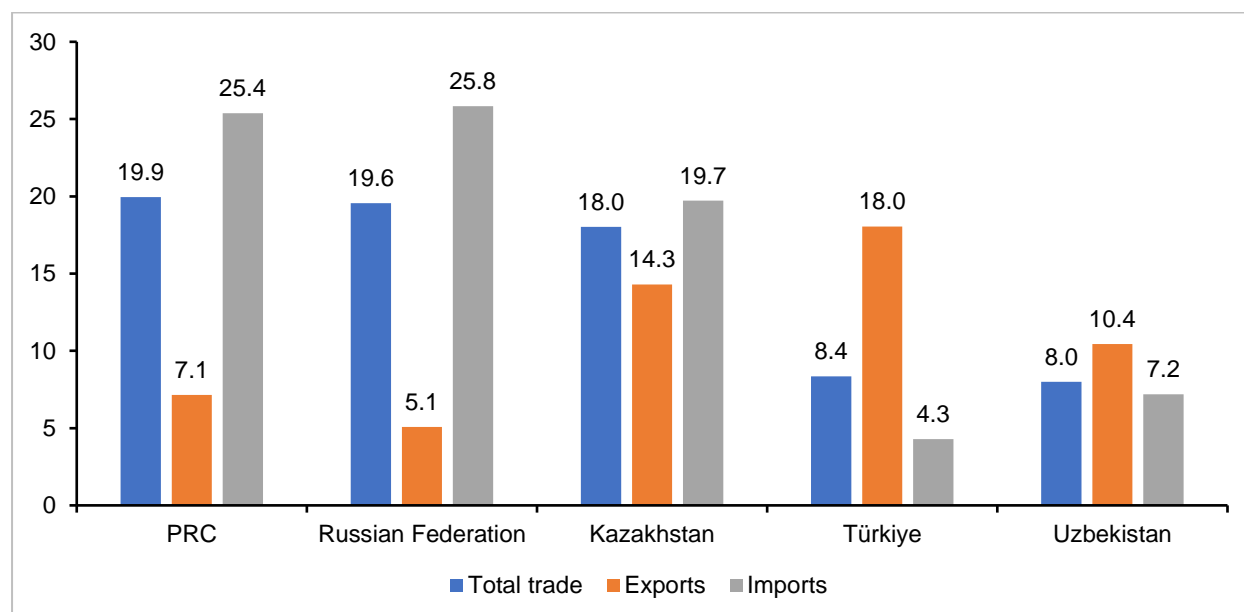
⁸ The numbers are based on the data from FAOSTAT, <https://www.fao.org/faostat/en/#data> (accessed 4 May 2023).

⁹ The numbers in the paragraph are based on the data from the WDI database, <https://datatopics.worldbank.org/world-development-indicators/> (accessed 4 May 2023).

¹⁰ The import dependency ratio of a country for a given product is computed as $(\text{imports} - \text{exports}) / (\text{domestic production} + \text{imports} - \text{exports}) * 100\%$. The indicator assumes values equal to or less than 100. Negative values indicate that the country is a net exporter of the product. The estimates of Tajikistan's import dependency ratio for selected food products are based on data from FAOSTAT, <https://www.fao.org/faostat/en/#data> (accessed 5 May 2023).

20. The Russian Federation, the PRC, Kazakhstan, Türkiye and Uzbekistan are Tajikistan's top trading partners in terms of their three-year average share in Tajikistan's merchandise trade in 2019-2021 (Figure 2). These countries are also Tajikistan's top five import markets. They jointly account for over four-fifths of Tajikistan's imports of goods and almost three-fourths of its total merchandise trade. The Russian Federation, Kazakhstan and Uzbekistan are origin countries for most of Tajikistan's food imports. The PRC, Kazakhstan, Türkiye and Uzbekistan—along with Afghanistan and Switzerland—are Tajikistan's top export markets. Almost 80% of Tajikistan's merchandise exports go to these six countries. Such geographic concentration of merchandise trade (especially food imports) makes Tajikistan's economy highly sensitive also to changes in the economic situation in, and the bilateral relations with, a few countries.

Figure 2: Tajikistan—Three-Year Average Share of Top Five Trading Partners in Merchandise Trade, 2019-2021 (%)



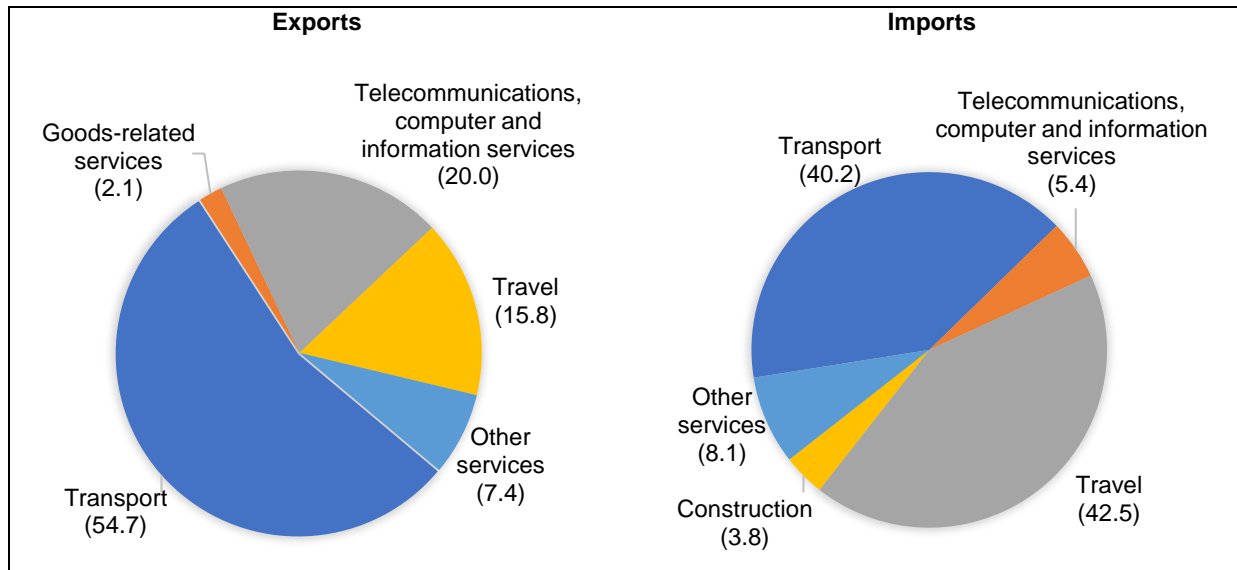
Source: UNCTADstat, <https://unctadstat.unctad.org/EN> (accessed 5 May 2023) and the study team's computations.

21. **Trade in services.** Unlike its merchandise exports and imports, Tajikistan's exports and imports of services have been stagnant in recent years. Its exports of services declined by 0.4% on average per year between 2010 and 2021, while its imports of services rose by an average annual rate of 1.4% over the same period. Consequently, the ratio of exports and imports of services to GDP dropped from over 40% in 2010 to less than 30% in 2021.¹¹

22. The structure of Tajikistan's exports and imports of services are similar. Transport, travel, and telecommunication services comprise about 90% of both exports and imports of services. (Figure 3). Transport services alone make up over 50% of the exports of services. Nonetheless, Tajikistan's exports of transport services, which amounted to US\$469 million (5.2% of GDP) in 2021, are arguably well below their potential, given the country's location and the extent of its involvement in international trade.

¹¹ The numbers in this and the next paragraphs are based on the data from WTO STATS, <https://stats.wto.org/> (accessed 5 April 2023) and the IMF's World Economic Outlook Database, April 2023, <https://www.imf.org/en/Publications/WEO/weo-database/2023/April> (accessed 5 May 2023).

Figure 3: Tajikistan—Three-Year Average Share of Selected Services in Exports and Imports of Services, 2019-2021 (%)



Source: WTO STATS, <https://stats.wto.org/> (accessed 5 May 2023) and the study team's computations.

B. Provincial Context

23. Sugd province is one of Tajikistan's major administrative units.¹² It is located in the northwest of the country (Figure 4). It borders eight provinces of Uzbekistan (including densely populated Tashkent, Samarkand, Fergana, and Namangan provinces) and Batken province of the Kyrgyz Republic. The Syrdarya and the Zarafshan rivers divide Sugd province into the northern, central and southern parts. With almost three million inhabitants (as of end-2022), the province accounts for 29% of Tajikistan's total population. It has rich cultural heritage, with a mix of the Tajik, Uzbek, Russian and Kyrgyz cultures and with numerous historical sites.

¹² Administratively, Tajikistan consists of the capital city (Dushanbe), one autonomous region (Kuhistoni Badakhshon Autonomous Region, which is also known as Gorno-Badakhshan Autonomous Region); two provinces (Khatlon and Sugd) and 13 districts and district-level cities that are directly subordinate to the central government.

Figure 4: Map of Tajikistan



Source: ADB

24. Khujand city is the administrative center of Sugd province. It is home to about 0.2 million people. Over one million people live in the agglomeration consisting of Khujand city and several smaller cities situated in its close proximity. Khujand city has been an important trade hub in Central Asia for many centuries due to its location along one of the routes of the ancient Silk Road.

25. **Recent performance of key economic sectors.** The overall economic activity in Sugd province expanded considerably over the past decade, but the performance of individual sectors has been mixed. While the mining sector has grown rapidly, agriculture, manufacturing and services have underperformed. Although cotton processing and leather production has increased, textile, apparel and footwear industries have remained underdeveloped partly because of Tajikistan's limited participation in global production networks and value chains. Several dozen food processing factories are located in Sugd province, but many of them operate well below their capacity due in part to lack of raw materials. Modern business services, including trade finance, certification and other trade-related business services, remain underdeveloped. In an effort to spur the development of manufacturing and modern services in Sugd province, the Government of Tajikistan established a special economic zone called the Sugd Free Economic Zone (SFEZ) near Khujand city in 2008 (Box 2.1).

Box 2.1: Sugd Free Economic Zone

The Sugd Free Economic Zone (SFEZ) is a special economic zone situated within Khujand city. It was established in 2008 for a period of 50 years. The total area of the zone is 320 ha, of which 110 ha are currently occupied. The governing body of the SFEZ is Tajikistan's Ministry of Economic Development and Trade. Its management body is the Administration of the SFEZ. Its priority activities include—but are not limited to—the following:

- production of fabrics and finished goods from cotton, silk and wool;
- production of finished leather goods, shoes, and furniture;
- credit, insurance, auditing, leasing, consulting and certification activities;
- import and export operations;
- information services;
- activities related to scientific-technical surveys, nanotechnologies and biotechnologies.

There are special tax and customs regimes and a simplified registration procedure for businesses within the SFEZ. Notably, the business activities carried out on the territory of the SFEZ by firms registered in the SFEZ (henceforth referred to as the residents of the SFEZ) are exempt from all taxes provided for in Tajikistan's Tax Cod except the 20% social security tax. The employees of these firms are subject to a 12% income tax. Foreign investors' profits and foreign employees' salaries in foreign currencies are not subject to any additional taxes when transferred abroad. The imported inputs used inside the SFEZ by its residents are exempt from import duties and the value added tax. The exports of SFEZ residents are exempt from the export taxes.

Source: SFEZ, <http://fezSugd.tj/en/legal-framework/> (accessed 8 May 2023).

26. **Transport connectivity.** Sugd province has relatively good internal and external transport connectivity. Major highways link Khujand city with Dushanbe, Tashkent and Fergana cities. One of them is the Dushanbe-Khujand-Chanak highway, which connects Dushanbe city via Khujand city with the Fotehobod (TAJ)-Oybek (UZB) international road border crossing point (BCP) on Sugd province's border with Tashkent province.¹³ Furthermore, a railway links the central part of Sugd province with Uzbekistan's Tashkent and Fergana provinces.¹⁴ There are ten road BCPs and two railway BCPs on the province's border with Uzbekistan and two road BCPs on its border with the Kyrgyz Republic. There is an international airport near Khujand city called the Khujand International Airport (KIA). It serves both domestic and international flights.

27. At the same time, there are certain inadequacies in Sugd province's transport connectivity. In particular, there are no railways in the northern and southern parts of the province, and there is no direct railway link between the province and the rest of Tajikistan. The Dushanbe-Khujand-Chanak highway passes over high mountains, and the mountain pass is often closed between October and May due to weather conditions. Some secondary and tertiary roads inside the province are in poor condition, while most BCPs on its borders with the neighboring countries are in need of modernization.

28. **Role in Tajikistan's external trade.** Because of its location and comparatively good transport connectivity, Sugd province serves as a gateway for Tajikistan's trade with Uzbekistan, Kazakhstan, the Russian Federation and many other countries. A large percentage of trade flows between the other parts of Tajikistan, on the one hand, and Uzbekistan, Kazakhstan and the Russian Federation, on the other hand, pass through Sugd province, which acts as a consolidation, deconsolidation and transshipment hub. In 2022, over two-fifths of the value of goods that crossed the Tajik-Uzbek border (including goods in transit) passed through the Fotehobod-Oybek BCP.

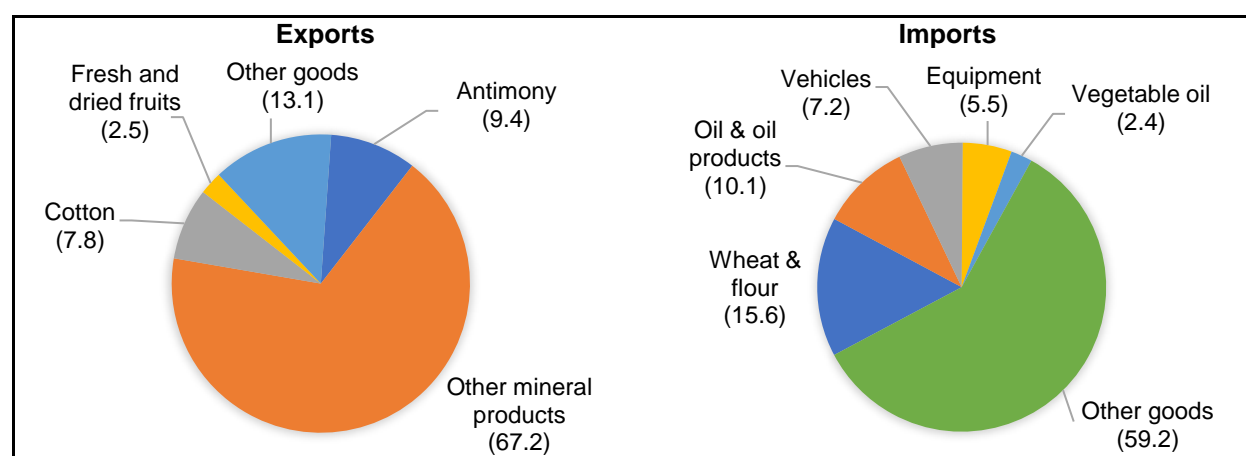
29. **Merchandise trade.** Given the role that Sugd province plays in Tajikistan's foreign trade, the province accounts for a relatively large share of the country's merchandise trade: over 50% of exports and more than 40% of imports in 2022. As is the case with the country's total merchandise exports, mineral products and cotton comprise the bulk of the province's exports of goods, while horticulture products make up a small fraction of its merchandise exports. At the

¹³ This highway is part of CAREC Corridor 6, a transport corridor that links South Asia with Europe via Central Asia and the Russian Federation. It is also part of route AH7 of the Asian Highway Network.

¹⁴ This railway is part of CAREC Corridor 2, a transport corridor that connects East Asia with Europe via Central Asia and the South Caucasus.

same time, wheat, and manufactured goods, including processed food products, account for a substantial proportion of the province's merchandise imports (Figure 5). The top export and/or imports markets for the province include the PRC, Kazakhstan, the Kyrgyz Republic, the Russian Federation, Türkiye, and Uzbekistan.

Figure 5: Sugd Province – Share of Selected Products and Product Groups in Merchandise Exports and Imports, 2022 (%)



Source: Agency for Statistics under the President of the Republic of Tajikistan and the study team's computations.

C. Overview of Logistics Sector¹⁵

30. Tajikistan's logistics sector is still at an early stage of development. Although the country's score and rank on most dimensions of the World Bank's Logistics Performance Index (LPI) have improved since 2016, Tajikistan has remained in the lower half of the ranking on the overall logistics performance and on all its dimensions included in the LPI. The country's score and rank on Tracking and Tracing and Customs as well as its ranking on International Shipments have stayed particularly low (Table 2). Tajikistan's score for the overall logistics performance is only about half of that of Singapore (which is ranked first) and lower than those of Kazakhstan (ranked 79th), Uzbekistan (88th), albeit its higher than that of the Kyrgyz Republic (123rd).

Table 2: Tajikistan—Score and Rank in Logistics Performance Index (2010, 2016 and 2023)

	Score			Rank		
	2010	2016	2023	2010	2016	2023
Overall logistics performance	2.3	2.1	2.5	131	153	97
Customs	1.9	1.9	2.2	147	150	110
Infrastructure	2.0	2.1	2.5	127	130	80
International Shipments	2.4	2.1	2.5	127	151	102
Logistics Competence and Quality	2.3	2.1	2.8	125	143	76
Timeliness	3.2	2.0	2.9	98	159	93
Tracking and Tracing	2.3	2.0	2.0	141	144	134

Note: The LPI scores range from 0 to 5, with a higher score corresponding to better performance. The LPI covered 155, 160 and 139 countries in 2010, 2016 and 2023, respectively.

Source: World Bank's Logistics Performance Index database, <https://lpi.worldbank.org/international> (accessed 10 May 2023).

¹⁵ There are a number of definitions of logistics services and logistics sector. In this report, the terms of logistics services and logistics sector include warehousing and storage activities; usual operations/manipulations associated with wholesale trade (such as assembling, sorting, grading, mixing/blending, packing and repacking of goods); logistics activities (i.e. planning, designing and supporting operations of transportation, warehousing and distribution); operation and maintenance of truck terminals; cargo handling and some other transportation support activities listed in the United Nations' International Standard Industrial Classification of All Economic Activities (Revision 4). The terms exclude transportation services.

31. **Major providers of logistics services.** There is a limited number of providers of logistics services in Tajikistan as a whole and Sugd province in particular. Among them are the six logistics centers of the Association of International Road Carriers of the Republic of Tajikistan (ABBAT). These logistic centers are situated in different parts of the country, with one being located in Khujand city and another being situated in Istarafshan city in the south of Sugd province (Table 3). Most of them, including the one located in Khujand city and called the Khujand Logistics Center (KLC), lack modern logistics facilities and equipment and provide a narrow range of logistics services. None of them have temperature-controlled storage facilities and loading/unloading equipment. Loading and unloading of trucks is usually done manually.

Table 3: ABBAT's Logistics Centers

Location and year of establishment	Area (ha)	Logistics and related services provided
Dushanbe city; 1997	n.a.	Parking, loading and unloading of trucks, storage of goods, customs clearance, sanitary and phytosanitary (SPS) controls, notification of consignees in Tajikistan upon arrival of foreign trucks with cargo, and freight forwarding
Istarafshan, Sugd province; 1997	0.67	Parking, loading and unloading of trucks, storage of goods, notification of consignees in Tajikistan upon arrival of foreign trucks with cargo, and freight forwarding
Khujand city, Sugd province; 1998	2.64	Parking, loading and unloading of trucks, storage of goods, customs clearance, and notification of consignees in Tajikistan upon arrival of foreign trucks with cargo
Tursunzade city, a district-level city directly subordinates to the central government; 1998	7.12	Parking, loading and unloading of trucks, storage of goods, and notification of consignees in Tajikistan upon arrival of foreign trucks with cargo
Khorog city, Gorno-Badakhshan Autonomous Region; 2004	n.a.	Parking, loading and unloading of trucks, storage of goods, notification of consignees in Tajikistan upon arrival of foreign trucks with cargo, and freight forwarding
Murghob city, Gorno-Badakhshan Autonomous Region; 2007	n.a.	Parking, loading and unloading of trucks

ABBAT = Association of International Automobile Carriers of Tajikistan
 Source: ABBAT, <http://www.abbat.tj/> (accessed 10 May 2023).

32. There are logistics companies that can organize shipments by rail, air and/or multimodal transport but no logistics centers handling such shipments. The existing warehouses only cater to road transport. While Tajikistan Railways accounts for a significant proportion of international freight transport turnover, it does offer multimodal transport solutions. The KIA does not have any logistics facility.

33. **Cold storage facilities.** There is a lack of cold storage facilities in Tajikistan, including in Sugd province. There is only a small number of large cold storage facilities, which are concentrated in Dushanbe. Most of the cold storage facilities located in other parts of the country, including in Sugd province, are small. Their capacity is not adequate to meet local demand. There are no cold storage facilities in any of the ABBAT's logistics centers, as mentioned above.

34. **Use of information and communication technologies (ICTs).** Tajik transport and logistics companies make limited use of modern ICTs. They use basic software such as Microsoft Office in creating, recording and sharing data. The use of specialized logistics software such as a warehouse management system, a freight management system or an inventory control system is rare. In part for this reason, most Tajik logistics companies lack the ability to track the progress of cargo transportation, as demanded by discerning clients who are becoming increasingly sophisticated and are no longer satisfied by basic services such as physical transportation.

35. **Fees for logistics services.** In part because of their limited supply, many logistics services are relatively expensive in Tajikistan. For instance, the storage fee is US\$5–15 for the use of one square meter for 24 hours and the fee for loading/unloading trucks is US\$8 per ton in the KLC. By comparison, the fees for the same services are US\$5–10 and US\$10, respectively, in Georgia. GDP per capita in Georgia is 6.3 times higher than that in Tajikistan (Table 4).

Table 4: Fees for Selected Logistics Services Provided in Tajikistan and Georgia, 2022

Services	Unit	Amount (US\$)	
		Tajikistan ¹	Georgia
Parking for domestic truck without cargo	Per 24 hours	2	2
Parking for domestic truck with cargo	Per 24 hours	10	2
Parking for foreign truck without cargo	Per 24 hours	3	2
Parking for foreign truck with cargo	Per 24 hours	15	2
Storage	Per m ² x 24 hours	5–15	5–10
Loading and unloading	Per ton	8	10

¹ The data are for KLC.

Note: In 2022, GDP per capita in Georgia was US\$6,670, as compared with US\$1,064 in Tajikistan.¹⁶

Source: KLC and Georgian International Road Carriers Association.

36. **Consequences of undeveloped logistics sector.** The underdevelopment of the logistics sector has significant negative consequences for Tajikistan and, in particular, Sugd province. Notably, it is one of the reasons why transport costs for international shipments to and from Tajikistan (including Sugd province) are high and transit times for such shipments are long and unpredictable (Box 2.2). While the high transport costs and the long and unpredictable transport times for international shipments adversely impact on exports of all goods, they generally hurt exports of horticulture products and manufactured goods (including processed food products) more than exports of primary commodities. Partly for this reason, primary commodities such as metals and ores dominate Tajikistan and, in particular, Sugd province's merchandise exports.

Box 2.2: Need for Multimodal Logistics Centers in Tajikistan

At present, there are no multimodal logistics centers in Tajikistan. This often lengthens supply chains and contributes to high transport costs in Tajikistan. For example, when a shipment of packaged goods arrives from the Russian Federation or Türkiye in Sugd province by train, the shipment is often unloaded from the train and loaded into a truck at the train station. It is then transported to a warehouse, where the goods are unloaded, stored and undergo breakbulk prior to their distribution to the final destinations by road. The need to use trucks for short distance transfers between a rail station and a general warehouse is inefficient.

