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FULL LENGTH ARTICLE

The China–Pakistan Economic Corridor and the Dynamics of Regional Connectivity

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ABSTRACT

The China–Pakistan Economic Corridor (CPEC), the flagship project of China's Belt and Road Initiative (BRI), has emerged as a transformative framework for enhancing regional connectivity and economic integration across South Asia, Central Asia, and the Middle East. This study examines the role of CPEC in strengthening regional connectivity through infrastructure development, energy cooperation, trade facilitation, and strategic partnerships. Drawing on the conceptual relationship between infrastructure and regional integration, the chapter analyzes how investments in transportation networks, energy projects, Gwadar Port, and special economic zones have improved Pakistan's internal connectivity and created opportunities for broader cross-border linkages. Particular attention is given to the potential of CPEC in fostering connectivity between Pakistan, China, Afghanistan, Central Asia, Iran, and Saudi Arabia. The findings suggest that CPEC has significantly improved Pakistan's energy and transport infrastructure, reduced logistical constraints, and established the foundations for regional economic cooperation. Furthermore, the corridor provides landlocked Central Asian states and Afghanistan with access to global markets through Gwadar Port while creating new prospects for trade, energy collaboration, and regional integration. The study concludes that although CPEC has laid the groundwork for enhanced regional connectivity, its long-term success depends on political stability, security cooperation, and sustained collaboration among participating countries. Overall, CPEC represents a strategic geo-economic initiative with the potential to reshape regional connectivity and promote shared economic development across a wider Eurasian landscape.

Keywords: China–Pakistan Economic Corridor ▪ Belt and Road Initiative ▪ Regional Connectivity ▪ Gwadar Port ▪ Central Asia ▪ Economic Integration

1. INTRODUCTION

The proposition for establishing China Pakistan Economic Corridor (CPEC) was put forth by Chinese Premier Li Keqing during his visit in May 2013. In April 2015, two years after the aforementioned event, President Xi Jinping made his inaugural visit to Pakistan and formally commenced the project, announcing a substantial amount of 46 billion US dollars. The largest portion of this investment was allocated towards the energy sector and infrastructure development. This is the only massive investment in Pakistan's history, and it is expected to significantly influence the country's social, economic, industrial, and infrastructure development. China has called CPEC the "flagship" project of the Belt and Road Initiative (BRI),

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while Pakistan has called it a "game changer" not only for the economy of Pakistan but for the overall region. As per the analysis conducted by Manish and Kaushik [1], the CPEC can facilitate regional integration by connecting the western part of China, South Asia, Central Asia, West Asia, North Africa, and other nations through economic collaboration. This, in turn, can generate economic connection and reinforce Pakistan's strategic position as a bridge and link between Eurasia and Africa. The CPEC is a significant investment initiative that involves various strategies, including geo-economic intervention. Through this initiative, China is effectively re-establishing and rejuvenating Pakistan's territory, enhancing its relevance and potential importance in regional and global contexts. The latest developments in the CPEC encompass a range of novel facets, including the implementation of fresh infrastructure projects the establishment of transportation networks comprising highways, railways, roads, and tunnels, the construction of energy infrastructure, the creation of industrial zones and free economic zones, the modernization of the port of Gwadar, and the promotion of cultural interactions through soft power initiatives. All of these projects significantly impact Pakistan's local geography and socioeconomic development [2, 3]. The significant investment made by China in Pakistan and other nations as part of the Belt and Road Initiative (BRI), which has surpassed US$ 62 billion and continues to rise, is underpinned by a well-defined justification.[1] China's efforts to expand its hold on power beyond its borders have exposed significant disparities in both domestic and foreign infrastructure. In order to address the gaps mentioned above, a decision was made to construct six corridors and engage in multiple bilateral and multilateral infrastructure initiatives with partner nations.[2] After the completion of these new projects, connectivity will improve by generating geo-economic zones. After the investment in Pakistan, China was involved in various projects in neighboring countries, including Iran, Afghanistan, Turkey, and Central Asian states located to the west of Pakistan. Additionally, China has undertaken initiatives in Nepal, Bangladesh, Myanmar, and even India, although the scale and nature of these projects differ from those in Pakistan. These projects are developing separately, but the plan is to establish interconnectivity in the future. After the connection of these projects, these pathways will facilitate cross-border and cross-regional connectivity [4].[3] Hence, the construction of new gateways, combined with China's institutional, economic, and cultural endeavors through the Belt and Road Initiative, will result in the integration of member states into China's network. The countries involved in the Belt and Road Initiative and their respective projects hold considerable significance. However, the CPEC has a distinct position as it serves as a crucial link between the land-based and maritime-based components of the initiative. This is due to Pakistan's strategic location, close strategic ties, and longstanding relationship of trust with China.[4] This enhances the significance of Islamabad within the broader regional strategy of Beijing. The Pakistani elite realizes the significance of the CPEC as an important part of China's ambitious initiative of the century. They aim to leverage it to promote domestic economic development and regional connectivity. Numerous research articles, books, reports, and media analyses have been published, exploring diverse facets of the CPEC against the context mentioned above. Nonetheless, no research has autonomously investigated the potential for an enhanced infrastructure to improve Pakistan's ability to serve as a regional intermediary with its close neighbors, including Afghanistan, Iran, India, and other nearby countries. CPEC is seen as a game changer due to its potential to enhance regional connectivity. Exploring this potential connectivity is highly valuable for various reasons. First, without any doubt, infrastructure is crucial in fostering economic growth and facilitating inter and regional connectivity.[5] The initial stage of the CPEC has facilitated the development of adequate infrastructure in Pakistan, which has established connectivity between the major cities, business hubs, and seaports through an extensive network of roads and railways. Simultaneously, it built a foundation for extending this network to neighboring countries in the next stage. Second, China is engaged in the development of infrastructure not only within Pakistan but also in other neighboring countries. The mutually beneficial character of both factors facilitates Pakistan's efforts to enhance its desired connections with the region. Third, in contrast to previous endeavors by Pakistan to extend its regional influence for geopolitical objectives, the present undertaking is motivated by geo-economic considerations, thereby adding to its chances of success. Fourth, this stated potential connection would increase Pakistan's linkages beyond adjacent countries, i.e., Afghanistan and Iran has the ability to act as a gateway to Central Asia, while Turkey and India can be a gateway to Southeast Asia. Fifth, international institutions like the United Nations, the World Bank, the Asian Development Bank, and other regional groups like SAARC and SCO all have mandates that support regional connection and integration. If implemented well, this link has the potential to alter regional dynamics by boosting economic collaboration among stakeholders. However, the question arises here: if facilitating regional connectivity was a primary goal of CPEC from the start, why was this aspect not emphasized during the project's initial phase? There were a few factors that led to this deliberate disregard. First, it seemed that CPEC adopted China's tradition of starting projects with a "soft opening" and deliberate uncertainty. As a result, interested parties may form their own views and responses to the initiatives. The Chinese government considers public interest in its initiatives to be valuable input and incorporates it into the final projects. This is mostly how CPEC developed its pattern. The project was initiated with a general scope and gradually evolved over time. The first phase of the CPEC witnessed China's tendency towards keeping a low profile, which can be attributed to Pakistan's internal and external challenges. Internally, Pakistan's political structure is very complicated, with big differences among various lines that might swiftly escalate minor problems into major ones. There have been problems with CPEC in Pakistan from the start. The implementation of the project faced obstacles due to various issues, including the center-province divide concerning the allocation of resources, the controversy surrounding the prioritization of the three routes connecting China's border with Gwadar Port, and apprehensions regarding Pakistan's potential vulnerability tofalling into a debt trap. Given the circumstances, it was a precarious move for Beijing to extend the scope of the CPEC by suggesting its expansion to other regions. In addition, it should be noted that the attainment of regional connectivity in Pakistan is contingent upon es-

