



BALUCHISTAN DEVELOPMENT UNDER CPEC: MARKET OPPORTUNITIES AND POTENTIAL

AUTHORS: AHAD NAZIR & JUNAID ZAHID

No part of this paper may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording or information storage and retrieval system, without prior written permission of the publisher.

A publication of the Sustainable Development Policy Institute (SDPI).

The opinions expressed in the papers are solely those of the authors and stakeholders mentioned and publishing them does not in any way constitute an endorsement of the opinion by the SDPI.

Sustainable Development Policy Institute is an independent, non-profit research institute on sustainable development.

First edition: August 2025

© 2025 by the Sustainable Development Policy Institute

Mailing Address: PO Box 2342, Islamabad, Pakistan.

Telephone: +92 (51) 2278134, 2278136, 2277146, 2270674-76

Fax: +92 (51) 2278135

www.sdpi.org

ABBREVIATIONS

B2B	Business-to-Business
BBoIT	Balochistan Board of Investment and Trade
BIFU	Balochistan Investment Facilitation Unit
BoI	Board of Investment
EPA	Environmental Protection Agency
ESIA	Environmental and Social Impact Assessment
FDI	Foreign Direct Investment
GER	Gross Enrolment Ratio
HACCP	Hazard Analysis and Critical Control Points
NER	Net Enrolment Ratio
NFC	National Finance Commission
NOC	No Objection Certificate
OECD	Organization for Economic Co-operation and Development
P&D	Planning and Development
PPPA	Public Private Partnership Authority
PSLM	Pakistan Social and Living Standards Measurement
SDPI	Sustainable Development Policy Institute
SEZ	Special Economic Zone
SMEs	Small and Medium Enterprises
UNFC	United Nations Framework Classification
PBS	Pakistan Bureau of Statistics

ACKNOWLEDGEMENTS

We are especially grateful to the leadership of Quetta Chamber of Commerce and Industry (QCCI) for their sustained engagement and substantive feedback throughout the research and consultation process. We acknowledge the support, expertise and insights provided by QCCI leadership Mr Akhtar Muhammad Kakar (Senior Vice-President), Mr. Muhammad Ayub Maryani (President), Engr. Mirwais Khan Kakar (Vice President), and Mr Ishfaq Ahmed, (Secretary General). We also acknowledge the support and feedback from Sardar Zain ul Abdin Khan (Chairman of Standing Committee on MCG Services), Dr. Hassan Daud Butt (Senior Advisor, Energy China), Mr. Jauhar Saleem (President, Institute of Regional Studies), Dr Faiz (former provincial Minister of Health and Environment, Balochistan), Dr Quratulain Bakhtiari and (Founding Director, Institute of Regional Studies), and Mr Ishfaq Ahmed (Secretary General, QCCI). Their leadership, and continued advocacy provided invaluable insights for the study and they facilitated the stakeholder dialogues, which are integral to the study.

We also extend our sincere appreciation to all officials, business leaders, and development partners, who contributed their intellectual input and time, through interviews, focus group discussions, or written correspondence. The depth and breadth of stakeholder engagement underpin the evidence-based recommendations and strategic priorities presented in this study.

This publication stands as a testament to the spirit of collaboration and shared vision for Balochistan's sustainable development. We once again are grateful to every individual and organization, whose support has enriched this endeavour.

EXECUTIVE SUMMARY

Balochistan, Pakistan's largest province by area as well as a resource-rich territory, remains institutionally marginalized and socioeconomically underdeveloped. Despite housing strategic assets, such as Gwadar Port, vast mineral reserves, and a coastline stretching over 700 kilometers, the province's share in national investment, industrial activity, and employment remains disproportionately low. The China-Pakistan Economic Corridor (CPEC) has reignited prospects for integrating Balochistan into national and regional value chains. However, this potential remains largely untapped due to fragmented governance, fiscal dependence, weak institutional capacity, and limited local participation in high-value projects.

This study examines Balochistan's development posture under the second phase of CPEC, focusing on industrial cooperation, B2B transactions, and the operationalization of Special Economic Zones (SEZs). Drawing upon primary data, policy documents, and stakeholder consultations, the study identifies the systemic constraints impeding inclusive economic development and offers a comprehensive roadmap of strategic, institutionally embedded reforms.

The study outlines the structural constraints that have hindered Balochistan's integration into the national development mainstream. These include a weak institutional apparatus incapable of translating investments into public goods, the absence of facilitation mechanisms for mid-size and private-sector players, delays in land acquisition and regulatory clearances, fragmented coordination between federal and provincial tiers, and a disjointed approach to local benefit-sharing and community engagement. It also identifies sectoral opportunities in mining, agriculture, fisheries, and logistics, emphasizing the need to develop cluster-based industrial ecosystems rather than isolated investments.

