CPEC 2.0 in an Era of Connectivity Competition: Third-Party Participation, Security Externalities, and Policy Options for a Sustainable Way Forward

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Abstract

The China–Pakistan Economic Corridor (CPEC) stands at a critical juncture as it enters a new phase in an increasingly competitive connectivity landscape. This paper examines "CPEC 2.0" – the second phase of this flagship Belt and Road Initiative (BRI) corridor – focusing on its expanded scope, the involvement of third-party actors, associated security externalities, and strategies for long-term sustainability. We begin by outlining the theoretical underpinnings of economic corridors and the geopolitics of connectivity, situating CPEC within broader BRI dynamics and the global competition to build infrastructure linkages. An overview of CPEC's first-decade achievements highlights substantial gains in energy capacity, transport infrastructure, and port development, which have addressed critical gaps in Pakistan's economy. We then analyze the challenges confronting Phase II, particularly the development of Special Economic Zones (SEZs), industrial cooperation, and logistics improvements, noting the hurdles in realizing industrialization goals. Opportunities and constraints for third-party participation – including potential partners from Gulf states, ASEAN, Turkey, and Central Asia – are explored, recognizing both the benefits of broader involvement and the geopolitical sensitivities it entails. The paper examines security and geopolitical risks facing CPEC: persistent physical security threats (e.g. insurgency and terrorism), financial and regulatory risks and cyber vulnerabilities. In response, we propose a structured "participation-by-design" framework to attract and safeguard third-party investments, emphasizing robust governance mechanisms, innovative financing models, and local benefit-sharing to ensure inclusive development. Finally, we offer actionable policy recommendations for Pakistan and China – from institutional reforms to security measures – aimed at bolstering CPEC's long-term sustainability. The analysis underlines that with strategic adjustments, CPEC 2.0 can evolve into a more resilient, inclusive corridor that not only strengthens Pakistan's development trajectory but also contributes to regional connectivity amid intensifying global competition.

Keywords: CPEC Phase II; Belt and Road Initiative (BRI); Economic Corridors; Connectivity Geopolitics; Special Economic Zones (SEZs); Third-Party Participation; Security Risks; Sustainable Development

Introduction

The China–Pakistan Economic Corridor (CPEC) has emerged as a pivotal project in Asia's evolving connectivity landscape. Launched in 2015 as a bilateral initiative between Beijing and Islamabad, CPEC was envisaged as a collection of energy, transport, and infrastructure projects to spur Pakistan's development and deepen linkages between Western China and the Arabian Sea[1]. Over the past decade, CPEC's first phase has delivered new highways, power plants, and port facilities, significantly upgrading Pakistan's infrastructure. These achievements have not only alleviated Pakistan's chronic energy shortages and transportation bottlenecks but also symbolized the tangible progress of China's broader Belt and Road Initiative (BRI) within South Asia[2]. As CPEC transitions into its second phase – often dubbed "CPEC 2.0" – the focus is shifting from foundational infrastructure to deeper economic integration through industrial cooperation, Special Economic Zones (SEZs), agriculture, and socio-economic development. This new phase unfolds at a time of intensifying connectivity competition, where multiple powers are advancing rival infrastructure strategies across Asia and beyond[3]. In this context, CPEC's trajectory will be influenced not only by China–Pakistan bilateral efforts but also by the involvement of other regional stakeholders and the broader geopolitical currents surrounding infrastructure development.

Underlying CPEC's evolution is the concept of the *economic corridor* – a development model that links transportation networks with industrial hubs and urban centers to stimulate trade and economic growth. The BRI, announced by President Xi Jinping in 2013, has globalized this model by proposing transcontinental corridors that connect East Asia with Europe, Africa, and the Middle East[4]. CPEC is one of BRI's six designated economic corridors and is frequently described as its "flagship" or pilot project[5]. The prominence of CPEC within BRI reflects its geostrategic value: it provides China a direct overland route to the Arabian Sea, bypassing traditional maritime chokepoints, and positions Pakistan as a key transit hub at the crossroads of South, Central, and West Asia. However, the growth of BRI has also spurred parallel initiatives – for instance, India and Japan's Asia–Africa Growth Corridor and the G7's Partnership for Global Infrastructure – as part of a wider contest to shape regional connectivity[6]. This "connectivity geopolitics" means that infrastructure projects like CPEC are not conducted in a vacuum; they carry strategic implications, attracting both collaboration and scrutiny from third parties.

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[1] Montesano, F. S. (2016, November 28). *The China-Pakistan Economic Corridor: Security challenges at a geopolitical crossroads*. Clingendael – the Netherlands Institute of International Relations.

[2] Inayat, Z. (2025). *Strengthening Pakistan's Connectivity with Regional Countries Through CPEC*. Islamabad: Pakistan Institute of Development Economics (PIDE), Discourse Vol. 2025-01.

[3] Petrella, S. (2018, March 27). *What is an economic corridor?* Reconnecting Asia, Center for Strategic and International Studies.

[4] McBride, J., Berman, N., & Chatzky, A. (2023). *China's Massive Belt and Road Initiative*. Council on Foreign Relations Backgrounder.

[5] Montesano, 2016.

[6] Petrella, 2018.

CPEC's First Phase: Achievements in Energy, Transport, and Port Development

In its first decade (2015–2025), the China–Pakistan Economic Corridor has delivered a range of infrastructure projects that have visibly transformed parts of Pakistan's economic landscape. These achievements are concentrated in three key domains: energy, transportation, and port development. By tackling longstanding bottlenecks in power supply and physical connectivity, CPEC Phase I addressed some of Pakistan's most pressing development needs and laid the groundwork for industrial and trade expansion. Figure 1 and Table 1 provide a summary of major CPEC projects completed or operational to date in these sectors, illustrating the scale and impact of this investment drive.