A multimodal logistics center enables to avoid this inefficiency by co-locating a train terminal and a warehouse in close proximity, so that the transfers between the terminal and the warehouse can be done quickly and cheaply. If the center is well-designed to permit cross-docking, the goods can also be rapidly transferred to the cross-docking station to a fleet of trucks and vans for the last mile distribution, avoiding the need and fees for storage and shortening the supply chain delivery time. However, cross-docking can only be done with physical space provisioned for such operation, and an effective logistics information system to split the incoming shipment to the specific vehicles in the fleet assigned to different delivery end points. The use of bar code and portable handheld scanners are required to expedite the cross-docking operation.

Source: Study team.

¹⁶ The ratios are based on the data from the IMF's World Economic Outlook Database, April 2023, <https://www.imf.org/en/Publications/WEO/weo-database/2023/April> (accessed 5 May 2023)

37. Furthermore, the underdeveloped logistics sector constrains the growth of e-commerce, which heavily relies on the logistics sector.¹⁷ It makes Tajikistan's transport companies less competitive in the market for international shipments, adversely affect exports of transportation services and hinder the development of the transport sector. It impedes the development of small and medium-sized enterprises (SMEs), which are usually more dependent on third-party logistics (3PL) and other trade-related business services than large companies. The lack of sorting, grading, packing and temperature-controlled storage services partly explains why post-harvest losses of fruits and vegetables are relatively high, their prices fluctuate substantially throughout a year, and their exports are below the potential. The lack of temperature-controlled storage facilities also constrains the development of food manufacturing (Box 2.3).

Box 2.3: Need for a Logistics Center with Cold Storage Facilities in Sugd Province

A number of large food manufacturing companies operate in the Sugd province. Among them are Coca Cola, Obi Zulol, Siyoma, 7 Ganj and Kogazi Tojik. Common feedback from these companies, as well as over 30 transport and logistics companies operating in Sugd province, is that a modern multipurpose and multimodal logistics center with cold storage facilities is badly needed in Sugd province.

The lack of cold storage facilities increases the cost of doing business for companies that are engaged in the production of or wholesale trade in food products. It necessitates more frequent and smaller sized shipments to distribution centers, which then dispatch the products to the final destination (last mile deliveries). If a logistics center with cold storage facilities were available, a larger batch of goods could have been transported on a larger vehicle at a lower unit transport cost to the logistics center and kept in the cold storage facilities for subsequent distribution in smaller quantities. Sufficiently large cold storage facilities would also enable Sugd province to keep reserve stock of perishable goods and release them to the domestic market during the off season or when imports of these goods are interrupted and/or expensive.

A logistics center that handles horticulture products usually needs cold storage facilities that provide different temperature zones, such as air-conditioned (16-25° C), chilled (1-10° C) and frozen (-18° C). These facilities in turn require a reliable electric grid and 24/7 operation using backup power supply. The margin for failure is very low because any interruption in the power supply to the storage facilities will result in the rapid deterioration of the quality of the goods in storage.

There are additional requirements for a logistics center designed to handle horticulture products. The center needs to have stations that facilitate cleaning, sorting and grading. These processes are essential for realizing higher revenue from the production of and trade in horticulture products. At present, these processes are often skipped due to the lack of space, equipment or labor, resulting in the products sold at the lowest price equivalent to the lowest grade. Cleaning, sorting and grading allows the current products such as the 'early harvest' produce like onions and potatoes to fetch a higher price.

Source: Study team.

38. The construction of two logistics center is currently underway in Tajikistan. One of them is a multimodal logistics center in Panji Poyon (also known as Nizhny Panj).¹⁸ The other is a trade and logistics center on Sugd province's border with Uzbekistan's Fergana province.¹⁹ However, these logistics centers are unlikely to fully satisfy the demand for logistics services, especially if one takes into account the expected growth of the demand.

39. **Demand projections for storage services in Sugd province.** The demand for many logistics services, including storage services, is expected to grow rapidly in Sugd province over the medium-term. Assuming that the recent trends will persist, the volume of cargo flows in the province is projected to rise from 10.8 million metric tons in 2021 to 36.5 million tons in 2035 and

¹⁷ The ratio of the e-commerce turnover to GDP was 0.1% in Tajikistan 2020, compared with 7.9% in Uzbekistan. The numbers are based on the data from KPMG, <https://assets.kpmg.com/content/dam/kpmg/kz/pdf/2020/12/Overview-of-Fintech-Development-in-Central-Asia.pdf> (accessed 11 May 2023) and the IMF's World Economic Outlook Database, April 2023, <https://www.imf.org/en/Publications/WEO/weo-database/2023/April> (accessed 5 May 2023).

¹⁸ Economic Cooperation Organization and IRU. 2020. *Project for Development of Kyrgyz-Tajikistan-Afghanistan-Iran (KTAI) Road Transport Corridor*. Final Report. Available at <https://www.iru.org/resources/iru-library/final-report-project-development-kyrgyz-tajikistan-afghanistan-iran-ktai-road-transport-corridor> (accessed 11 May 2023).

¹⁹ Sputnik. 2023. *На границе Таджикистана и Узбекистана возведут логистический центр* (A logistics center will be established on the border of Tajikistan and Uzbekistan). 14 March. Available at <https://tj.sputniknews.ru/20230314/granitsa-tajikistan-uzbekistan-logisticheskii-tsentr-1055487698.html> (accessed 11 May 2023).

115.4 million tons in 2048. The volume of cargo flows that create demand for storage services (that is, the volume of cargo flows, excluding the direct dispatch) is forecast to increase from 7.4 million tons in 2021 to 26.3 million tons in 2035 and 86.2 million tons in 2028.²⁰ This will create considerable gaps between the demand for storage services and the existing storage capacity in the province (Table 5).

Table 5: Gap Analysis for Storage Capacity in Sugd Province

Cargo Classification	Product Type	Existing Storage Capacity	Growth Rate of Demand	Projected Demand in 2048	Assessed Storage Capacity Gap
Agricultural products	Wheat	1.2 MTPA	7 - 8 %	5.7 MTPA	4.5 MTPA
	Frozen foods	1,100 tons	8 - 10%	162,330 tons	0.16 MTPA
	Others	12,300 tons	7 - 8 %	36.0 MTPA	92.2 MTPA*
Manufactured goods			6 - 8%	34.2 MTPA	
Imports (excluding agriculture products)			7 - 8%	22.0 MTPA	

MTPA = million ton per annum

* The total gap for agricultural products (excluding wheat and frozen foods), manufactured goods and imports (excluding agricultural products). Source: Official Statistics of Sugd province – Tajikistan Statistics Agency, Logistics Cluster – Tajikistan

D. Cargo Demand Projections for Logistics Services

40. This section aims to project cargo demand in the Sugd province by 2048. The analysis includes (i) the cargo profile for the province (via manufacturing and trade activities), (ii) the growth in cargo generation (covering the present cargo flows originating in Sugd province); and (iii) the cargo flows for the proposed Trade and Logistics Center (TLC) in the Sugd province.

41. **Profile of cargo flows in Sugd province.** Cargo profiling for Sugd province provides estimation on the logistics and trade services requirements, and the estimation of the products which require value-added services such as packaging, labeling, distribution in addition to the traditional services (e.g., storage services). The cargo flow includes those from extractive industry, agricultural activity, manufacturing activity and imports in the province. Table 6 shows an increase of cargo in manufacturing activity and import (excluding direct dispatch) activities in the period of 2019-2021.

Table 6: Cargo Classification for Sugd Province (2019–2021)

Cargo Classification	Unit	2019	2020	2021
Extractive Industry	MTPA	1.97	1.97	1.96
Agricultural Activity	MTPA	3.27	3.66	3.30
Manufacturing Activity	MTPA	1.96	2.26	2.50
Imports (Excluding Direct Dispatch)	MTPA	2.39	2.49	2.90
Total		9.59	10.38	10.66

MTPA = million ton per annum

Source: Official Statistics of Sugd Province – Tajikistan Statistics Agency, ITC Trade Maps

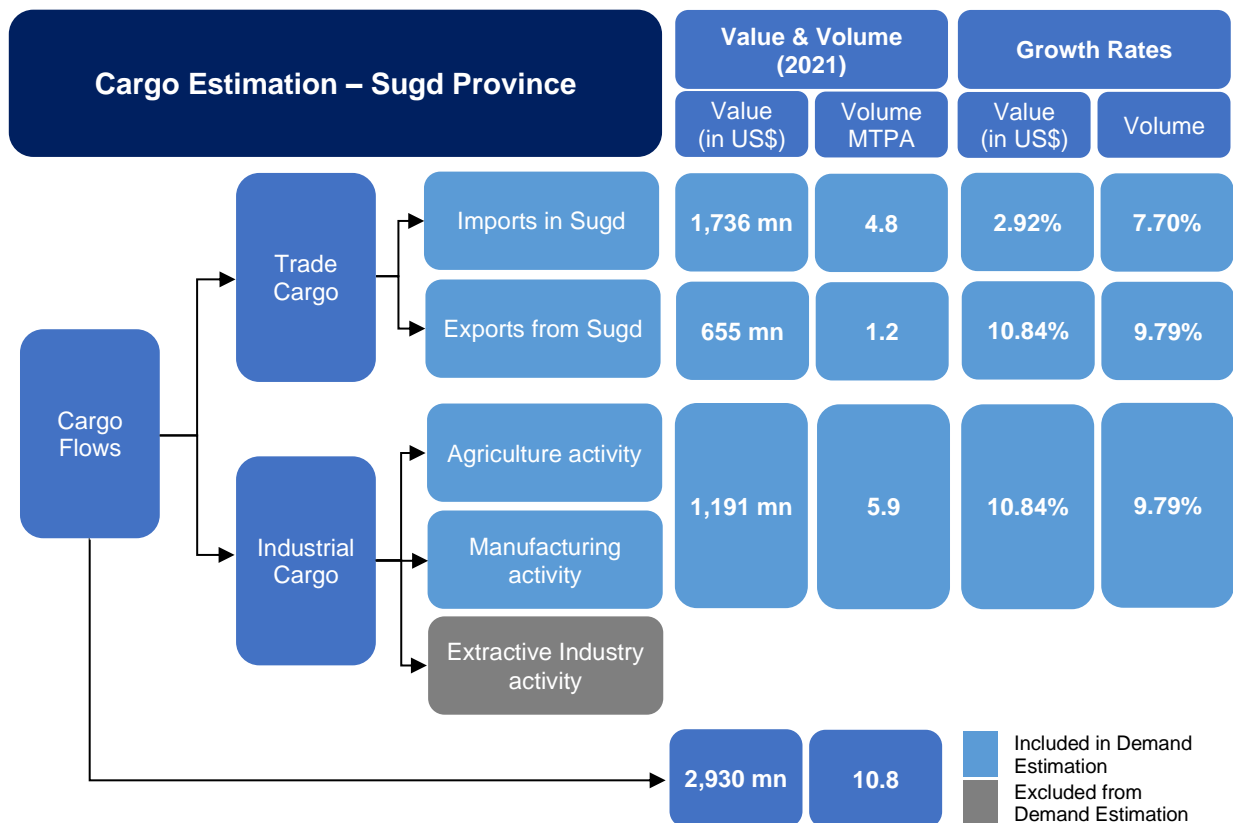
42. **Cargo from trade activity.** The exports from Sugd province account for 50.71% while imports account for 40.63% of the total exports and imports in Tajikistan. In 2021, the exports from Sugd province were \$633 million while imports were \$1,630 million. Trade with Kazakhstan, Uzbekistan, and Russian Federation account for approximately 70% of the total trade for Sugd

²⁰ Appendix 1 explains how the projections of the cargo flows have been made.

province. Hence it is assumed that 70% of all exports and 72% of imports shall be used to calculate cargo projection in the province.

43. **Cargo from manufacturing and agricultural activity.** The cargo from manufacturing activity in Sugd province accounts for 40% of total manufacturing in Tajikistan. The province’s manufacturing industry accounts for \$1,077 million output or 5.8 MTPA of cargo in 2021. The agriculture industry accounts for 57% and processed foods account for 12% of the total production. Production of non-metallic mineral products such as cement and concrete bricks account for 26% of the total production. Specifically, 20% of the manufacturing volume is exported while 80% is locally consumed. As the majority of the manufactured and produced cargo volumes are agricultural produce, processed foods, and other non-metallic products, hence the entire manufacturing volume has been considered for cargo estimation. Figure 6 represents cargo estimation for Sugd province from different activities in 2014-2021.

Figure 6: Cargo Flow in Sugd Province (2014–2021)



MTPA = million ton per annum

Notes: Average Growth rates calculated for 8 years period (2014-2021).

Source: ITC Trade Maps, Compendiums from Sugd Administration.

44. **Cargo demand projections for Sugd province.** The current cargo volumes from exports, imports, and manufacturing (domestic cargo) have been used to generate cargo volume forecasts for a period of 20 years (2029-2048). The projections for trade cargo volume considered the trade flow increase over a period of 8 years (2014-2021). The cargo volume growth is computed by factoring the Annual Growth Rate on a linear scale. As a result, the overall cargo volume from trade in the Sugd province has grown at a rate of 8.09% (i.e., 9.8% growth of exports and 7.7% growth of import cargo) in 2014-2021. Furthermore, to account for the volatility of trade and manufacturing cargo, the variation in GDP has been used as a metric to normalize the cargo growth rates in line with GDP variation. The cargo demand projections are calculated on logarithmic statistics modeling, by considering the variance in the growth rates of the overall economy (the GDP), calculated for a period of 22 years (2000-2021). Table 7 shows cargo flow

projections for Sugd province for selected years from 2026 to 2048 (See Appendix 1 for the methodology used for the calculation).

Table 7: Cargo Flow Projections for Sugd Province

Indicators	2020	2021	2026	2030	2035	2040	2045	2048
GDP (current \$ billion)	8.13	8.75	11.93	13.60	15.69	17.77	19.85	21.10
Growth Rate interval- 8 years	-0.5%	-0.5%	4.6%	3.1%	2.6%	2.3%	2.0%	1.9%
Cargo Flow Projections (MTPA)	7.3	10.8	16.5	23.5	36.5	56.8	88.4	115.4

GDP = Gross Domestic Product, MTPA = million ton per annum
Source: Study team analysis, GDP Forecasts for Tajikistan

45. Demand projection for manufacturing and trade in Sugd province will be subject to variations due to several external factors which can impact the estimated growth in cargo volume. Tajikistan has a large opportunity to become a more prominent marketplace in Central Asia. The steady growth of trade between Tajikistan and Uzbekistan, and the positive externality from the Russian invasion of Ukraine (e.g., influx of Russian investment in infrastructure, relocation of Russian business) are favorable development that creates demand for increased trade in Tajikistan and particularly Sugd province.

46. **Cargo flow forecasts for the TLC.** Various assumptions on the cargo movement (in volume) from the border crossing point (BCP) and trade profile have been undertaken to estimate the cargo flows from Sugd province to the TLC. The cargos considered for the TLC include those from the Fotehobod-Oybek BCP, excluding direct dispatch in imports and road cargo.

47. The Fotehobod-Oybek BCP can accommodate up to 10,000-20,000 vehicles/year. As the TLC's identified location is near Khujand city, the cargo volume outbound to Fotehobod-Oybek BCP is primarily considered to attract major share in TLC's demand. The Fotehobod-Oybek BCP is a major international BCPs between Tajikistan and Uzbekistan, hence approximately 75% of the cargo traded between Tajikistan, Kazakhstan and the Russian Federation passes through this BCP, which accounts for major trade share for Sugd province. Hence approximately 75% of the trade with the above-mentioned major trade partners is estimated to travel via Fotehobod-Oybek BCP. It has been assumed that approximately 40% of all imports in Sugd province are direct dispatch cargo (i.e., products which do not need value addition in TLC), they are thus excluded from cargo demand for TLC. Further, the cargo volume from extractive industries is excluded from the overall manufacturing and industrial cargo for TLC. Figure 7 summarizes key assumptions used for TLC cargo demand assessment. Detailed assumptions and inputs used in the demand assessment can be found in Appendix 1.

Figure 7: Key Assumptions for TLC Cargo Demand Assessment

Theme	Assumption	Description	Value
Cargo Estimation	Countries for Trade	Trade from Tajikistan with Russian Federation, Kazakhstan and Uzbekistan considered from the BCP near Khujand city	Russian Federation, Kazakhstan, Uzbekistan
	BCP Volume from total trade	Fotehobod and Patar only international BCP; all trade volume with Kazakhstan and Russian Federation are directed through these BCPs	75% of total trade with 3 countries
	Sugd Manufacturing Volume	Ratio of output from total manufacturing and industrial product of Tajikistan and its exports	5x of exports 40% Sugd retail vol.
	Direct Dispatch	Cargo volume from imports which is outbound for direct delivery to the destination site – less assessed need for warehouse	40% of total cargo
	Road – Rail Cargo split	Benchmarking with respect to the actual mode of cargo split	approximately 80% of total volume
Forecasts	Demand Projections	Linear modeling of AAGR based on past 8 years data	approximately 8.09% AAGR for overall cargo vol.

BCP = border crossing point, TLC = trade and logistics center

Source: Data source – ITC Trade Maps, Agency of Statistics – Tajikistan, World Bank GDP data – Tajikistan

48. Based on the above assumptions for the demand assessment, the total cargo volume estimated for TLC is 16.7 MTPA by 2030 and 86.2 MTPA by 2048, out of which road transport's share is 67.45 MTPA. The detailed trade and manufacturing cargo estimates for current and future demand for TLC is provided in Table 8.

Table 8: Cargo Flow Projection for TLC

Region	Indicators	2021	2030	2035	2040	2045	2048
Sugd	Export	1.2	2.8	4.5	7.3	11.7	15.6
Sugd	Import	4.8	9.6	14.0	20.5	29.9	37.5
Sugd	Manufacturing	5.9	13.9	22.5	36.3	58.5	77.9
Sugd	Total Cargo Volume	10.8	23.5	36.5	56.8	88.4	115.4
TLC	Total Cargo Volume	7.4	16.7	26.3	41.5	65.5	86.2
TLC	Road Cargo	5.83	13.07	20.61	32.50	51.29	67.45

TLC = trade and logistics center

Source: Findings from demand estimation model

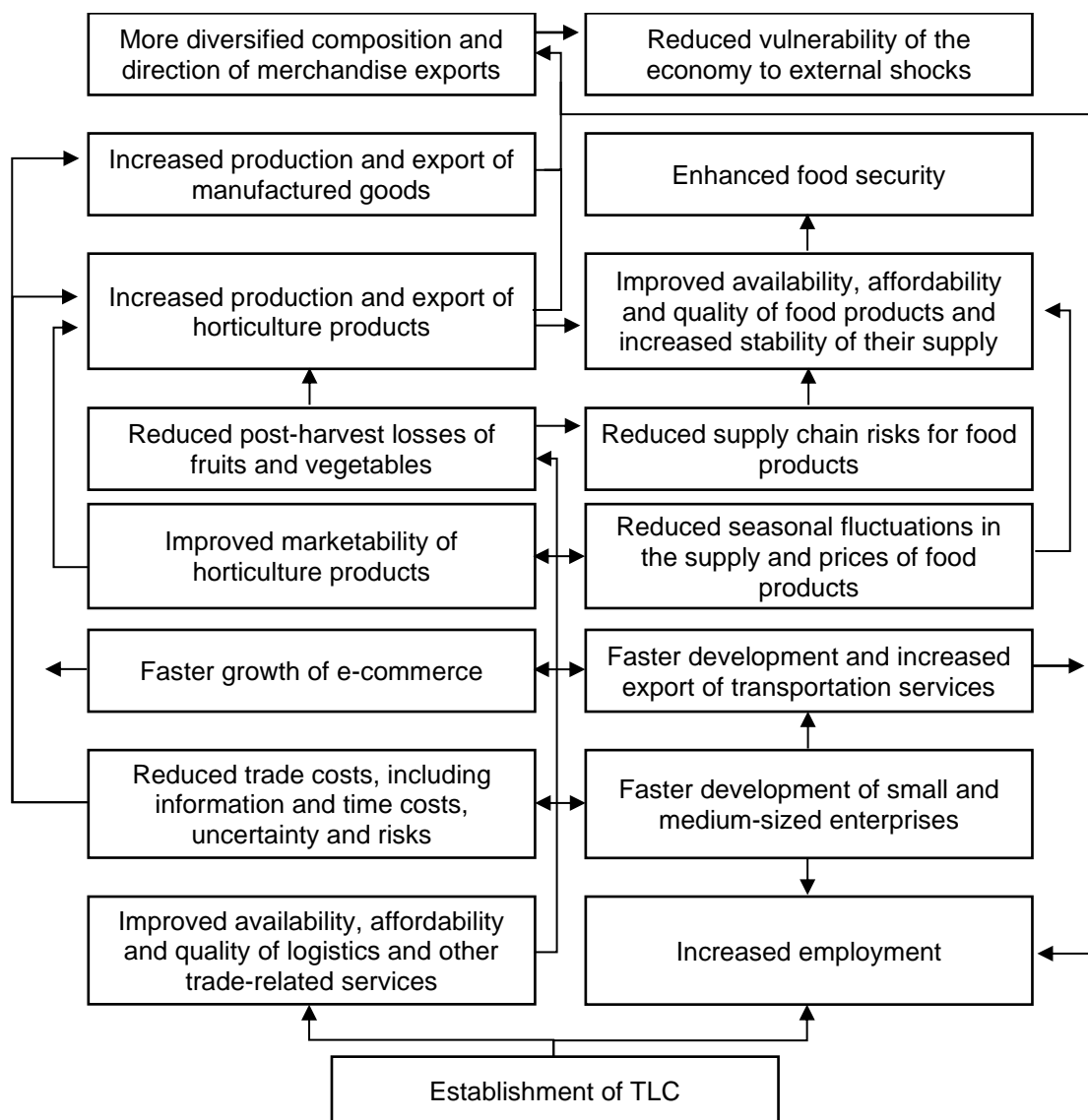
49. The outcome of the cargo demand projection will result in area estimations and zoning for various shortlisted components of TLC such as warehousing zone and storage facility, trade center, value added services facilities and truck parking and handling area.

E. Economic Rationale for Establishment of the Trade and Logistics Center

50. Given the country, provincial and sector context discussed in the first three sections of this chapter and the projected cargo demand for logistics services presented in the fourth section, there is strong economic rationale for setting up a TLC in Sugd province. The rationale is predicated on the potential economic benefits of the establishment of a TLC in the province and its alignment with economic development priorities of the central government of Tajikistan and the local government of Sugd province.

51. **Potential economic benefits.** Setting up a modern TLC that utilizes digital technologies and can provide multimodal logistics and other trade-related business services (including temperature-controlled storage services) will generate considerable economic benefits for Sugd province. Given the province's size and role in Tajikistan's external trade, the establishment of such a TLC in Sugd province will also engender significant economic benefits for the country as a whole. In particular, it will increase employment. The TLC itself can potentially employ a significant number of people, including medium- and high-skilled workers. In addition, it can increase employment by stimulating a range of economic activities (including horticulture, manufacturing, and transportation) and the development of SMEs.