To address these constraints, a sequenced and thematically structured set of strategic interventions is proposed. A Balochistan Investment Facilitation Unit (BIFU) should be established as a legislated, autonomous entity within the Planning & Development Department to function as a one-window platform for regulatory approvals, digitized investor services, and project lifecycle management.

A dedicated Provincial Investment Tribunal should be introduced to handle commercial and land-related disputes in SEZs and industrial corridors. It must be aligned with international arbitration standards to ensure legal certainty for investors. Fiscal autonomy and mineral revenue devolution must be operationalized through Article 172(3), enabling equitable allocation of resource rents to district and provincial funds, backed by independent audits and mandatory public disclosures.

To mitigate investment risks beyond state-backed megaprojects, a tiered security framework should be developed, with dedicated services for SMEs and mid-sized investors, community liaison officers, and subsidized private security support within industrial estates. Economic clusters should be developed in Chagai (mineral processing), Pishin and Loralai (agri-processing), and Pasni and Gwadar (fisheries), supported by infrastructure, value chain development, and export facilitation. A new provincial law should replace the colonial-era Land Acquisition Act to enable transparent, digitized land transactions and standardized investor contracts.

Strategic infrastructure expansion must include rail and energy connectivity to Gwadar, digital infrastructure for SEZs, and PPP-based desalination initiatives. These efforts should be coordinated through a jointly managed federal-provincial steering mechanism. A Local Economic Participation Framework should institutionalize local hiring quotas, SME procurement thresholds, gender-sensitive workforce planning, and social audits to ensure equity and mitigate conflict. An international investment marketing and diaspora engagement strategy should include dedicated investment desks abroad, a multilingual digital portal, co-financing schemes, and annual investment summits with pre-approved projects.

Environmental and social safeguards must be mainstreamed through binding Environmental and Social Impact Assessments (ESIAs), provincial environmental tribunals, and district grievance redressal forums. An independent Monitoring and Evaluation Cell within the P&D Department should track investment flows, job creation, and policy effectiveness, while benchmarking against global indices such as the World Bank Doing Business and Organization for Economic Co-operation and Development (OECD). Reform implementation must be driven by strong political commitment

from the Chief Minister's Office, sequenced through a five-year roadmap, and supported by real-time monitoring tools and coordination with federal entities, including Bol Pakistan and CPEC Authority. Without such structural reforms, Balochistan risks remaining a peripheral, extractive node rather than a transformative economic actor. Empowering provincial institutions, restoring investor trust, and embedding local participation are essential to reposition Balochistan within Pakistan's economic future.

TABLE OF CONTENTS

Abbreviations	2
Acknowledgements	3
Executive Summary	4
1. Background and Context	8
1.1 Objectives	9
2. Methodology.....	10
3. MARKET LANDSCAPE IN BALOCHISTAN	10
3.1. Overview of the Provincial Economy	10
3.2. Fiscal Autonomy and Budget Constraints	11
3.3. Institutional and Regulatory Landscape	11
3.4. Infrastructure and Connectivity Enhancements	12
4. Investment Opportunities by Sector	13
4.1. Mining and Mineral Resources.....	13
4.2. Agriculture and Livestock.....	14
4.3. Fisheries and Marine Economy.....	15
4.4. Renewable Energy.....	15
4.5. Infrastructure and Industrial Development.....	16
5. Enabling Environment and Institutional Constraints	17
6. POLICY RECOMMENDATIONS.....	19
6.1. Establish A Balochistan Investment Facilitation Unit (BIFU).....	19
6.2. Create a Provincial Investment Tribunal and Dispute Resolution Mechanism	19
6.3. Introduce a Framework for Fiscal Autonomy and Mineral Revenue Devolution	19
6.4. Launch a Tiered Security Framework for Private and Mid-Sized Investments.....	19
6.5. Expand and Institutionalize Sectoral Cluster Development Programmes.....	19
6.6. Reform Land Use and Acquisition Mechanisms	19
6.7. Expand Infrastructure with Strategic Federal-Provincial Coordination	20
6.8. Operationalize Local Economic Participation and Inclusion Framework	20
6.9. Establish an Investment Marketing, Diaspora, and JV Facilitation Platform	20
6.10. Institutionalize ESG Compliance and Grievance Redressal Mechanisms.....	20
6.11. Establish an Independent Investment Policy Monitoring and Evaluation Cell.....	20
7. Conclusion.....	21
8. References	22

LIST OF TABLES

Table 1: Select indicators of PSLM 2021 (Pakistan Bureau of Statistics, 2021)	8
Table 2: Percentage contribution and major sub-sectors of various sectors of economy	10