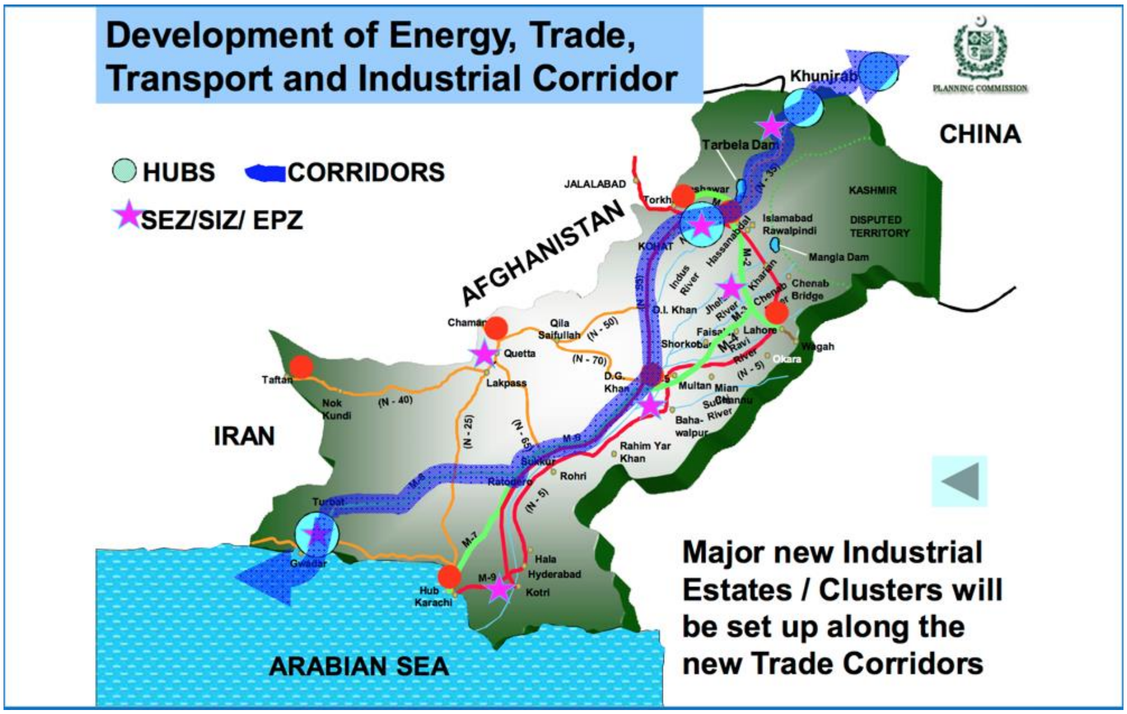

Figure 1: Map of the China–Pakistan Economic Corridor (CPEC) connecting Kashgar in western China to Gwadar Port in Pakistan. The map shows key transport routes, including the Karakoram Highway through Gilgit-Baltistan, major highway upgrades in Pakistan, and the location of energy and infrastructure projects along the corridor. As a flagship BRI route, CPEC spans over 3,000 km and links various regions of Pakistan to China's Xinjiang province.[7]

[7] Montesano, 2016.

Table 1: **Selected Major Projects Completed Under CPEC Phase I (2015–2023)**[8]

Category	Project	Details and Status
Energy	Port Qasim Coal Power Plant (Karachi)	2×660 MW (1,320 MW) coal-fired plant; operational since 2017. Solved power outages in Karachi region.
Energy	Sahiwal Coal Power Plant (Punjab)	2×660 MW (1,320 MW) coal plant; completed 2017 in record time. Supplies Punjab's grid.
Energy	Karot Hydropower Project (AJK/Punjab)	720 MW run-of-river hydro plant on Jhelum River; began operations 2022. Renewable energy contribution.
Energy	Quaid-e-Azam Solar Park (Bahawalpur)	1,000 MW solar PV park (400 MW built by Chinese firms); partly operational, expanding capacity.
Energy	Orange Line Metro (Lahore) – Energy aspect	Orange Line urban rail transit (Lahore); indirectly an energy project (electric metro) improving urban infrastructure (completed 2020).
Transport	Sukkur–Multan Motorway (M-5)	392 km six-lane controlled-access motorway; opened 2019. Cuts travel time across Sindh–Punjab.
Transport	Havelian–Thakot Highway (KKH Phase II)	120 km of Karakoram Highway upgraded in northern Pakistan; completed by 2020. Enhances China–Pakistan land link.
Transport	East Bay Expressway (Gwadar)	19 km six-lane expressway linking Gwadar Port to national highway; completed 2022. Facilitates cargo movement from port.
Port & Shipping	Gwadar Port expansion (Phase I)	3 multipurpose berths, cranes, and storage yard built. Port operational for bulk cargo since 2016.
Port & City	Gwadar Free Zone (Phase I)	60-acre Free Trade Zone with business units (warehousing, seafood processing, etc.); first phase inaugurated 2018.
Social/Other	Gwadar 300MW Power Plant	300 MW coal power plant near Gwadar (to address local power needs); construction completed by 2023, in testing phase.
Social/Other	Optical Fiber Cable: Khunjerab–Islamabad	820 km fiber-optic cable from China to Pakistan (completed 2018) for digital connectivity as part of CPEC's ICT component.

[8] Inayat, 2025; Pakistan Institute of Development Economics [PIDE]. (2025, January 1). *A decade of CPEC – Lessons, challenges, and the road ahead: An interview with Mr. Ahsan Iqbal, Federal Minister for Planning, Development & Special Initiatives* [Interview].