52. Further, the TLC will improve the availability, affordability and quality of logistics services. This will in turn help lower trade costs, including information and time costs as well as the uncertainty and risks entailed in international shipments to and from Tajikistan. The TLC will also foster the development of SMEs, e-commerce and the transport sector, and boost exports of transportation and logistics services. It will help Tajikistan and, in particular, Sugd province to fully realize their transit potential. By providing cleaning, sorting, grading, packing and temperature-controlled storage services, the TLC can help improve the marketability of horticulture products, cut post-harvest losses of fruits and vegetables, maintain food reserves, and reduce seasonal fluctuations in food prices. Through these effects, the TLC can increase the production and export of horticulture products and manufactured goods (including processed food products); help diversify the composition and direction of merchandise exports; reduce the economy's vulnerability to external shocks (such as a sharp rise or fall in world commodity prices); mitigate supply chain risks for food products; and enhance food security (Figure 8).

Figure 8: Potential Economic Benefits of TLC

TLC = trade and logistics center
Source: Study team

53. The establishment of a TLC in Sugd province will contribute to the development of the STKEC. It will serve at least two thematic priorities of the road map for STKEC development—namely, improvement of road and railway transport connectivity and development of horticulture value chains. Accordingly, the TLC will help deepen Tajikistan’s economic integration with Uzbekistan and Kazakhstan and boost shared prosperity in Central Asia.

54. The recognition of the economic rationale was also evident in the fact that a few development organizations are active in supporting projects similar to TLC. World Bank plans to support the establishment of three logistics facilities in Tajikistan, including a 2.5 ha agro-logistics in the Sugd province, focusing on temperature-controlled facilities. The Islamic Development Bank is also assessing the feasibility of a logistics center at the Fotehobod-Oybek BCP.²¹

55. **Alignment with government priorities.** Setting up a modern TLC in Sugd province will be consistent with development priorities of the central government of Tajikistan and the local

²¹ Information was shared by Tajikistan officials on 12 September 2023, at the Consultation Meeting on Draft Prefeasibility Studies of TLC and ICIC in Tashkent.

government of the province. It will serve several economic and social objectives of both the central government of the country and the local government of the province.

56. The objectives of the National Development Strategy of the Public of Tajikistan for the period up to 2030 include fully utilizing the country's transit potential, ensuring food security, and increasing productive employment. The Government of Tajikistan recognizes the importance of developing the logistics sector for achieving these objectives. Accordingly, the priorities of the strategy include development of logistics infrastructure and establishment of a network of modern transport-logistics centers.²² In 2022, the Government of Tajikistan drafted the State Program for the Development of the Logistics System in the Republic of Tajikistan for 2023–2028. The program aims to raise the share of transportation and logistics services in GDP from 8% to 10%. The program also prioritizes developing information infrastructure for logistics services. It stresses the need to implement modern ICTs and create a unified information platform for logistics centers under a single network.²³ Its priorities include attracting investment into the logistics sector, developing hard infrastructure.

57. The development priorities of the local government of Sugd province include creating new jobs, developing manufacturing and services, and expanding exports, including exports of horticulture products. The Program of Socio-Economic Development of Sugd Province for 2021–2025 highlights the need to develop logistics infrastructure and services in the province, in particular to foster the growth of the food industry, expand and diversify exports, and enhance food security.²⁴ Creating cargo terminals in major industrial cities such as Khujand with adequate infrastructure and equipment can help increase cross-border trade flows. Creation of consolidation and de-consolidation centers with equipment for loading and unloading, as well as container sites, where intermodal reloading and cargo picking are carried out, are seen as key factors to bridge the gap in infrastructure for logistics services. This will also increase the efficiency of the sector.

²² Government of Tajikistan. 2016. *National Development Strategy of the Republic of Tajikistan for the Period up to 2030*. https://medt.tj/documents/main/strategic_national_programm/NDS-2030_edited_14.3.doc2 (accessed 13 May 2023).

²³ Government of Tajikistan. 2022. *State Program for the Development of the Logistics System in the Republic of Tajikistan for 2023–2028*. Dushanbe.

²⁴ Council of People's Deputies of Sugd Province. 2020. *Program of Socio-Economic Development of Sugd Province for 2021–2022*. Khujand.

III. CONCEPT PLAN FOR TRADE AND LOGISTICS CENTER

A. Components of Trade and Logistics Center

58. The Trade and Logistics Center (TLC) is intended to increase cross-border trade and ensure efficient logistics services in Sugd province by developing dedicated trade and logistics infrastructure and services. The TLC will increase the capacity to better serve the needs for trade and manufacturing cargo, and expediting customs procedures leading to faster movement of cargo traffic at the border crossing points (BCPs). The TLC will include facilities such as warehouse, packaging facilities, cargo handling facilities, distribution centers, container yards and support infrastructure, as well as administration building, customs checkpoint, security, and office spaces among other utility facilities. These facilities will be included in two physical components: a trade center and a logistics center.

59. The **trade center** within the TLC is designed as a preferred destination in facilitating and promoting trade-related activities within the Sugd province, including industrial and trade exhibitions, trade conferences, conventions, trade fairs, B2B networking events, and company-specific events. It aims to attract service providers to facilitate sector-specific support to traders, e.g., providing sector specific advisory services, imparting training to relevant stakeholders, providing investment support, helping with relevant market intelligence, connecting domestic market players to global value chains, etc. The trade center will provide commercial office space for trade associations, customs, and other stakeholders to operate in proximity. The functions of the trade center within TLC will include:

- **Organize trade related events/exhibitions** through providing the physical infrastructure and associated services to facilitate the organization of trade related events.
- **Create knowledge desk to support traders** by providing pertinent, timely and reliable data and information, and offering advisory services (e.g., on customs procedures and documentation) to existing and new trade players including facilitating the start of trade businesses.
- **Support private sector development** by bringing together public and private sector stakeholders to jointly contribute to a conducive business environment.

60. The business activities performed in trade centers in various parts of the world have guided the selection of sub-components of the trade center of the TLC. For instance, the trade center in Dubai focuses on hosting large events (up to 500 events annually) has an event space of 1.3 million ft² and a large residential complex wherein participants and corporates can book serviced apartments for longer durations. On the contrary the Mumbai Trade Center which focuses on providing office spaces has a larger space dedicated to commercial areas, training and education center. It also focuses on creating knowledge for its tenants/users by conducting training programs in affiliation with universities on multiple themes such as entrepreneurship development, trade business services, financial management for SMEs, international marketing strategies, etc. Table 9 provides an illustration of the space allocation under various components of the three benchmarked trade centers.

Table 9: Components of Trade Centers in Dubai, Mumbai, and Istanbul

Sub-Components	Dubai	Mumbai	Istanbul	Shortlisted for TLC
Area under components (as a % of total area of trade center)				
Exposition centers / expo center	30.3%	27.0%	49.8%	Yes
Convention center/ meeting rooms etc.	2.8%	3.0%	1.0%	Yes
Shopping center or arcade	1.4%	3.0%	4.0%	Yes
Commercial Complex or business center or office space	46.5%	61.0%	36.0%	Yes
Accommodation space or hotels	15.1%	0.0%	6.0%	No
Support infrastructure/ Parking zones	4.0%	3.0%	3.0%	Yes
Education & Training center	-	3%	-	No
Revenue Generated from operations (US\$ million, as on 2022)	350	6	17	
Annual Usage Frequency (no. of expo events)	500	60	100	
Population Catering	1.9 million			

TLC = trade and logistics center

Source: Study team analysis

61. The components of the TLC are selected based on the nature of the services to be provided by the center. The primary objective of the TLC is to increase cross-border trade in the province, thus the trade center should provide expo centers, commercial complex/office spaces and the supporting infrastructure. As the TLC is envisaged to be located within, or close to, the Khujand agglomeration, developing a residential complex is deemed unnecessary.

62. The **logistics center** is designed to provide logistics support to promote trade in the Sugd province through improving logistics infrastructure and services. In particular, it is intended to serve as a warehouse center for cargo and a transit warehousing facility, and to provide value-added services of tinning, packaging and distributing of cargo. The logistics center aims to boost the supply of logistics services with a significantly expanded capacity to serve the trade and manufacturing cargo. It will meet the rising demand for storage spaces for food products, construction materials and equipment based on the projections of the demand for storage services presented in the previous chapter. Some key functions of the logistics center are summarized below:

- **Facilitate freight aggregation and distribution** by enabling the consolidation of freight to achieve economies of scale thus reducing overall logistics cost.
- **Provide integrated storage and warehousing** by providing modern and mechanized warehousing, with specific handling requirements, if any, reducing sorting and handling losses.
- **Promote multimodal freight transport** by supporting the smooth transfer of cargo from road to rail for line haul thereby improving efficiency and reducing cost.
- **Provide value-added services** such as customs clearance, container repositioning, labelling, packaging, to reduce waiting time at ports, resulting in reduced freight transportation cost and time for export cargo.

63. Multimodal logistic centers within Central Asia in different countries, including Tajikistan, Georgia and Kazakhstan, have a similar set of components (Table 10).

Table 10: Benchmarking Logistics Centers in Central Asia

Country	Tajikistan	Tajikistan	Georgia	Kazakhstan
Component / Location	Nizhny Panj	Tursunzoda	International Logistics Center	Logistics Center Astana
Development stage	Completed (Phase 1)	Completed	Ongoing	Ongoing
Custom inspection/ bonded zone	Yes	Yes	Yes	-
Warehouse/storage facility	Yes	Yes	Proposed	Yes
Support infrastructure (Security etc.)	Yes	Yes	Proposed	Yes
Admin and social facilities (health care, fire brigade services)	Yes	Yes	Proposed	Yes
Commercial office spaces/cargo offices	Yes	Yes	Yes	Proposed
Container depot/yard	Yes	Yes	Yes	Yes
Distribution center	-	-	Proposed	Yes
Truck terminal	Yes	Yes	Yes	Yes
Packaging facility	Yes	-	Yes	-
Weighing facility	Yes	Yes	Yes	Yes
Air cargo complex	-	-	Yes	-
Rail Terminal	Proposed	Yes	Yes	-
Cargo handling facility	Yes	Yes	Yes	Yes
Business centers	-	Yes	-	Proposed

Source: Study team analysis based on project reports of benchmarked centers

64. To further facilitate cross-border trade, the TLC may include an inland customs office and a custom bonded warehouse.²⁵ For a province like Sugd where high volumes of agricultural and horticulture products are traded, it is necessary for the clearance facility to be equipped with a specialized test laboratory with highly skilled technical staff. A centralized location for customs services within the TLC shall augment the control of cargo clearance and movement, provide security of cargo, and ensure policy consistency. The custom bonded warehouse will help in short-to-medium term storage of cargo so that the traders can defer payments on import duties and hence increase their working capital.^{26, 27}

65. The TLC shall also have a common facility for weighbridge and administration services area which will act as a support infrastructure for TLC. The size of each of these infrastructure elements is dependent on the projected trade flows from the TLC. The cargo demand assessment has been conducted to identify the size and capacity requirements (see Section D of chapter 2). The subsequent sections incorporate the cargo demand assessment of TLC. Based on the trade profiling and manufacturing potential in the province, the land requirements for the proposed facility are estimated.

B. Location Assessment for TLC

66. The identification of location for the TLC is based on stakeholder consultations and key information collected from the site visits. There are three sites under consideration, namely the

²⁵ An inland customs office shall provide simplified clearance procedures to regular importers who may not need separate import declaration for each shipment, thus easing bottlenecks at BCPs. Expedited customs procedure results in faster movement of traffic at BCPs, saves the time and cost of cargo handling.

²⁶ Custom bonded warehouse: As TLC is envisaged to facilitate cross-border trade, a customs bonded warehouse shall be one of its components. The customs bonded warehouse is a duty-free zone for imports and exports. At such a facility, all the taxes are deferred till the time the goods are released either for domestic use or exports. This helps in short-to-medium term storage which helps the traders to defer the payments on import duties and hence increase their working capital.

²⁷ Article 100-103: Tajikistan Customs Code

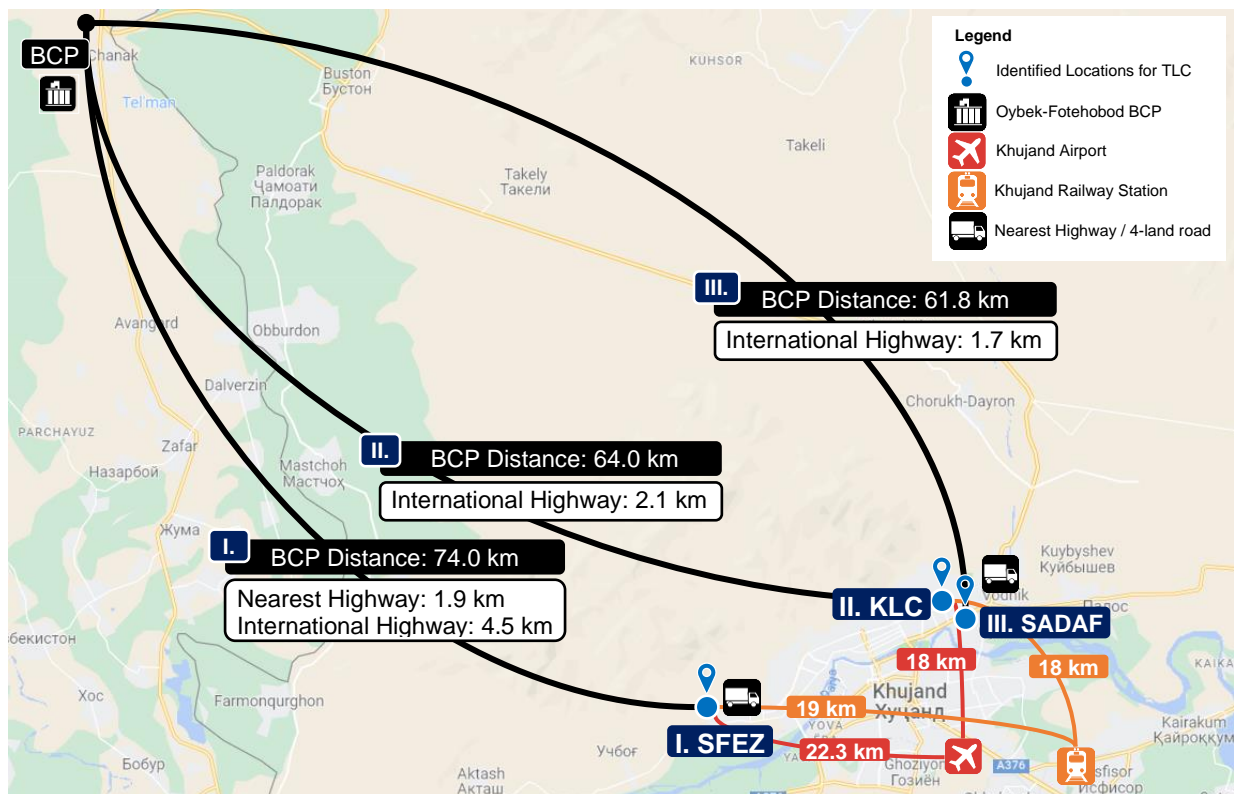
Sugd Free Economic Zone (SFEZ), the Khujand Logistics Center (KLC), and the Sadaf Industrial Zone, which were proposed by the Sugd administration. Multiple parameters such as land features, topography, accessibility, environmental constraints, infrastructure, BCP, utilities availability, and approvals and regulatory considerations were captured and analyzed to identify the most suitable location for the TLC.

67. The following section details out the methodology adopted for location assessment of the three potential sites and outlines the framework adopted for final selection of the land parcel, and results from the exercise.

1. Land Identification and Site Candidates

68. The study team conducted site visits of the proposed three candidate sites for the TLC. The following section describes the three potential candidates for the TLC (Figure 9).

Figure 9: Location for SFEZ, KLC and Sadaf Land Parcels



BCP= border crossing point, KLC = Khujand Logistics Center, SIZ= Sadaf Industrial Zone, SFEZ = Sugd Free Economic Zone, TLC = trade and logistics center

Source: ABBAT Transport Carriers - Tajikistan

Sugd Free Economic Zone

69. As mentioned in the previous chapter, the SFEZ is a special economic zone located within 10 km from Khujand city center. It has a total area of 320 hectares out of which 210 hectares is available while 110 hectares has buildings and light manufacturing facilities. Established in 2008, the SFEZ has a land rent of \$0.50 per m². The proximity to manufacturing industries within SFEZ and around Khujand city may ensure a steady demand for logistics. SFEZ is equipped with internal infrastructure such as power availability, water supply, internal roads, and operational office spaces.

70. The SFEZ is only connected via road and the nearest railway station is Khujand Railway Station (approximately 20 kms from SFEZ). Hence, only cargo from the road with higher freight cost for last mile delivery is expected in SFEZ. However, the site is near international highways

such as the Pamir international highway (9 kms) and the Dushanbe-Khujand-Chanok Highway which improves the attractiveness.

71. There are multiple small and medium sized enterprises (SMEs) manufacturing units operating in SFEZ. Businesses in SFEZ enjoy preferential tax and customs regime. This creates a rationale for more such enterprises to set up their operations in SFEZ and avail logistics and trade services in TLC.

Khujand Logistics Center

72. Established in March 1998, the KLC is an operational logistics center within Khujand city. The main activity of KLC is to provide parking, customs procedures, goods storage facility to international road carriers. The KLC provides for joint round-the-clock work of customs authorities, sanitary and quarantine services, as well as temporary storage warehouses and customs warehouses.

73. At present, the KLC is operated under 2.64 hectares, which is expandable up to 20 hectares. The KLC is located near Khujand city and has well organized logistics management. The facility has famous brand clients such as Coca Cola and Cuema. From its location, the goods can move to Uzbekistan, Khujand city and Dushanbe as the KLC is located near the International Highway Khujand–Tashkent (1.5km) and International Highway Dushanbe-Chanak. The KLC is also in proximity to over 20 SMEs. The KLC has internal infrastructure facilities such as power, water, etc. and has 2 transport and logistics operators.

Sadaf Industrial Zone








74. The Sadaf Industrial Zone or SUE Sadaf is located in the northeastern industrial zone of Khujand city with access to more than 80 SMEs within 10 kms radius. State owned, the total area of the Sadaf Industrial Zone is 12.9 hectares. The entire place has buildings, and some production equipment were abandoned by previous operators. This area also includes a number of finished buildings and structures under a total area of more than 40,000 m². SUE Sadaf is located approximately 1.5 kms away from the international highway–Khujand-Tashkent. The industrial zone is around 10 kms from Khujand railway station and 40 kms from Spitamen-NAU station.

75. This industrial zone can be converted into a TLC as the land is owned by the government, and the implementation could be expedited by tapping into the existing facilities and equipment. However, the existing assets are outdated and require extensive modernization.

2. Site Assessment Framework and Assessment Result

76. The location assessment is undertaken through a framework which consists of 7 main themes/parameters such as land features, connectivity and related infrastructure, internal infrastructure and utilities, capital and operating cost, BCP, external environment and approvals and regulatory considerations (Figure 10). These parameters aim to assess the comprehensive feasibility of the land parcel as per the physical infrastructure, socio-economic and demographic features of each site. Parameters such as 'Approvals and Regulatory Features' also assess the ease of doing business (EoDB) component for each site. The parameter "Capital and Operating Cost" aims to also evaluate the overall capital and operational expenditure outlay for setting up and operating TLC within each location, including evaluation of land cost, additional acquisition charges, utilities and maintenance charges levied. The framework consists of 40 sub-parameters with an equal weightage. These parameters are then ranked and scored for the three site candidates on a relative ranking scale (Refer to Appendix 2 for detailed methodology)

Figure 10: Site Assessment Framework for TLC

 Land Features	<ul style="list-style-type: none"> • Availability of land • Contiguity of land parcel • Topography • Shape of land
 Connectivity and Related Infrastructure	<ul style="list-style-type: none"> • Proximity of connecting highways • Railway connectivity • Airports • Industrial areas • Connecting / Access Roads • Infrastructure expansion plans
 Internal Infrastructure and Utilities	<ul style="list-style-type: none"> • Power availability • Water availability • Internal infrastructure • Internal road connectivity
 Capital and Operating Cost	<ul style="list-style-type: none"> • Cost of land • Additional acquisition charges • Utilities cost • Maintenance charge
 BCP	<ul style="list-style-type: none"> • Distance from BCP • Cargo Flow • Availability of customs office • Clearance procedures, etc.
 External Environment	<ul style="list-style-type: none"> • Presence of cargo-based Industries • Anchor tenants • Urban center proximity • Presence of logistics operators in the region • Development stage of the area • Talent availability
 Approvals and Regulatory Considerations	<ul style="list-style-type: none"> • Possibility of Purchase • Approval time • Level of approval required • Environmental clearance

BCP = border crossing point, TLC = trade and logistics center
 Source: Study team analysis

77. Based on the site related data analysis and onsite investigation, the three sites were evaluated against the location assessment framework as shown in Figure 8. As per the data collected and the analysis conducted, **the SFEZ was shortlisted as the most suitable location among the three options, followed by the KLC and the Sadaf Industrial Zone.** Below is a summary of the results (see also Table 11).

- The SFEZ ranks higher than the other two sites in terms of internal infrastructure availability, connectivity (with closer access to rail cargo), lower capital and operating cost, and lesser approval time and cost associated with setting up a TLC.
- The KLC's available land (only 2.41 hectares available) has limited expansion capacity to accommodate the increased cargo volume envisaged for the TLC. Further, the KLC has no further plan or scope for a railway terminal to be built within KLC as opposed to the SFEZ where railway terminal and last mile connectivity planning is underway.
- The Sadaf Industrial Zone, although with land availability, has major constraints in infrastructure development (with electricity and water issues), and existing assets are outdated and need extensive modernization which is costly.

78. The comparison of the three sites puts the SFEZ in an advantageous position to be a first candidate for the TLC, while the KLC and the SUE Sadaf are almost at par under the various parameters, with the KLC slightly over the SUE Sadaf. **A new location with existing and/or potential connectivity to railway link can also be considered** as the SFEZ has no last mile railway connectivity which is essential to cater to almost 25% of cargo movement in Sugd province.