1. BACKGROUND AND CONTEXT

China-Pakistan Economic Corridor (CPEC) has played a paramount role as being a catalyst in the overall infrastructure development of Pakistan, particularly of Balochistan from a strategic and geographic point of view. The notable projects emphasized development in terms of basic communication and power infrastructure especially in terms of roads, energy corridors, port facilities, and other relevant connectivity networks. The specific projects, specifically the construction of Gwadar Port and Makran Coastal Highway, have enhanced connectivity and market accessibility besides bringing about improvement in regional trade and economic benefits for the remote and resource-rich areas of the province (Zubair et al. 2018; Malik and Rehman, 2021; Bureau of Statistics, 2023a, Bureau of Statistics, 2023b)

Balochistan is a unique province in the context of Pakistan owing to its wide landscape and sparse population¹. However, it has been deprived of the infrastructure development activities for a long time. The richness of natural resources as well as the Gwadar Port has revitalized the importance of communication and power infrastructure in the province to fully tap the market potential and ensure sustainable development. This importance is further enhanced based on the coastal belt and placement of Gwadar port viz-a-viz Arabian sea giving a strategic importance for regional supply chain and economic integration. Thus, there is a need to extend the range of connectivity to the whole of province to ensure its more significant role in the national economy (Khan and Yu, 2022; Malik and Rehman, 2021).

The initial focus of CPEC-1.0 was on the development of some essential communication infrastructure in the province. This needs to be consistently improved to fully utilize the macro development in terms of both economic and social terms. The physical infrastructure must be fully used for generating employment opportunities for the local people and entrepreneurial growth ensuring national level economic integration and unlocking market opportunities at the national, regional and global levels. The inauguration of Gwadar International Airport in October 2023 was the harbinger of infrastructure development and modernization of Balochistan. This was a milestone leading to overall progress of the province. CPEC has emerged as a conduit for this development and long-term economic growth (Sajjad and Muhammad, 2025; Malik and Rehman, 2021; Zubair et al. 2018; Khan and Yu, 2022; Khetran and Saeed, 2017).

Evidence suggests that even with these biggest developments, Balochistan continues to face acute socio-economic problems that limit the transformative impact of developmental projects. Human Development Indicators suggest a significant downgrade of Balochistan. Some select indicators and their values from the Pakistan Social and Living Standards Measurement (PSLM) are analyzed in Table 1.

Table 1: Select indicators of PSLM 2021 (Pakistan Bureau of Statistics, 2021)

Indicator	Values for Balochistan (per cent)
Literacy Rate (10 years and older)	46
Out of School Children (5-16 years)	47
Primary GER (Class 1-5 & Age 6-10)	0.72
Primary NER (Class 1-5 & Age 6-10)	0.56
Middle GER (Class 6-8 & Age 11-13)	0.47
Middle NER (Class 6-8 & Age 11-13)	0.26
Matric GER (Class 9-10 & Age 14-15)	0.36

¹ The province comprises 44% of the country's landmass, but constitutes only 6 per cent of the population.

Matric NER (Class 9-10 & Age 14-15)	0.14
Full Immunization (12-23 months, record)	0.35
Full Immunization (12-23 months, recall & record)	0.53
Prenatal Consultation	0.63
Skilled Birth Attendant	0.52

Based on the data, Balochistan has a stark negative difference compared to all other provincial and national averages, particularly in the education and health sectors. The literacy rate for individuals aged 10 and above is 46 per cent against 60 per cent of the national average displaying slight educational exclusion of the province. The gender indicators are also an additional factor with female's literacy rate being 29 per cent and 49 per cent for male. On the contrary, the Punjab and Khyber Pakhtunkhwa report female literacy rate as of 57 per cent and 37 per cent respectively (Malik, 2025; Pakistan Bureau of Statistics, 2021).

In Balochistan, only 35 per cent of children aged 12 to 23 months are fully immunized based on record compared to 70 per cent as the national average. Considering both recall and records, immunization coverage reaches 53 per cent, which is far below 81 per cent as of national average. Similarly, the province falls short of the national average in several other variables including but not limited to prenatal care, skilled birth attendance, and postnatal consultations. This illustrates weak infrastructure and outreach in the health services sector (Pakistan Bureau of Statistics, 2021; Bureau of Statistics, 2022).