Phase II – Industrial Cooperation, SEZs, and Logistics: Key Challenges and Priorities

With the foundational infrastructure largely in place, CPEC's second phase shifts the emphasis toward *industrialization*, *trade facilitation*, and *socio-economic development*. The Long-Term Plan of CPEC (2017–2030) envisioned that after the "early harvest" energy and transport projects, the corridor would catalyze Pakistan's industrial upgrade through the establishment of Special Economic Zones and promote diversification into sectors like manufacturing, agriculture, tourism, and technology. As Pakistan entered the second decade of CPEC around 2023–24, there was a clear recognition in both Islamabad and Beijing that the corridor's success would now be judged by economic outcomes such as job creation, export growth, and sustainable development rather than just the completion of physical projects[9].

A linchpin of CPEC Phase II is the development of **Special Economic Zones** across Pakistan. Nine priority SEZs were designated in the original plan, distributed among Pakistan's provinces and regions to ensure broad-based industrial growth. These include zones like *Rashakai SEZ* in Khyber Pakhtunkhwa, *Allama Iqbal Industrial City (M3)* in Punjab (Faisalabad), *Dhabeji SEZ* in Sindh near Karachi, *Bostan SEZ* in Balochistan, and others in Islamabad, Gilgit-Baltistan, Azad Kashmir, and Port Qasim. The concept is to create industrial parks with preferential incentives (tax breaks, customs facilitation, infrastructure provision) to attract both Chinese and local manufacturers to set up factories, particularly in labor-intensive and export-oriented sectors.

Yet, despite being announced in 2016–17, progress on SEZs has been slow and uneven. As of late 2024, only two zones – the Allama Iqbal Industrial City in Faisalabad and the Rashakai SEZ in the northwest – have made tangible headway, and even they are in early stages of occupancy. Basic infrastructure (roads, utilities) has been developed at these sites and a handful of enterprises have started operations or construction (e.g., textile and pharmaceutical units in Faisalabad, a steel plant in Rashakai). The other planned SEZs have faced delays in land acquisition, utilities provision, or bureaucratic approvals and remain largely on paper or in initial development. For example, Dhabeji SEZ near Karachi, despite strong interest due to its proximity to port and city, saw its tendering process prolonged and was still finalizing developers by 2025. The Gwadar Free Zone's second phase (a much larger 2,200-acre expansion) also lagged amid challenges in water and electricity supply and security concerns.

Recognizing this, Pakistan and China have in recent years redoubled focus on kick-starting industrial cooperation. High-level meetings in 2023 and 2024 (such as the CPEC Joint Cooperation Committee sessions) placed SEZ acceleration at the top of the agenda. Measures being implemented include reviving the CPEC Business and Industrial Cooperation Working Group, introducing more attractive incentive packages

[9] Zhang, H., & Malik, A. A. (2024, December 16). *Delivering promises for the China-Pakistan Economic Corridor: Lessons learned and the path forward*. Georgetown Journal of International Affairs.

(tax holidays, expedited customs clearance of machinery), and crucially, improving Pakistan's *investment climate*. One positive development is the establishment of the Special Investment Facilitation Council (SIFC) in Pakistan – a civil-military body created in 2023 to act as a one-stop shop for vetting and fast-tracking investments, particularly those from Gulf countries and China[10]. Through SIFC and related efforts, Pakistan has moved to streamline approvals for SEZ projects and address investor grievances. For instance, SIFC is working on providing sovereign guarantees or insurance to mitigate political risks for foreign firms entering Pakistani SEZs.

Another pillar of CPEC 2.0 is enhancing **logistics and trade facilitation** to capitalize on the new infrastructure. The mere existence of highways and ports does not automatically translate into economic gains; efficient logistics systems, cross-border connectivity, and supportive trade policies are needed to actually increase the flow of commerce. Pakistan's logistics performance has historically been hampered by fragmented transport services, lengthy customs procedures, and inadequate storage facilities. CPEC provides an opportunity to modernize these aspects by introducing better technology and practices in transportation management and by physically extending Pakistan's trade routes into new regions.

One focus area is the upgrade of the rail network, primarily via the planned ML-1 railway modernization. Rail is crucial for bulk cargo and long-distance trade efficiency. The ML-1 project, agreed in principle under CPEC, aims to double-track and upgrade the Karachi–Peshawar mainline, increasing train speeds from the current ~80 km/h to 160 km/h and upping annual line capacity from 34 to over 100 million passengers and tons of freight. This $6.8 billion project encountered delays over financing terms, but by 2023 a new deal was reached to proceed in phases with a combination of Chinese concessionary loans and Pakistan's own resources. If executed, ML-1 will be a game-changer: for example, it could cut Karachi-to-Lahore freight train times from 36 hours to under 18, making Pakistani exports more competitive and reducing trucking pressure on highways. Additionally, a spur to Gwadar and Quetta (through ML-2 or ML-3 alignments) is envisaged, which would integrate Balochistan into the national rail grid and connect the port directly to upcountry markets.

Third-Party Participation in CPEC: Opportunities and Constraints

As CPEC progresses into a more expansive phase, both Pakistan and China have increasingly expressed openness to third-party participation in its projects. Making CPEC an "inclusive" corridor by involving additional countries or investors could bring fresh capital, expertise, and legitimacy to the initiative, potentially relieving some burdens on Pakistan and addressing international concerns about exclusivity. Indeed, at various points over the past few years, official statements noted that CPEC is "open and

[10] Khan, H. A. (2024, May 15). Pakistan, China to finalize modalities for third party participation in CPEC. *Arab News*.

inclusive" and that interested countries or international organizations are welcome to join in "appropriate ways" to share the benefits of connectivity[11].