tablishing adequate infrastructure, even if domestic political challenges are successfully addressed. Before the initiation of the CPEC, Pakistan's infrastructure was significantly insufficient to facilitate such interconnectivity. The Karakorum Highway, which serves as the only terrestrial connection between China and Pakistan, was in poor condition and was rendered non-operational during the winter months due to high snowfall. The use of the highway throughout the year was made possible solely through the upgradation under the CPEC. Externally, the construction of the CPEC has elicited worries from both India and the United States. The CPEC route crossing through Pakistan-administered Kashmir, a territory claimed by India, has been contested by the Indian government on the grounds of growing upon its sovereignty.[6] India is concerned that the construction would compromise its national sovereignty. In response, India has opposed the CPEC and condemned China's participation in the project. The United States says CPEC and its flagship project Gwadar Port, as an attempt to expand Beijing's sphere of influence in the Indian Ocean.[7] In light of this context, the early disclosure of the CPEC expansion to other regions may reinforce the perception of China's overall strategic goals. In order to avoid the development of such a perception, China presented the project as a bilateral initiative. China has developed infrastructure in Pakistan and other regional countries as part of its Belt and Road Initiative. Once infrastructure deficiencies and favorable political environment issues are resolved, then China will prioritize enhancing inter- regional connectivity. In September 2018, Chinese and Pakistani authorities unveiled a framework for third-party involvement, which came around three and a half years after the initial opening of CPEC.[8] Pakistan is asking Saudi Arabia to join the CPEC project as a strategic partner, making them the first nation Pakistan has contacted for such a role. According to Prime Minister's financial adviser Abdul Hafeez Shaikh, the success of CPEC is dependent on the involvement of surrounding countries. Pakistan has put out a plan called CPEC Plus.[9] Chinese leaders welcomed investment from Saudi Arabia or anywhere else with open arms. According to Lu Kang, the representative of China's Ministry of Foreign Affairs, the contribution of positive factors towards the advancement of interconnectivity and prosperity in the region through consultation by any other party is deemed as a positive factor. After this statement, China and Pakistan officially declared to expand the CPEC to include Afghanistan.[10] Several countries have indicated their desire to become a part of it. Pakistan's CPEC website was recently updated to describe the project as a "framework of regional connectivity," which includes India.[11] This statement suggests that enhancing connectivity is a primary goal of the CPEC. Connectivity is a broad concept that includes different types, like economic and financial aspects through monetary collaboration, trade via Free Trade Agreements, political dimensions through institutional cooperation, cultural aspects through interpersonal interactions, and maritime aspects through cooperation in oceanic matters. The CPEC encompasses various modes of connectivity. The present chapter will concentrate on Pakistan's connectivity with its neighboring countries through land and maritime routes. The chapter has been divided into three distinct sections. The first part of this chapter presents a conceptual framework that elucidates the significance of infrastructure in facilitating regional connectivity. It also provides cases from the neighboring countries of East Asia to illustrate the aforementioned concept. The second section briefly overviews the projects under the CPEC. The third section of this chapter elucidates the potential of these projects in facilitating the establ ishment of regional connectivity. Furthermore, it focuses on the Afghanistan, Central Asian economies, Iran, and Saudi Arabia case studies. This section explores the potential impact of connectivity on China's relationships with these states. The last section examines the economic considerations that emphasize the imperative importance of regional connectivity.

