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CPEC and Global Corridors: An Analytical Framework for Pakistan

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Abstract
The program of CPEC is the talk of the town as it is the landmark cooperation for the economy of Pakistan. It is the evidence of strong China-Pakistan friendship but it may test this friendship as Pakistan is going through difficult economic phase. The program encounters a vogue of debate since its inauguration due to its opportunities and associated risks. This study is an attempt to figure out a global perspective of corridors and the differences and similarities of CPEC with these global corridors. We have taken various corridors from Asia, Africa and Europe and highlighted the challenges and policy interventions of the respective corridors. This exercise allows the study to develop an analytical framework to introduce relevant soft interventions at different stages of long-term plan of CPEC.
Keywords: CPEC, Global Corridors, Regional Connectivity, Framework, policy interventions.
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1. Introduction

An economic corridor is a programmatic and conceptual model for shaping physical and socio-economic outcomes. It develops an area that builds a linear agglomeration of economic activities and people along the physical backbone of transport infrastructure (Brunner, 2013).The concept of economic corridor has wide implications as it connects economic agents along a defined geography. This further creates significant links between economic hubs or nodes that are customarily centered in urban landscapes connecting extensive economic resources around the world. The benefits of economic corridor are not restricted, as it also plays its part in the regional connectivity and development. Thus, it can be comprehended only in terms of the network effects that they induce. Furthermore, improvement in the physical infrastructure accentuates the regional integration through investment (including foreign direct investment), trade, and financial market development (Bhattacharyay,2010). It also includes efforts to improve the social set up in the corridor related areas as these are essential aspects to ensure the success of the corridor.

1.1 Evolution of a Transport Corridor

The Asian Development Bank (ADB) introduced the idea of "economic corridor" for development across geographic regions in 1988. Meanwhile, various research efforts were made to refine the idea and to figure out its association with the other types of corridors such as transport corridors, trade corridors, development corridor, domestic trade corridors and trade corridors. Hence, the evolution of a transport corridor into an economic corridor and its transformation process at each level is defined (Hope & Cox, 2015).

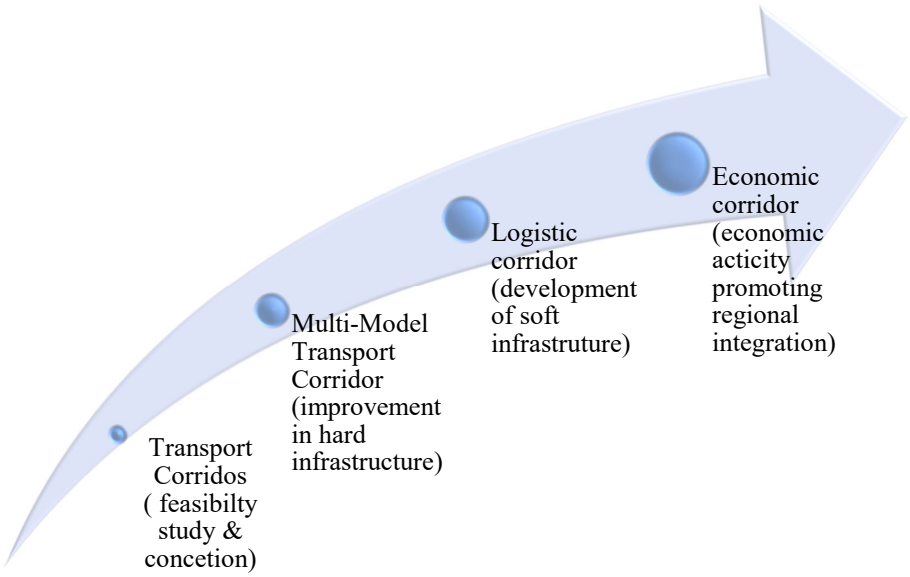


Figure 1. Evolution of a Transport Corridor into Economic Corridor; Adapted from (Hope & Cox, 2015)

The evolution of a corridor follows a pre-determined process as it ultimately develops into economic corridor for most of the times as it is elucidated in figure 1. The figure shows that a transport corridor initiates with feasibility studies and conception of integration and results in improvement in basic infrastructure such as roads, port and highways. Latterly, improvement in hard infrastructure transforms the model in to a multi-modal transport corridor while soft infrastructure (logistics and institutions) develops it into a logistics corridor to maintain the efficiency with the passage of time. There exists an inseparable boundary between transport and economic growth as transport routes connect economic hubs within and across economies. Hence, a transport is a cluster of economically significant areas and specifically industrial one (De & Iyengar, 2014).

An upgraded system of infrastructure also enhances living standard and reduces poverty by linking distant/remote places with economic hubs and markets bridging the development gap among the regions and provinces (Bhattacharyay, 2010). Initially, the effects are prominent in the focal areas of the corridor and subsequently growth and connectivity surges investment in other regions of the economy. However, this significant association requires a planning mechanism for multi-objective decision making (Cobacho, Caballero, Gonzalez, & Molina, 2010) such as improvements in soft infrastructure intervention, legislation and proficiency in customs procedures, and harmonization of policies between the economies of the corridor.

1.2 China Pakistan Economic Corridor (CPEC)

CPEC is an outline of regional connectivity. It is not only a joint venture of China and Pakistan but will also ensure positive outcomes for the region including the economies of Afghanistan, Central Asian Republic, India and Iran (Butt & Butt, 2015). The project will enhance the regional connectivity with improvement in physical infrastructure such as road, rail and air. Meanwhile, soft infrastructure initiatives will also enhance the transportation mechanism and exchange across borders. Undoubtedly, the project also has the scope for growth and social connectivity as it also undertakes various academic and cultural programs for better transformation of knowledge in the region. All the patrons of the CPEC consider it a milestone for achieving more flow of trade and business due to production and movement of energy (Miller, 2017). Therefore, win-win model of CPEC ensures more optimal businesses and enhancement of co-operation between China and Pakistan.

The vision of CPEC stimulates economic growth, bilateral relations and construction, exploring potential investment opportunities, trade, logistics, and cultural connectivity in the region. Moreover, collaborations between Pakistani and Chinese companies for energy projects, set up of export processing zones (EPZ) and industrial parks, tourism, agricultural growth, cultural exposures, poverty alleviation, and human resource development are the pivotal segments of the program.

1.3 Objective of the Study

The objective of this study is to figure out that comparison of CPEC with other economic corridors and come up with analytical framework. Whether the idea of corridor can be applied effectively to unlock the unrealized potential of China-Pakistan Economic Corridor (CPEC) in Pakistan. In this regard, we compare the case studies of other economic corridors with CPEC and extracted some useful similarities and dissimilarities. In broader terms, this allows to incorporate some effective policy interventions for transformative investments of CPEC in developing and emerging the economy of Pakistan. Meanwhile, we develop an analytical framework of CPEC

based on the body of knowledge extracted from case studies of diverse global corridors. The novelty of the study is that this study aims to fill a gap in the policy initiative for CPEC by performing a mapping exercise of global corridors. More specifically, the study proceeds to identify the detail, vision, strategic upthrust, challenges and implemented policies of corridors to embed a successful transformation of CPEC as an opportunity for Pakistan given the fact that program is still in debate for its declaration as opportunity or threat (http://cpec.gov.pk/, 2018).