The oil-rich Gulf countries have been among the most courted third partners for CPEC. Pakistan sees natural synergy in involving nations like **Saudi Arabia** and the **United Arab Emirates**, given their financial clout and longstanding ties with Pakistan. In 2018, Pakistan formally invited Saudi Arabia to become a third strategic partner in CPEC[12]. High-level visits led to Saudi commitments to invest, including a headline proposal for a $10 billion oil refinery and petrochemical complex at Gwadar Port[13]. Saudi Arabia's interest in CPEC stems from multiple considerations: securing a stake in a future trade route where Saudi oil could be exported via Gwadar to western China; exploring mineral and energy investment opportunities (e.g., Saudi firms have shown interest in Pakistan's mining sector and energy projects); and geopolitically, deepening an alliance with Pakistan that also complements Saudi relations with China. Likewise, the UAE – a major investor in Pakistan historically – has eyed CPEC projects in logistics and real estate. The UAE's DP World had earlier been involved in Pakistan's Karachi port and might consider port or free zone investments in Gwadar if commercial viability improves. In 2019 and again in 2023, Pakistani officials signaled that the UAE could participate especially in Gwadar's development and in infrastructure for tourism on the Balochistan coast.

Turkey has often expressed fraternal interest in Pakistan's development and could be a valuable third partner, given its expertise in infrastructure construction and its own aspirations for connectivity (Ankara promotes a "Middle Corridor" linking Turkey to China through Central Asia). Turkish companies have already executed some infrastructure projects in Pakistan (outside CPEC, e.g., Turkish contractors built a dam and some public transport systems). In 2022, Pakistan's then Prime Minister invited Turkey to join CPEC, with specific mention that Turkey could invest in SEZs or build projects jointly[14]. Turkey's strategic location at the crossroads of Europe and Asia means it could help extend CPEC's reach westward. For example, a future route could see goods from Xinjiang going through Pakistan and Iran to Turkey and onward to Europe, integrating with Turkey's Kars–Tbilisi–Baku railway. From Turkey's perspective, participating in CPEC aligns with President Erdogan's vision of strengthening Turkey's role in Muslim-majority countries and could open a southern trade route that circumvents the Suez Canal.

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[11] Zhao, L. (2022, November 28). 'China, Pakistan welcome third party participation in CPEC'. *The Express Tribune*.

[12] Shahzad, A. (2018, September 20). Pakistan invites Saudi Arabia to join China's Belt and Road corridor. *Reuters*.

[13] Haris, M. (2018, September 21). *Breaking news: Saudi Arabia to invest $10 billion in Gwadar*. CPIC Global.

[14] Associated Press of Pakistan. (2022, November 28). China, Pakistan welcome third party participation in CPEC. *The Express Tribune*.

Iran shares a nearly 900 km border with Pakistan and has its own port – Chabahar – just ~70 km from Gwadar. Initially, Iran was not directly involved in CPEC, and Pakistan balanced between not antagonizing Iran and not jeopardizing its ties with Saudi Arabia (a rival to Iran) or the US (which had sanctions on Iran). However, the strategic logic of Iran's participation is strong: Iran could provide energy supplies to CPEC (pipelines for Iranian oil/gas into Pakistan and China) and serve as a conduit for westward routes. In fact, China signed a major 25-year strategic partnership with Iran in 2021, which includes infrastructure development; linking that to CPEC could create a new branch of the BRI that connects China–Pakistan–Iran. Pakistan has openly invited Iran to join CPEC cooperation[15]. Tehran has responded positively in principle – it views connectivity with South and East Asia as beneficial, and CPEC's success would complement Iran's own role in regional trade. One concrete area is the revival of the Iran–Pakistan gas pipeline (IP pipeline), which was stalled due to sanctions. If sanctions ease under any future Iran nuclear deal, that pipeline could potentially be completed, supplying Pakistan (and by extension possibly China via Gwadar or another link) with Iranian natural gas, thereby becoming part of the corridor's energy network. Additionally, road and rail links between Pakistan and Iran are being upgraded (e.g., a new border crossing at Gabd-Rimdan was opened in 2022, and Quetta–Zahedan rail improvements are considered). These could tie Iran's transport grid into CPEC, giving Iran access to the Asian interior and giving Pakistan an outlet to the Persian Gulf beyond Gwadar.

Central Asian states (Kazakhstan, Kyrgyzstan, Uzbekistan, Tajikistan, Turkmenistan) landlocked in the heart of Eurasia have shown interest in any corridor that offers them sea access and diversified trade routes. Traditionally reliant on Russia or Iran for port access, they see Pakistan's Gwadar and Karachi ports as attractive alternatives for reaching South Asian and Middle Eastern markets. CPEC's road/rail network, if extended through Afghanistan or via China's Xinjiang, could allow Central Asian exports like oil, gas, minerals, and wheat to flow south, and conversely let them import goods from those regions via a shorter path. Kazakhstan, for example, has discussed linking up via road and rail through China's Urumqi–Kashgar and then down the Karakoram into Pakistan[16]. Already, a Quadrilateral Traffic in Transit Agreement (QTTA) involving Pakistan, China, Kyrgyzstan, and Kazakhstan provides a legal framework for commercial trucking from Central Asia to Pakistan via the Karakoram Highway (bypassing Afghanistan). Although this route is circuitous, it has been occasionally used when Afghan routes were insecure. Uzbekistan has separately pushed for a trans-Afghan railway connecting Termez (Uzbekistan) to Kabul and then to Pakistan's rail network – a project which, if realized, could effectively plug Uzbekistan (and by extension Kazakhstan) into CPEC's transportation system at Peshawar or Quetta. Pakistan has welcomed these ideas as they would increase traffic through its infrastructure and bring transit fees and political goodwill. China also supports Central Asian connectivity as it aligns with the BRI vision of a networked Eurasia. In fact, many Chinese companies operating in Kazakhstan or Kyrgyzstan could leverage CPEC

[15] Khan, 2024.