2. EVOLUTION OF INFRASTRUCTURE AND CONNECTIVITY

According to literature, infrastructures are defined as tangible systems that transport commodities, ideas, energy, people, and capital across geographical areas [5, 6]. Infrastructure is predominantly constructed through government funding and geographically connects industrial regions, production networks, markets, and populations. It is widely observed as a crucial component of advancement in society. According to modernization theorists such as W. W. Rostow, Albert Hirschman, and Paul Rosenstein-Rodan, infrastructures are an essential prerequisite for the economic take-off of any society [7]. While the term "infrastructure" has only recently gained prominence in economic literature, it has long been recognized as an important variable in facilitating the integration of markets, regions, and populations. Since the late 1980s, there has been a significant increase in the literature examining the relationship between infrastructure development and its potential impact on economic growth [8, 9, 10]. Additionally, Aschauer [11] examined the correlation between infrastructure investment and economic growth in the United States. After that, a significant amount of focus has been directed toward identifying and analysing the empirical and theoretical connections between infrastructure and development. Countries in East and Southeast Asia emphasize the need for improved infrastructure and regional and even global connections in their efforts for economic growth. After completing construction on internal infrastructu re, they turned their attention to establishing connections with neighboring states. The development of a regional network had a significant positive impact on the economies of the involved countries. This impact was manifested in various ways, including r educed market distances, increased competitiveness, decreased production costs, the attraction of foreign direct investment, and expansion of trade and economic activities. Infrastructure development was important to economic reforms in China, India, and Vietnam [12]. Transportation improvements were particularly crucial within the field of infrastructure, as they were the foundation for regional connectivity, markets, commodities, and services [13]. Research across countries has demonstrated that enhanced transportation infrastructure is important for economic development [14, 15]. Giving priority to infrastructure development is of utmost importance for developing nations like Pakistan in order to alleviate poverty [16]. As per a report by the World Bank, developing countries face challenges such as power crises, inadequate transportation infrastructure, including roads, railways,

ports, and airports, and weak communication s ystems. These factors contribute to increased transaction costs, reduced productivity, and render investments unfeasible. According to The World Bank report, to attain their long-term economic objectives, developing nations must allocate approximately 9% of their GDP towards enhancing their infrastructure [17]. The increasing debates about the role of infrastructure development in the economic growth of a nation have led to a greater focus on infrastructure development and regional connectivity in the national economic strategies of numerous developing countries [18, 19]. Enhanced infrastructure can potentially build an environment of international and regional connectivity and economic dependency. Supporters of the classical liberal ideology contend that interdependence can potentially mitigate conflict [20]. Furthermore, scholars, including Charles de Secondat, Baron of Montesquieu, Adam Smith, and David Ricardo, discussed the correlation between interdependence and peace because it gives rise to business groups that push policymakers to ensure stability. It has been suggested that increased trade connectivity reduces the possibility of conflict [21]. In particular, trade agreements (like Free Trade Agreements) agreed between nations might facilitate peaceful relations and develop a common future [22]. Some research suggests that member states of the same trade blocs tend to avoid military conflicts [23]. While these characteristics are not restricted to neighboring countries, it is more cost-effective to establish such blocs within a region rather than with countries at a distance.

3. KEY INFRASTRUCTURE PROJECTS WITHIN CPEC: A COMPREHENSIVE OVERVIEW

In the second stage of the CPEC, spanning from 2020 to 2025, 33 projects were successfully completed, while 25 projects are under consideration and 32 are in the pipeline. The finished projects have improved transportation inside Pakistan and boosted the country's ties with neighboring nations. A total of 21 energy projects were undertaken to produce a combined electricity output of 17,045 MW. By the mid of 2023, a total of 14 energy projects were successfully completed, with a combined cost of 14.5 billion US dollars. The aforementioned projects contributed a total of 5320 MW of energy to the national grid. The detail of these energy projects are presented in Table 1. Furthermore, it is noteworthy that there were two ongoing projects with a total capacity of 1130 MW, and an additional five projects with a capacity of 3244.7 MW were in the pipeline. As per Pakistani authorities, the successful implementation of all power projects under CPEC is expected to provide a permanent solution to the energy crisis in the country [24]. Regarding infrastructure development, there are 19 projects, of which six are completed, five are still under construction, and eight are in the pipeline. Several major projects were completed, including the upgrading of the 120 km Karakorum Highway, the completion of the 392 km Multan-Sukkur section of the Peshawar-Karachi Motorway, the installation of an 820 km long fiber optics network along the China-Pakistan border, 297 km of Hakla DI Khan Motorway, and 27 km of Orange Line Metro Train Lahore. By the mid of 2023, the total cost of the completed projects reached 6301 million US dollars. China has initiated the development of various infrastructure projects in Gwadar, including the Gwadar East Bay Expressway, the Gwadar Port Free Zone, the New Gwadar International Airport (which is the largest airport in Pakistan), 5 MGD Water Desalination Plant Gwadar, Gwadar Friendship Hospital, Gwadar Technical and Vocational Institute, and China-Pakistan Friendship School. Additionally, China has facilitated navigation at Gwadar Port. Karachi is presently linked to Gwadar through the Makran Coastal Highway, a 653 km long highway constructed with 220 million US dollars from China in 2004. Pakistan has successfully executed a 27 km rail-based Mass Transit Project (MTP) in the provincial capital of Lahore and a Bus Rapid Transit (BRT) system in the provincial capital of Peshawar. Plans are underway to construct similar services in Karachi and Quetta's remaining two provincial capitals. The development of this infrastructure has facilitated a continuous terrestrial linkage between the northern border of China and important cities and seaports in Pakistan, including Karachi, Qasim, Ormara, Pasni, and Gwadar, situated along the Makran Coast. Additional major projects during the next stage encompass the Gwadar Port's forthcoming stage and the Zhob-DI Khan Motorway, which will establish a motorway connection between Islamabad and Quetta, Hoshab Awaran Road Section, and KKH Alternate Route Shandur Chitral Road.[12] The improvement and extension of the Pakistan Railway in the present day is an essential aim in the second phase (2020 to 2025) of CPEC. As per the proposed plan, the complete railway track that extends in 1872 km distance from Peshawar to Karachi is intended to be upgraded and expanded at an estimated cost of 6.8 billion US dollars. This modernization aims to enhance the speed of passenger trains to 160 km per hour and freight trains to 120 160 km per hour. This represents the most substantial investment under the China-Pakistan Economic Corridor (CPEC) initiative and is considered the most extensive improvement of Pakistan Railways since the nation gained independence in August of 1947. In addition, other railway initiatives include a railway extending 1059 kilometers that will connect Havelian and Karachi and a railway system extending 1328 kilometers that will connect Jacobabad and Quetta via Basima to Gwadar. Pakistan Railways has proposed the construction of a 560 km railway route that would cover Quetta to Kotla Jam, passing through the cities of Zhob and D.I. Khan in the province of Balochistan [25]. Furthermore, new bridges, tunnels, and connecting roads, while novel infrastructure was constructed. Table 2. shows the full description of the infrastructure projects, as mentioned earlier. Implementing energy projects has contributed to the reduction of power shortages in Pakistan, while infrastructure projects have facilitated improved connectivity by creating connectivity between major cities and industrial hubs. This connectivity helps Pakistan to facilitate and build connections with its neighboring countries. The scope of connectivity discussed in this chapter extends beyond the confines of neighboring countries. However, the next part will focus on Afghanistan, Iran, and India connectivity under CPEC.