Table 11: Result of Site Assessment for TLC

Parameters	P. Weightages	Sugd FEZ	Khujand Logistics Center	SUE Sadaf
Land Features	15%	0.35	0.28	0.28
Connectivity and related Infrastructure	20%	0.50	0.45	0.48
Internal Infrastructure and Utilities	10%	0.38	0.35	0.35
Capital and Operating Cost	15%	0.33	0.28	0.28
BCP	15%	0.38	0.40	0.38
External Environment	15%	0.35	0.43	0.43
Approvals and Regulatory Considerations	10%	0.25	0.23	0.20
Total		2.53	2.40	2.38

BCP = border crossing point, FEZ = free economic zone, TLC = trade and logistics center

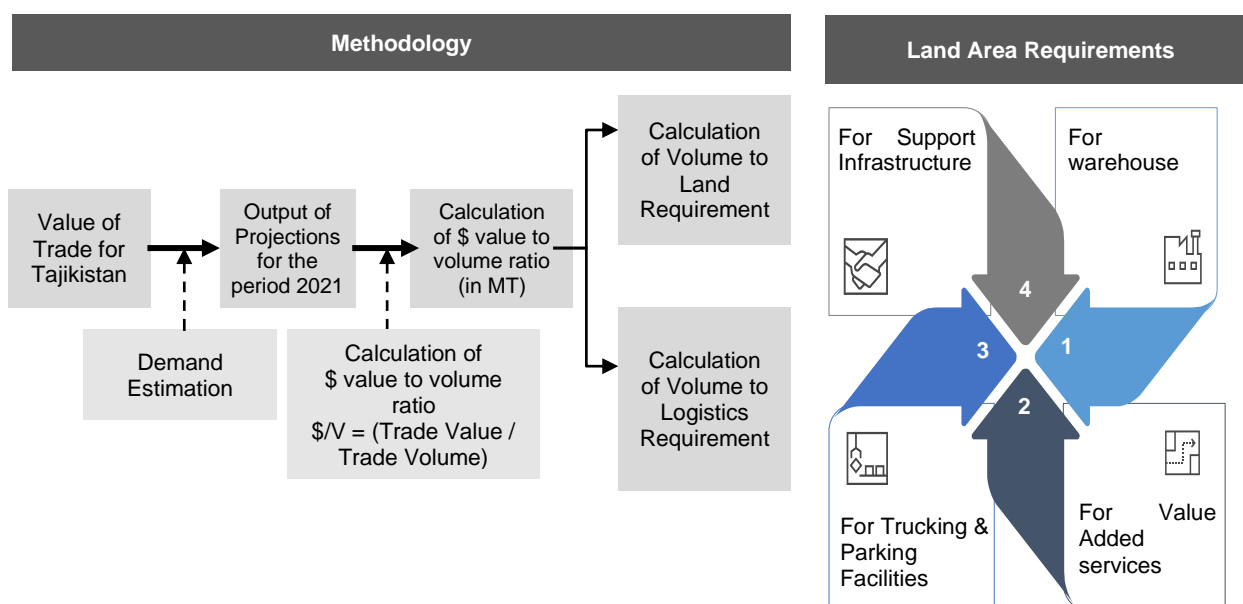
Source: Study team analysis and data from site visits

C. Estimation of Land Area Requirements for TLC

79. This section outlines the land area estimation based on the projections of the demand for logistics services, which capture the demand generated from cargo movement (trade) as well as cargo generated in the manufacturing zone in Sugd province (see Sections C and D of chapter 2 and Appendix 1). The demand projections aim to assess the land area requirements for all the shortlisted components for TLC and subsequent phasing for the development.

80. The estimation of the land area requirements for the TLC has been conducted by assessing the trade volume and manufacturing output potential for the Sugd province. Figure 11 shows the methodology and land area demand assessment.

Figure 11: Estimation of Land Area Requirements for TLC



TLC = trade and logistics center

Source: Study team analysis

81. **Assumptions used in the estimation of the land area requirements.** The study was conducted by taking the cargo volume and the profile of various products that can be stored in the TLC (see Section D of chapter 2 and Appendix 1). Through secondary research it was observed that the storage capacity required to store one ton of cargo is 1.1 m². Also, the average

time for cargo storage is 15 days per ton. These assumptions were considered by calculating the area and average dwell time requirements for major product categories such as food products, construction material, fertilizer, and agriculture products. The cargo volume estimates are made to identify the land area requirement for the TLC. Table 12 summarizes the findings on storage area benchmarks for TLC.

Table 12: Storage Area Benchmarks for TLC

Product Category	Storage Area Benchmarks		
	Volume (MTPA)	Avg. Dwell Time	Storage Area (Sqm/ton) / sqm
Food Grains	1.3	30	1.25
Fertilizers	0.10	15	1.25
PoL Pdt. (Edible oil)	0.10	15	0.42
Construction material	1.48	1.5	1.09
	3.0	14.8	1.1

MTPA= million ton per annum, TLC = trade and logistics center
Source: Benchmarking based on secondary research

82. **Warehousing Area.** The type of storage facility such as a warehouse depends on the nature of the commodity, average dwell time for the cargo, and storage area required per ton of cargo. Warehousing area requirement for TLC is calculated based on maximum annual area requirement over a period of 20 years. For calculating the same, peaking factor of 20% is considered on total annual volumes that require storage. The mathematical formula for calculating warehousing area requirement for each commodity is present below:

$$\text{Warehousing Area} = \{\text{Commodity volume handled (tons)} * \% \text{ of volume requiring warehousing} * (1 + \text{Peaking Factor}) * (\text{Average dwell time of commodity} / 365) * \text{Storage area required per ton of cargo}\}$$

83. Based on the calculations for the cargo estimated, the total area required for warehousing is 64 hectares. This includes covered warehousing area, open space for warehousing, transit facility, cold chain storage and value-added facilities. The percentage volume requiring warehousing is assumed to be 21% based on the assumption that nearly half of the medium and large-scale enterprises have their own warehousing facility and not more than 30% of small and medium sized enterprises may outsource their logistics requirements under a conservative scenario. The facilities area within the warehousing facility shall include space allocation for value added services such as packaging, labelling and distribution, which will be 50% of the total warehousing, approximately 33 hectares.

84. **Support Infrastructure Area.** The support infrastructure includes facilities such as internal roads, administration buildings, truck loading and dispatch yards, commercial space for offices, and expo center for trade services. The area for the truck terminal shall include container depot, empty container yard, weighing and cargo handling facility. The space for internal roads is assumed to be 6 - 8% of the total warehousing area (i.e., 4 hectares) while 4 hectares is assumed for commercial spaces, offices, and expo center.

85. The area estimate for a trade center is benchmarked with some of the exposition centers with high capacity and have hosted expos annually since its inception. The space requirement per person is calculated to be 2.5 m². Hence, considering a capacity to host 15,000–20,000 persons in a trade event shall require approximately 2 hectares of area.²⁸

86. **Truck Terminal.** The total TLC area under consideration shall have approximately 2.4 million cargo vehicles (both for manufacturing and cargo volume by 2048). The TLC is assumed to handle 3,60,000 trucks per annum by 2048. With an average dwell time of not over 3 days, the total area requirement for truck terminal is estimated to be 7 hectares. Given the space for other

²⁸ Area estimation for expo center in India: <https://www.expocentreindia.com/facilities/>; <https://indiaexpomart.com/index.php/capacity-chart/>

support infrastructure such as administration buildings, internal roads, custom inspection zones, etc., **the total estimated area for the TLC is estimated to be 80 hectares.** Table 13 shows the result of land demand assessment for the TLC.

Table 13: Land Demand Assessment for TLC

TLC components	Maximum Annual Volume (MTPA) / number of vehicles	% Volume Requiring warehousing	Avg. Dwell time (in days)	Storage Area ((sqm/ton) / sqm)	TLC Area (sqm)	TLC Area (ha)
Total Area of the Facility for Warehousing	67.4 MTPA	21%	15	1.10	642,459	64
Truck terminal & Handling Facility	1,686,174 vehicles	21%	2.5	28	68,879	7
Support Infrastructure	-	-	-	-	85,432	9
Total Area Requirement						80

MTPA= million ton per annum, TLC = trade and logistics center
Source: Study team analysis based on the demand estimation for TLC

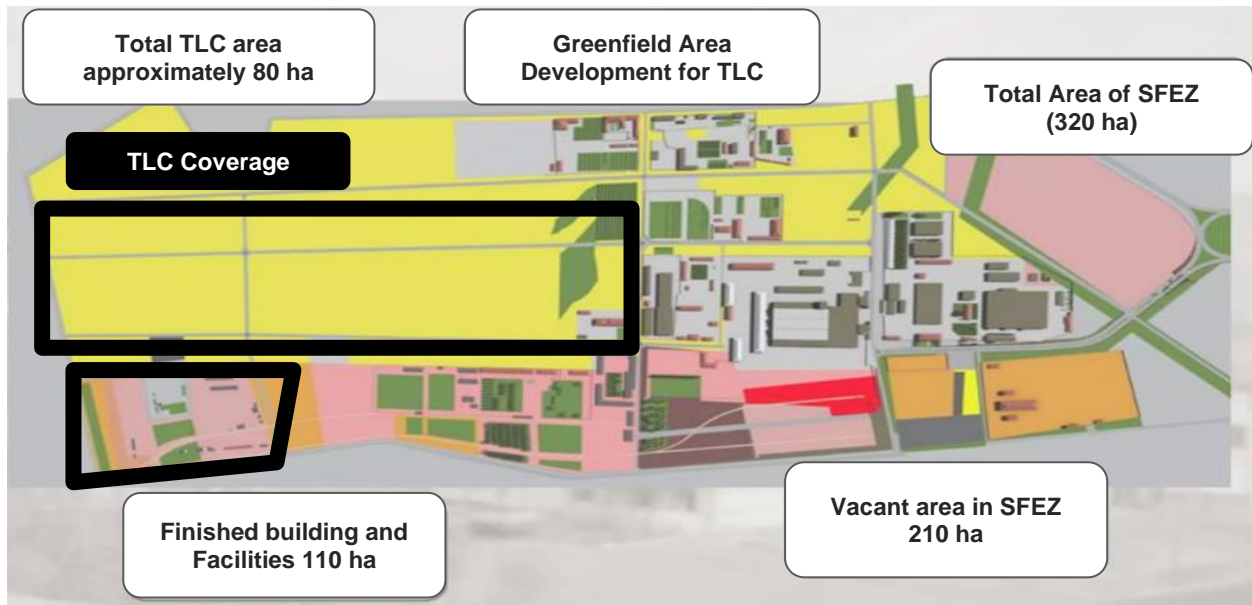
D. Zoning Plan for TLC

87. The zoning plan aims to provide an overview of the possible layout for the TLC including the warehouses, support infrastructure, parking spaces and value-added services facility. The zoning is based on the following criteria/principles:

- i. Utilize the existing space and infrastructure of SFEZ including the administrative buildings, security checkpoints, internal roads, office spaces, and utilities infrastructure.
- ii. Create movement and inspection space for heavy cargo trucks, including movement of cargo from warehouse to customs checkpoint.
- iii. Form a dense stack-up warehousing facility core with a chance to create more ground space for ancillary development.
- iv. Create internal routes and connecting infrastructure for easy movement of cargo from security checkpoint (gate-in) – warehouse – value added services facility – trucking and weighbridge – customs clearance zone.
- v. Place exhibition center, trade center and other support infrastructure in a separate zone to avoid traffic diversion.

88. The SFEZ has a total of 320 hectares out of which 110 hectares is covered under finished buildings while the remaining 210 hectares are vacant and available for construction of the TLC (Figure 12).

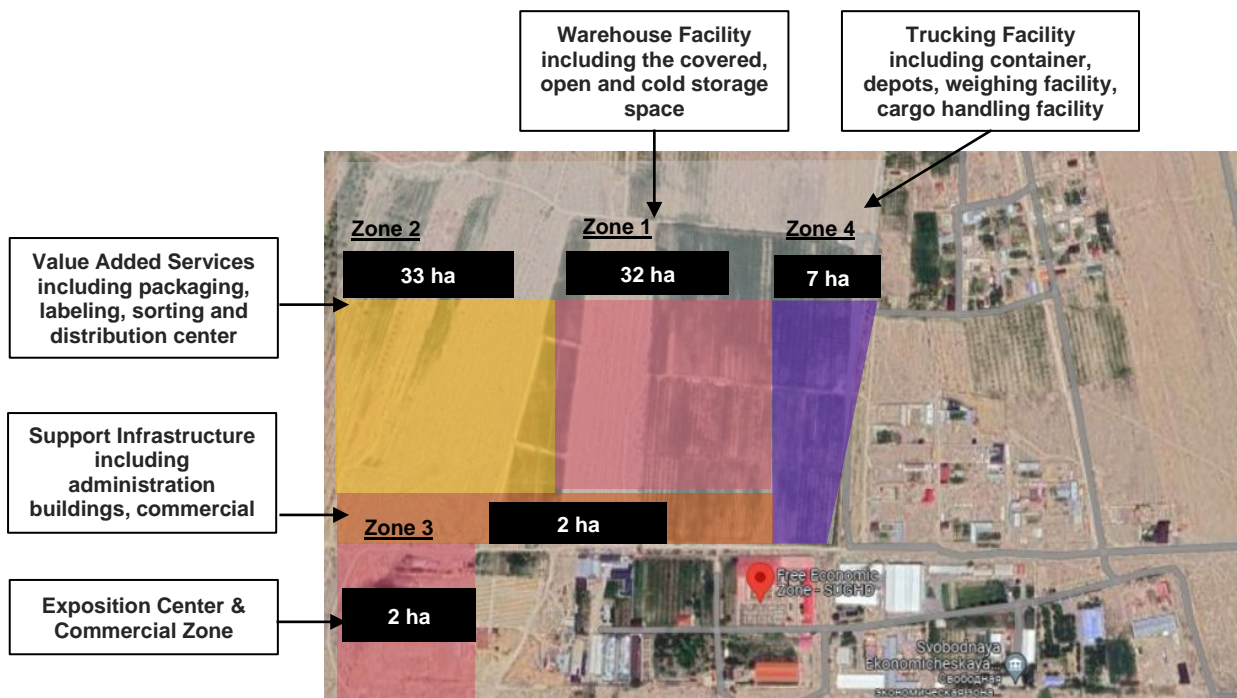
Figure 12: Layout of Sugd Free Economic Zone



SFEZ= Sugd Free Economic Zone, TLC = trade and logistics center
 Source: SFEZ website, Inputs from the demand estimation for TLC

89. The TLC shall be bifurcated to two broad components: a trade center and a logistics center. The logistics center shall include warehouse facility including the covered, open and cold storage area (zone 1), the facilities area which includes packaging and distribution center (zone 2), customs inspection and bonded zone, and truck terminal (zone 4). The trade center shall consist of office spaces, expo center, retail complex and restaurants (zone 3 and 4) (see Figure 13 for the concept and zoning plan of the TLC). The expo center area to be designated for free movement of people and direct road access to be provisioned to avoid entry of people in FEZ area.

Figure 13: Concept Plan and Zoning for Trade and Logistics Center



Source: Study team analysis

E. Institutional Structure for TLC

90. The establishment and successful operation of the TLC requires an effective institutional and governance framework to coordinate policies and implementation issues at the central and local levels. Such a framework should ensure integrated planning, establishment, and management of the entity with respect to (i) physical and industrial infrastructure, (ii) urban and social amenities, and (iii) investment promotion and facilitation mechanisms, among others. This section details the types of institutional models proposed for the management of the TLC within the SFEZ using benchmarking exercise conducted with various similar facilities around the world. The proposed models are formed by taking inputs from institutional models adopted across the world for development of a large infrastructure asset. The section also summarizes the various department functions, and the roles and responsibilities for various functional heads, of the TLC.

91. Development and governance of large-scale infrastructure projects has followed various models in different parts of the world. These models have multitier institutional structures with varied roles and responsibilities. Two models are proposed for the institutional structure of the TLC, namely the government-led model and the public-private partnership (PPP) model.²⁹

1. Model I: Government-Led Model

92. Under the Government-led model, the SFEZ administration shall act as the top management body and shall be responsible for all TLC activities. The SFEZ Administration is a separate legal entity which provides management oversight on SFEZ. The SFEZ Administration is a subordinate organization of an authorized state entity on FEZs management (in this case the Majlisi Namoyandagon). The SFEZ Administration appoints a manager to present the SFEZ in all domestic and foreign international organizations, enterprises, banks and departments, and coordinates with local executive bodies of the state power in creating and developing the SFEZ. Box 3 provides general information on FEZs in Tajikistan including the SFEZ.

Box 3: Free Economic Zones in Tajikistan

The Tajikistan's laws on free economic zones (FEZs) governs the SFEZ, which is the proposed location for the TLC. The law defines the organizational, legal, economic principles of establishment, management, and operations of FEZs within Tajikistan. There are different types of FEZs in Tajikistan based on the priority activities set as per the FEZ law. Depending on the nature of activities, FEZs are divided into specific types and can combine several functional (complex) types of FEZs. They may consist of several individual sites under a single administration. Major types of FEZs are – industrial, trade and commercial, service provision and innovation, research and promotional.

While the industrial (manufacturing industrial products) FEZs aim at development and promotion of the industrial sector, the trade and commercial FEZ is used for processing, sorting, packaging, labeling and storage of goods imported to the zone for their further import into the customs territory or removal from the customs territory of Tajikistan. Trade and commercial FEZs are created at the airports, railway stations, docking stations, highways, on border crossings and in other limited areas of the territory Republic of Tajikistan, through which regular international transportation of goods is carried out.³⁰

The SFEZ is categorized as an industrial-innovation type FEZ which aims to promote manufacturing of food products, textiles, electronics, and white goods, fast moving consumer goods, gypsum goods and aims to promote import-export operations from the facility. The SFEZ also aims to attract investment in the sphere of scientific-technical surveys, innovation activity, nanotechnologies, and biotechnologies etc.

Source: Study team

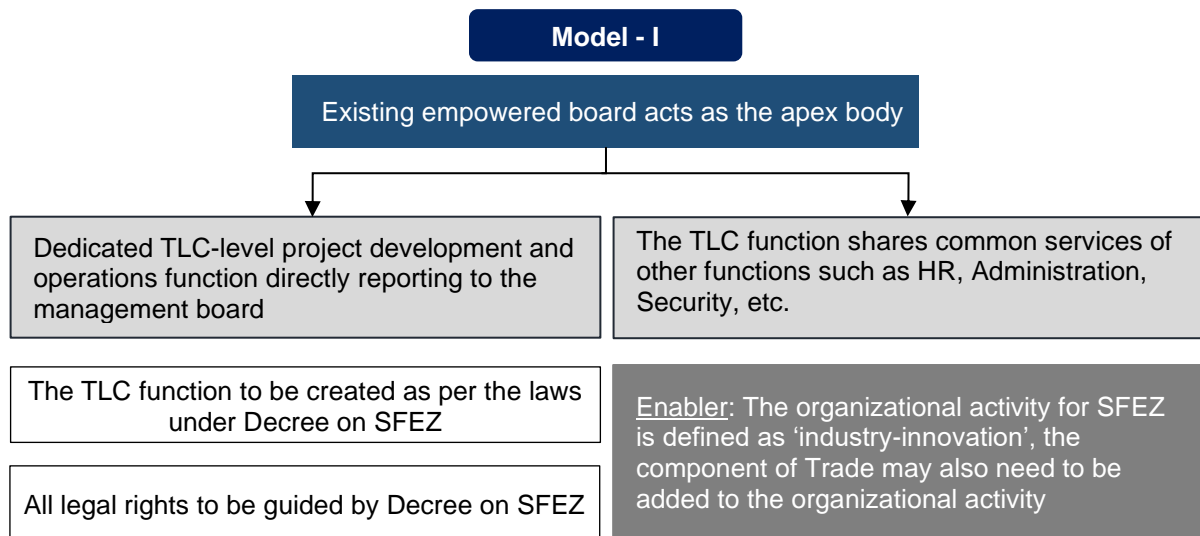
93. In the first model, a new function for the TLC can be created which directly reports to the SFEZ Administration Manager. This function of the TLC may be kept separate from the industrial development function within the SFEZ administration and can share the same arrangement of functioning as SFEZ. The existing management oversight and control may not be changed in this

²⁹ Note: These are just options provided by the study team as part of their pre-feasibility assessment of the requirements for developing TLC and the permissible institutional structures as per the Tajikistan law. The choice of choosing either of the models for development resides with the government of Tajikistan considering several factors and budgetary allocations (as the case may be).

³⁰ https://www.wto.org/english/thewto_e/acc_e/tjk_e/wtacctjk23a1_leg_2.pdf

case, only a new function may be added to the existing structure which shall be solely dedicated for operations and development of the TLC (Figure 14).

Figure 14: Institutional Structure for TLC under Model I



FEZ = free economic zone, SFEZ= Sugd Free Economic Zone, TLC = trade and logistics center
Source: Study team analysis

94. Figure 14 represents the functionality for this proposed model. However, as discussed earlier, the current organizational activity for the SFEZ does not include a trade component. As per the FEZ law, trade activity including allocation of land for processing, sorting, packaging, labeling and storage of goods is an identified activity for FEZ and can be included in the existing SFEZ.

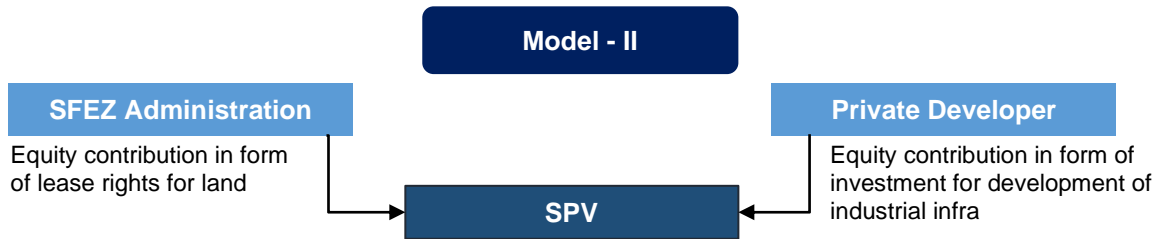
2. Model II: Public-Private Partnership Model

95. The residents of the SFEZ are allowed to undertake any economic activity that is not prohibited by the law on the territory of the SFEZ. This opens opportunities for the private sector to develop, operate and maintain the TLC in providing quality and efficient services.

96. Under the PPP model, the land area required can be given to a private developer on leased as per the leasing regulations for the SFEZ. This model works like a Joint Development model under PPP structure where the government provides the land area in exchange for partial equity while the private developer invests for development, operations and maintenance of the TLC facility. The SFEZ administration and the private developer create a special purpose vehicle (SPV) which shall undertake designing, development, financing, investments, operations and maintenance of the TLC facility.

97. Under the joint development model, the majority of the investment responsibility is assumed by the private developer. The private developer undertakes activities such as designing, developing and operating. The SPV will earn revenue from TLC operations and will pay to the SFEZ Administration either in the form of lease rent, fixed revenue share or dividends payment in lieu of the equity held by the administration. Figure 15 provides an outline of the model functionality.

Figure 15: Institutional Structure for TLC under Model II



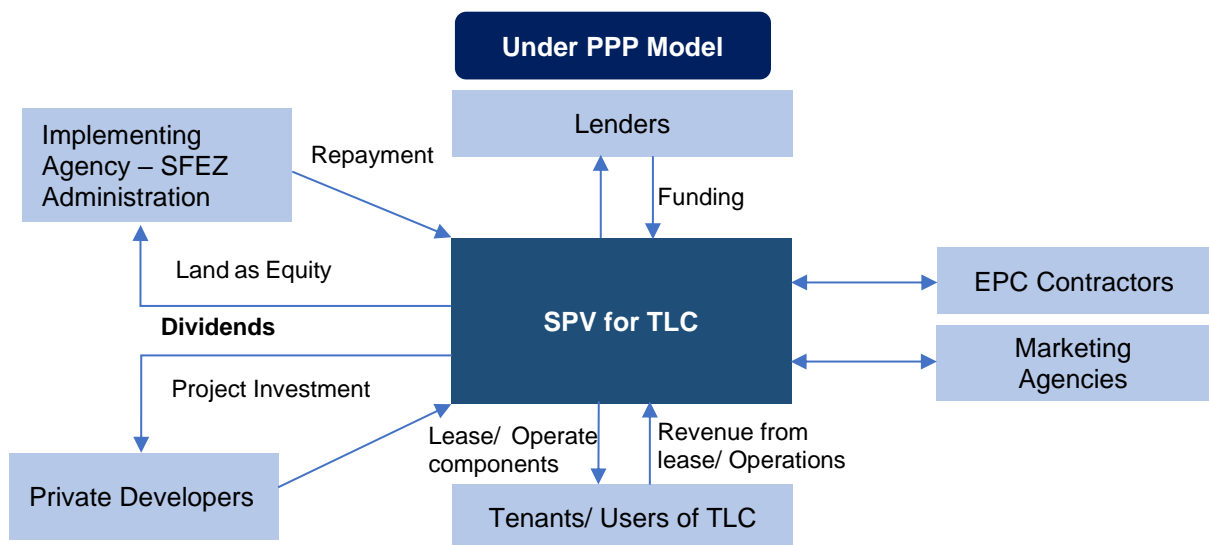
- An SPV shall be created where SFEZ Administration shall contribute to the equity in the form of lease rights for land and the developer may invest for TLC infrastructure development as its equity contribution.
- The developer shall be responsible for development of requisite TLC infrastructure.
- Private developer may manage Design, Construction, and financing risks of the project and share market risk with the Authority.
- O&M responsibility may be outsourced to a separate contractor.
- Both SFEZ Administration and the developer shall get dividend share as per its equity share in this SPV.
- Proposed revenue model is -1) Built-up area premium model, 2) Revenue share and 3) Co-development / Dividends model.