[16] Inayat, 2025.

routes for their logistics, creating “tripartite ventures” and trade hubs involving Central Asian, Pakistani, and Chinese partners.

Regarding **ASEAN countries**, their participation in CPEC is more indirect but not negligible. For Southeast Asian nations like Malaysia, Indonesia, or Singapore, CPEC might offer an alternate route for trade with western China or a destination for outward investment. Malaysia was an early supporter of BRI and has its own significant Chinese-backed projects (like Port Klang expansion). While ASEAN countries have not been specifically invited as “partners” in CPEC, Pakistan has sought investment from them in its SEZs. For example, Malaysian and Singaporean investors have been approached to develop industrial parks or invest in Pakistan’s real estate and telecom sectors, with the argument that improved connectivity under CPEC makes Pakistan a more appealing base to access Central Asia and the Middle East. Companies from Thailand and Malaysia have participated in some energy projects supply chains (like providing equipment). Another angle is through China’s involvement: many ASEAN countries host Chinese manufacturing; as China relocates lower-end industries abroad, some could come to Pakistan (through joint ventures) if Pakistani SEZs become attractive – thus an *ASEAN firm could indirectly be a player in CPEC* by partnering in those ventures. Additionally, CPEC’s maritime dimension (linking to the Arabian Sea) intersects with ASEAN’s trade routes: shipping from Gwadar/Karachi to Southeast Asia is part of the Maritime Silk Road. In the future, one could envisage transshipment arrangements or port alliances (e.g., Gwadar with ports in Malaysia or Indonesia) as trade volumes grow.

Security and Geopolitical Risks: Externalities of CPEC’s Expansion

Large-scale initiatives like CPEC do not unfold in a vacuum; they generate a host of externalities, particularly in the realm of security and geopolitics. As CPEC has grown in scope, it has encountered myriad risks – from insurgent attacks on infrastructure to financial sustainability issues – that threaten to undermine its objectives. Ensuring the long-term success of CPEC 2.0 will require navigating these security externalities deftly.

From its inception, CPEC has been shadowed by security challenges, given that many projects traverse volatile regions of Pakistan. Two areas stand out: Balochistan, home to Gwadar port and long a hotbed of separatist insurgency, and the northwest (Khyber Pakhtunkhwa) region, where Islamist militant groups like the Tehrik-e-Taliban Pakistan (TTP) operate and border instability with Afghanistan persists. These threats are not abstract – they have materialized in numerous violent incidents aimed at derailing CPEC or targeting Chinese interests.

In Balochistan, the ethnic Baloch insurgents (notably the Balochistan Liberation Army, BLA, and similar groups) resent what they perceive as exploitation of their province’s resources and marginalization of local communities. To them, CPEC projects – especially at Gwadar and related road infrastructure – symbolize an influx of outsiders (Chinese and others) and central authority in their homeland. Over the past few years, Baloch militants have carried out a string of attacks: they have targeted CPEC workers and Chinese personnel, such as the attack on the Chinese consulate in Karachi in 2018 and several deadly assaults on Chinese engineers and project sites in Balochistan[17]. In 2022, a female BLA suicide bomber attacked a van carrying Chinese teachers at Karachi University, underlining the reach of Baloch militancy beyond Balochistan. In 2023, an audacious attempt was made to storm a security compound at Gwadar Port, which was foiled but underscored persistent intent to hit the corridor[18]. These incidents have sometimes led Chinese contractors to temporarily halt work and have prompted strong demands from Beijing for better security.

Pakistan's government has responded by deploying a dedicated security force of over 15,000 troops (the Special Security Division and associated units) specifically to guard CPEC projects and Chinese nationals. Convoys get military escorts in high-risk areas, and surveillance has been increased. Despite these measures, the sheer length and dispersed nature of CPEC infrastructure make 100% security coverage difficult. Insurgents have adapted with new tactics (e.g., novel IED attacks, targeting softer targets like hotels frequented by Chinese). A related issue in Balochistan is *local grievances*. If local communities feel dispossessed or see few direct benefits (jobs, social services) from CPEC, it can fuel sympathy for insurgents. The government belatedly recognized this and has started programs to increase local hiring and provide social welfare in Gwadar and other project areas[19]. Inclusive development – ensuring the Baloch people tangibly benefit from CPEC – is ultimately the most sustainable way to undercut the insurgency's narrative.

In Khyber Pakhtunkhwa and the tribal belt, terrorism and religious militancy pose another security risk. Groups like the Pakistani Taliban (TTP) and remnants of ISIS-Khorasan have explicitly menaced CPEC projects, viewing China as an ally of the Pakistani state they fight against[20]. Several attacks have occurred in the northwest: notably, the Dasu hydropower project attack in July 2021 (technically not under CPEC but a World Bank project executed by Chinese company) where a bus explosion killed 9 Chinese engineers – it was a turning point that raised alarm in Beijing about the security environment. In 2023, a suicide bomber targeted a convoy of Chinese engineers in KP's Shangla district, killing Chinese workers[21]. The TTP, emboldened after the Afghan Taliban's return to power, has escalated attacks generally, and while their primary targets are Pakistani security forces, collateral or direct threats to foreign nationals increase in such chaos. Additionally, Pakistan's major urban centers like Karachi have seen terrorism in the past; any renewed terror campaign could incidentally hit CPEC interests (for example, a bomb in a hotel hosting Chinese delegations, etc. has precedent – the Zaver Pearl Continental in Gwadar was attacked in 2019 by Baloch militants).