4. CONTRIBUTION OF CPEC TO THE BETTERMENT OF REGIONAL CONNECTIVITY

CPEC prioritizes the improvement of regional connectivity as a pivotal component of the project. The CPEC endeavors

Table 1. Completed Energy Projects under CPEC

Project Name	Mega Watt	Total Cost
Sahiwal Coal-fired Power Plant	1320 MW	1912.2 Million US$
Coal-fired Power Plant at Port Qasim Karachi	1320 MW	1912.2 Million US$
China Hub Coal Power Project, Hub Balochistan	1320 MW	1912.2 Million US$
Engro Thar Coal Power Project	660 MW	995.4 Million US$
Quaid-e-Azam Solar Park (Bahawalpur)	600 MW	781 Million US$
Hydro China Dawood Wind Farm, Gharo, Thatta	50 MW	112.6 Million US$
UEP Wind Farm, Jhimpir, Thatta	100 MW	250 Million US$
Matiari To Lahore HVDC Transmission Line	4000 MW EC	1658.3 Million US$
Karot Hydropower Project, AJK/Punjab	720 MW	1,720 Million US$
HUBCO Thar Coal Power Project (Thar Energy)	330 MW	497.70 Million US$
SSRL Thar Coal Block-I 7.8 mtpa & Power Plant	1320 MW	1912.1 Million US$
HUBCO ThalNova Thar Coal Power Project	330 MW	497.70 Million US$

Source: CPEC Official Website

Table 2. Completed Infrastructure Projects under CPEC

Project Name	Length in km	Total Cost
KKH Phase II (Havelian–Thakot Section)	120 km	1315 Million US$
Peshawar–Karachi Motorway (Multan–Sukkur)	392 km	2889 Million US$
Orange Line Metro Train–Lahore	27 km	1626 Million US$
Cross Border Optical Fiber Cable (Khunjrab–Pindi)	820 km	44 Million US$
Hakla–D.I Khan Motorway	297 km	426.2 Million US$
Development of Port and Free Zone		300 Million US$
Gwadar Eastbay Expressway		179 Million US$
New Gwadar International Airport		230 Million US$

Source: CPEC Official Website

to enhance the infrastructure, trade, and economic collaboration between China and Pakistan while promoting regional connectivity throughout South Asia and other regions. This study discusses the role of CPEC in the regional connectivity between Pakistan, China, Central Asia, Afghanistan, Iran, and India.

4.1 Regional Connectivity between China, Pakistan, and Central Asia under CPEC

Central Asia is situated in the northern region of Pakistan, with Tajikistan being the nearest Central Asian nation in proximity to its borders. Central Asia and Pakistan maintain strong ties despite lacking shared borders for various reasons. The landlocked status of the Central Asia countries is identified as a major obstacle to their economic development and progress. They can't trade or travel by sea since they have no access to warm seawater. Since the 2000s, Central Asian nations have sought ways to trade with neighboring economies, including China, India, Pakistan, and the West Asian states [26]. Moreover, they look to the Indian Ocean to reach Western markets [27]. Gwadar Port, a key compo nent of the CPEC, would allow landlocked Central Asia countries to expand their trade connections with the rest of the globe. Additionally, Central Asian nations are of great importance to China and Pakistan because of their wealth of natural resources, which includes large energy reserves. Bilateral and multilateral trade may facilitate the encouragement of regional connectivity and integration. Over the last twenty years, China has made significant investments in the energy and transportation infrastructure of Central Asian countries. In addition to the extant gas pipelines that link China to Central Asia and furnish it with an annual supply of 55 billion cubic meters, further pipeline initiatives are being formulated and executed to augment gas provision by an extra 30 bcm/y. China has supported advancing various forms of infrastructure in Central Asia, such as transportation networks, including roads, railways, bridges, and communication systems. China has an additional aim of bolstering the economic capabilities of Central Asia by creating employment opportunities. The Central Asian nations have approved the CPEC and view the resulting initiatives as a promising avenue for regional development. Turkmenistan President Gurbanguly Berdimuhamedov confirmed this sentiment during a meeting with former Pakistani Prime Minister Nawaz Sharif in March 2016. After all, his nation benefited economically from Gwadar Port, and the TAPI pipeline (connecting Turkmenistan, Afghanistan, Pakistan, and India) is essential to the CPEC. Likewise, Tajikistan is eager to participate in CPEC projects since they would help the country achieve its economic objectives and improve its connections with Pakistan. The involvement of Uzbekistan's in the CPEC was also confirmed in 2016 . This might lead to an increase in Uzbekistan's energy exports to Pakistan. Kazakhstan, the wealthiest country in Central Asia, has demonstrated a significant desire to join the CPEC. Therefore, the Central Asian nations present themselves as potential allies for Pakistan and China, offering vast opportunities for regional collaboration



Figure 1. The role of CPEC in Regional Connectivity in Map.

and mutual economic advantages. However, the government of the Central Asian countries supports the commitments of the above statements. The task of achieving regional c onnectivity and economic integration is still formidable due to security risks from Afghanistan, which is situated in the west of Pakistan. The trade routes passing through Afghanistan offer the most direct transit options for Central Asian nations to reach Gwadar. However, the possibility of achieving sustained peace in Afghanistan remains uncertain. There is still hope for the CPEC's future, but it will be a long time before the region is stable enough for Central Asia to participate in the multifaceted project and contribute to its economic attraction. CPEC would significantly improve Pakistan's economy and modernize the country's infrastructure. New roads and railroads will link Pakistan and Central Asia. Landlocked Central Asia countries have rich natural resources and cannot fully develop without an economic corridor connecting them to global markets.