SFEZ= Sugd Free Economic Zone, SPV= special purpose vehicle, TLC = trade and logistics center
 Source: Study team analysis

98. The external development of the site which includes transport connectivity, last-mile railway connectivity, building and maintenance of connecting roads, and other amenities within the SFEZ which are jointly used by the TLC and other residents of SFEZ shall be maintained and developed by the SFEZ Administration. While the creation of an SPV brings in more capability and bandwidth to develop the project, it also brings transparency in operations of the facility. The SFEZ Administration, being the equity partner, shall share voting rights and will also have participation in important subjects such as determination of pricing and rentals, allotment structure, etc.

99. The creation of the TLC under a PPP model may require several changes in the current SFEZ Administration and FEZ laws in general. The current FEZ law does not allow ownership of asset to any third party but the respective state government, however, the SPV created may have to grant management rights to the TLC to attract private investments in TLC (Figure 16).

Figure 16: Institutional Structure for TLC through Special Purpose Vehicle



EPC = engineering procurement and construction, SFEZ= Sugd Free Economic Zone, SPV= special purpose vehicle, TLC = trade and logistics center
 Source: Study team analysis

100. As the resident investors of FEZ are not subjected to taxes other than social and personal income tax, the same incentives should be accorded to the TLC developer for the entire period of TLC development and operation.

IV. FINANCIAL ANALYSIS

101. The financial analysis of the proposed TLC project provides a comprehensive overview of its financial viability. The model reviews relevant sources to analyze the project's revenue, costs, cash flows, potential risks, and returns. Market research, analysis of comparable companies, industry reports, and regulatory guidelines have been applied and analyzed in the financial model. This chapter also offers a summary of the methodology and assumptions of the financial assessment.

A. General Assumptions

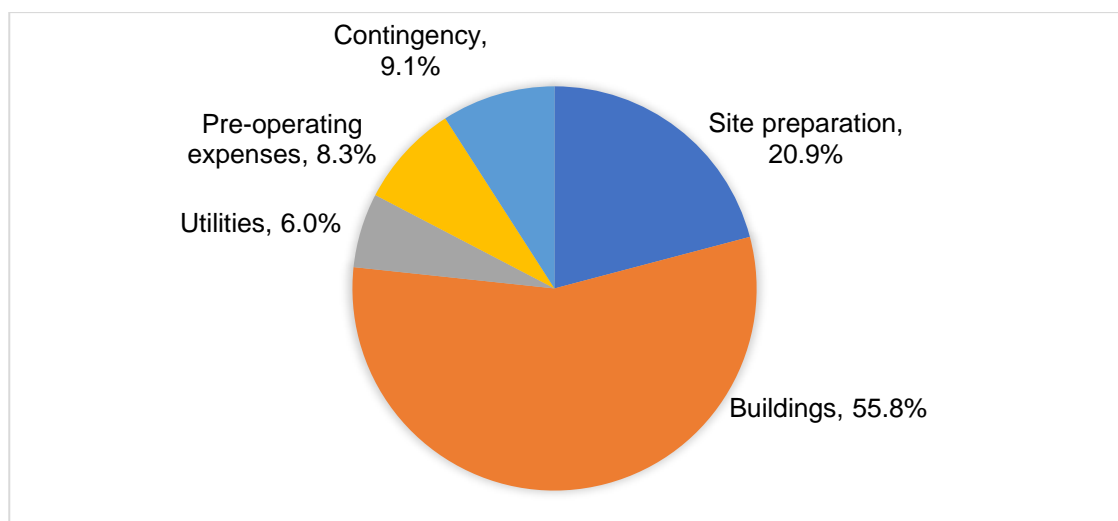
102. To determine whether this project is financially viable and sustainable, a discounted cash flow (DCF) model is used to calculate the net present value (NPV) and the internal rate of return (IRR). The analysis generally divides the timeline into two phases (two decades) to correspond to the expected demand levels in the region so that the capital investments would have a higher utilization. Phase 1 and phase 2 are assumed to last within 2029-2038 and 2039-2048 periods respectively. Considering the required period to prepare the necessary documentation such as feasibility study, approval from the respective government agencies etc. the analysis assumes that the operations would not commence earlier than 2029.

103. It is assumed that the TLC would receive revenue from cargo handling, parking, and renting spaces. Revenue from the cargo handling services is generated through warehousing charges. Revenue from parking is generated from fees for transit of domestic and foreign vehicles with cargo. Revenue from rent includes rental payments for commercial and cargo office spaces that will be leased out by potential operators and rent from expo center as the exhibition venue for trade fairs and consumer events.

104. The operational expenditure (OPEX) is derived by the median OPEX to Revenue ratio of 69.3% from comparable logistic centers and companies. The ratio is deemed reasonable as it is also comparable with KLC's costs.

105. Capital expenditure (CAPEX) is assumed to be borne in two phases based on the project timeline. The analysis estimates the total project CAPEX to be US\$ 43.5 million, with buildings making up most of the CAPEX (55.8%), followed by infrastructure development (20.9%), and contingency (9.1%) (Figure 17). The cost estimates of comparable logistic centers (the KLC and the logistics center in Nizhny Pyanj) were used for benchmarking purposes regarding any possible structural differences between them.

Figure 17: Capital Expenditure Breakdown (%)



Source: Study team analysis

106. The investment period includes two different scenarios for funding, scenario 1 with 100% multilateral loan and scenario 2 with a hybrid of debt and equity based on market terms. Additionally, tax benefits and a variability gap funding (VGF) option were investigated under scenario 2.

107. The table below (Table 14) describes the key assumptions undertaken in the course of financial analysis.

Table 14: Description of Assumptions

	Components	Description
1	Timing assumptions	<ul style="list-style-type: none"> • Construction period for phase 1 – 2027-2028 • Construction period for phase 2 – within 2038 • Phase 1 operating period – 2029-2038 • Phase 2 operating period – 2039-2048
2	Macroeconomic assumption	<ul style="list-style-type: none"> • Macroeconomic assumptions of Tajikistan were based on the forecast provided by IHS Markit agency. The two main indicators, consumer price index (CPI) and exchange rate, were applied for the analysis. • Macroeconomic indicators from other sources such as IMF were also applied for comparison purposes, but there are no up-to-date data and absence of the exchange rate forecast in Tajikistan.
3	Tariffs	<ul style="list-style-type: none"> • Tariffs were based on the available market data on real estate in Tajikistan, the Trade Portal of Tajikistan data, and consultations with stakeholders of KLC. • As part of the financial analysis, the actual tariffs are as follows: <ol style="list-style-type: none"> i. Warehouse rental rate – \$3.4 per m² ii. Fee for loading and unloading works – \$2.4 per tons iii. Parking fee for domestic cargo vehicles – \$10 per vehicle iv. Parking fee for foreign transport – \$15 per vehicle v. Monthly rental rate for commercial space – \$3.73 per m² vi. Monthly rental rate for offices – \$5.76 per m² vii. Daily rental amount for expo center – \$14.64 per m²
4	Volumes	<ul style="list-style-type: none"> • The total retail turnover for TLC and number of vehicles are estimated according to the Demand Assessment (see C0), regarding the percentage volume requiring warehousing (21%). • The area is distributed according to the volume of cargo transportation into two phases. Phase 1—around 29% of overall volume of freight transportation is allocated to the period of 2029-2038, while the remaining 71% is distributed between 2039-2048 (Phase 2). • The volumes of the rental revenue were based on the planned area of TLC (80 ha). The area's functional distribution consists of warehouses and facilities area (81%), support infrastructure (11%), including commercial and cargo office spaces, expo center and open space, and truck terminal (9%). • Based on the market analysis, the average occupancy rate of warehouses in the region was applied at the level of 80%. Initial occupancy rate of commercial and office spaces and expo center at the start of operation were assumed to commence at 50% gradually reaching industry levels after 3 years.
5	OPEX	<ul style="list-style-type: none"> • OPEX to Revenue ratio was based on the average median value 69.3% of benchmarking comparable logistic centers and companies that primarily engage in warehousing, value-added services, distribution, and logistics business (Table A6.1). • For comparison purposes, the OPEX to Revenue ratio (at the level of 70%) was compared to the margin level of the logistic centers in Tajikistan.

	Components	Description
6	CAPEX	<ul style="list-style-type: none"> • The total amount of CAPEX was determined by multiplying the estimated area of the TLC and the unit costs provided by the Administration of the Sugd and other publicly available information. • The construction costs are divided into two phases accordingly: <ol style="list-style-type: none"> i. About 59% of the CAPEX would be allocated during the first year of construction for site preparation, utilities, and internal roads. The construction of logistics facilities development – in the second year of construction. The remaining CAPEX would be split between the two phases. ii. In 2038, when the volumes reach a stabilized level of cargo movement, Phase 2 is expected to commence incurring the rest of CAPEX (~41%) for landscaping and parks, as well as supporting facilities (commercial spaces, expo center, and training center). • The resulting project CAPEX of TLC is \$546,356 per hectare. (CAPEX breakdown in Table A4.1). For analytical and benchmarking purposes, two comparable logistic centers in Tajikistan have been analyzed on per hectare basis regarding possible structural differences between the projects. The CAPEX amount for TLC is comparable to the similar centers in Tajikistan such as KLC and Nizhny Pyanj (see Table A4.2), hence providing a rationale for the calculated CAPEX amount.
7	Financing	<ul style="list-style-type: none"> • Financing scenario 1 – 100% multilateral loan. Financing scenario 2 – the capital structure (respective shares of 48% and 52% for equity and debt) is based on the market terms and with the involvement of a private partner and commercial loan (see Table A5.1). • The interest rate of 6% for multilateral loan is based on the official information sources of multilateral organizations mark-up (2%) and risk-free rate (4%). Second scenario's interest rate is based on the average weighted long-term interest rate on loans issued by commercial banks in US\$ (12.3%) according to the National Bank of Tajikistan. • The repayment terms are based on the market analysis of infrastructure projects with repayment provided by international financing institutions in the region. Repayment tenor is assumed as 10 years for scenario 1 and 5 years for Scenario 2. The grace period is assumed to be 2 years. Error! Reference source not found. represents the repayment terms. • Since the operational period of the project begins only two years after the issuance of the first loan, we considered a short-term loan to cover cash gaps. The interest rate is based on the average weighted interest rate on commercial loans for National Bank of Tajikistan in US\$ with less than a year maturity (13.0%). In the case of absence of these financing methods, it is assumed the possible involvement of additional funds from the investor or attracting new loans and subsidies from the government. • In the case of Scenario 2, an additional funding option (Scenario 2B) was assumed, based on the assumption that TLC will have tax benefits and other means of support from the government. For instance, the government subsidy could be involved in the form of VGF to make the project viable for potential investors. The financial feasibility of the project would be improved by subsidies in the amount of \$18.5 million, which would cover the CAPEX for site preparation, utilities, roads, and a portion of logistics facilities.
8	Discount rate	<ul style="list-style-type: none"> • The discount rate for Scenario 1 was assumed at 6% at the level of borrowing cost. • The discount rate for Scenario 2 was estimated considering the market capital structure of the real estate industry. Cost of equity was calculated through CAPM method and included all relevant components resulting in 19.4% discount rate.

	Components	Description
9	Tax	<ul style="list-style-type: none"> Corporate income tax rate was applied as 18% based on the Tax Code of the Republic of Tajikistan.
10	Working capital	<ul style="list-style-type: none"> The turnover days are applied as 30 days for accounts receivable and 60 days for accounts payable based on the industry indicators (Table A5.3).

CAPEX = capital expenditures, KLC = Khujand Logistics Center , TLC = trade and logistics center
Source: Study team analysis

B. Financial Analysis Results

108. When analyzing the financial attractiveness of an investment project, uncertainties and risks associated with the project need to be considered. The outcome of financial analysis is relevant only under the assumptions made during the analysis. Table 15 illustrates the financial results of the model for both financing scenarios. Cash flows projections for 2027-2048 are presented in Appendix 5 for each financing scenario (see Table A5.4 and Table A5.5).

109. Based on the derived results, the project would be viable and have a positive NPV in case of scenario 1 and scenario 2B that involves a VGF in the form of tax benefits and subsidies from the government. The required VGF of \$18.5 million, covering the CAPEX for site preparation, utilities, roads, and a part of logistic facilities costs would result in an IRR of 19.4% and hence, make the project financially viable for a potential private partner. Financing scenario 2A, which is purely based on the market terms and financing conditions, does not make the project bankable from the standpoint of a private investor as illustrated below (Table 15).

Table 15: Results of Financial Analysis (\$'000)

Indicators	Scenario 1	Scenario 2A	Scenario 2B
Project NPV	20,304	(4,726)	44
Project IRR	12.5%	12.5%	19.4%
Payback period	14	14	9

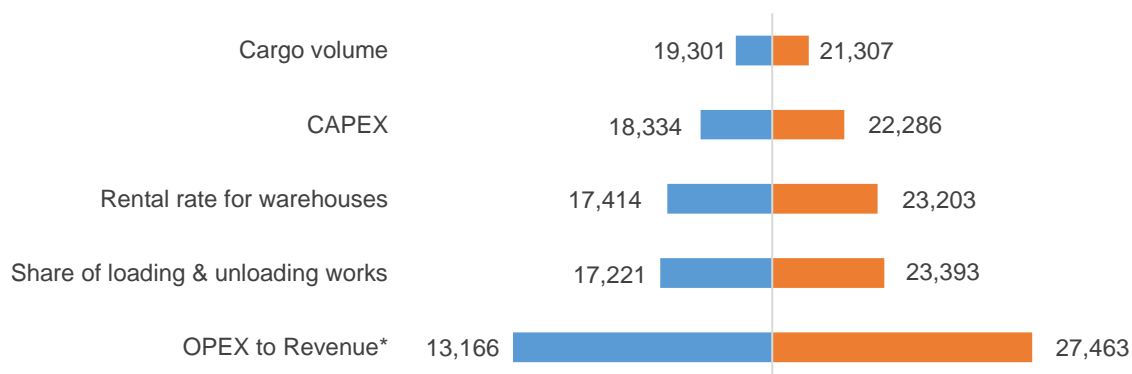
IRR = internal rate of return, NPV = net present value

Source: Study team analysis

C. Sensitivity Analysis

110. The sensitivity analysis was conducted for both financing scenarios and based on the key operational and financial indicators to demonstrate the effects of changes in financial model assumptions. For illustrative purposes, the results of project NPV are shown below in tornado charts with increments (+10%/-10%) (see Figure 18). Detailed sensitivity analysis is presented in Appendix 6 (Table A6.1, Table A6.2, Table A6.3, Table A6.4).

Figure 18: Sensitivity Analysis for Project NPV (Scenario 1) (\$'000)



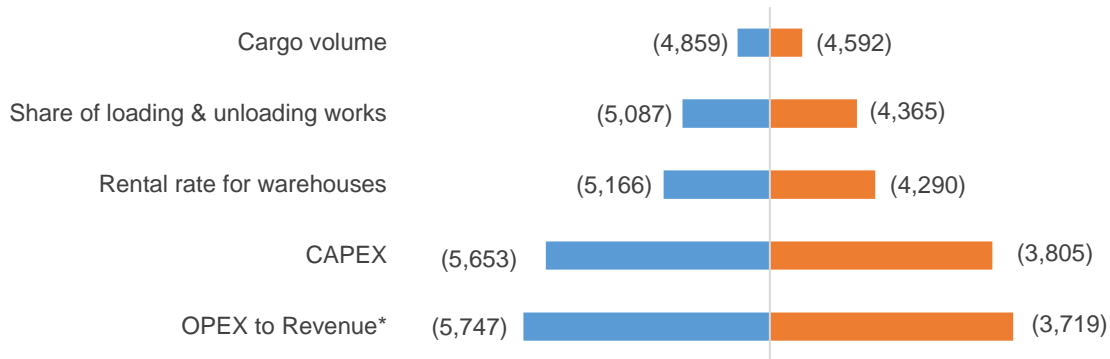
CAPEX = capital expenditures, NPV = net present value, OPEX = operating expenses

Note: * OPEX to Revenue (+5%/-5%)

Source: Study team analysis

111. The sensitivity analysis for financing scenario 2 is presented below in Figure 19. The details of sensitivity analysis are shown in Appendix 6 (Table A6.5, Table A6.6, Table A6.7). Sensitivity analysis on commercial loan terms is presented in Table A6.8

Figure 19: Sensitivity analysis for project NPV (Scenario 2) (\$'000)



CAPEX = capital expenditures, NPV = net present value, OPEX = operating expenses

Note: * OPEX to Revenue (+5%/-5%)

Source: Study team analysis

112. The tornado chart illustrates that the largest impact on model results from changing OPEX and CAPEX. Therefore, the stakeholders of the project should pay a particular attention to costs management and optimise the process of retaining an OPEX level at 70% of revenue to sustain profits. In order to retain investment performance and project viability, the stakeholders should also conduct a detailed CAPEX analysis.

D. Conclusion

113. The financial viability of the project is highly sensitive to the expected financing conditions. Scenario 1 with 100% multilateral loan financing terms results in better financial viability. Meanwhile, given Tajikistan's high risk of debt distress, the attraction of external loans by multilateral organizations may be limited and need to be carefully analyzed.

114. Funding Scenario 2, which is purely based on the market financing conditions, results in financially unattractive outcome, complicating the attraction of a private partner for potential investment. To make the project financially viable, government support in the form of tax preferences (setting corporate profit tax payable to zero) and additional subsidies which would cover CAPEX for site preparation, infrastructure development and part of logistics facilities in the amount of \$18.5 million could improve project indicators to 19.4% of IRR and a positive NPV.

115. It is important to consider the results of the model along with the sensitivity results, especially for OPEX and CAPEX assumptions. An increase in CAPEX by 10% would potentially make even financing Scenario 1 unprofitable. Optimization of CAPEX will improve financial results subsequently. In case of any changes in assumptions or new additional available information, the analysis results could be adjusted or changed accordingly. It is worthy to note that the current stage of the project is a pre-feasibility study, and a full-scale feasibility study is required to be conducted to deepen the analysis, confirm, and strengthen the results of the preliminary analysis if the TLC is going to be constructed.

V. KEY EXTERNAL ENABLERS

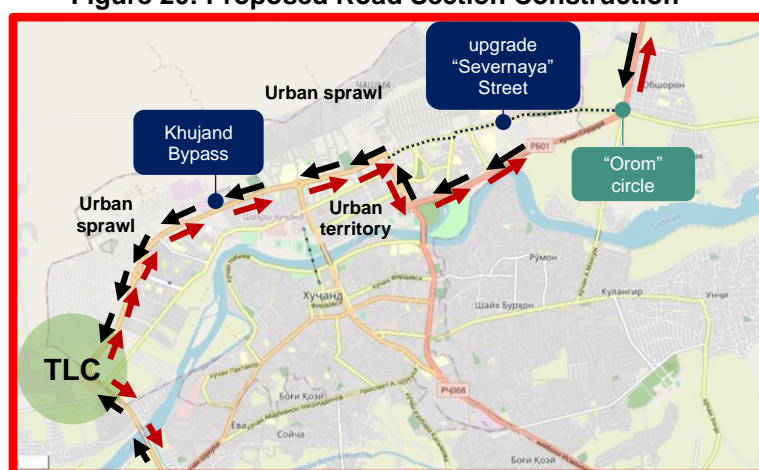
116. The smooth functioning of the TLC depends on well-developed hard infrastructure such as transport connectivity within the Sughd province particularly well-functioning transport connecting to the TLC and to the BCPs. It will also need the support of soft infrastructure—the favorable policy environment such as simplified procedures for border crossing of cargo in and out of the Sughd province.³¹ This chapter highlights the need for hard infrastructure development particularly transport connectivity, and soft infrastructure development particularly policy reforms desired to facilitate trade in the Sughd province in general, and to enable the smooth functioning of the TLC in particular.

A. Infrastructure Needs

117. The proposed optimal TLC site is in the southwest industrial area of Khujand, inside the SFEZ, on the right-side bank of the Syrdarya River. It has a direct road connection with the new international transit highway (bypass) that starts directly next to the central entrance of the SFEZ. The bypass diverts transit traffic and trucks move around the city center to avoid congesting the roads and streets of the city center. Khujand bypass runs from the southwest towards the crossroad of “Orom” linking the Fotehobod-Oybek BCP (with Uzbekistan) in the north, and the Kyrgyz Republic in the east, ensuring high-speed links along those international roads. There is also a newly constructed bridge over the Syrdarya River connecting the TLC site with an Asian Highway (AH7) running north-south toward Dushanbe. However, a significant drawback of this proposed site is the absence of direct connectivity to the railway network. The nearest railway station is 18–20 km away from the TLC site. Proposals for key infrastructure/transport projects to facilitate the full functioning and service of the TLC are summarized below.

118. **Upgrade existing section of road for a new bypass and land-use regulation.** The TLC has immediate and easy access to Khujand and its surrounding urban settlements through 4 bridges on the Syrdarya River and a well-developed urban road network. Sections of CAREC Corridor 2, Asian Highway and Dushanbe–Khujand–Chanak Highway run through the town center or densely populated areas. This road network provides favorable local and intraregional connectivity for the movements of people and goods. The traffic on these roads is not high but has grown over the years. There are two suggestions to avoid congestion for seamless transportation: (i) upgrade the existing road along “Severnaya” street section of the bypass and (ii) planning and regulations of land-use to provide the necessary controls to prevent construction development along the bypass (Figure 20).