2. Mapping Exercise for Corridors

In order to understand CPEC in an extensive context, it is essential to map various global corridors as we believe that it is an instrument to create understanding the economic integration and accessibility objectives of CPEC. We first perform mapping exercise of corridors accompanied by a snapshot of the details of the corridors. Over 25 corridors have been mapped out and detailed matrix of regional corridors provides the relevant information.

To analyze the understanding of the possible rationale of these corridors the mapping of corridors considering the theme, objectives and strategic upthrust is discussed with an assessment of the economic and policy environment in which they take place.

The mapping of corridors is followed by the following selection criteria.

- The achievement of economic integration is a sine qua non condition.
- The timeline of the corridor is taken into consideration as the longer time span of the corridor is preferred for the analysis.
- An inclination is also expressed for a diversity of corridors rather focusing only on economic corridors.
- The selection of corridors is also based on some related similarities and differences so that we can perform a comparison between CPEC and other corridors in the world to avoid mitigating effects.

2.1 Mapping of Asian Corridors

The development of Asia has been an interesting experience from both national and regional point of view (ADB, 2015). There are variety of corridors such as development corridors, trade and transport corridors, industrial corridors, and economic corridors to develop regional connectivity and integration. Table 1 provides a quick glance on the detail of the Asian corridors.

Table 1.Detail Matrix for Corridors (Asia)

Economic Corridor	Origin	Destination	Length	Country/ Region	Regional Connectivity
East–West Economic Corridor	Myanmar	Vietnam	1450 km	Southeast Asian countries Myanmar, Thailand, Laos, Cambodia and Vietnam	India-Myanmar–Thailand via Trilateral Highway
North–South Economic Corridor (NSEC)	Thailand	Lao PDR	684 km	Yunnan Province in China, Shan State in Myanmar, Northern Laos and Northern Thailand	Bangkok and Kunming, China, including the Laos route and the Myanmar route
Southern Economic Corridor (SEC)	Bangkok	Dong Kralor	1600 km	Thailand-Combodia	Bangkok and Ho Chi Minh–Vung Tau
BCIM Economic Corridor	Kunming	Kolkata	1.65 million sq.km	India, China, Mayanmanr, Bangladesh	Linking the ASEAN free trade area
Sarawak Corridor of Renewable Energy (SCORE)	Similajau	Tanjung Manis, Mukah	70,709 km^2	Malaysia	China, India, Middle East, Southeast Asia

Economic Corridor	Origin	Destination	Length	Country/ Region	Regional Connectivity
Sabah Development Corridor	Kota Kinabalu	Tawau	1348 km^2	Kota Kinabalu, Sandakan, Tawau	Inter-regional connectivity and international linkages
Iskandar Malaysia	Johor	Kukup	2,217 km2	Johor Bahru District, Kulai District, Pekan Nanas, Kukup	Inter-regional connectivity
The East Coast Economic Region (ECER)	Johor	Johor	66,000 sq-km	Kelantan, Terengganu, Pahang district of Mersing	A gateway to the Far East, Asia Pacific Region and beyond
The North Coast Economic Region (NCER)	Kedah	Penang	66,000 sq.km	Kedah, Perak, Perlis, Penang	Inter-regional Connectivity
Nanning–Singapore economic corridor (under the framework of MSR)	Nanning	Singapore	5000 km	China, Vietnam, Laos, Cambodia, Thailand, Malaysia, Singapor	Boosting tourism between China and the Indo-China Peninsula
International North–South Transport Corridor	India	Russia	7200-km	India, Iran, Russia, Turkey, Azerbaijan, Kazakhstan, Armenia, Belarus, Tajikstan,Kyrgyzstan,Oman, ukraine, Syria, Bulgaria	Movement of freight between India, Iran, Afghanistan, Armenia, Azerbaijan, Russia, Central Asia and Europe
North–South and East–West Corridor (NS-EW)	Srinagar	Silchar	7142 km	India	Connecting Srinagar with Silchar through Kanyakumari, Kochi and Porbandar
East Coast Economic Corridor (ECEC)	Kolkata	Kanyakumari	2,500 km	Linking domestic companies with East and Southeast Asia	West Bengal, Odisha, Andhra Pradesh and Tamil Nadu
Vizag–Chennai Industrial Corridor Key part of East Coast Economic Corridor (ECEC)	Visakhapatnam	Chennai	800 km	Indian National Highway 5, the Kolkata–Chennai rail route, and seven non-captive operational ports	Inter-regional connectivity with SAARC & ASEAN

Economic Corridor	Origin	Destination	Length	Country/ Region	Regional Connectivity
Chennai–Kanyakumari Industrial Corridor	Chennai (India)	Kanyakumari (India)	655km	23 of the 32 districts of Tamil Nadu	Connecting through the states of Thoothkudi, Tirunelveli, Madurai, Tiruchi, Cuddalore, Thanjavur, Pudukottai, Manaparai Perambalur and Karaikudi
Odisha Economic Corridor	Khordha	Ganjam	Covering 20 districts	Odhisa (India)	Covers the entire east coast running from Kolkata to Kanyakumari
West Bengal Economic Corridor	Sonakania	Bongaon	2241 km	India	Nodes between Sonakania to Kolkata and then Bongaon to the Amritsar
Delhi–Mumbai Industrial Corridor Project (DMIC)	Delhi	Mumbai	1483 km	India	Includes the states of Dadri-Noida-Ghaziabad, Manesar-Bawal, Khushkhera-Bhiwadi-Neemrana and Jodhpur-Pali-Marwar, Pithampur-Dhar-Mhow, Ahmedabad-Dholera, the Shendra-Bidkin Industrial Park, and Dighi Port Industrial Area in Maharashtra

Source: Compiled by Authors

Out of 18 Asian corridors, only 5 have been selected. These include three transports cum economic corridors of Great Mekong Sub-region (GMS), Sabah Development Corridor (SDC) and Delhi–Mumbai Industrial Corridor (DMIC). It is pertinent to mention here that the selected corridors were designed to move progressively through physical infrastructure to economic corridor. Essentially, this will ensure wider economic benefits as these corridors have the potential to accelerate investment opportunities and economic activity including the marginalized areas along the region (Banomyomg, 2008).

2.1.1 Great Mekong Sub-Region (GMS) Corridors

Great Mekong Sub-Region (GMS) Corridors is a regional corridor initiative which intends to transform its nine transport corridors into three economic corridors. These three include East–West Economic Corridor (EWEC), North–South Economic Corridor (NSEC) and Southern Economic Corridor (SEC). These are selected for being the earliest, most comprehensive and most advanced corridor in Asia.

2.1.2 Sabah Development Corridor (SDC)
The Sabah Development Corridor (SDC) is a regional development corridor initiative that took place in Malaysia. This case has been chosen for being the most ambitious project having a large component of state development and for implanting the promotion of industrial clusters and special economic zones.
2.1.3 Delhi–Mumbai Industrial Corridor (DMIC)
The Delhi–Mumbai Industrial Corridor (DMIC) is an inspirational and crowd- pleasing initiative of India to promote "Make in India" initiative and business facilitation. The project intends to define the region as investment hub with major focus on planned urbanization and freight movement and thus attracts us to include it in the case studies.