4.2 The Role of Afghanistan in Regional Connectivity Under CPEC

The cross-border connections between Pakistan and Afghanistan are undergoing improvements and expansions through the CPEC initiative. The most significant among them is the 281-kilometer-long Peshawar-Kabul Road. Currently, this route is being developed by China, Pakistan, and Afghanistan to become an important land link. In the future, it will serve as an important connection between Afghanistan and Central Asia. It will connect to the existing network of highways in Pakistan. The Pakistan Motorway is a system connecting major towns and industrial areas, passing through Peshawar. The Peshawar-Kabul Road has the potential to grant Afghanistan entry to all urban centers within Pakistan. The Quetta-Kandahar Road is a significant link facilitating fast access for Afghanistan to the Gwadar Port. Furthermore, it is worth noting that the Pakistani border town of Parachinar shares a connection with the Afghan border. In northern Pakistan, two roads intersect with the Pakistan-Afghanistan border, originating from Chitral and Mingora, respectively, and converge with the Jalalabad Road at different junctures. Particularly, the Western corridor of the China-Pakistan Economic Corridor is close to the border shared by Pakistan and Afghanistan. Given the existing infrastruc ture in Pakistan, establishing additional connections with Afghanistan would not be challenging. Three potential rail routes are being evaluated for establishing connectivity between Pakistan and Afghanistan. These include the Landi-Kotal line with Jalalabad, the Peshawar line with Central Asia through Afghanistan, and the Chaman Balochistan line with Spin Boldak. The two nations are jointly working on constructing a 1500 MW hydropower initiative in Kundar, which China is financing. The primary objective of this project is to provide Pakistan with a reliable source of electricity. The TAPI transmission line has garnered interest from China, specifically concerning Turkmenistan, Afghanistan, Pakistan, and India.[13] The territory of Pakistan has successfully implemented the Integrated Transit Trade Management System at the Torkham Border, which will facilitate free trade operations throughout the day and night. These two nations started to reap the advantages of this interconnectivity. The Pakistani cabinet app roved in December 2019 the importation of cotton from Central Asian countries through Afghanistan. The first-ever Afghan cargo vessel at Gwadar Port occurred in January 2020. The goods were offloaded and dispatched

to Afghanistan by using a road transporta tion network. As per some reports, Afghanistan's selection of Gwadar Port for its trade was influenced by China [28]. Despite being a land-locked nation, Afghanistan has the potential to serve as a land link for Pakistan toward Central Asia. This will allow the devastated country access to regional markets and the vast seas and a means of generating income. Possibilities for economic growth might help mitigate the increase in violence. China will benefit exactly as much as Pakistan from improved communication with Afghanistan [29]. An agreement was signed between Beijing and Afghanistan in 2016 through a Memorandum of Understanding (MoU) to facilitate collaboration under the Belt and Road Initiative (BRI). The People's Republic of China has established a Confucius Institute at Kabul University, provided numerous scholarships to Afghan students, and undertaken various infrastructure-related initiatives. Currently, it holds the position of the primary investor in Afghanistan. Given the challenging mountainous terrain that renders China's border with Afghanistan inaccessible, the Chinese government has expressed its intention to incorporate Afghanistan into the Belt and Road Initiative (BRI) network through the utilization of Pakistan and Central Asia. The economic viability of accessing via Pakistan is attributed to its short distance and relatively well-developed infrastructure, further enhanced through the China-Pakistan Economic Corridor (CPEC). Because this route involves traveling through only one country, as opposed to an alternative way that passes through Uzbekistan and Kazakhstan. Additionally, China's relations with Pakistan are stronger than with any Central Asian countries. Finally, the Pakistani routes offer a means of accessing the Arabian Sea through the Gwadar Port [30]. Beijing has implemented an active diplomacy strategy in response to its increasing involvement in Afghanistan, to address concerns related to Pakistan-Afghanistan relations and supporting cross-border projects [31]. China leveraged its positive diplomatic ties with both nations to facilitate the resolution of the difficulties between Islamabad and Kabul on multiple occasions. Considering China's improved relations with Pakistan, the Afghan government requested the assistance of Beijing in enhancing its diplomatic ties with Pakistan.[14] China facilitated a series of trilateral debates involving Pakistan, China, and Afghanistan. One of the most significant developments in recent times is establishing a formal structure for the Trilateral Foreign Minister's dialogues. Over the course of several years, Beijing has consistently demonstrated its dedication to expanding the aim of Pakistan-Afghanistan reconciliation.