Figure 20: Proposed Road Section Construction

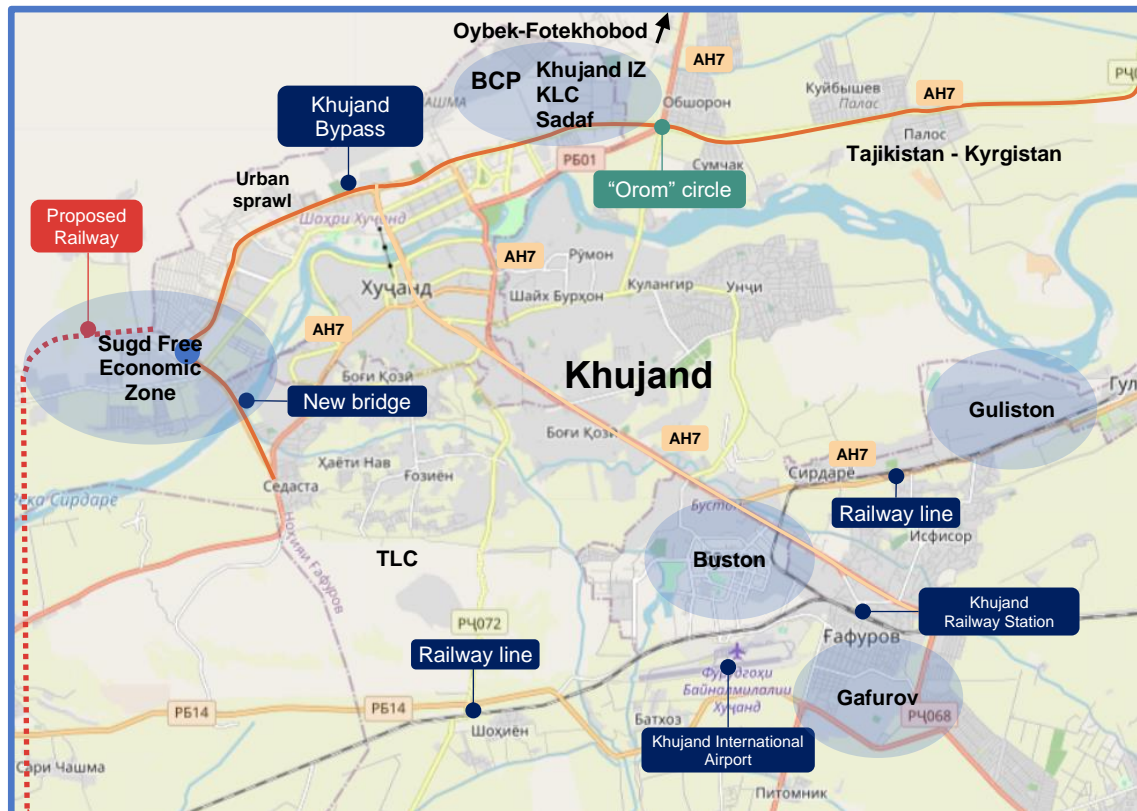


TLC= trade and logistics center
Source: Study team analysis

³¹ Simplification of entry and exit procedures result in shorter delivery time and shipment costs. Section B on Trade Facilitation in this chapter describes various techniques to do this, such as a green lane. The study team includes recommendations not only to simplify entry and exit in the TLC, but also between the TLC and the BCPs. This is an important consideration because shipments in landlocked Central Asia tend to be held up at land border-crossings.

119. **Construct a new rail link.** As mentioned above, there is no direct railway access to the proposed TLC site. However, Khujand Railway Station is 19.7km and Spitamen-Nau Railway Station is 28 km away from the TLC. It is proposed to construct a 22 km long rail extension to connect the TLC to the existing rail network and facilitate the shipments from and to the TLC accessing the Spitamen station. This will also allow faster border-crossing via the Nau-Bekabad BCP (with Uzbekistan) which supports rail transport. Railway line construction will help the business community by offering alternative modes of transport and services, thus promoting and expanding trade in the province (see Figure 21).

Figure 21: Proposed Road and Rail Construction to the TLC



BCP = border crossing point, KLC = Khujand Logistics Center , TLC= trade and logistics center
 Note: Red line represents a prioritized investment to connect the TLC to the existing railway network.
 Source: Study Team Analysis

120. **Install Automated Weight Bridge system.** Presently, transit shipments undergo repeated weight controls at designated weight stations to obtain an official weight certificate. This is done by the transit country to ensure that the physical weight of the truck and goods tally with the stated weight on the road waybill, for example, the Convention on the Contract for the International Carriage of Goods by Road (CMR) Consignment Note. However, this adds time and cost to international shipments as the trucks have to detour to the weight stations and wait in queue. Such weight stations are often hotbeds for corruption as the drivers tip the officers if the control is manual. It is suggested that Tajikistan collaborate with Uzbekistan, Kazakhstan, and other export, import and transit countries in implementing Annex 8, Appendix 2 (the International Vehicle Weight Certificate) of the International Convention on the Harmonization of Frontier Controls of Goods. Further, it is recommended that automated and digital weighbridge solution be deployed at BCPs and the TLC to avoid human intervention in the weighing process.

121. **Revitalize industrial properties in Sugd province.** Khujand is located close to the cities of Buston and Guliston, as well as the district of Ghafurov. These sites are near the Khujand International Airport and Khujand Railway Station and have strong industrial capacities served by various rail yards and sidings. These three locations (Buston, Guliston, and Ghafurov) are well

connected with each other by rail and road and have great potential to transform into high-tech and competitive innovative industries with high export potential if the railway operation is more efficient and the assets modernized. That would provide a source of cargo and income for the railway authority. It is proposed that the Sugd administration conducts a separate study to examine ways that can revitalize these three industrial estates through strengthening the local transport infrastructure connecting to the TLC, where the operators in these industrial estates can use the TLC's services.

122. Rehabilitation and electrification of the northern rail line. To ensure efficient interconnectivity of the abovementioned territorial and industrial structures as well as TLC with external markets, rehabilitation and electrification of the northern rail line section is needed. Due to the country's low electricity price, electrification could lower operational costs and carbon emissions, stimulating the use of railways over road transportation.

123. Develop an air cargo village. Khujand International Airport is 22.5 km north of the TLC. As the Sugd province exports a significant volume of agricultural products, particularly early harvest items, it is beneficial to use air transport to move these perishables quickly. Food items that are processed and packaged inside the TLC can be customs cleared at the source and then moved under a bonded consignment to the Khujand International Airport. The airport does not have any logistics facility presently. It is proposed to develop an air cargo village, as an extension of the TLC to support multimodal logistics. The air cargo village provides temperature-controlled storage and facilitates the air cargo agent to perform logistical activities such as consolidation, deconsolidation, packing, marking, labeling and inspection.

B. Trade Facilitation Needs

124. Adoption of Coordinated Border Management (CBM). CBM refers to a coordinated approach by border control agencies, both domestic and international, to achieve greater efficiency in managing trade and travel flows, while maintaining a balance with compliance requirements.³² CBM is proposed to ensure minimal delay for shipments between the border and the TLC. This requires a few measures to achieve rapid border-crossing including automating, streamlining and simplifying the physical and information flows.

125. On-site inspection and customs clearance. The TLC will comprise of offices housing customs, transport, SPS and veterinary controls. Inbound goods can terminate here for physical inspection and the goods would be cleared for the consignees to receive and distribute to other locations in Tajikistan. Outbound goods would be consolidated here for customs seal before leaving for the border to the final destination. The various agencies' officers can complete inspection at source for outbound goods so that those shipments can cross the external border promptly, without the need for repeated inspection. Any exports can be loaded onto the vehicles or train wagons and containers under customs supervision and customs sealed. The shipment then proceeds to the exit border and leaves under a 'green lane' arrangement to avoid unnecessary waiting time at the border. This requires the nearest BCPs (Fotehobod-Oybekand Nau-Bekabad) to have physical green lanes to support such expedited clearance. For inbound shipments, the vehicles will go through the green lanes. Drivers with shipping documents with the final destination as TLC will be permitted to go through the BCP under the green channel and go to the TLC for final clearance. To implement inspection at source, the following solutions could be considered by customs, (i) station customs officers at bonded zones to perform the inspection, (ii) deploy mobile teams of customs officers to specific sites for inspection, prioritizing those already operating as in a bonded zone or enjoy the status of an Authorized Economic Officers, (iii) install mobile vehicle inspection equipment that can move to different locations inside or outside the TLC to scan the items inside a transport vehicle.

126. Promote cross-border collaboration between border agencies. Tajikistan provides legislative backing for the preliminary declaration of goods under Article 130 of the Customs. In

³² World Customs Organization, <https://www.wcoomd.org/-/media/wco/public/global/pdf/topics/facilitation/instruments-and-tools/tools/safe-package/cbm-compendium.pdf>

practice, pre-arrival processing operates with Afghanistan, the Russian Federation, and Uzbekistan as part of the "Green Corridor" agreement, which is a simplified procedure for customs control between the relevant goods (commodities of agricultural products) according to the technical conditions developed for the "Green Corridor." A "Green Corridor" agreement that includes Kazakhstan would be beneficial for the STKEC development by encouraging intra-regional trade.

127. There are 63 physical locations in Tajikistan that provide support for the application and issuance of permits. The TLC should be added to the list of locations where the support of the single window is offered, in particular, to foreign investors and operators which can include overseas manufacturers, trading firms and logistics service providers.

128. **Streamline certification process and fees.** Tajikistan adopts risk-based management, and testing of all perishable goods is mandatory by the Agency of Standardization, Metrology, Certification, and Trade Inspection, which also provides accredited certificates to traders. Perishable goods have a limited shelf life, thus getting certification in time is important for traders to reduce loss. At present, application for a certificate for perishable goods takes 3 days on average. Expediting this service creates opportunities for corruption and bribery, so it is important to regulate terms and fees, including for expedited services.

C. Policy and Regulatory Interventions

129. The establishment and operations of the TLC will require a set of both infrastructure and policy enablers based on the proposed institutional framework to coordinate policies and regulations at national, provincial and city level. The TLC is envisaged to become one of the largest storage and transit spaces for Sugd province to provide value-added logistics services for customs clearances. This will create opportunities for Sugd province to increase trade with other countries in Central Asia and beyond, through ensuring good access to logistics services and amenities to its tenants.

130. This section details the policy and regulatory enablers that are needed to facilitate the establishment and operations for the TLC. These include policies and regulations to be set forth by the government such as PPP structuring, FEZ laws, investment promotion regulations and customs regulations which will form the basis for the TLC's operations, with strengthened participation of private sector within the SFEZ. Table 16 highlights major interventions for the TLC's incorporation and implementation.

131. Tajikistan policymakers have revised existing laws to attract foreign investment. In the past, production may comply to an approved list of products for a specific SEZ. If a business desires to produce any item not within the list, special permission must be obtained, resulting in lengthy review and approval process. This requirement is now removed. The latest SFEZ regulation states that as long as an item is not under prohibition, a business is free to conduct business activities. The "Law on Foreign Investment" in the Republic of Tajikistan is also updated to include more protection for foreign investors, such as Clause 7 and 8.³³

³³ The Law on Foreign Investment in the Republic of Tajikistan
www.wto.org/english/thewto_e/acc_e/tjk_e/wtactjk13a1_leg_7.pdf

Table 16: Policy and Regulatory Enablers for Trade and Logistics Center

	Interventions	Governing Agency	Policy/Regulations for Review
(i) Incorporation of TLC			
1	Incorporation of a customs office within the SEFZ premises which is operated by the Tajik Customs department	Tajikistan Customs Service	Customs Code of Tajikistan
2	Incorporation of TLC under PPP mode - the FEZ and SFEZ regulations to have a provision for formation of SPV* <i>(*Applicable only in case of model II of institutional framework which is PPP based)</i>	PPP Council	FEZ Law of Tajikistan PPP Law of Tajikistan
(ii) Operations of TLC			
3	Procedure for entry and exit from the SFEZ premises	SFEZ Administration	Regulation of SFEZ
4	Amendment of the relevant laws & regulations to enable Govt agencies in charge of customs, food safety, SPS and veterinary control to setup their offices and, as appropriate, laboratories and provide clearance and/or certification services at the TLC	SFEZ Administration, Tajikistan Customs Service	Regulation of SFEZ
5	Procedure for cargo movement outbound from TLC at Tajikistan BCP	Tajikistan Border Services	Customs Code of Tajikistan
6	Fees structure for TLC under the PPP model* <i>(*Applicable only in case of model II of institutional framework which is PPP based)</i>	PPP Council	Regulation of SFEZ
7	Support in developing and integration of a portal for active monitoring of cargo movement and transit to BCP	Tajikistan Customs Service	Customs Code of Tajikistan
8	Investment promotion and customized incentives for TLC	Ministry of Economic Development and Trade	Investment Promotion Policy

BCP = border crossing point, FEZ = free economic zone, PPP = public private partnership, SFEZ = Sugd Free Economic Zone, TLC = trade and logistics center
Source: Study team analysis

132. The following sub-sections describe the interventions listed in Table 16 Table 16 in detail, including the perceived necessity, authority/agency responsible and level of approvals required.

Incorporation and Establishment of TLC

133. For the TLC to obtain access and space to construct and operate within the SFEZ location, special approval, and possible amendment in the SFEZ Regulations (Decree No. 1146 of Majlisi Namoyandagon Majlisi Oli of Republic of Tajikistan on 29 October 2008) are required. The priority list of activities in the SFEZ includes production and innovation. The FEZ regulations law of Tajikistan stipulates trade and commercial activity as a separate priority activity within the FEZ regulated zones. The same can be added to the regulations governing the SFEZ incorporating TLC within the SFEZ.

134. As per the FEZ law, preferential tax regime for FEZ (all business activities regardless of ownership shall be exempt from all taxes except physical person income and social security tax) should be applicable to the TLC. Also, the profit (including salary) earned by foreign investors and foreign employees in foreign currency should not be taxed, and not be controlled for taking out of Tajikistan.

135. To facilitate fast passage of goods from the TLC to other countries, a customs clearance office/zone is desirable to be set up within the TLC to provide fast clearance of international cargo. An alternative is to locate customs authorities within the TLC, to perform the same customs clearance duties.

136. In case the TLC is developed under Model II (PPP model between the SFEZ Administration and a private developer), an intervention in the SFEZ regulations might be to provide flexibility for the TLC to form SPVs with a private developer. The SFEZ regulations do not explicitly state the provision for formation of SPVs for SFEZ Administration. However, several infrastructure projects under PPP model are under feasibility study within the SFEZ, including the construction of railway branches and restoration of drinking water supply with investors from the Russian Federation and PRC, supported by the SFEZ Administration and Ministry of Economic Development and Trade. The same can be applied to the TLC.

Operations and Maintenance Activities of TLC

137. The SFEZ has specified laws and procedures for the entry of foreign nationals into the bordering zones of Tajikistan (for business and private trips) with permission from the Ministry of Internal Affairs. The Ministry handles the registration, entrance and stay of foreigners after necessary information submitted by the SFEZ Administration. A simplified procedure should be in place to facilitate the entry to and exit from the TLC and the SFEZ by foreigners (e.g., trade and logistics service providers, truck drivers) carrying goods or transshipments to Tajikistan territory.

138. As part of the border crossing procedure, the Tajikistan government provides an option of green channel (express lane) for specific cargo such as perishables and commodities of national importance. Tajikistan conducts pre-arrival procedures with Afghanistan, the Russian Federation, and Uzbekistan under a "Green Corridor" agreement, through a simplified procedure for customs control for specific goods (e.g., commodities of agricultural products). The cargo outbound from the TLC can also use the "Green Corridor" at the BCP as one of the benefits and incentives of using the processing services offered by the TLC.

139. At present in Sugd province, cargos for exports and transshipments crossing the BCPs are subject to multiple checks and documentation requirements by the border control agency, which usually involves lengthy waiting at the BCPs, incurring high time cost, because of multiple agencies executing border control without inter-agency coordination and cooperation. The Government launched a single window portal for foreign trade in 2019, to provide a single platform for data access and procedural clearances. Data from the TLC can be integrated into the single window portal to provide automated approvals for cargo passing from the TLC, preferably with a special privilege as a Green Corridor with higher priority clearance at BCP, as part of the pre-approval from the single window. This procedure will ensure traders and shippers not to enter the same shipment data twice and save time and cost at the BCP.

140. The SFEZ Administration oversees the leasing rates for the land under SFEZ territory. The lease rentals for land under SFEZ are guided by rules for rent payment calculation, as approved by the state authority on FEZ management. In the case of Model-2 (PPP mode) the management committee of SPV will decide the lease rentals to be levied.

141. A special financial assistance can be provided as a policy-based intervention to incentivize the private sector to invest in the development of logistics and warehouse hubs/centers in selected regions of Tajikistan, including the TLC in Sugd province, which have higher demand for logistics services to meet increased cargo movement, manufacturing and other economic

activities. Eligible developers should meet the criteria of quality and land acquisition standard in accessing the special financial assistance including:

- **Capital Subsidy:** Set a range of percentage reimbursement on fixed capital investment done by the investor in plant and machinery (provide higher incentive in less developed regions)
- **Land Cost Subsidy:** Set a range of percentage reimbursement on land cost (in case of acquisition) done by the investor (provide higher incentive in less developed regions)
- **Reimbursement on utilities charges:** Rebate of power and water tariff for logistics units up to 5 -7 years of the logistics center's operational period.
- **Infrastructure Development Assistance:** Set a percentage assistance to all eligible logistic and warehousing centers for infrastructure development up to a predefined maximum limit against the expenses made for development of the external road/rail infrastructure (access to the project site).

D. Conclusion

142. The smooth functioning of the TLC depends on well-developed hard infrastructure such as good transport connectivity within the Sugd province and soft infrastructure—the favorable policy environment that facilitates trade and border crossing of cargo. A number of enablers that are external to the TLC are needed to facilitate its establishment, enhance its financial viability, boost its economic benefits, and minimize its adverse effects (such as increases in traffic congestion and air pollution in Khujand city). These external enablers include (i) amendment of the legal and regulatory framework for the establishment and operation of the TLC, (ii) development of complementary transport and logistics infrastructure, and (iii) international trade and transport facilitation. The following table lists some of the necessary/recommended actions pertaining to these enablers:

Table 17: Key Actions Related to External Enablers

External Enablers	Necessary/Recommended Actions
1. Amendment of the legal and regulatory framework for the establishment and operation of the TLC	<ul style="list-style-type: none"> • Amendment of the regulation on the SFEZ to simplify the entry/exit procedures for foreigners (e.g., foreign logistics service providers and drivers) • Amendment of the laws on free economic zones and PPPs to enable the incorporation of the TLC under the PPP model (if this institutional model is chosen) • Amendment of the relevant laws and regulations to enable government agencies in charge of customs, food safety, phytosanitary and veterinary controls to set up their offices and, as appropriate, laboratories and provide clearance and/or certification services at the TLC
2. Development of complementary transport and logistics infrastructure	<ul style="list-style-type: none"> • Upgrade of the Severnaya street section of the Khujand bypass road • Construction of a railway extension (22 km) that will connect the SFEZ with the existing railway network • Development of an air cargo village at the Khujand International Airport
3. International trade and transport facilitation	<ul style="list-style-type: none"> • Modernization of border crossing points located in Sugd province • Adoption of Coordinated Border Management • Streamlining of border controls (including food quality, phytosanitary and veterinary controls), especially for perishable goods • Strengthening of the food safety, phytosanitary and veterinary laboratory capacity • Implementation of the e-TIR system, ATA carnet system and CAREC Advanced Transit System in collaboration with Uzbekistan, Kazakhstan and other key export/import/transit countries

External Enablers	Necessary/Recommended Actions
	<ul style="list-style-type: none"> • Introduction of the electronic CMR consignment note, International Vehicle Weight Certificate and electronic entry permits for trucks in cooperation with key export/import/transit countries • Extension of the Green Corridor arrangement with Afghanistan, Uzbekistan and the Russian Federation to Kazakhstan and other key export/import/transit countries • Application of the Green Corridor arrangement to international shipments to/from the TLC

CMR = Convention on the Contract for the International Carriage of Goods by Road, PPP = public private partnership, SFEZ = Sugd Free Economic Zone, TLC = trade and logistics center

APPENDIX 1: ANALYSIS OF CARGO FLOWS AND DEMAND PROJECTION FOR LOGISTICS SERVICES IN SUGD PROVINCE

1. This section provides additional data in Section C (storage demand) and Section D of Chapter 2 on the analysis for cargo flows and demand projection for logistics services in Sugd province, and for the proposed TLC.

A. Demand Projections for Storage Services in Sugd Province

Table A1.1: Storage Area Requirements for Sugd Region

Product Category	Cold Storage	Cool Storage	Covered Sheds	Silo Storage	Tank-based Storage
Rubber and plastic products, any non-metallic mineral products	-	-	9.87%	18.27%	-
Grains	-	-	-	20.14%	-
Dairy products	12.09%	-	-	-	-
Textile and sewing products	-	-	10.20%	-	-
Vegetables	0.01%	9.77%	-	-	-
Food products, together with beverages and tobacco	0.57%	8.53%	-	0.42%	-
Fruits	5.67%	-	-	-	-
Meat and meat products	1.32%	-	0.72%	-	-
Petroleum products	-	-	-	-	1.26%
Automobile	-	-	1.16%	-	-
Grand Total	19.70%	18.30%	22.00%	38.80%	1.30%

Source: Study team analysis based on data from Sugd administration statistics

B. Profile of Cargo Flows in Sugd Province

Table A1.2: Total Volume of Production by Mining Industry in Sugd Province

Extraction of Different Types of Extractive Industry	unit	2019	2020	2021
Coal	MTPA	1.79	1.76	1.69
Oil	MTPA	0.01	0.01	0.01
Natural gas	Cubic meters	542	678	762
Sand and stone	Cubic meters	156,996	183,124	252,509
Salt	Tons	9,834	10,386	344

Source: Official Statistics of Sugd province – Tajikistan Statistics Agency

Table A1.3: Total Volume of Production in Agriculture Sector in Sugd Province

Agricultural products in all categories of farms	Product Category	Volume of production of agricultural products (tons)		
		2019	2020	2021
Grain	Total	331,690.0	351,374.6	328,664.5
Grain	Wheat	-	55,007.2	139,566.5
Grain	Rice	47,974.8	561,187.1	56,538.5
Vegetables	Onions	494,914.9	171,927.6	572,842.0
Vegetables	Potatoes	144,792.7	512,069.1	172,110.5
Cotton		450,322.0	126,011.8	530,000.0
Polish		126,843.5	151,820.3	112,607.3
Apricot		32,742.4	93,899.0	33,779.6
Grapes		98,957.6	50,573.2	37,506.0
Animal feed		61,747.6	466,302.2	54,734.3
Meat (in live weight)		439,624.5	66,594.2	75,859.7
Meat (in live weight)	Chicken meat	58,648.6	9,564.1	17,655.9
Milk		269,224.9	272,960.3	276,695.5
Eggs, a thousand pieces		429,919.3	594,600.9	637,871.6
Other dairy produce		1,516.3	1,550.0	1,581.1
Silk		315.6	142.9	163.0
honey		1,416.5	1,458.5	1,466.3
Fishing		369.9	869.7	890.6
Others		254,321.1	291,215.7	267,981.2
Total		3,197,367.4	3,162,934.1	3,122,409.1

Source: Official Statistics of Sugd province – Tajikistan Statistics Agency

Table A1.4: Total Volume of Production in Manufacturing Sector in Sugd Province (2019-2021)