2.2 Mapping of African Corridors
The improvised yet resource-based continent of Africa requires an industrial development initiative to eradicate poverty and achieve sustainable growth. This requires a resource-based industrialization policy framework rooted to catalyze the growth of potential economies in Africa. There are several economies in Africa that are involved in crafting credible projects to achieve economic stability and prosperity (Mulenga, 2013). The detail matrix of the identified corridors is presented in table 2.
Table 2. Detail Matrix for Corridors (Africa)

Economic Corridor	**Theme**	**Origin**	**Destination**	**Country/ Region**	**Regional Connectivity**
Trans Caprivi Corridor	Trade Corridor	Democratic Republic of Congo (DRC)	Zimbabwe	Southern Africa	Two-way trade between the SADC region and Europe, North and South America and the emerging far East markets
Trans Kalahari Corridor	Transport Corridor	Botswana	Zimbabwe	Namibia	Potential to serve two-way trade between South Africa, Botswana, Europe, America and far east
Maputo Corridor	Transport Corridor	South Africa	Mozambique	Gauteng, Limpopo, Maputo	The shortest route of MC serves as an export harbor for South Africa's industrial heartland in Gauteng and Mpumalanga
Zambezi Valley Development Corridor (ZVDC)	Trade Corridor	Mozambic Province	Malawi	Africa	Enhancing the economic potential of Mozambique, Malawi and Zambia

Source: Compiled by Authors
Here, we have identified four corridors in Table 4. For a comprehensive analysis, two have been selected. These two corridor initiatives have been launched to foster transport ad trade specifically.
2.2.1 Trans Kalahari Corridor (TKC)
The Trans Kalahari Corridor (TKC) originates from South Africa (SA) connecting the port of Walvis Bay to Gaborone and Gauteng and further to Zimbabwe. Considering the extension of the corridor, it further links with the coastal part of SA through Maputo Corridor.
2.2.2 Maputo Development Corridor (MDC)
Maputo Development Corridor (MDC) is a trade and transport corridor supported by the governments of South Africa (SA) and Mozambican. The MDC offers a shortest route of rail and road between Gauteng and Mpumalanga provinces of SA and connects Gaborone (Botswana) and deep-water port in Maputo. Furthermore, the private sector is responsible to ensure the full potential of MDC.

2.3 Mapping of European Corridors
The detail matrix of European corridors (table 3) reveals that there are some emerging corridor projects that foster integration and transport advancements. Precisely corridors in Europe are aimed at promoting clean fuel policies for innovative transport solutions. Moreover, removal of bottlenecks, identification of missing crosses border links; and promotion of interoperability and integration are also significant in this regard. For further analysis we discuss two initiatives out of four identified corridors.

Table 3. Detail Matrix for Corridors (Europe)

Economic Corridor	Theme	Origin	Destination	Country/ Region	Regional Connectivity
East-West Transport corridor	Transport Corridor	China	Denmark	Denmark, Sweden, Germany,Lithuania,Beralus, Russia, Ukraine, China	
Baltic-Adriatic Corri5dor	Transport Corridor	Gdansk Głowny Railway station	Vienna - Graz (Southern Railway)	Central Europe	Transport links between Europe and global markets (Eastern Med/SE Asia)
Southeast Transport Axis (SETA) Corridor	Trade & Transport Corridor	Central Europe	Northern Adriatic ports	Croatia, Bosnia, Herzegovina, Serbia, Kosovo, Albana	
Transport Corridor Europe-Caucasus-Asia (TRACEA)	Trade & Transport Corridor	Armenia	European Union States	Armenia, Azerbaijan, Bulgaria, Georgia, Kazakhstan, Kyrgyzstan, Iran, Moldova, Romania, Turkey,Ukraine ,Uzbekistan, Tajikistan,Turkmenistan & 28 member states of the EU	

Source: Compiled by Authors

2.3.1 Baltic-Adriatic Corridor

Baltic-Adriatic Corridor is a significant axis of European road and railway. The industrialized areas are central to link the Baltic with Adriatic Sea between Southern Poland and Northern Italy. It is a work in progress comprising projects of railway routes in Austria and other cross border economies (Wendt & Wiskulski, 2012).

2.3.2 South East Transport Axis (SETA)

South East Transport Axis (SETA) is a trade and transport corridor for better accessibility in South East Europe. The corridor basically revolves around the concept of "Green Corridor"to ensure environment friendly freight between Central and South East European regions. Moreover, to improve the infrastructure facilities the corridor looks for more access to alternate financing options within the partner regions.

The detailed matrix of corridors revealed that regional differences are vibrant among these corridors based on geographical significance, theme of the corridor, destination and covered length involvement of patron and conveners for better connectivity and regional integration.

3. CPEC and Global Corridors

This section briefly investigates that how CPEC is similar the international corridors and meanwhile, what are the key factors that differentiate the project of CPEC from other corridors in Asia, Africa and Europe.

Table 4. Transport Matrix for Corridors

Economic Corridor	Road	Port	Rail	Air	Utilities	Pipeline
Asia						
China Pakistan Economic Corridor	✔	✔	✔			
East–West Economic Corridor (GMS)	✔		✔			
North–South Economic Corridor (NSEC)	✔	✔	✔			
Southern Economic Corridor (SEC)	✔	✔				
BCIM Economic Corridor	✔	✔	✔			
Sarawak Corridor of Renewable Energy (SCORE)	✔	✔		✔	✔	
Sabah Development Corridor	✔		✔	✔	✔	
Iskandar Malaysia	✔	✔	✔	✔		
The East Coast Economic Region (ECER)	✔	✔	✔	✔		
The North Coast Economic Region (NCER)						
Nanning–Singapore economic corridor (under the framework of MSR)	✔		✔			✔
International North–South Transport Corridor	✔	✔	✔			
North–South and East–West Corridor (NS-EW)	✔					
East Coast Economic Corridor (ECEC)						
Vizag–Chennai Industrial Corridor (ECEC)	✔	✔				
Chennai–Kanyakumari Industrial Corridor		✔	✔			
Odisha Economic Corridor	✔	✔				
West Bengal Economic Corridor	✔					
Delhi–Mumbai Industrial Corridor Project (DMIC)	✔	✔		✔		
Africa						
Trans Caprivi Corridor	✔	✔				
Trans Kalahari Corridor	✔	✔	✔	✔		
Maputo Corridor	✔	✔	✔		✔	✔
Zambezi Valley Development Corridor (ZVDC)	✔		✔			
Europe						
East -West Transport corridor	✔	✔				
Baltic-Adriatic Corridor			✔			
South East Transport Axis (SETA) Corridor			✔			
Transport Corridor Europe-Caucasus-Asia (TRACEA)	✔	✔	✔			

Source: Compiled by Authors

Table 4 summarizes various transport modes of the corridors. The tables show that almost every corridor including CPEC covers road and port of the host country while other modes- railway; air, utilities and pipelines are also part of these corridors. This highlights the argument given by (Coşar & Demir, 2016) that poor quality of transport infrastructure in developing economies is the key impediment in accessing international access to international markets.