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[17] Ahmad, F., Hussain, A., & Abbas, S. (2024). China-Pakistan Economic Corridor (CPEC): Security threats and challenges for Pakistan and China. *Global Social Sciences Review, 9*(3), 37–43.

[18] Ahmad, B. (2024, June 22). Security threats endanger future of CPEC, warns Chinese official. *Dawn*.

[19] Pakistan Institute of Development Economics [PIDE], 2025.

[20] Ahmad et al., 2024.

[21] Ahmad, 2024.

Beyond immediate security, CPEC faces financial sustainability risks that can also threaten its viability. Pakistan's persistent macroeconomic troubles – high external debt, fiscal deficits, and occasional balance-of-payments crises – pose the risk that Pakistan may struggle to meet its financial commitments related to CPEC. Many early CPEC projects were financed through loans to the Pakistani government or via "investments" that need repayment through tariffs (in energy projects). For instance, Pakistan owes billions to Chinese power producers for capacity payments and fuel costs. As of 2023, Pakistan's power sector circular debt (amount owed to energy generators) ballooned, and Chinese IPPs (Independent Power Producers) complained of unpaid dues, even temporarily shutting down some plants[22]. Such issues can discourage further Chinese investment or make new projects contingent on Pakistan clearing arrears.

Regulatory risk is another angle – this involves changes in government policies, bureaucratic inefficiencies, or legal challenges that affect CPEC. Pakistan's political instability (three changes of government since 2015, including a military-influenced interim setup in 2023) means policies towards CPEC can shift or slow. For example, the government elected in 2018 initially ordered reviews of CPEC power contracts, suspecting corruption or wanting to renegotiate terms; although they eventually recommitted to CPEC, valuable time was lost and a message of uncertainty sent[23]. Inconsistent tax policies or delays in approvals have also plagued some projects – e.g., the clearance for Gwadar's Kohala power plant or certain SEZ incentives got delayed. Land acquisition issues, provincial-center coordination problems, and Pakistan's notoriously cumbersome business regulations all add *friction* to CPEC implementation. Chinese stakeholders often express frustration at these "soft" hurdles. Improving governance – a theme we will return to in recommendations – is vital to mitigate regulatory risk. Encouragingly, measures like the one-stop SIFC and stronger central coordination through the Planning Ministry have been enacted, but their effectiveness will need to endure beyond individual tenures.

Another risk is the underutilization of completed projects due to regulatory or planning flaws. The GJIA study by Zhang and Malik pointed out that because industrial demand didn't grow as fast, some power plants are underused, making them appear as overinvestment[24]. This could turn initial successes into burdens (idle capacity still costs money). Thus, the lack of synchronized planning – ensuring energy, industrial, and skills development go hand in hand – can create a scenario where pieces of the corridor don't fully click together, undermining the economic rationale. Addressing this requires flexible policy adjustments (e.g., if power surplus exists, export electricity to neighbors like Afghanistan or let it trigger lowering prices to stimulate consumption).

As CPEC has a significant technological component (power grids, telecommunications, surveillance systems, etc.), it is exposed to cybersecurity threats that could disrupt operations or compromise sensitive data. Modern infrastructure is often digitally

[22] Syed, B. S. (2024, June 22). Security threats endanger future of CPEC, warns Chinese official. *Dawn*.

[23] Shahzad, 2018.

[24] Zhang & Malik, 2024.

controlled and interconnected; a concerted cyber-attack on the power plants, for example, could shut down electricity on a wide scale or damage equipment[25]. Similarly, hacking the signalling system of railways (once modernized) or ports' IT systems could cause chaos in logistics. Both state-sponsored hackers and militant groups could be interested in targeting CPEC's critical infrastructure via cyber means, as it's a high-profile project.

In 2022, Pakistani authorities identified an increase in cyber attacks aimed at CPEC-related departments, likely probing for intelligence or attempting sabotage. This has led to capacity-building – training Pakistani IT staff in cybersecurity and establishing response teams. Given the critical nature of some CPEC assets (power plants, for instance, feeding the national grid), their cyber defense is now being treated as part of overall project security.

To conclude, a brief note on environmental externalities is warranted as part of sustainability. Some CPEC projects, like coal power plants and large highways, have environmental impacts – CO_2 emissions, habitat disruption, etc. Pakistan's emissions have risen partly due to new coal plants; if global climate pressures lead to carbon tariffs or funding cuts for fossil fuels, those plants could become stranded assets or costly due to carbon fees. Additionally, local environmental issues (dust, pollution, water use) around project sites can cause community opposition. For instance, in Gwadar, locals protested not just lack of water but also environmental harm from certain construction. Both governments have stated Phase II will emphasize "green development" – more solar, wind, and adherence to environmental standards[26]. How well they implement this will influence CPEC's acceptance and long-term viability in a world increasingly prioritizing sustainable development.