4.3 The Role of Iran in Regional Connectivity Under CPEC

In early 2015, Iran hesitated to participate in the China-Pakistan Economic Corridor. Iran's primary focus is related to the underlying reasons behind the choice made by India to build the Chahbahar port in Iran. The construction of Chahbahar Port in collaboration with Afghanistan and Iran has been made possible through the financial support provided by India under the Tripartite Preferential Trade Agreement (PTA). Pakistan supports Iran's involvement in CPEC because it promotes new magnitudes in bilateral connections and helps the country deal with increasing geo-economic tension. Initially, it is imperative to note that Pakistan does not intend to engage in activities that may undermine the Chahbahar port by adopting an aggressive approach towards Iran. Secondly, the port of Gwadar possesses a greater capacity to accommodate larger vessels. The infrastructure services in Gwadar are comparatively sophisticated in managing both liquid and containerized cargo. Iran can potentially increase its financial gains by reducing the impact of US sanctions and enhancing its global reputation. Iran's nuclear-related sanctions have severely stunted its economic development. Thus, the country may seek trading partners to increase its capital flows and regional connectivity [32]. The governments of Pakistan and Iran have resumed the operation of mass transit and cargo train services, which have re-established connectivity between the two nations. The governments of Pakistan and Iran have recently resumed the operation of their respective mass transit and cargo train services, which connect the city of Quetta in Pakistan with Mashhad province in Iran. Both parties have initiated the opening of border markets to streamline cross-border trade and regulate illegal trade activities. The Istanbul–Tehran–Islamabad (ITI) railway began its test runs in 2009. The Economic Cooperation Organisation (ECO) train operated under its structure and traveled the equivalent of 10,000 km in 15 days. Regular service has been approved for resumption in three nations. With the help of the Marmara Sea Tunnel, this service may be expanded from Istanbul to the rest of Europe and Asia.[15] The study by Guo et al. [33] advocated establishing the China –Pakistan–Iran–Turkey (CPIT) energy corridor. The China-Pakistan Economic Corridor (CPEC) presents viable prospects for Iran, given the significant participation of the Chinese government, its influence, and the economic ramifications for regional connectivity. By linking Pakistan's Gwadar and Iran's Chabahar, the CPEC-Westward development facilitates additional international cooperation measures. Iran's ambassador to Pakistan said in 2019 that his country was eager to join the CPEC. Pakistan's participation might eventually increase bilateral trade to 5 billion US dollars as Iran looks at new ways to increase bilateral trade. Positive news for Iran may also be seen in the form of engagements made by Pakistan and China to build a liquefied natural gas (LNG) terminal at Gwadar Port. Given that India isn't likely to increase its interest in LNG demand from Iran, the recent events are critical for Iran. According to estimates, the optimal means of linking to the Pakistan-Iran gas pipeline would involve the utilization of a pipeline spanning a pproximately 700 kilometers in length for the importation of LNG. This development can create additional energy demand for Iran, as China and Pakistan may seek to utilize the resources. This could result in establishing a connection between Iran and Gwadar port, which is located within a distance of 80 kilometers. The 25-year strategic China-Iran deal has also improved Pakistan's connection as a "transit country" for gas pipeline supply network routes between Iran and China. Under this fundamental structure, Iran has the potential to establish a dominant triangle in South and Southwest Asia, known as China-Pakistan-Iran, which could lead to noteworthy economic vitality in inter-regional connectivity [34]. Iranian authorities have accorded significant importance to China, as they have incorporated an energy-focused agenda into their plan to integrate with the China-Pakistan Economic Corridor. As a result, the Iranian government is keen on investigating the possibilities afforded by a CPEC alternative pipeline. Iran's primary energy export market is in India,

but this pipeline would also let the country concentrate on other markets. The value of exports from Pakistan to Iran hit 66.6 billion US dollars during 2019, and the two nations anticipate more growth in their commercial relationship in the coming years. Iran cannot risk losing access to this pipeline for these two reasons. The first benefit would be the removal of sanctions on Iran's economy, and secondly, it would boost the regional integration process to assist Iran secure trade routes [35].

part-1-1991-2014/

4.4 The Role of Saudi Arabia in Regional Connectivity Under CPEC

Crown Prince Muhammad bin Salman visited to Pakistan in 2018, which brought to the fore the keen interest of Saudi Arabia in becoming a part of the China-Pakistan Economic Corridor. This interest was mainly focused on petrochemical and oil refining investments. In his speech, he announced that Saudi Arabia will contribute 10 billion US dollars to construct an oil refinery at Gwadar deep-sea Port. Under the leadership of Muhammad bin Salman, Saudi policy measures have been implemented to transform the economy from a traditional reliance on oil to a focus on industrialization and market-seeking initiatives. This shift represents a significant economic development in the country. The present Saudi Arabian administration sees the National Transformation Plan as a key component of the country's overarching strategy for addressing economic difficulties. The year 2030 is the targeted year for completing economic reform. The nation has pledged to decrease its reliance on the petroleum industry and transition towards an integrated market economy. Within this particular context, Muhammad Bin Salman is currently directing his attention toward identifying new opportunities for market-driven financial growth. As such, he is actively pursuing involvement in various regional infrastructure development initiatives . For instance, the BRI megaprojects have the ability to contribute significantly to national economic security and include an open connection to initiate sustainable market integration.[16] Saudi Arabia is Pakistan's "third strategic" partner, which plays a significant role in CPEC. The visit of Chinese President Xi Jinping to Saudi Arabia led to the signing of 35 agreements that align with the Belt and Road Initiative (BRI) and Saudi Arabia's Vision 2030. These agreements have the potential to impact the China-Pakistan Economic Corridor (CPEC) and facilitate regional connectivity in various sectors such as energy, information technology, communications, and infrastructure. Moreover, the United Arab Emirates offers port infrastructure for a substantial investment of 5 to 6 million USD, establishing a connection between Gwadar and Sharjah, and Abu Dhabi via the Karachi-Gulf Express. As a result, these actions boost the CPEC's economic impact and expand its reach to include Saudi Arabia, other Gulf nations, and additional regions. In 2021, the value of Pakistan's exports to Saudi Arabia has increased to 365 million US dollars, suggesting a significant interest from Saudi Arabia in energy-related matters. From a geopolitical perspective, Pakistan's trade and economic ties between Asia, the Middle East, and Europe have the potential to enhance financial flows. Establishing this trade route is anticipated to reduce costs for China in its trade relations with the Middle East while facilitating a secure and convenient supply of oil to China. In addition, the strategic location of the Gwadar Port at the heart of the Strait of Hormuz, an essential route for trade worth $40 trillion annually, has the potential to significantly decrease transportation expenses for Chinese exports to Middle Eastern nations such as Saudi Arabia and Africa [36]. With regard to the longstanding structural hostility between Saudi Arabia and Iran, the implementation of the CPEC Model has the potential to enhance the involvement of Chinese and Pakistani governmental bodies, thereby establishing a mutually beneficial mechanism for both Saudi Arabia and Iran. Over time, prioritizing long-term regional objectives may reduce national security worries about the rivalry between Saudi Arabia and Iran [37].