Furthermore, inclusion of ports in a corridor highlights the strategic significance of ports especially for the land locked areas (Terrill, 2018). It is also similar for CPEC as Pakistan is going to facilitate China by providing the port services through Gawadar port for their western China region. Turning to the case of Africa, it is obvious that poor infrastructure demands more roads and railway tracks. Instead of relying on roads and port, European corridors are more inclined towards market diversification and thus development of railway and other alternative transport mode (Martín, 2011). CPEC also include projects to improve the existing infrastructure and railway network and intends to further diversify it in future.

3.1 CPEC and Asian Corridors

Table 5 explains the respective vision and strategic upthrust of CPEC and other corridors. This matrix basically assesses to figure out the similarities and differences between CPEC and other corridors in Asia.

Table 5. Vision and Strategic Up thrust Matrix for Corridors in Asia

Economic Corridor	Theme	Vision	Strategic Up thrust
China Pakistan Economic Corridor (CPEC)	Economic Corridor	• To improve the lives of people of Pakistan and China by building an economic corridor promoting bilateral connectivity	Energy cooperation, agricultural development & poverty alleviation, cooperation & people to people communication
East–West Economic Corridor (EWEC)	Economic Corridor	• To bring prosperity and well-being to all people in the corridor area	Connectivity, social and environmental sustainability, empowerment of private sector, poverty reduction
North–South Economic Corridor (NSEC)	Economic Corridor	• A dynamic, progressive and well integrated corridor • Enhancement of domestic and foreign investments • Effective functioning as a gateway to ASEAN trade • Increase in employment generation, incomes and poverty reduction in the GMS	Conventional measures to deal with social and environmental concerns, Strengthening infrastructure and facilities, cross border trade and transport, investment in key sectors and industries ,expansion of public private partnership, establishment and enhancement of institutional mechanism of NSEC
Southern Economic Corridor (SEC)	Economic Corridor	• A prosperous and dynamic corridor that improves the well-being of the people • Inclusive sustainable development	Strengthen infrastructure and connectivity, trade facilitation, enhancing investment opportunities, social and environment concerns, private sector participation
BCIM Economic Corridor	Economic Corridor	• Development of supply chains based on comparative advantage • Transforming comparative advantages into competitive advantages • closer people to people contact	Increase in investment, infrastructure development, joint exploration and development of mineral, water, and other natural resources
Sarawak Corridor of Renewable Energy (SCORE)	Development corridor	• High income and advanced state	Building momentum to trigger development, infrastructure projects
Sabah Development Corridor	Development Corridor	• Wealth diversity Harnessing unity in diversity for wealth creation and social well being	Promoting harmony in the state regardless of race or religion, creating job opportunities, more technology-savvy state, making the state a comfortable state for living
Iskandar Malaysia	Development Corridor	• To boost the physical and economic development of the state	Immediate implementation of Strategic Economic Thrust (SET) for future growth in long term (2005-2025)

Economic Corridor	Theme	Vision	Strategic Up thrust
The East Coast Economic Region (ECER)	Development Corridor	• To be a developed region by 2020 fast-forwarding	Moving up the economy through value chain, raising capacity for knowledge and innovation, addressing socio-economic inequalities, improvement in standard and sustainability of the quality of life, strengthening the implementation and institutional capacity
The North Coast Economic Region (NCER)	Development Corridor	• Growth with social equity • To maximize the economic potential • To minimize the income gap between the different regions in Malaysia	Socio-economic progress, knowledge based economy, increase in per capita income
Nanning–Singapore economic corridor (under the framework of MSR)	Economic Corridor	• Good relationship with neighboring economies • Development across the ASEAN–China Free Trade Area	Investment in China-ASEAN tourism, trade, cultural and social exchange, distribution of labor in the industrial chains
International North–South Transport Corridor	Transport Corridor	• Increase in trade connectivity between major cities such as Mumbai, Moscow, Tehran, Baku, Bandar Abbas, Astrakhan, Bandar Anzali	Cost reductions in terms of time and money over the recent and traditional route
North–South and East–West Corridor (NS-EW)	Transport Corridor	• To ease chronic capacity restrictions by upgrading key routes of the national highway network	Promotion of economic growth with the easier and less costly movement of goods and people
East Coast Economic Corridor (ECEC)	Economic Corridor	• To play a vital part in amalgamating the large domestic market, • To integrate a dynamic Indian economy through global value chains of Southeast and East Asia	Promoting industry integration and synergy, infrastructure development, logistics, urbanization, focusing industrial production clusters, urban centers, international gateways, formation of efficient multimodal transport network
Vizag–Chennai Industrial Corridor Key part of East Coast Economic Corridor (ECEC)	Transport Corridor	• To leverage the maritime privilege of industries • To promote industrialization	Identification of international markets at provincial level, development and participation in collaborative international trade, investment initiatives with common interests
Chennai–Kanyakumari Industrial Corridor	Industrial Corridor	• To unlock the potential to accelerate manufacturing growth in the state of Tamil Nadu	Managing the accelerated growth of mobbed cities, acquiring high class urban amenities

Economic Corridor	Theme	Vision	Strategic Up thrust
Odisha Economic Corridor	Economic Corridor	• To play a crucial role in transporting various goods	Increase in investment opportunities, synchronized industrial and urban settlements institutional framework for implementation
West Bengal Economic Corridor	Economic Corridor	• To promote sub regional economic activities • Poverty reduction • Trade facilitation • Removal of critical capacity constraints through improvement in transport efficiency	Sub-regional connectivity, rehabilitation of rural communities through better access to markets, hospitals, schools, employment and social services
Delhi–Mumbai Industrial Corridor (DMIC)	Industrial Corridor	• To connect investment nodes to ensure impetus to 'Make in India' initiative • To facilitate the business opportunities • To remove hiccups in land acquisitions for industry set up • To provide fast, cheap and efficient transportation	Industrial development, investments in industries, provision of stable environment to businessman for more investments, enhancement of export and employment potential

Source: Compiled by Authors

Nearly all corridors possess similar objectives same as CPEC. These include enhancing regional connectivity, infrastructure development; trade facilitation; poverty reduction and social and cultural integration and so on. (Roberts, Melecky, Bougna, & Xu, 2018) However, it is pertinent to mention here that theses corridors seek different goals than CPEC.

For instance, EWEC is more oriented towards social and environmental sustainability and empowerment of private sector. The Vizag–Chennai Industrial Corridor (VCIC) is a project to be started soon, stresses on more access to international markets at provincial level (ADB, 2015).

In the short-run, there is no any significant initiative under CPEC offering institutional capacity, provision of stable environment to businessmen for more investments, synchronized industrial and urban settlements, institutional framework for implementation, social and environmental sustainability and empowerment of private sector. All these aspects create challenges for the success of CPEC in Pakistan. It is observed that while establishing economic corridors, the success of corridor closely depends on policy reform, capacity development, and the strengthening of institutions (De & Iyengar, 2014).