Towards a Sustainable "Participation-by-Design" Framework

The analysis thus far has underscored that CPEC's future success hinges on broadening its ownership while managing risks – in essence, making it both *inclusive* and *resilient*. To achieve this, we propose a structured "participation-by-design" framework that integrates third-party involvement, strong governance, risk mitigation, and benefit-sharing into the fabric of CPEC's second phase. Rather than ad-hoc invitations or reactive problem-solving, the idea is to embed mechanisms from the outset that attract external partners and safeguard their interests, ensure transparency and accountability, and distribute CPEC's gains more equitably to build local support. This section outlines the key components of such a framework: **governance reforms** for inclusivity and accountability, **innovative financing models** to diversify funding and reduce debt burden, **local benefit-sharing and community engagement** strategies, and enhanced **security and risk management** measures tailored to protect all stakeholders. By institutionalizing these elements, Pakistan and China can transform CPEC into a more sustainable corridor that is robust against both geopolitical headwinds and on-ground challenges.

[25] Ahmad et al., 2024.

[26] Khan, 2024.

A crucial first step is to strengthen CPEC's governance structure to be more inclusive of various stakeholders – including third-party participants, provincial authorities, and local communities – and more transparent in decision-making. The existing CPEC institutional setup (a Joint Cooperation Committee at the top, with Joint Working Groups by sector) has been effective for bilateral coordination, but it could be expanded or adapted for multilateral input. For example, observer status or associate membership could be offered to interested third countries in relevant Joint Working Groups.

Another governance aspect is enhancing the role of provincial and local authorities in CPEC planning. Many CPEC projects lie in provincial domain, and lack of consultation had caused friction (e.g., smaller provinces felt Punjab got a larger share initially). To remedy this, Pakistan could create a *CPEC Inter-Provincial Council* that meets regularly, bringing chief ministers into the loop on upcoming plans and seeking their input on local needs. Decentralizing some implementation to provincial bodies (with capacity support) can also improve oversight and tailoring of projects to local contexts. For instance, in developing an SEZ in Balochistan, the provincial government should co-chair the effort with federal and Chinese counterparts to ensure local labor is trained and employed, and environmental regulations are met to provincial standards.

Financial sustainability can be vastly improved by diversifying the sources and models of financing for CPEC projects. Rather than relying predominantly on bilateral government-to-government loans, CPEC 2.0 should embrace Public–Private Partnerships (PPPs), joint ventures, and multilateral financing instruments. This reduces the debt load on Pakistan and allows more stakeholders to take ownership.

One approach is to set up a CPEC Investment Fund – a pooled vehicle where Pakistan, China, and third countries (or their sovereign wealth funds, as well as private investors) can contribute capital. This fund, possibly managed by an independent board with representation from major contributors, could provide equity or debt to CPEC projects meeting certain criteria

Engaging multilateral development banks (MDBs) more directly is another strategy. AIIB is already involved; Pakistan can seek ADB or World Bank co-financing for projects that have regional impact (they might be more open if e.g. a project clearly benefits Afghanistan or Central Asia too). Multilateral involvement often comes with stricter procurement rules, which would bolster transparency as well.

For CPEC to endure and fulfill its promise, it must tangibly improve the lives of the people along its routes. A participation-by-design approach extends beyond nations to local communities – they must "participate" in the benefits to feel a sense of ownership.

Every CPEC project agreement should include binding commitments on local employment targets and training programs. This has already been done to an extent – Pakistani officials claim over 75% of workers on CPEC projects have been Pakistani[27]. Codifying it ensures consistency. Furthermore, a portion of the revenue from CPEC projects could be set aside in community development funds for affected areas. This

[27] Pakistan Institute of Development Economics [PIDE], 2025.

model mirrors how some countries share mining royalties with local communities. China and Pakistan could agree on earmarking a small percentage of project revenues or an upfront grant per project that goes directly into local development initiatives overseen by joint committees of locals, government and the company. This addresses the sentiment of resource exploitation and ensures locals see visible improvements in their daily lives (water supply schemes, health services, etc.) attributed to CPEC.

Before launching projects, conducting thorough stakeholder consultation and social impact assessments can preempt conflicts. In the early phase, this was sometimes bypassed. Now, make it standard that any major project (railway, highway rerouting, industrial zone) involves consulting local landowners, tribal elders, or urban communities. Their feedback can be used to tweak project design – for instance, providing alternative fishing jetties to Gwadar's fishermen if port operations restrict their traditional areas. In fact, the Gwadar fishermen's protest could have been avoided had a proper consultation and compensation plan been in place from the start. Institutionalizing this, Pakistan's planning ministry could require an inclusive consultation report as part of project approval in the Joint Working Group. Including local representatives or civil society members in environmental and social monitoring committees during project implementation can also increase transparency and trust.

Intentional measures should also ensure CPEC doesn't widen provincial inequalities. While Punjab and Sindh benefited strongly in Phase I (due to better readiness and existing infrastructure), Phase II should prioritize uplifting lagging regions like Balochistan, KP, and Gilgit-Baltistan. That means fast-tracking the SEZ in Balochistan (Bostan) and one in KP (Rashakai, which is underway) and making sure infrastructure like internet connectivity, roads, and power is provided to those sites even if initial economic returns might be lower than in a big city. Economic activity spurred in these regions will pay off in national cohesion and stability – a worthwhile dividend even if ROIs are a bit longer-term.

Moreover, integrating agriculture and small businesses into CPEC supply chains spreads benefits. For example, China and Pakistan have initiated agricultural pilot projects under CPEC; expanding these by linking Pakistani farmers to Chinese markets via CPEC logistics can boost incomes. Special freight trains or cold storage trucking for exporting mangoes, rice, or seafood to China and beyond can directly benefit farming communities. This is already identified in Phase II plans[28] – execution will be key, such as setting up collection centers, providing training in meeting export quality standards, and ensuring farmers get fair prices (here a third-party like FAO could even collaborate, depoliticizing development).