Product Category	Product	UOM	2019	2020	2021
Production of food products, together with beverages and tobacco	Meat and meat products, including chicken meat, tons	Tons	27,379	28,391	19,447
	Sausage products, tons	Tons	2,259	4,640	1,989
	Pure milk products, tons	Tons	7,218	6,409	7,257
	Cans	Tons	20,346	30,189	30,753
	Confectionery products, tons	Tons	6,452	4,881	4,642
	Others	Tons	293,609	598,146	495,774
	Vegetable oil	Tons	5,028	5,098	4,133
	Pasta, noodles and other pasta products	Tons	1,770	2,881	5,206
	Vodka and liquor and vodka products	Tons	270	243	224
	Barley water	Tons	3	2	2
	Non-alcoholic drinks	Tons	67,808	61,987	89,710
	Mineral water	Tons	17,399	12,888	18,891
	Production of textile and sewing products	Cotton fiber	Tons	42,822	40,101
Cotton rope		Tons	1,902	2,521	2,832
Cloths		Tons	254	279	181
Carpets and carpet products		Tons	10,651	5,708	9,716
School clothes		Tons	0	72,287	192,662

Product Category	Product	UOM	2019	2020	2021
Production of petroleum products	Diesel fuel, tons	Tons	8,201	3,754	4,298
	Fuel oil, ton	Tons	10,248	4,247	5,704
	Asphalt, ton	Tons	44,479	25,637	47,032
Production of rubber and plastic products, any non-metallic mineral products	Cement, ton	Tons	1,317,118	1,280,565	1,393,901
	Building brick	Tons	52,608	52,132	50,465
	Construction concrete	Tons	22,315	16,829	36,239
	Plastic pipes	Tons	2,778	2,467	2,874

Source: Official Statistics of Sugd province – Tajikistan Statistics Agency

Table A1.5: Total Volume of Imports in Agriculture Sector in Sugd Province (2019-2021)

Group of goods	Value (\$'000)			Volume (ton)		
	2019	2020	2021	2019	2020	2021
Domestic bird	-	222	271	-	2,454	3,673
Meat and products	-	3,700	2,329	-	8,814	6,606
Beef	-	17	61	-	61	97
Chicken meat	-	3,683	2,225	-	8,753	6,442
Frozen fish	-	282	657	-	505	1,285
Bird eggs	-	699.6	1129.0	-	2463.2	4028.9
Wheat	1,043,159.9	943,060	966,672	212,244	229,253	248,222
Vegetable oil	57,432.9	37,391	32,271	47,308	31,852	36,181
Sugar and confectionery products	46,511.3	43,881	17,490	22,284	18,800	11,578
Pasta products	-	5,760	4,588	-	6,768	7,085
Potatoes	-	11,547	250	-	2,572	55
Tomato	-	136	581	-	169	695
Mineral products	613,355.9	576,205	663,653	302,559	230,302	338,244
petroleum gas	369,206.2	346,287	-	166,627	144,493	-
Lights	50,391.4	46,968	39,208	12,796	10,335	8,418
Timber and its products	395,550.3	306,003	-	94,173	75,974	-
Paper and cardboard and their products	19,193.7	15,661	-	18,266	14,252	-
Cheap fuel and their products	246,549.2	298,468	-	145,596	157,909	-
Vehicles and equipment	29,354.5	255,989	29,520	76,688	58,989	92,006
Means of transport	47,468.0	51,535	58,661	100,821	88,720	97,892
Misc. Items	74,338.6	55,270.4	44,517.3	18,748.4	20,035.7	28,684.1
Total	2,992,512	2,999,064	1,861,797	1,218,109	1,104,659	884,652
Food Products % of total imports	38%	35%	55%	23%	27%	36%
Wheat % of total imports	35%	31%	52%	17%	21%	28%

Source: Official Statistics of Sugd province – Tajikistan Statistics Agency

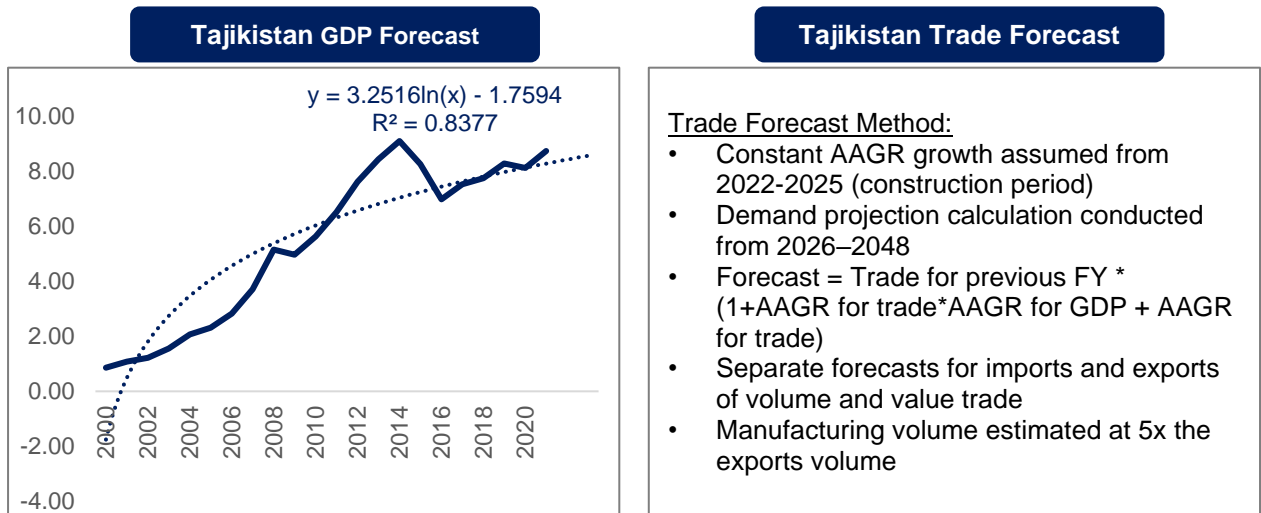
Table A1.6: Imported Cargo for Direct Dispatch in Sugd Province (2019–2021)

HS Code	Product Type - Imports	Product Value (in \$'000)			% of Imports	Direct vs indirect dispatch
		2019	2020	2021		
'27	Mineral fuels, mineral oils and products of their distillation; bituminous substances	550,974	499,171	691,752	29%	Direct Dispatch
'10	Cereals	235,240	261,707	286,560	12%	Possible Storage in warehouse
'72	Iron and steel	151,861	189,399	186,925	8%	Direct Dispatch
'15	Animal or vegetable fats and oils and their cleavage products; prepared edible fats	99,934	110,087	143,520	6%	Possible Storage in warehouse
'44	Wood and articles of wood; wood charcoal	111,101	111,414	136,622	6%	Possible Storage in warehouse
'87	Vehicles other than railway or tramway rolling stock, and parts and accessories	65,718	23,395	98,268	4%	Possible Storage in warehouse
'28	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals	118,383	105,439	76,562	3%	Possible Storage in warehouse
'23	Residues and waste from the food industries; prepared animal fodder	23,337	37,386	64,736	3%	Possible Storage in warehouse
'19	Preparations of cereals, flour, starch or milk; pastrycooks' products	36,618	44,313	51,558	2%	Possible Storage in warehouse
'84	Machinery, mechanical appliances, nuclear reactors, boilers; parts thereof	26,474	27,230	41,590	2%	Possible Storage in warehouse
'39	Plastics and articles thereof	26,983	33,800	40,306	2%	Possible Storage in warehouse
'22	Beverages, spirits, and vinegar	20,018	26,941	38,673	2%	
'31	Fertilizers	30,760	40,166	36,903	2%	Direct Dispatch
'85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television ...	43,102	31,685	36,640	2%	Possible Storage in warehouse
'73	Articles of iron or steel	23,355	20,403	33,262	1%	Possible Storage in warehouse
'18	Cocoa and cocoa preparations	27,224	25,794	28,974	1%	Possible Storage in warehouse
'34	Soap, organic surface-active agents, washing preparations, lubricating preparations	17,797	23,815	27,286	1%	Direct Dispatch
'93	Arms and ammunition; parts and accessories thereof	14,619	197	27,087	1%	Direct Dispatch
'21	Miscellaneous edible preparations	16,401	18,312	26,712	1%	Possible Storage in warehouse

Source: ITC Trade Maps

C. Cargo Demand Projections for Sugd Province

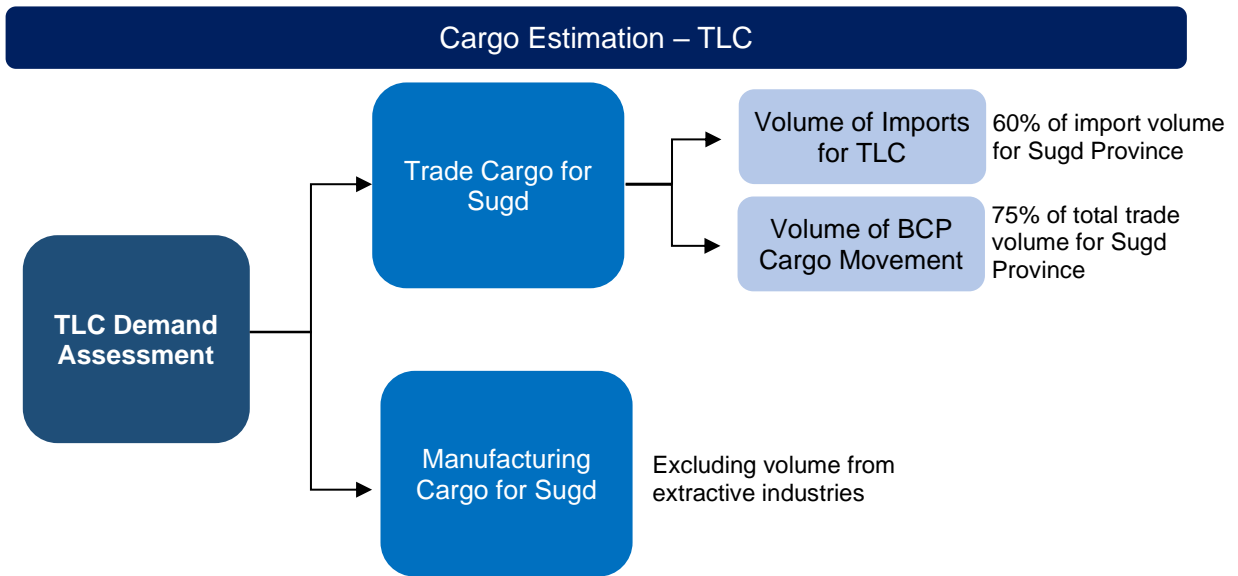
Figure A1.1: Cargo Demand Assessment Methodology for Sugd Region



AAGR= annual average growth rate, GDP = Gross Domestic Product
 Source: Study team analysis basis the GDP data from World Bank

D. Cargo Demand Forecast for TLC

Figure A1.2: Methodology for Cargo Estimation for TLC



Source: Study team analysis based on CPMM data and industry benchmarks

Table A1.7: Trade and Manufacturing Cargo - Sugd Province and TLC

Region	Volume	Unit	Trade and Manufacturing Cargo – Present							
			2014	2015	2016	2017	2018	2019	2020	2021
Sugd	Export	\$ million	287	259	332	522	586	480	308	655
Sugd	Import	\$ million	1,379	1,132	1,055	1,066	1,157	1,416	1,433	1,736
Sugd	All Trade Flows	\$ million	1,666	1,391	1,387	1,588	1,743	1,896	1,741	2,391
Tajikistan	Manufacturing	\$ million	1,307	1,178	1,509	2,371	2,664	2,183	1,399	2,977
Sugd	Manufacturing - Sugd Province	\$ million	523	471	604	949	1,066	873	560	1,191
Sugd	Trade + Manufacturing	\$ million	1,902	1,603	1,658	2,015	2,222	2,289	1,993	2,927
Sugd	Export	MTPA	0.6	0.6	0.6	0.8	1.2	1.2	0.6	1.2
Sugd	Import	MTPA	2.7	2.6	2.7	2.8	2.9	4.0	4.1	4.8
Sugd	Manufacturing-Sugd	MTPA	2.8	3.1	3.0	3.8	6.0	6.1	3.2	5.9
Sugd	All Flows - Region (Sugd)	MTPA	5.5	5.7	5.7	6.6	8.8	10.1	7.3	10.8
TLC	All Flows - Excl. Direct Dispatch	MTPA	3.7	3.9	3.9	4.7	6.6	7.2	4.7	7.4
Sugd	All Flows	Road Tonnage	2.89	3.05	3.04	3.64	5.15	5.65	3.68	5.83
Sugd	All Flows	Rail Tonnage	0.80	0.85	0.85	1.01	1.43	1.57	1.02	1.62
Sugd	All Flows	Number of Vehicles	72,353	76,339	76,082	90,982	128,774	141,144	92,117	145,683

Source: Study team analysis based on data received from ITC Trade Maps, Tajikistan Statistics compendiums

Table A1. 8: Cargo Demand Projections for Trade and Manufacturing Cargo Flows (FY2029 – 38)

Region	Volume	Unit	Cargo Demand Projections (First 10 years)									
			2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Sugd	Export	\$ million	1,512	1,681	1,869	2,078	2,309	2,567	2,852	3,170	3,522	3,914
Sugd	Import	\$ million	2,195	2,262	2,330	2,400	2,472	2,547	2,623	2,702	2,783	2,866
Sugd	All Trade Flows	\$ million	3,707	3,943	4,199	4,478	4,782	5,113	5,475	5,872	6,305	6,780
Tajikistan	Manufacturing	\$ million	6,873	7,641	8,495	9,443	10,497	11,666	12,965	14,408	16,010	17,789
Sugd	Manufacturing - Sugd Province	\$ million	2,749	3,057	3,398	3,777	4,199	4,666	5,186	5,763	6,404	7,116
Sugd	Trade + Manufacturing	\$ million	4,945	5,318	5,728	6,177	6,671	7,213	7,809	8,465	9,187	9,982
Sugd	Export	MTPA	2.5	2.8	3.1	3.4	3.7	4.1	4.5	5.0	5.5	6.0
Sugd	Import	MTPA	8.8	9.6	10.3	11.1	12.0	13.0	14.0	15.1	16.3	17.6
Sugd	Manufacturing-Sugd	MTPA	12.7	13.9	15.3	16.9	18.6	20.5	22.5	24.8	27.3	30.0
Sugd	All Flows - Region (Sugd)	MTPA	21.5	23.5	25.7	28.0	30.6	33.4	36.5	39.9	43.6	47.6
TLC	All Flows - Excl. Direct Dispatch	MTPA	15.2	16.7	18.3	20.0	21.9	24.0	26.3	28.8	31.6	34.6
Sugd	All Flows	Road Tonnage	11.93	13.07	14.31	15.68	17.17	18.81	20.61	22.57	24.73	27.08
Sugd	All Flows	Rail Tonnage	3.32	3.63	3.98	4.36	4.78	5.23	5.73	6.28	6.88	7.53
Sugd	All Flows	Number of Vehicles	298,228	326,677	357,836	391,965	429,349	470,300	515,158	564,300	618,136	677,117

Source: Study team analysis based on data received from ITC Trade Maps, Tajikistan Statistics compendiums

Table A1.9: Cargo Demand Projections for Trade and Manufacturing Cargo Flows (FY 2039 – 48)

Region	Volume	Unit	Cargo Demand Projections (Next 10 years)									
			2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Sugd	Export	\$ million	4,348	4,831	5,367	5,962	6,622	7,356	8,170	9,074	10,078	11,192
Sugd	Import	\$ million	2,952	3,041	3,132	3,225	3,322	3,421	3,523	3,628	3,737	3,848
Sugd	All Trade Flows	\$ million	7,301	7,872	8,498	9,187	9,944	10,777	11,693	12,703	13,815	15,040
Tajikistan	Manufacturing	\$ million	19,765	21,958	24,394	27,099	30,102	33,436	37,137	41,246	45,809	50,873
Sugd	Manufacturing - Sugd Province	\$ million	7,906	8,783	9,758	10,839	12,041	13,374	14,855	16,499	18,323	20,349
Sugd	Trade + Manufacturing	\$ million	10,858	11,824	12,889	14,065	15,362	16,795	18,378	20,127	22,060	24,198
Sugd	Export	MTPA	6.6	7.3	8.0	8.8	9.7	10.6	11.7	12.9	14.2	15.6
Sugd	Import	MTPA	19.0	20.5	22.1	23.8	25.7	27.7	29.9	32.2	34.8	37.5
Sugd	Manufacturing-Sugd	MTPA	33.0	36.3	40.0	44.0	48.4	53.2	58.5	64.4	70.8	77.9
Sugd	All Flows - Region (Sugd)	MTPA	52.0	56.8	62.0	67.8	74.1	80.9	88.4	96.6	105.6	115.4
TLC	All Flows - Excl. Direct Dispatch	MTPA	37.9	41.5	45.5	49.8	54.6	59.8	65.5	71.8	78.7	86.2
Sugd	All Flows	Road Tonnage	29.67	32.50	35.60	39.00	42.73	46.81	51.29	56.19	61.56	67.45
Sugd	All Flows	Rail Tonnage	8.25	9.04	9.90	10.85	11.88	13.02	14.26	15.62	17.12	18.75
Sugd	All Flows	Number of Vehicles	741,735	812,534	890,106	975,102	1,068,236	1,170,291	1,282,125	1,404,679	1,538,985	1,686,174

Source: Study team analysis based on data received from ITC Trade Maps, Tajikistan Statistics compendiums

Demand Projections for Sugd and TLC

Table A1.10: Trade and Manufacturing Cargo - Sugd Province and TLC

Region	Volume	Unit	Trade and Manufacturing Cargo - Present							
			2014	2015	2016	2017	2018	2019	2020	2021
Sugd	Export	\$ million	287	259	332	522	586	480	308	655
Sugd	Import	\$ million	1,379	1,132	1,055	1,066	1,157	1,416	1,433	1,736
Sugd	All Trade Flows	\$ million	1,666	1,391	1,387	1,588	1,743	1,896	1,741	2,391
Tajikistan	Manufacturing	\$ million	1,307	1,178	1,509	2,371	2,664	2,183	1,399	2,977
Sugd	Manufacturing - Sugd Province	\$ million	523	471	604	949	1,066	873	560	1,191
Sugd	Trade + Manufacturing	\$ million	1,902	1,603	1,658	2,015	2,222	2,289	1,993	2,927
Sugd	Export	MTPA	0.6	0.6	0.6	0.8	1.2	1.2	0.6	1.2
Sugd	Import	MTPA	2.7	2.6	2.7	2.8	2.9	4.0	4.1	4.8
Sugd	Manufacturing-Sugd	MTPA	2.8	3.1	3.0	3.8	6.0	6.1	3.2	5.9
Sugd	All Flows - Region (Sugd)	MTPA	5.5	5.7	5.7	6.6	8.8	10.1	7.3	10.8
TLC	All Flows - Excl. Direct Dispatch	MTPA	3.7	3.9	3.9	4.7	6.6	7.2	4.7	7.4
Sugd	All Flows	Road Tonnage	2.89	3.05	3.04	3.64	5.15	5.65	3.68	5.83
Sugd	All Flows	Rail Tonnage	0.80	0.85	0.85	1.01	1.43	1.57	1.02	1.62
Sugd	All Flows	Number of Vehicles	72,353	76,339	76,082	90,982	128,774	141,144	92,117	145,683

Source: Study team analysis based on data received from ITC Trade Maps, Tajikistan Statistics compendiums

Table A1.11: Cargo Demand Projections for Trade and Manufacturing Cargo Flows (FY2029 – 38)

Region	Volume	Unit	Cargo Demand Projections (First 10 years)									
			2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Sugd	Export	\$ million	1,512	1,681	1,869	2,078	2,309	2,567	2,852	3,170	3,522	3,914
Sugd	Import	\$ million	2,195	2,262	2,330	2,400	2,472	2,547	2,623	2,702	2,783	2,866
Sugd	All Trade Flows	\$ million	3,707	3,943	4,199	4,478	4,782	5,113	5,475	5,872	6,305	6,780
Tajikistan	Manufacturing	\$ million	6,873	7,641	8,495	9,443	10,497	11,666	12,965	14,408	16,010	17,789
Sugd	Manufacturing - Sugd Province	\$ million	2,749	3,057	3,398	3,777	4,199	4,666	5,186	5,763	6,404	7,116
Sugd	Trade + Manufacturing	\$ million	4,945	5,318	5,728	6,177	6,671	7,213	7,809	8,465	9,187	9,982
Sugd	Export	MTPA	2.5	2.8	3.1	3.4	3.7	4.1	4.5	5.0	5.5	6.0
Sugd	Import	MTPA	8.8	9.6	10.3	11.1	12.0	13.0	14.0	15.1	16.3	17.6
Sugd	Manufacturing-Sugd	MTPA	12.7	13.9	15.3	16.9	18.6	20.5	22.5	24.8	27.3	30.0
Sugd	All Flows - Region (Sugd)	MTPA	21.5	23.5	25.7	28.0	30.6	33.4	36.5	39.9	43.6	47.6
TLC	All Flows - Excl. Direct Dispatch	MTPA	15.2	16.7	18.3	20.0	21.9	24.0	26.3	28.8	31.6	34.6
Sugd	All Flows	Road Tonnage	11.93	13.07	14.31	15.68	17.17	18.81	20.61	22.57	24.73	27.08
Sugd	All Flows	Rail Tonnage	3.32	3.63	3.98	4.36	4.78	5.23	5.73	6.28	6.88	7.53
Sugd	All Flows	Number of Vehicles	298,228	326,677	357,836	391,965	429,349	470,300	515,158	564,300	618,136	677,117

Source: Study team analysis based on data received from ITC Trade Maps, Tajikistan Statistics compendiums

Table A1.12: Cargo Demand Projections for Trade and Manufacturing Cargo Flows (FY 2039 – 48)

Region	Volume	Unit	Cargo Demand Projections (Next 10 years)									
			2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Sugd	Export	\$ million	4,348	4,831	5,367	5,962	6,622	7,356	8,170	9,074	10,078	11,192
Sugd	Import	\$ million	2,952	3,041	3,132	3,225	3,322	3,421	3,523	3,628	3,737	3,848
Sugd	All Trade Flows	\$ million	7,301	7,872	8,498	9,187	9,944	10,777	11,693	12,703	13,815	15,040
Tajikistan	Manufacturing	\$ million	19,765	21,958	24,394	27,099	30,102	33,436	37,137	41,246	45,809	50,873
Sugd	Manufacturing - Sugd Province	\$ million	7,906	8,783	9,758	10,839	12,041	13,374	14,855	16,499	18,323	20,349
Sugd	Trade + Manufacturing	\$ million	10,858	11,824	12,889	14,065	15,362	16,795	18,378	20,127	22,060	24,198
Sugd	Export	MTPA	6.6	7.3	8.0	8.8	9.7	10.6	11.7	12.9	14.2	15.6
Sugd	Import	MTPA	19.0	20.5	22.1	23.8	25.7	27.7	29.9	32.2	34.8	37.5
Sugd	Manufacturing-Sugd	MTPA	33.0	36.3	40.0	44.0	48.4	53.2	58.5	64.4	70.8	77.9
Sugd	All Flows - Region (Sugd)	MTPA	52.0	56.8	62.0	67.8	74.1	80.9	88.4	96.6	105.6	115.4
TLC	All Flows - Excl. Direct Dispatch	MTPA	37.9	41.5	45.5	49.8	54.6	59.8	65.5	71.8	78.7	86.2
Sugd	All Flows	Road Tonnage	29.67	32.50	35.60	39.00	42.73	46.81	51.29	56.19	61.56	67.45
Sugd	All Flows	Rail Tonnage	8.25	9.04	9.90	10.85	11.88	13.02	14.26	15.62	17.12	18.75
Sugd	All Flows	Number of Vehicles	741,735	812,534	890,106	975,102	1,068,236	1,170,291	1,282,125	1,404,679	1,538,985	1,686,174