3.2 CPEC and African Corridors

Table 6 reveals that the continent of Africa is more interested in developing trade and transport corridor as the infrastructure facilities in Africa are not only poor but also the region is lagged behind in terms of trade and regional connectivity. These characteristics of African corridors are in in line with CPEC. However, CPEC is different in a sense that African corridors are developed to utilize the idle natural resources for the development of the economies while there no such intuition in case of CPEC. The African corridors heavily rely unlocking its mining and agriculture potential such as Trans Kalahari Corridor (TKC) and Zambezi Valley Development Corridor (ZVDC). Despite the fact that Pakistan is enriched with natural resources and agricultural potential, there is yet no project in CPEC to develop the natural resources and agriculture sectors of Pakistan. However long-term plan of CEPC reflects development of agriculture and natural resources clusters of Pakistan.

Table 6. Vision and Strategic Up thrust Matrix for Corridors in Africa

Corridors	Theme	Vision	Strategic Upthrust
Trans Caprivi Corridor	Transport Corridor	• To develop the infrastructure facilities in the region	Trade and transport facilitation with improved logistic set up
Trans Kalahari Corridor (TKC)	Transport Corridor	• To improve and facilitate trade and transport through better infrastructure • To ensure harmonization of conflicting regulations and polices • Providing quality services at minimal costs, and increasing competitiveness	Harmonization of conflicting policies and regulations of the three economies, ensuring an integrated transport and trade system in accordance with better logistics services and travelling system
Maputo Development Corridor	Trade & Transport Corridor	• To establish developmental alliance between the Maputo port and the Gauteng province of South Africa	Development of the most highly industrialized and productive regions of Southern Africa such as the Mpumalanga, Gauteng, and Limpopo Provinces to Mozambique
Zambezi Valley Development Corridor (ZVDC)	Transport Corridor	• To unlock economic potential of mining and agriculture in Mozambique	Enhancement of coal an hydropower energy for industries, promotion of more production and thus consumption of residents

Source: Compiled by Authors

3.3 CPEC and European Corridors

The vision of CPEC and European corridors revolves around strengthening economic relations, trade and transport in the region. In Europe, the European Union (EU) is seeking to enter new markets offering the EU a renewed economic influence in the region. Therefore, the corridors in Europe are intended to develop more cooperation, low freight costs and promotion of knowledge based economies. This is the main thing that differentiates CPEC from European corridors.

Table 7: Vision and Strategic Up thrust Matrix for Corridors in Europe

Economic Corridor	Theme	Vision	Strategic Upthrust
East -West Transport corridor	Transport Corridor	To form an effective transnational supply chain To provide different means of transportation and logistics services	Achievement of synergy, and cooperation between different stakeholders within the global supply chain
Baltic-Adriatic Corridor	Transport Corridor	To provide support to Central Europe regions To improve accessibility of transportation between Adriatic and Baltic Sea along the North South axis	Low freight costs, safety and security, provision of top logistics requirements through tracking and tracing, assurance reliable and guaranteed departures of freights across borders, warehousing facilities for fresh food, reload facilities
South East Transport Axis (SETA) Corridor	Trade & Transport Corridor	To build efficient railways links between the landlocked areas of Central Europe and the Northern Adriatic port	Focus on upgrading the existing rail infrastructure, moderate investment costs for project, connection various means of transport
Transport Corridor Europe-Caucasus-Asia (TRACEA)	Transport & Trade Corridor	To strengthen economic relations, trade and transport in the regions of the Black Sea basin, South Caucasus and Central Asia	Cooperation, progressive integration through mutual interests, Set up of transport networks, access to EU markets, international legal and regulatory outlines

Source: Compiled by Authors

The current projects included in CPEC cover only cross-border trade between China and Pakistan. New markets and regions for connectivity under CPEC are yet to be explored in terms of trade and market diversification for Pakistan. Meanwhile, the international lobby of USA, India and Afghanistan is persistently opposing the project of CPEC blocking the economic integration perspective of CPEC (Abid & Ashfaq, 2015).

4. Challenges and Policy Interventions of Selected Corridors

4.1 Policy Interventions of Selected Asian Corridors

Table 8 provides a brief view of the policy interventions in Asia to cope with the challenges faced by the management authorities of the corridor.

Table 8. Matrix of Policy Interventions of Asian Corridors

Corridor	Challenges	Policy Interventions
East–West Economic Corridor (EWEC)	• Integrate immigration and customs check post (India to Vietnam) • Incomplete cross border and multimodal infrastructure network • Partially completed feeder road network connecting production and hub • Inefficient interoperability among different modes of transport	• Provision of e-visas to foreign tourists • Elimination of tariffs and non-tariff barriers • cross-border transport agreement • Simplification of logistics and customs procedures
North–South Economic Corridor (NSEC)	• High transportation cost • Illegal movements across borders (human trafficking) • Equity issues • Environmental problems income disparities	• Encouraged participation of local authorities in the corridor • Export diversification for poor economies • Continuation of Transport and Trade Facilitation (TTF) • Facilitation of logistics services, Development of border and corridor towns • Investment promotion and enterprise development, Improvement of access to and from adjacent areas • Multimodal transport development
Southern Economic Corridor (SEC)	• Allowed but restricted trade Border trade barriers • Failure of both Thai and Cambodia public authorities in trade facilitation • Non issuance of truck and bus permits • Soft infrastructure issues	• Improvement in cross-border facilities • Encouragement of TTF • Enhancement of logistics services
Sabah Development Corridor	• Co-ordination of multiple agencies within the authority • Monitoring and close association with implementing bodies for better quality of infrastructure • Assurance to investors	• Proper designation of land for industrial, agricultural, commercial, residential etc. • Detailed market analysis to bring together industry players and catalysts • Balancing expediency against good governance • Specific fiscal incentive packages for investors
Delhi–Mumbai Industrial	• Land acquisition issues • Abandoned power projects • Slow pace of project	• Smooth movement of goods Capital and investment initiatives • Specialized satellite cities

Corridor	Challenges	Policy Interventions
Corridor Project (DMIC)	• Weak corridor nodes	• Integrated through a web • of Transportation arteries • promotion of high tech and knowledge based industry • mix

Source: Compiled by Authors

Despite the fact that most part of the EWEC has been completed, the project is unable to form an integrated immigration and customs network from India to Vietnam. Meanwhile, the cross border issues still hinder to achieve the goal of regional connectivity to the distinct nodes of corridor. These issues are being tried to resolve by the elimination of tariff and non-tariff barriers, provision of visas and simplification of logistic services.

The NSEC is a project in progress and follows NSEC Action plan. There were 75 subsidiary projects of which 35 had been completed, 19 were ongoing and 21 were pending as of March 2015. The pending projects were mostly in rail transport, investment promotion and facilitation, and capacity building and institutional development. High business cost and the lack of standardized and harmonized border and transit trade procedures is the weakest link in the NSEC sub corridors

The Strategy and Action Plan (SAP) of SEC suggests various policy interventions that are discussed in table 3. The plan basically supports the participation of the private sector and public-private ventures to make infrastructure projects more attractive to the private sector. Therefore, the SEC authorities are more concerned towards mitigating the commercial and sovereign risks of investors. In this regard, a more genuine and encouraging business environment is important.