5. CONCLUSION

This study explores the role of CPEC in regional connectivity and analyses its significance and nature in facilitating market connectivity in the energy, infrastructure, and developmental sectors to promote regional integration. Moreover, this study examines the strategic significance of Gwadar Port in facilitating the establishment of new alliances, which in turn creates opportunities for expanded trade not only between China and Paki stan but also involving additional partners such as Afghanistan, Central Asia, Iran, and Saudi Arabia. Pakistan's energy sector and infrastructure development have significantly benefited from Chinese investment during the first phase of the CPEC. To a certain extent, implementing this initiative has mitigated the energy crisis and enhanced the infrastructure of Pakistan. The industrial hubs and the main cities of Pakistan are connected by a somewhat modern network of roads, motorways, rail, bridges, ports, airports, and tunnels. Pakistan has enhanced its regional connectivity with Afghanistan, and the country is also working to extend its railway network up to Central Asia. This will facilitate Afghanistan and Central Asian countries' access to Pakistani markets and the Indian Ocean. If Afghanistan could access global markets, its economy, and decades-long war might improve. The same holds true for Pakistan and Iran, which now have better road and rail connections. Pakistan uses both Afghanistan and Iran as gateways to the Central Asian countries. Iran offers Pakistan another route to reach Turkey. In return, Iran has the opportunity to establish connectivity with China. Iran has demonstrated its inclination to participate in the CPEC and construct a gas pipeline extending to China through Pakistan. The regional connectivity between Pakistan and these countries strengthens the Build and Road Initiative in China. That's why China urges all interested countries to work through their difficulties and boost their cooperation. To that purpose, it acted as a mediator when tensions arose between Afghanistan and Pakistan. Since the groundwork has already been laid in the first phase, expansion into neighboring nations is a distinct possibility in the second phase. CPEC has undoubtedly built the way for increased regional connectivity, yet its ultimate success will rely on the quality of collaboration among neighboring states.

NOTES

1. Find more detail about CPEC projects here: https://cpec.gov.pk/

2. There exist five additional corridors, namely the New Eurasian Land Bridge, the China-Mongolia-Russia Economic Corridor (CMREC), the China-Central and Western Asia Economic Corridor, the China-Indochina Peninsula Economic Corridor, and the Bangladesh-China-India-Myanmar (BCIM) Corridor.

3. As per the analysis conducted by a researcher, challenging geographical barriers such as mountain ranges, deserts, jungles, and rivers have historically impeded the building of connections between the Eurasian hinterland and the Indian Ocean. China is endeavoring to overcome these barriers through the Belt and Road Initiative (BRI), marking a significant historical milestone.

4. For more detail about the significance of trust in the bilateral relationship between China and Pakistan, see [38], pp. 227–228.

5. The CPEC is an ongoing initiative. The initial phase has laid the foundation for Pakistan's connectivity with neighboring nations. The term "potential connectivity" is used because the linkages have not yet expanded beyond national borders and are anticipated to be established during the second phase. The term reflects concrete advancements in infrastructure development within Pakistan and neighboring nations over recent years.

6. Details of the news can be found at https://www.chinausfocus.com/finance-economy/china-pakistan-economic-corridor-and-indias-responses.

7. The Economic Times report is available at https://economictimes.indiatimes.com/news/defence/us-and-india-must-develop-plan-to-counter-chinas-efforts-to-strengthen-its-position-in-indian-ocean/articleshow/76066110.cms?from=mdr.

8. The South China Morning Post report is available at https://www.scmp.com/news/china/diplomacy/article/2163943/china-pakistan-agree-open-economic-corridor-investment-other.

9. Pakistan invites Saudi Arabia to join China's Belt and Road corridor; see https://www.reuters.com/article/uk-pakistan-saudi-silkroad-idUKKCN1M02DT.

10. "China, Pakistan seeking CPEC extension to Afghanistan." Voice of America, November 1, 2018. https://www.voanews.com/south-central-asia/china-pakistan-seeking-cpec-extension-afghanistan.

11. CPEC, Ministry of Planning, Development and Special Initiatives: http://cpec.gov.pk/introduction/1.

12. Details of the projects are available at http://cpec.gov.pk/.

13. For more details, see "China assumes leading role in Afghan reconciliation," Dawn: https://www.dawn.com/news/1164186/china-assumes-leading-role-in-afghan-reconciliation.

14. See "Afghanistan's 'China card' approach to Pakistan, part 1: 1991–2014," The Diplomat, April 2019: https://thediplomat.com/2019/04/afghanistans-china-card-approach-to-pakistan-part-1-1991-2014/.

15. Details are available at https://www.railfreight.com/railfreight/2020/01/31/istanbul-tehran-islamabad-container-train-may-finally-run/.

16. More detail about Saudi Arabia's Vision 2030 is available at https://vision2030.gov.sa/download/file/fid/417.

REFERENCES

[1] Manish and P. Kaushik, "CPEC, Afghanistan and India's concerns," *India Quarterly*, vol. 75, no. 2, pp. 253–261, 2019.

[2] M. Forough, "Intervention with Chinese characteristics: The Belt and Road Initiative reconfiguring (Afro-)Eurasian geo-economics," *Conflict, Security & Development*, vol. 19, no. 3, pp. 275–295, 2019.

[3] M. McCartney, "The China-Pakistan Economic Corridor (CPEC): Infrastructure, social savings, spillovers, and economic growth in Pakistan," *Eurasian Geography and Economics*, vol. 63, no. 2, pp. 180–211, 2022.

[4] D. Brewster, "Silk roads and strings of pearls: The strategic geography of China's new pathways in the Indian Ocean," *Geopolitics*, vol. 22, no. 2, pp. 269–291, 2017.

[5] W. Buhr, "What is infrastructure?" Volkswirtschaftliche Diskussionsbeiträge, no. 107-03, 2003.

[6] P. Dourish and G. Bell, "The infrastructure of experience and the experience of infrastructure: Meaning and structure in everyday encounters with space," *Environment and Planning B: Planning and Design*, vol. 34, no. 3, pp. 414–430, 2007.

[7] N. H. Anwar, *Infrastructure Redux: Crisis, Progress in Industrial Pakistan and Beyond*. London, U.K.: Palgrave, 2015, pp. 191–192.

[8] S. Démurger, "Infrastructure development and economic growth: An explanation for regional disparities in China," *Journal of Comparative Economics*, vol. 29, no. 1, pp. 95–117, 2001.

[9] H. S. Esfahani and M. T. Ramírez, "Institutions, infrastructure, and economic growth," *Journal of Development Economics*, vol. 70, no. 2, pp. 443–477, 2003.