Source: Study team analysis based on data received from ITC Trade Maps, Tajikistan Statistics compendiums

APPENDIX 2: LOCATION AND LAND ASSESSMENT FOR TLC

Table A2.1: Parameters and Description of Ranking

Parameters	P. Weightages	Sub-Parameters	Description	Gross Weightages
Land Features	13%	Availability of Land	Availability of >50 hectares of land	2.5%
		Contiguity of land parcel	Largest contiguous land parcel possible within the site (any major road / environmentally protected within the land area)	2.5%
		Potential to access cargo	The type of industries, commercial development level of area within 5 kms radius	2.5%
		Topography	Physical characteristics of land including position with respect to major water bodies, mountains, vegetation etc.	2.5%
		Shape of land	Possibility of expansion of the area under consideration	2.5%
Connectivity and related Infrastructure	20%	Proximity of connecting highways	Proximity of connecting highways, distance in kms	2.5%
		Railway connectivity	Distance from Railway station in kms and last mile connectivity	2.5%
		Ports connectivity	Proximity to dry ports, distance in kms	2.5%
		Airports	Distance to major international airport, distance in kms	2.5%
		Industrial Areas	Proximity to fully functional industrial clusters, distance in kms	2.5%
		Connecting / Access Roads	Availability of alternate routes, number of lanes of the connecting roads	2.5%
		Major connecting trade road	Proximity to CAREC / other transnational corridors to facilitate transit movement	2.5%
		Infrastructure expansion plans	Plans for future development of logistics infrastructure directly affecting volume and traffic of the land	2.5%
Internal Infrastructure and Utilities	13%	Power Availability	Power requirement of xx KW/h per annum	2.5%
		Water Availability	Water requirement of xx KLD	2.5%
		Discharge	Availability of internal facility for discharge	2.5%
		Internal Infrastructure	Operational Infrastructure development level in the location	2.5%

Parameters	P. Weightages	Sub-Parameters	Description	Gross Weightages
		Internal Road connectivity	2 / 4 lane roads in developed / developing condition present in the area	2.5%
Capital and Operating Cost	15%	Cost of land (per unit)	Total cost of land acquisition (per acre)	2.5%
		Additional acquisition charges	Additional charges for land acquisition (per acre)	2.5%
		Power cost	Per unit power cost, in KW/h	2.5%
		Water cost	Water cost per unit, in KLD	2.5%
		Natural gas cost	Per unit gas cost	2.5%
		Maintenance charge	Maintenance charges, per unit	2.5%
BCP	15%	Presence of BCP	Presence of BCP within 50 kms from the land	2.5%
		Distance from nearest multimodal BCP	Distance of the land area from nearest multimodal BCP	2.5%
		Cargo Flow	Volume of cargo handled at BCP	2.5%
		Availability of Customs Office	Availability of customs office within the location premises	2.5%
		Opening and closing time for BCP	Number of opening hours of the nearest BCP	2.5%
		Time taken for clearance procedure	Time taken for clearance procedure	2.5%
External Environment	15%	Presence of cargo-based Industries	Number of cargo-based Industries within 15 - 20 kms distance	2.5%
		Anchor Tenants	Large scale manufacturers / service providers present within the location	2.5%
		Nearest urban center	Distance from nearest Tier - 1 city	2.5%
		Presence of logistics operators in the region	Presence of logistics operators in the region	2.5%
		Development stage of the area	Underdeveloped / developing / developed stage of the area	2.5%
		Talent Availability	Proximity to A-Grade colleges / universities for talent acquisition	2.5%
Approvals and Regulatory Considerations	10%	Possibility of Purchase	Possibility of Purchase of the land area	2.5%
		Approval time	Total time envisaged for approvals	2.5%
		Level of approval required for TLC	Land area approval from central / Oblast level	2.5%
		Environmental Clearance	Environmental impact from various elements within TLC	2.5%

Table A2.2: Scoring for Location Assessment for TLC

Parameters	P. Weightages	Sub-Parameters	Gross Weightages	SFEZ	KLC	Sadaf
Land Features	15%	Availability of Land	2.5%	0.08	0.03	0.05
		Contiguity of land parcel	2.5%	0.08	0.08	0.08
		Potential to access cargo	2.5%	0.05	0.08	0.08
		Topography	2.5%	0.08	0.08	0.08
		Shape of land	2.5%	0.08	0.08	0.08
Connectivity and related Infrastructure	20%	Proximity of connecting highways	2.5%	0.05	0.08	0.08
		Railway connectivity	2.5%	0.08	0.05	0.05
		Ports connectivity	2.5%	0.03	0.03	0.03
		Airports	2.5%	0.08	0.08	0.08
		Industrial Areas	2.5%	0.08	0.05	0.05
		Connecting / Access Roads	2.5%	0.05	0.08	0.08
		Major connecting trade road	2.5%	0.08	0.08	0.08
Internal Infrastructure and Utilities	10%	Infrastructure expansion plans	2.5%	0.08	0.03	0.05
		Power Availability	2.5%	0.08	0.08	0.05
		Water Availability	2.5%	0.08	0.05	0.08
		Discharge	2.5%	0.08	0.08	0.08
		Internal Infrastructure	2.5%	0.08	0.08	0.08
Capital and Operating Cost	15%	Internal Road connectivity	2.5%	0.08	0.08	0.08
		Cost of land (per unit)	2.5%	0.05	0.05	0.05
		Additional acquisition charges	2.5%	0.05	0.05	0.05
		Power cost	2.5%	0.08	0.05	0.03
		Water cost	2.5%	0.08	0.05	0.05
		Natural gas cost	2.5%	0.00	0.00	0.00
BCP	15%	Maintenance charge	2.5%	0.00	0.00	0.00
		Presence of BCP	2.5%	0.08	0.05	0.05
		Distance from nearest multimodal BCP	2.5%	0.05	0.08	0.08
		Cargo Flow	2.5%	0.08	0.08	0.08
		Availability of Customs Office	2.5%	0.05	0.08	0.05
		Opening and closing time for BCP	2.5%	0.08	0.08	0.08
		Time taken for clearance procedure	2.5%	0.05	0.05	0.05
		Presence of cargo-based Industries	2.5%	0.05	0.05	0.08
External Environment	15%	Anchor Tenants	2.5%	0.05	0.08	0.08
		Nearest urban center	2.5%	0.08	0.08	0.08
		Presence of logistics operators in the region	2.5%	0.05	0.08	0.05
		Development stage of the area	2.5%	0.05	0.08	0.08
		Talent Availability	2.5%	0.08	0.08	0.08
		Possibility of Purchase	2.5%	0.05	0.08	0.05
Approvals and Regulatory Considerations	10%	Approval time	2.5%	0.08	0.05	0.05
		Level of approval required for TLC	2.5%	0.00	0.00	0.00
		Environmental Clearance	2.5%	0.08	0.08	0.08
Consolidated Score				2.40	2.35	2.33

Source: Study team analysis based on data collected during site visits

APPENDIX 3: LAND AREA DEMAND ESTIMATION FOR TLC

Table A3.1: Assumptions for Mode of Transport in Tajikistan

Mode	2017	2018	2019	2020	2021
Road ('000 tons)	27,769	25,654	22,288	18,573	16,712
Rail ('000 tons)	4,631	6,305	5,799	5,348	4,647
Road %	85.7%	80.3%	79.4%	77.6%	78.2%
Rail %	14.3%	19.7%	20.6%	22.4%	21.8%

Source: Transport Sector Assessment for Tajikistan – 2021

Table A3.2: Model Input Assumptions

Inputs	
Trade Volume diverted to TLC	21%
Volume requiring Value addition	80%
Trade volume to manufacturing ratio	20
Sugd Volume estimate	38%
Direct dispatch in trade estimates	40%
Volume of international trade (Kazakhstan and Russian Federation) in Sugd	75%

TLC = Trade and Logistics Center

Source: Study team analysis

APPENDIX 4: CAPITAL EXPENDITURES

1. CAPEX includes expenses on infrastructure development, buildings construction, utilities, pre-operating expenses and contingency. Construction and development costs were calculated on per unit cost basis (per hectare). Because of early stages of construction, pre-operating expenses were assumed to be 10% of construction CAPEX and contingency – 10% of total CAPEX. The resulting total project CAPEX of TLC is \$546,356 per hectare.

Table A4.1: CAPEX Breakdown (\$'000)

CAPEX Breakdown, (\$'000)	Phase 1 CAPEX	Phase 2 CAPEX	Total CAPEX	CAPEX per hectare	Weight (%)
Site preparation	9,095	-	9,095	114.15	20.9%
Site development incl. land filling	2,224	-	2,224	27.91	5.1%
Site fencing and compound wall	0.001	-	0.001	0.00	0.0%
Internal roads	5,930	-	5,930	74.42	13.6%
Main roads	3,706	-	3,706	46.52	8.5%
Access roads	2,224	-	2,224	27.91	5.1%
Landscaping and parks	942	-	942	11.82	2.2%
Buildings	9,415	14,872	24,287	304.82	55.8%
Logistics facilities	9,415	-	9,415	118.17	21.6%
Support Amenities	-	10,548	10,548	132.39	24.2%
Expo center	-	4,324	4,324	54.26	9.9%
Utilities	2,594	-	2,594	32.56	6.0%
Electricity	1,853	-	1,853	23.26	4.3%
Potable water supply distribution network	556	-	556	6.98	1.3%
Sewerage network	93	-	93	1.16	0.2%
Storm water drain network	93	-	93	1.16	0.2%
Pre-operating expenses	2,110	1,487	3,598	45.15	8.3%
Contingency	2,322	1,636	3,957	49.67	9.1%
Total	25,537	17,995	43,532	546.36	100.0%

Source: Administration of the Sugd Province, Stakeholder consultations, Study team analysis

2. The resulting total project CAPEX of TLC is \$546,356 per hectare. The total CAPEX per hectare of the KLC amounted to \$370 thousand. The logistics center in Nizhny Pyanj is more comparable to TLC on an operating activity and development level with CAPEX equal to \$605 thousand per hectare. The absence of detailed information on the characteristics of Nizhny Pyanj does not allow to conduct a detailed comparison to identify the drivers of CAPEX differences.

Table A4.2: CAPEX Comparison on Logistics Centers (\$'000 per hectare)

Logistic Centers	CAPEX per hectare
KLC	370
TLC	546
Nizhny Pyanj	605

KLC = Khujand Logistics Center, TLC = Trade and Logistics Center

Source: Study team analysis

APPENDIX 5: FINANCING TERMS

Table A5.1: Financing Structure Scenarios

Capital structure	Scenario 1	Scenario 2
Debt	100%	52%
Equity	0%	48%
Total	100%	100%

Source: Study team analysis

Table A5.2: Repayment Terms

Capital structure	Scenario 1	Scenario 2
Interest rate	6.0%	12.3%
Grace period	2	2
Repayment period	10	5

Source: Study team analysis

Forecasts Under the Financial Analysis

Table A5.3: Net Working Capital (\$ million)

Indicator	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Receivables	0.5	0.6	0.7	0.8	0.8	0.9	1.0	1.0	1.1	1.2
Payables	0.7	0.8	1.0	1.1	1.2	1.2	1.3	1.4	1.5	1.7
NWC	(0.2)	(0.2)	(0.3)	(0.3)	(0.3)	(0.3)	(0.4)	(0.4)	(0.4)	(0.5)

Indicator	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Receivables	2.4	2.7	3.0	3.4	3.5	3.6	3.8	4.0	4.2	4.4
Payables	3.3	3.7	4.2	4.6	4.8	5.1	5.3	5.6	5.9	6.2
NWC	(0.9)	(1.0)	(1.2)	(1.3)	(1.4)	(1.4)	(1.5)	(1.6)	(1.6)	(1.7)

Source: Study team analysis

Table A5.4: Cash Flows Forecast for Scenario 1 (\$'000)

Cash Flows	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Project Cash Flows											
Revenue	-	-	5,790	7,037	8,339	9,710	10,270	10,898	11,609	12,441	13,400
OPEX	-	-	(4,014)	(4,879)	(5,782)	(6,733)	(7,121)	(7,557)	(8,049)	(8,626)	(9,291)
EBITDA	-	-	1,775	2,158	2,557	2,977	3,149	3,341	3,559	3,814	4,108
Total Changes in WC	-	-	184	40	41	43	19	20	23	25	32
Capex & Capitalised FF&E	(13,005)	(12,532)	-	-	-	-	-	-	-	-	-
Tax Paid	-	-	(42)	(128)	(216)	(307)	(352)	(400)	(451)	(508)	(572)
FCFF	(13,005)	(12,532)	1,918	2,069	2,382	2,713	2,816	2,962	3,131	3,332	3,568
Discount rate	6.0%										
Discounted FCFF	(10,004)	(9,096)	1,313	1,337	1,452	1,560	1,527	1,515	1,511	1,517	1,533
Cash Flows	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Project Cash Flows											
Revenue	14,518	28,669	32,515	36,546	40,791	42,537	44,449	46,550	48,858	51,395	54,186
OPEX	(10,066)	(19,879)	(22,546)	(25,340)	(28,284)	(29,494)	(30,821)	(32,278)	(33,878)	(35,637)	(37,572)
EBITDA	4,451	8,790	9,969	11,205	12,507	13,042	13,629	14,273	14,980	15,758	16,614
Total Changes in WC	36	450	119	131	135	55	57	71	73	81	(1,634)
Capex & Capitalised FF&E	(17,995)	-	-	-	-	-	-	-	-	-	-
Tax Paid	(427)	(1,246)	(1,492)	(1,734)	(1,987)	(2,101)	(2,222)	(2,353)	(2,494)	(2,647)	(2,832)
FCFF	(13,935)	7,994	8,597	9,602	10,655	10,997	11,463	11,991	12,560	13,192	12,148
Discount rate	6.0%										
Discounted FCFF	(5,647)	3,056	3,101	3,267	3,420	3,330	3,275	3,231	3,193	3,164	2,749
Project NPV	20,304										
Project IRR	12.0%										

Source: Study team analysis

Table A5.5: Cash Flows Forecast for Scenario 2 (\$'000)

Cash Flows	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Project Cash Flows											
Revenue	-	-	5,790	7,037	8,339	9,710	10,270	10,898	11,609	12,441	13,400
OPEX	-	-	(4,014)	(4,879)	(5,782)	(6,733)	(7,121)	(7,557)	(8,049)	(8,626)	(9,291)
EBITDA	-	-	1,775	2,158	2,557	2,977	3,149	3,341	3,559	3,814	4,108
Total Changes in WC	-	-	184	40	41	43	19	20	23	25	32
Capex & Capitalised FF&E	(13,005)	(12,532)	-	-	-	-	-	-	-	-	-
Tax Paid	-	-	(10)	(96)	(184)	(275)	(320)	(358)	(479)	(536)	(599)
FCFF	(13,005)	(12,532)	1,949	2,101	2,414	2,745	2,847	3,003	3,103	3,304	3,541
Discount rate	19.3%										
Discounted FCFF	(5,865)	(4,737)	617	557	537	511	444	393	340	303	272
Cash Flows	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Project Cash Flows											
Revenue	14,518	28,669	32,515	36,546	40,791	42,537	44,449	46,550	48,858	51,395	54,186
OPEX	(10,066)	(19,879)	(22,546)	(25,340)	(28,284)	(29,494)	(30,821)	(32,278)	(33,878)	(35,637)	(37,572)
EBITDA	4,451	8,790	9,969	11,205	12,507	13,042	13,629	14,273	14,980	15,758	16,614
Total Changes in WC	36	450	119	131	135	55	57	71	73	81	(1,634)
Capex & Capitalised FF&E	(17,995)	-	-	-	-	-	-	-	-	-	-
Tax Paid	(432)	(1,236)	(1,470)	(1,712)	(1,965)	(2,120)	(2,241)	(2,372)	(2,513)	(2,666)	(2,832)
FCFF	(13,941)	8,004	8,619	9,624	10,677	10,978	11,444	11,971	12,540	13,173	12,148
Discount rate	19.3%										
Discounted FCFF	(898)	432	390	365	339	292	255	224	196	173	134
Project NPV	(4,726)										
Project IRR	12.0%										

Source: Study team analysis

APPENDIX 6: SENSITIVITY ANALYSIS

A. Sensitivity Analysis for Financing Scenario 1

1. The two most important indicators, OPEX to Revenue ratio and volume of cargo to be processed, were chosen to illustrate the consequences of changes in operational assumptions. For the OPEX ratio, minimum and maximum values as well as the 1st and 3rd quartiles were considered to account for the wider range of OPEX to Revenue ratio among the sample. In addition, sensitivity analysis was carried out to account for the significant possible differences in the cargo volume to be handled. Below table indicates OPEX to Revenue and share of loading and unloading services, respectively).

Table A6.1: Sensitivity Analysis on OPEX to Revenue Ratio and Share of Loading and Unloading Works for NPV (\$'000)

		OPEX to Revenue					
		45.1%	55.8%	69.3%	67.5%	78.2%	85.0%
Share of loading and unloading works	5.0%	41,261	28,577	12,604	14,740	2,083	(6,042)
	10.0%	44,009	30,790	14,143	16,369	3,182	(5,252)
	20.0%	49,503	35,222	17,221	19,631	5,382	(3,696)
	30.0%	54,998	39,654	20,304	22,900	7,581	(2,150)
	40.0%	60,493	44,087	23,393	26,169	9,780	(614)
	50.0%	65,988	48,519	26,484	29,441	11,980	923

Source: Study team analysis

2. Sensitivity scenario with traffic flows (number of vehicles) and rental rate for warehouses demonstrate the changes in revenue.

Table A6.2: Sensitivity Analysis on Annual Cargo Volume and Warehouses Rental Rate for NPV (\$'000)

		Warehouses Rental Rate					
		32.4	36.5	40.5	44.6	48.6	52.7
Cargo volume	(20%)	12,522	15,416	18,302	21,197	24,096	26,996
	(10%)	13,523	16,415	19,301	22,200	25,099	27,999
	0%	14,524	17,414	20,304	23,203	26,103	29,002
	10%	15,526	18,413	21,307	24,206	27,106	30,006
	20%	16,526	19,411	22,310	25,210	28,109	31,010

Source: Study team analysis

3. Since CAPEX directly affects the potential results of the project, the OPEX to Revenue ratio and CAPEX indicators were used to show the changes effect in operational assumptions too.

Table A6.3: Sensitivity Analysis on OPEX to Revenue Ratio and CAPEX for NPV (\$'000)

		OPEX to Revenue					
		45.1%	55.8%	69.3%	67.5%	78.2%	85.0%
CAPEX	(20%)	58,968	43,624	24,269	26,866	11,546	1,861
	(10%)	56,983	41,639	22,286	24,882	9,565	(139)
	0%	54,998	39,654	20,304	22,900	7,581	(2,150)
	10%	53,013	37,669	18,334	20,918	5,591	(4,172)
	20%	51,029	35,685	16,360	18,953	3,591	(6,219)

Source: Study team analysis

4. The financing structure and terms were the two key indicators that demonstrated the effects of changes in financial assumptions. Sensitivity analysis was conducted to account for the potential variations in financial terms and rates and to represent the potential impact.

Table A6.4: Sensitivity Analysis on Financial Terms for NPV (\$'000)

		Loan repayment years					
		10	11	12	13	14	15
Multilateral loan rate, %	2.0%	20,164	20,158	20,155	20,153	20,150	20,148
	4.0%	20,234	20,227	20,220	20,215	20,210	20,206
	6.0%	20,304	20,295	20,285	20,277	20,270	20,264
	8.0%	20,374	20,363	20,350	20,340	20,330	20,322
	10.0%	20,447	20,432	20,415	20,402	20,390	20,380
	12.0%	20,520	20,500	20,480	20,464	20,450	20,437

Source: Study team analysis

B. Sensitivity Analysis for Financing Scenario 2

5. Sensitivity analysis for Scenario 2 was performed in the same way for project NPV as it was for Scenario 1 in the context of operational and financial indicators.

Table A6.5: Sensitivity Analysis on OPEX to Revenue Ratio and Share of Loading and Unloading Works for NPV (\$'000)

		OPEX to Revenue					
		45.1%	55.8%	69.3%	67.5%	78.2%	85.0%
Share of loading and unloading works	5.0%	(1,416)	(3,284)	(5,629)	(5,314)	(7,205)	(8,459)
	10.0%	(1,099)	(3,027)	(5,448)	(5,124)	(7,074)	(8,362)
	20.0%	(465)	(2,513)	(5,087)	(4,742)	(6,812)	(8,168)
	30.0%	168	(2,000)	(4,726)	(4,361)	(6,549)	(7,975)
	40.0%	802	(1,486)	(4,365)	(3,979)	(6,287)	(7,785)
	50.0%	1,435	(973)	(4,004)	(3,598)	(6,024)	(7,595)

Source: Study team analysis

Table A6.6: Sensitivity Analysis on Annual Cargo Volume and Warehouses Rental Rate for NPV (\$'000)

		Warehouses Rental Rate					
		32.4	36.5	40.5	44.6	48.6	52.7
Cargo volume	(20%)	(5,879)	(5,435)	(4,993)	(4,557)	(4,121)	(3,686)
	(10%)	(5,744)	(5,301)	(4,859)	(4,424)	(3,988)	(3,552)
	0%	(5,609)	(5,166)	(4,726)	(4,290)	(3,854)	(3,419)
	10%	(5,475)	(5,031)	(4,592)	(4,157)	(3,721)	(3,285)
	20%	(5,340)	(4,897)	(4,459)	(4,023)	(3,588)	(3,152)

Source: Study team analysis

Table A6.7: Sensitivity Analysis on OPEX to Revenue Ratio and CAPEX for NP (\$'000)

		OPEX to Revenue					
		45.1%	55.8%	69.3%	67.5%	78.2%	85.0%
CAPEX	(20%)	2,017	(151)	(2,884)	(2,518)	(4,684)	(6,079)
	(10%)	1,093	(1,075)	(3,805)	(3,439)	(5,614)	(7,026)
	0%	168	(2,000)	(4,726)	(4,361)	(6,549)	(7,975)
	10%	(756)	(2,925)	(5,653)	(5,282)	(7,487)	(8,930)
	20%	(1,681)	(3,847)	(6,584)	(6,213)	(8,426)	(9,890)

Source: Study team analysis

6. The effects of changes in financial assumptions were demonstrated by two significant indicators: financing structure and terms. To account for the potential variations of financial terms and rates sensitivity analysis was performed to reflect the potential effect.

Table A6.8: Sensitivity Analysis on Financial Terms for NPV (\$'000)

		Loan Repayment Years					
		5	7	9	11	13	15
Commercial loan rate, %	6.0%	(4,768)	(4,780)	(4,784)	(4,788)	(4,791)	(4,793)
	8.0%	(4,755)	(4,769)	(4,775)	(4,779)	(4,783)	(4,786)
	10.0%	(4,741)	(4,758)	(4,765)	(4,771)	(4,776)	(4,780)
	12.3%	(4,726)	(4,746)	(4,754)	(4,761)	(4,767)	(4,772)
	14.0%	(4,715)	(4,736)	(4,746)	(4,754)	(4,761)	(4,767)
	16.0%	(4,704)	(4,726)	(4,737)	(4,746)	(4,754)	(4,760)

Source: Study team analysis