Despite the fact that SDC is a public-private initiative, the authorities of SDC are striving to cope with the concerns of investors. Investors require a security for their investment in long run due to an expected and uneven increase in the cost of business. Therefore, the SDC implementation authority has offered equity participation and loan funding.

The DMIC includes huge projects and processes deep impacts on multiple stakeholders. However, there is a bundle of issues with the projects as abandoned power projects, slow pace of project and weak corridor nodes. These impediments arise due to lack of consultation with elected bodies, society groups and elected bodies and weak policy structure of the corridor.

4.2 Policy Interventions of Selected African Corridors

The potential impediments inhibited by the TKC may hinder the corridor to transform in to economic corridor. Theses include a set social obstacle, infrastructure issues and financial impediments. Table 4 illustrates a brief view of these sets. These setbacks were addressed by the proposed dry port initiative that may facilitate in storage of goods and decrease transportation cost. It will also transit time for the transporting of the goods. These facilities can offer various benefits to the system of importing and exporting, as one can be strategically located in a border area so that it is accessible by both countries without having to undergo border processing.

Table 9: Matrix of Policy Interventions of African Corridors

Corridor	Challenges	Policy Interventions
Trans Kalahari Corridor	• Regional Integration • Low level of business education in the SME community • Health and Safety Concerns • Expansion of the Port of Walvis Bay • Road Damage from heavy transport • Lack of funds for SMEs • Lack of economic diversification	• Development of Cluster Projects • Creation of a Dry Port System • Set up of Town Capacity building Program in 2005 between Namibia and Zambia • Promotion of alternative transportation methods
Maputo Development Corridor	• Negative criticism on one-stop facility from discouraged workers • Customs and immigration issues • Corruption • Delayed service • Slow initiation pace of projects • Lack of community engagement	• Appointment of competent project managers on both end nodes • Strengthening private sector involvement • Support to SMMEs • Assurance of easy access and flow of goods and people between

Corridor	Challenges	Policy Interventions
	• Reluctance for communities to participate in the corridor development	• South Africa and Mozambique • Through the upgradation of Komati port-Garcia Borer post • Introduction of one –stop border control procedure to reduce the cross-border bottlenecks • No requirement of visa for South Africans to enter Mozambique

Source: Compiled by Authors

The MDC is regarded as a successful initiative, yet, there still exists some specified operational setbacks of the project. These include failure in providing adequate rail services, environmental concerns, investments, government issues, unsatisfactory progress and environmental issues as it is shown in table 5. Maputo corridor possesses strong PPP and the government of both countries monitors it.

It is worth mentioning that the role of African Development Bank (AfDB) is commendable as the bank is striving to use economic corridors as a strategy for regional integration under the Action Plan for the Acceleration of Industrialization. The plan underlined the promotion of economic or development corridors and other Spatial Development Initiatives (SDIs) to focus on resource based anchor investments for infrastructure interventions in association with business linkages to SMEs.

4.3 Policy Interventions of Selected European Corridors

Despite the fact that BAC shows impressive outcomes, the patrons of corridor are unable to cannibalize the existing business. This shows scant interest in providing new and better transport facilities. Furthermore, private sector participation is still limited. Turning to the logistics facilities, lack of mutual consent of drivers is also a major constraint. Besides this, high fuel costs due to legal constraints are also fuelling up the costs of the corridor.

Table 10. Matrix of Policy Interventions of European Corridors

Corridor	Challenges	Policy Interventions
Baltic Adriatic Corridor (BAC)	• Scant interest in providing new transport services • Mostly state owned rail-road carriers • No business expansions • High fuel costs	• Infrastructure modernization and technical improvements to comply to EU standards are require
South East Transport Axis (SETA) Corridor	• Time consuming border procedures • Lack of the harmonization of procedures • Lack of mutual acceptance of drivers • Lack of coordination between agencies and country's regulatory authorities	• Improved capacity by new sidetracks • Reduction in waiting time • at borders • Reduction in stops of international trains • Launch of a Demo train for regular connection • Customs clearance for passenger trains • Customs clearance for passenger trains

Source: Compiled by Authors

The SETA corridor is a road-rail initiative to ensure more accessibility to other global markets and thus requires high speed transport modes. However, time consuming document procedures are the key constraints in providing competitive and fast rail connections for passengers and freight transport. Meanwhile, lack of the harmonization and coordination between authorities is also the challenge. We are interested here to figure out the challenges faced by the authorities of a corridor and how they fixed these issues. This may assess to prescribe some tangible soft policy interventions to develop a concrete analytical framework for CPEC in Pakistan.

5. Analytical Framework for CPEC

Since its inauguration, CPEC has been a talk of the town due to geopolitical and strategic opportunities and risks, fetters of geographical factors and restraints to economic growth projections. Therefore, the long-term plan of CPEC is announced to deal with the concerns of the relevant stakeholders.

The short-term plan of CPE includes the completion of transport an energy projects by 2020 removing the major bottlenecks restraining socio- economic development of Pakistan. Considering the medium term objectives,

the project utilizes the infrastructure to develop the industrial set up in Pakistan. This includes completion of nine Special Economic Zones (SEZs) for balanced economic growth. It is proposed that given the accomplishment of short and medium term objectives, the project of CPEC will be completed by 2030. The long term plan of CPEC includes entire completion of the project with sustainable growth and taking CPEC further to connect with economic development of Central Asia and South Asia making the region an international economic zone.

Currently, the program is heading towards its medium term projects that are related to infrastructure, energy and connectivity. However, given the customary and institutional arrangements (bureaucratic delays, in availability of authentic information) the project does not seem to meet its targets on time.

Considering the energy targets of CPEC, in a time span of four years (2015-18) a significant contribution of CPEC is the enhancement of 10,000 megawatt energy capacity in Pakistan. This capacity is sufficient enough to overcome the chronic energy shortfalls by enhancing the plant efficiency from 28 percent to 61 percent. This would definitely bring down the cost to domestic consumers. However, this additional capacity has nothing to do for consumers, as this power capacity is not much helpful as government of Pakistan has not been able to enhance transmission and distribution capacity. Hence, distribution delays and delay in paying dues have exerted massive push on public expenditures and will further escalate subsidies in absence of institutional reforms (Cobacho, Caballero, Gonzalez, & Molina, 2010).

The second important area is the construction sector that also includes infrastructure development and construction of new highways/motorways and railway links from Gwadar to Kashgar and the Mass Transit systems within big cities. Undoubtedly, this upgradation and rehabilitation process would provide relieve to domestic producers from high cost transportation through trucking fleet but would also facilitate the lower income group due to reduced travel time and savings in transportation expenses.

The achievement of medium term goals of CPEC includes the improvement in livehood of people along the CPEC route. It is expected that the regressive districts of Balochistan and Khyber Pakhtunkhwa (Southern) would be facilitated more by the western route of CPEC as the route will assess the community to link up with the other national markets. The benefits to these communities include increase in yield and selling of their products (mining, livestock and poultry, horticulture (mining, livestock and poultry, horticulture, fisheries), set up of cool chains and warehousing facilities, easy processing at adjoined processing zones, access to trucking fleet and containers and installments of fibre optic networks to these deprives districts. All these benefits are attributed to the basic facilities of education, heath, drinking water, and training. However, still no project of these facilities has been initiated in Balochistan. If we associate these facilities with the establishment of industrial zones then here a question arises that how the communities would get benefit from such zones. This may create resentment that the benefits are not accruing to the people at large in these districts/geographic areas.