Conclusion and Policy Recommendations

As CPEC enters its second decade, its trajectory will serve as a bellwether for the broader Belt and Road Initiative and for regional connectivity in South Asia. The analysis presented in this paper suggests that while CPEC has delivered critical infrastructure and initial economic gains, its long-term success hinges on strategic

[28] Ahmad, 2024.

course corrections in Phase II. By embracing a more inclusive, multilateral, and security-conscious approach – encapsulated in the “participation-by-design” framework – Pakistan and China can transform CPEC into a truly sustainable economic corridor that navigates geopolitical competition and delivers enduring benefits. Below, we outline actionable policy recommendations for both Pakistan and China (and relevant partners) to operationalize this vision:

1. Formalize Third-Party Participation Mechanisms: Pakistan and China should move swiftly to finalize the “modalities” for third-party involvement agreed upon in 2024. This entails drafting a framework document that defines how other countries or organizations can join CPEC projects, either as financiers, investors, or technical partners. The framework should cover processes for proposal submission, joint feasibility studies, cost-sharing, and decision-making rights for third parties. It should also list priority sectors open for collaboration (e.g., energy, infrastructure, agriculture) to guide interested countries. By institutionalizing third-party participation, CPEC can transition from a bilateral venture to a platform for broader regional cooperation, attracting capital from Gulf sovereign funds, expertise from countries like Turkey, and possibly development funding from multilateral institutions.

2. Strengthen Joint Governance and Transparency: We recommend establishing an expanded CPEC coordination body that includes representatives from key stakeholder groups – federal ministries, provincial governments, Chinese counterparts, and observers from third-party partners and development banks. This could be an evolution of the Joint Cooperation Committee (JCC) into a CPEC Council that meets semi-annually to review progress, address grievances, and approve new initiatives with input from all sides. Pakistan should also enhance the role of its Parliament and civil society in oversight by regularly publishing CPEC progress reports and convening parliamentary committees to scrutinize implementation. China, on its part, can encourage its state-owned enterprises to be more open about their CPEC project operations and local procurement (publishing data on jobs created, contracts given to local firms, etc.). Maximum transparency will counter suspicions and improve project execution through public accountability.

3. Prioritize Industrial and SEZ Development with Reforms: To unlock CPEC’s economic potential, Pakistan must re-energize its efforts on Special Economic Zones and industrial projects. This means resolving the remaining bureaucratic and regulatory hurdles stalling SEZs. The federal Board of Investment, in coordination with Chinese authorities, should implement true one-stop services for investors, cutting red tape in company registration, work visas, and customs clearances at SEZs. By 2025–26, the goal should be to have at least 3–4 SEZs fully operational with significant factory occupancy.

4. Implement “Security by Design”: Pakistan needs to elevate security planning as an integral part of CPEC project design and execution. This involves continuing to augment the Special Security Division dedicated to CPEC with better equipment, training, and intelligence capabilities. A recommended step is establishing integrated command centers in each CPEC cluster where military, civilian law enforcement, and Chinese security liaisons work together to monitor threats and coordinate responses in real time.

In areas like Gwadar and the Karakoram Highway, consider deploying advanced surveillance (drones, CCTV networks) and quick reaction forces on alert. On a proactive front, Pakistan should intensify efforts to engage insurgents and disaffected groups through dialogue and development. A political solution in Balochistan – addressing local autonomy and resource-sharing – would tremendously improve the security outlook for CPEC.

5. Foster Local Ownership and Communication: We strongly recommend an upgraded communications strategy for CPEC within Pakistan. The government and Chinese embassy should collaboratively launch community outreach programs in CPEC areas – townhall meetings, radio broadcasts in local languages, and involvement of local influencers to explain upcoming projects, address concerns, and highlight benefits. A grievance redressal mechanism, perhaps an ombudsperson’s office for CPEC, would allow issues (like land compensation disputes or environmental complaints) to be handled transparently and fairly, reducing the chance that these fester into larger conflicts. On the benefit-sharing front, Pakistan should implement policies like preferential hiring of locals, local content requirements (e.g., mandating a certain percentage of construction materials be procured from local suppliers where feasible), and corporate social responsibility (CSR) obligations for Chinese companies to invest in community projects.

6. Integrate Climate and Environmental Safeguards: To align CPEC with sustainable development, both China and Pakistan should ensure rigorous environmental impact assessments (EIAs) and mitigation plans for all projects, disclosing these to the public. Clean energy projects (solar, wind, hydropower) in CPEC should be expedited to balance the earlier focus on coal. In fact, an earlier announced target was to increase the share of renewables – policy action like inviting bids for solar farms in Balochistan or wind farms in Sindh under the CPEC umbrella can capitalize on investor interest and China’s strength in renewables manufacturing. Additionally, implementing “greening” measures – such as planting trees along highway corridors (perhaps as part of Pakistan’s massive reforestation campaign) and using energy-efficient port equipment – will improve CPEC’s environmental footprint. A joint environmental working group under CPEC can monitor compliance and introduce international best practices, drawing on expertise from organizations like UNEP. By proactively addressing environmental concerns, CPEC will avoid backlash from civil society and fit into global trends of green infrastructure, potentially even unlocking climate financing for certain components.

If implemented conscientiously, the policy steps outlined can turn CPEC 2.0 into a durable engine of growth for Pakistan, a showcase of cooperative connectivity for China, and a beneficial enterprise for all participants – truly a corridor of prosperity in an era of connectivity competition, rather than a locus of contestation. The next few years, with Phase II’s critical initiatives, will test this commitment. Success will not only silence skeptics but also provide a model for other BRI corridors pursuing sustainable development amid complex geopolitical landscapes.

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