[10] P. Sahoo and R. K. Dash, "Infrastructure development and economic growth in India," *Journal of the Asia Pacific Economy*, vol. 14, no. 4, pp. 351–365, 2009.

[11] D. A. Aschauer, "Is public expenditure productive?" *Journal of Monetary Economics*, vol. 23, no. 2, pp. 177–200, 1989.

[12] Y. Huang, "Understanding China's Belt & Road initiative: Motivation, framework and assessment," *China Economic Review*, vol. 40, pp. 314–321, 2016.

[13] Y. T. Mohmand, A. Wang, and A. Saeed, "The impact of transportation infrastructure on economic growth: Empirical evidence from Pakistan," *Transportation Letters*, vol. 9, no. 2, pp. 63–69, 2017.

[14] A. Mačiulis, A. Vasiliauskas, and G. Jakubauskas, "The impact of transport on the competitiveness of national economy," *Transport*, vol. 24, no. 2, pp. 93–99, 2009.

[15] H. Chang-fu and X. Yuan, "Research on the role of urban rail transit in promoting economic development," *Procedia Engineering*, vol. 21, pp. 520–525, 2011.

[16] M. Akbar, N. A. Abdullah, and S. H. Syed, "Does an improvement in rural infrastructure contribute to alleviate poverty in Pakistan? A spatial econometric analysis," *Social Indicators Research*, vol. 162, no. 1, pp. 475–499, 2022.

[17] A. Estache and L. Wren-Lewis, "Toward a theory of regulation for developing countries: Following Jean-Jacques Laffont's lead," *Journal of Economic Literature*, vol. 47, no. 3, pp. 729–770, 2009.

[18] M. Blumenfeld, W. Wemakor, L. Azzouz, and C. Roberts, "Developing a new technical strategy for rail infrastructure in low-income countries in Sub-Saharan Africa and South Asia," *Sustainability*, vol. 11, no. 16, Art. no. 4319, 2019.

[19] S. Schindler and J. M. Kanai, "Getting the territory right: Infrastructure-led development and the re-emergence of spatial planning strategies," *Regional Studies*, vol. 55, no. 1, pp. 40–51, 2021.

[20] J. R. Oneal, F. H. Oneal, Z. Maoz, and B. Russett, "The liberal peace: Interdependence, democracy, and international conflict, 1950–85," *Journal of Peace Research*, vol. 33, no. 1, pp. 11–28, 1996.

[21] V. H. Asal, R. K. Rethemeyer, and E. W. Schoon, "Crime, conflict, and the legitimacy trade-off: Explaining variation in insurgents' participation in crime," *The Journal of Politics*, vol. 81, no. 2, pp. 399–410, 2019.

[22] O. Brown, M. Qobo, and A. Ruiz-Dana, "The role of regional trade integration in conflict prevention," in *Regional Trade Integration and Conflict Resolution*. London, U.K.: Routledge, 2009, p. 209.

[23] E. D. Mansfield and J. C. Pevehouse, "Trade blocs, trade flows, and international conflict," *International Organization*, vol. 54, no. 4, pp. 775–808, 2000.

[24] W. Duan, A. Khurshid, N. Nazir, K. Khan, and A. C. Calin, "From gray to green: Energy crises and the role of CPEC," *Renewable Energy*, vol. 190, pp. 188–207, 2022.

[25] M. Z. U. Khan and M. M. Khan, "China-Pakistan economic corridor," *Strategic Studies*, vol. 39, no. 2, pp. 67–82, 2019.

[26] N. Naseem and I. Younas, "Regional bonds between Central Asia and South Asia: With special reference to Pakistan," *Journal of Punjab University Historical Society*, vol. 29, no. 2, pp. 168–181, 2016.

[27] K. M. Butt and A. A. Butt, "Impact of CPEC on regional and extra-regional actors," *The Journal of Political Science*, vol. 33, p. 23, 2015.

[28] K. C. Das, "The making of one belt, one road and dilemmas in South Asia," *China Report*, vol. 53, no. 2, pp. 125–142, 2017.

[29] M. Esteban, "The China-Pakistan Corridor," *Strategic Studies*, vol. 36, no. 2, pp. 63–74, 2016.

[30] T. Dadabaev, "Afghanistan in 2018," *Asian Survey*, vol. 59, no. 1, pp. 114–123, 2019.

[31] G. Ali, "China-Pakistan cooperation on Afghanistan: Assessing key interests and implementing strategies," *The Pacific Review*, vol. 35, no. 3, pp. 506–528, 2022.

[32] M. Dorraj and J. M. F. Blanchard, "Iran in China's Maritime Silk Road Initiative (MSRI): Bounded progress and bounded promise," in *China's Maritime Silk Road Initiative, Africa, and the Middle East: Feats, Freezes, and Failures*, pp. 165–197, 2021.

[33] F. F. Guo, C. F. Huang, and X. L. Wu, "Strategic analysis on the construction of new energy corridor China-Pakistan-Iran-Turkey," *Energy Reports*, vol. 5, pp. 828–841, 2019.

[34] S. M. Ali and S. M. Ali, "Case study 1: The China-Pakistan Economic Corridor," in *China's Belt and Road Vision: Geoeconomics and Geopolitics*, pp. 175–230, 2020.

[35] J. Garlick and R. Havlová, "The dragon dithers: Assessing the cautious implementation of China's Belt and Road Initiative in Iran," *Eurasian Geography and Economics*, vol. 62, no. 4, pp. 454–480, 2021.

[36] K. M. Alam, X. Li, and S. Baig, "Impact of transport cost and travel time on trade under China-Pakistan economic corridor (CPEC)," *Journal of Advanced Transportation*, vol. 2019, 2019.

[37] E. Hussain, "CPEC and the Belt and Road Initiative: Economic implications for the greater Middle East," *Asian Journal of Middle Eastern and Islamic Studies*, vol. 14, no. 1, pp. 35–50, 2020.

[38] G. Ali, *China-Pakistan Relations: A Historical Analysis*. Karachi, Pakistan: Oxford University Press, 2017.