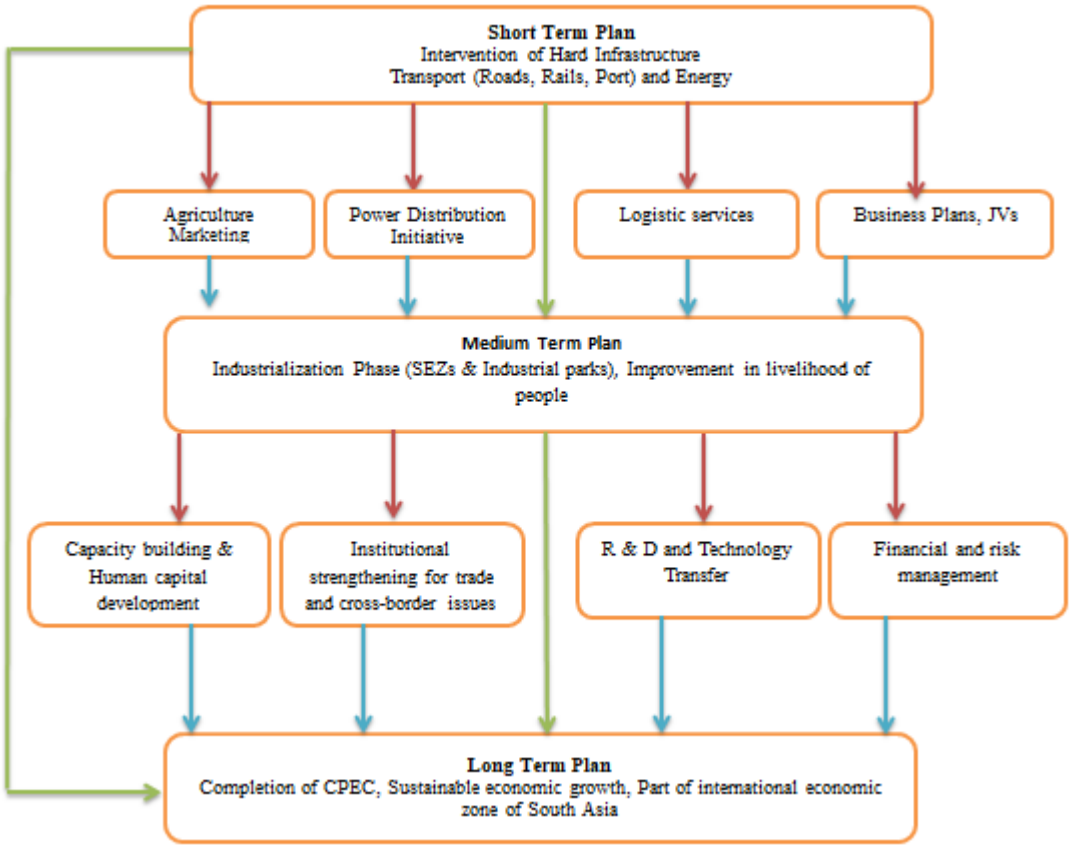
Nonetheless, investment in infrastructure expands the road structure in a developing economy that would assess firms to expand exports. This would surge the sales of the firms leading more jobs in the economy. However, the compliance of this proposition with reality is still unknown (Martincus, Carballo, & Cusolito, 2017). Considering labor market prospects of CPEC, according to the recent study by CPEC Centre of Excellence, the project has the potential to generate job opportunities for I.2 million workers including various initiatives of infrastructure, energy, and industrial collaboration and Gwadar port development. The study revealed that skilled staff required for these projects include electrical and communication engineers, project managers, signal support staff, communication engineers, and civil and electrician engineers. The availability of this type of labor in the deprived areas of the project is another debate as labor from other part of the country will demand more wages and thus this would create more burdens on the cost of the projects. Some economists have also argued the benefits to local labor as they feel that most of the projects employ Chinese labor in big numbers.

Despite the fact that Pakistan is an agriculture economy, there is still an uncertainty in farmers of Pakistan for lack of information regarding that what would they have to expect from CPEC. Meanwhile, due to increased transportation links and low tariffs Chinese products are already found in Pakistani markets and competing with locally grown produce. Although, Chinese investment might be considered as remedy for some of the impediments for the agriculture sector such as water scarcity, energy shortages, and poor post-harvest infrastructure yet, no public debates have been held on CPEC in this regard.

Given the above scenario, we develop an analytical framework that takes into account the each plan of CPEC and suggests relevant soft policy interventions. Soft interventions are basically policy measures that are designed to build the capacity of the economy and require relatively more financial assistance to improve institutions and capacities (Galvez Nogales, 2014). Considering the corridors, these include multidimensional aspects such as training and development, transport facilitation, management of natural resources and so on.

In figure 2, it is evident that initially the CPEC is a hard infrastructure intervention in short term which concurrently ensures infrastructure development. Thus, it requires a disciplined and comprehensive approach to achieve growth, competitiveness and regional development.

Figure 2. Analytical Framework for CPEC



Note. = Actual/Proposed Links
= Missing Links
= Positive Change Enablers

The transport development of the corridor requires the support of logistic industry with relevant policy interventions. These include simple procedures for trade, economies of scale to support the low-cost business at global level, investments in specific logistics businesses (such as cool chain, trucking chain and warehousing) and strategic cooperation between public and private sector for new logistics solutions (Banomyomg, 2008; Banerjee, 2017; Aqeel, 2016).

Meanwhile, the distribution of power of must also be initiated to facilitate the highly affected business sector in Pakistan. At this stage, government support for domestic producers, specifically Small and medium Enterprises (SMEs) will regain the confidence of domestic producers through the provision of infrastructure, power, and a range of services and incentives in terms of business plans and Joint Ventures (JVs) with China. Agriculture is the relevant but neglected sector and a weak part of the CPEC and thus inclusion of agriculture marketing. It is expected that collaboration of these initiatives would foster the outcomes of the short period and accelerates the development of the medium-term plan.

The long-term plan of CPEC is a broader context of the national development as by the end of this stage nine SEZs in Pakistan would start functioning in Pakistan. The significance of (SEZs) is crucial for productive and efficient utilization of industry output. (Ishida, 2009) Yet, completion of these SEZs is not sufficient enough to achieve the medium-term goals. The success of these SEZs rely on the capacity building and human capital development through skills development and training program in the areas of the project as this will also benefit the derived communities along the route of CPEC. Besides this, the issue of capacity and capital deficiency can be amended through again with JVs with China (Munnell, 1992).The involvement of the business community in the project is thus highly recommended to unlock the potential of CPEC. Furthermore, as the project is supposed to be entering in its completion stage in 2030, the program will face new challenges of cross-border transactions and legal procedures.

These can be resolved by introducing institutional strengthening for trade and cross border issues and financial and risk management are required to deal with the financial dynamics between China and Pakistan. An increase in institutional competences ensures effectiveness of government policy that particularly fosters the

development process through infrastructure development (Esfahani & Ramírez, 2003).

According to Younis (2014), the growth outcomes of CPEC in short term and long term plans may differ. Still, CPEC is a milestone for the economy of Pakistan the problems of project stem from impervious policy interventions, lack of information and the failure of government of Pakistan to heed local and regional concerns. The long-term plan of CPEC (2017-2030) has shown no input in clearing the doubt of the public. We have also felt the plan is formulated without addressing the concerns of business community and local civil society and thus the anti-CPEC debate still goes on.

6. Conclusion

The analysis of global corridors highlights the fact that corridors are present in every part of world. From the advanced economic centers of Europe, China and Indian sub-confinement to the developing and less prosperous regions of the Asia Minor and sub-Saharan Africa. The international nature of these corridors underscores their importance to regional trade integration.

Moreover, the analysis of global corridors provides useful insights for this study. First, the analysis of these corridors ended up on a conclusion that all corridors intend to transform in to an economic corridor. Second, the completion of corridor does not ensure economic development and regional integration due to divergent national and cross border bottlenecks that vary from region to region (Esteban, 2016). Third, these case studies are helpful in formulating an analytical framework for CPEC to provide some practical policy interventions for the success of CPEC.

CPEC is a journey towards industrialization and economic regionalization in the globalized world following peace, progress and win-win approach. Considering the economic implications of CPEC it will lead to infrastructure development, job creation, increase in business opportunities with trade facilitation and recommencement of economic growth. Pakistan is required to address major bottlenecks to sustain its credibility to China and meanwhile to people of Pakistan for growth momentum of the project. A well synchronization and timely completion of projects of infrastructure, energy may assess to reduce the governance and administration paucities. The unhinged socio-economic development and external sector susceptibilities also need to be monitored to avoid any possible challenges to CPEC.

Additionally, each stage of CPEC requires divergent policy interventions. The core element of these interventions is to bring the relevant policy at the right time. CPEC will foster economic activities along a transport a route with holistic and multisectoral approach.

Economic corridor stimulates regional integration and trade and it is indeed a common tool for development, yet, when it fails to produce the proposed economic benefits, it would be then considered as an unbalanced investment (Melecky, 2017). Hence, the improvements in infrastructure arrangements in Pakistan require a harmonized customs measures and regulatory module of other involved authorities (Vaqar & Ghulam, 2011).

References

Abid, M., & Ashfaq, A. (2015). CPEC: Challenges and opportunities for Pakistan. *Journal of Pakistan Vision*, *16*(2), 142-169.

Ahmed, V., & Ghulam, S. (2011). Trade facilitation for economic corridors in South Asia: the perspective of Pakistan. University Library of Munich, Germany.

Aqeel, M. U. H. A. M. M. A. D. (2016). Impact of China Pakistan Economic Corridor (Unpublished degree thesis, BBA International Business). ARCADA.

Asian Development Bank. (2015). Connecting South Asia and Southeast Asia. Retrieved from https://www.adb.org/publications/connecting-south-asia-and-southeast-asia.

Banerjee, P. (2017). Development of East Coast Economic Corridor and Vizag-Chennai Industrial Corridor: Critical Issues of Connectivity and Logistics. Retrieved from https://www.adb.org.

Banomyong, R. (2008). Logistics Development in the North-South Economic Corridor of the Greater Mekong Subregion. Journal of GMS Development Studies, Vol. 4, pp. 43-57.

Bhattacharyay, B. (2010). Estimating Demand for Infrastructure in Energy, Transport, Telecommunications, Water, and Sanitation in Asia and the Pacific: 2010-2020.

Bhattacharyay, B.N. (2010). Infrastructure for ASEAN connectivity and integration. *ASEAN Economic Bulletin*, *27*(2), 200-220.

Brunner, H. P. (2013). What Is Economic Corridor Development and What Can It Achieve in Asia's Subregions?. Retrieved from https://www.adb.org.

Butt, K. M., & Butt, A. A. (2015). Impact of CPEC on Regional and Extra-Regional Actors. *The Journal of Political Science*, 33, 23.

Cobacho, B., Caballero, R., González, M., & Molina, J. (2010). Planning federal public investment in Mexico using multiobjective decision making. *Journal of the Operational Research Society*, *61*(9), 1328-1339.

Coşar, A. K., & Demir, B. (2016). Domestic road infrastructure and international trade: Evidence from Turkey.

Journal of Development Economics, *118*, 232-244.
De, P., & Iyengar, K. (2014). Developing economic corridors in South Asia. Retrieved from https://www.adb.org.
Esfahani, H. S., & Ramírez, M. T. (2003). Institutions, infrastructure, and economic growth. *Journal of development Economics*, *70*(2), 443-477.
Esteban, M. (2016). The China-Pakistan Corridor: a transit, economic or development corridor. *Strategic Studies*, *36*(2), 63-74.
Galvez Nogales, E. (2014). Making economic corridors work for the agricultural sector. Agribusiness and Food Industries Series No. 4. FAO, Rome.
Hope, A., & Cox, J. (2015). Development Corridors. Coffey International Development. Retrieved from https://assets.publishing.service.gov.uk.
Ishida, M. (2009). Special economic zones and economic corridors. ERIA Discussion Paper Series, 16, 2009. Retrieved from http://www.eria.org/publications.
Martín, J. C. (2011). Transportation changes in Europe. *Transportation Journal*, *50*(1), 109-124.
Martincus, C. V., Carballo, J., & Cusolito, A. (2017). Roads, exports and employment: Evidence from a developing country. *Journal of Development Economics*, *125*, 21-39.
Melecky, M. (2017). Appraisal econometrics for proposed transport corridors: optimal placement, intervention design, and wider economic benefits. Retrieved from https://elibrary.worldbank.org.
Miller, D. T. (2017). The China Pakistan Economic Corridor: Indicator of Chinese Strategic Energy Goals and a Challenge to the Open Procurement Status Quo. Jackson School of International Studies. University of Washington, Seattle Washington. Retrieved from https://web.isanet.org.
Mulenga, G. (2013). Developing economic corridors in Africa: Rationale for the participation of the African Development Bank. NEPAD, Regional Integration and Trade Department, (1).
Munnell, A. H. (1992). Policy watch: infrastructure investment and economic growth. *Journal of economic perspectives*, *6*(4), 189-198.
Official website of China Pakistan Economic Corridor. (2018).Retrieved from http://cpec.gov.pk/.
Roberts, M., Melecky, M., Bougna, T., & Xu, Y. (2018). Transport corridors and their wider economic benefits: a critical review of the literature. Retrieved from http://documents.worldbank.org.
Terrill, M. (2018). Reforming transport planning in Australia. Road pricing and provision, 47.
Wendt, J. A., & Wiskulski, T. (2012). Baltic-Adriatic corridor and cooperation. Cross-border cooperation and local development in Poland and Romania, pp.75-88.
Younis, F. (2014). Significance of Infrastructure Investment for Economic Growth. Retrieved from https://mpra.ub.uni-muenchen.de.