The economic side of the provincial performance also portrays a dismal picture when it comes to the service delivery gaps. On indices capturing satisfaction with public services and economic conditions, Balochistan scored only one per cent as compared to 46 per cent in the Punjab. These subjective indicators are also consistent with the overall disadvantage and exclusion for Balochistan. The major factors behind these are limited fiscal sovereignty, underdeveloped human capital, geographic barriers, and underinvestment in infrastructure and human resources. The infrastructure investment projects have shown progress in the long-term, but they are not helpful in transforming the socio-economic conditions of the province. It requires structural and targeted reforms at policy level on the inclusion and market integration, and specific & local sector level interventions (World Bank Group, 2025; Malik, 2025; Khan and Yu, 2022; Khetrان and Saeed, 2017; Sajjad and Muhammad, 2025; Bureau of Statistics, 2023b).

Now, when CPEC has entered into its second phase, the focus is shifting from infrastructure development to industrial cooperation with a strong business-to-business (B2B) linkage and development of special economic zones. This will shift the economic structure of Balochistan. However, it will require significant structural reforms and focus on human development. It will attract investment, promote trade, and connect local industry with global value chains. This additional scope of CPEC is an opportunity for public and private sectors to go beyond capital investment. It needs to focus on green and clean energy and logistic value chain development that can improve regional connectivity and diversify industrialization with a focus on regional trade development. This will require a consistent and coherent policy and regulatory framework, transparency and accountability of governance mechanisms, and larger inclusion of local communities to help take the province out of the existing exclusion and put Balochistan on the path of an inclusive and sustainable growth and development (Zahoor and Gebru, 2024; Khetrان and Saeed, 2017; Hafeez, 2023; Sajjad and Muhammad, 2025).

1.1 Objectives

The study discusses the market landscape, opportunities, challenges and recommends a way forward for an inclusive and sustainable development in Balochistan. It aims to provide a structured and evidence-informed assessment of Balochistan's economic potential under the second phase of the China-Pakistan Economic Corridor (CPEC). It further underscores that while infrastructure-led growth under CPEC 1.0 has created a foundation, sustainable and inclusive development under CPEC

2.0 will depend on deep institutional reforms, sector-specific investment strategies, and coherent provincial-federal coordination.

2. METHODOLOGY

A multi-pronged methodological approach has been adopted in the study that integrates field-level insights with a comprehensive review of existing literature and secondary data. The analysis followed three main steps, such as: a) desk review, b) primary data collection, and c) triangulation and synthesis. A desk review was undertaken covering national and provincial policy documents, academic studies, investment guides, donor-funded reports, and sectoral regulations. Key sources included the Pakistan Bureau of Statistics, Planning & Development Department of Balochistan, Balochistan Board of Investment and Trade, and publications by international development partners.

Primary data was gathered through interviews and focus group discussions conducted in Quetta and Gwadar. Participants included representatives from Quetta, Lasbela, and Gwadar Chambers of Commerce and Industry. Consultations were also held with senior officials from the Planning & Development Department, Balochistan Board of Investment and Trade, and other provincial bodies responsible for economic planning and CPEC coordination.

Findings from these engagements were triangulated with desk research to identify core institutional, economic, and infrastructural challenges and develop policy recommendations.

3. MARKET LANDSCAPE IN BALOCHISTAN

3.1. Overview of the Provincial Economy

The economy of Balochistan has a high concentration of natural resources-based sectors including mining, and small-scale agriculture. In addition, livestock and fisheries make a significant contribution to the overall provincial economy with manufacturing and services sectors being comparatively underdeveloped. The sectoral distribution of the provincial GDP includes agriculture (24%), mining (18%), livestock (11%) and services sector (30%). This distribution not only depicts a weakness in manufacturing sector but also shows an economic mix imbalance which when combined with the weak urban development, poor logistics and unreliable infrastructure, especially in energy sector, exposes the vulnerability and missed opportunities for the province (Khan and Yu, 2022). The same can be seen in Table 2. Furthermore, there is anecdotal evidence of low single factor productivity of the labour force mainly attributed to their inclusion in low-productivity sectors and with over 60 per cent of the rural population focused on agriculture and livestock while youth unemployment stands at 29 per cent which is highest in Pakistan (Pakistan Bureau of Statistics, 2021; Bureau of Statistics, 2023b).

Table 2: Percentage contribution and major sub-sectors of various sectors of economy

Sector	Contribution to GDP	Major Sub-sectors
Agriculture	24%	Dates, Apples, Wheat
Livestock	11%	Cattle, Goats, Sheep
Mining	18%	Chromite, Coal, Copper
Fisheries	5%	Marine Fishing (Pasni, Gwadar)
Services	30%	Public Admin, Trade, Transport
Manufacturing	<5%	Marble Cutting, Food Processing

CPEC is considered a light at the end of the tunnel for Balochistan province. Not only can it be used to reshape the economic landscape of the province, it can also place Balochistan on more economically prioritized areas at national level. For instance, considering integration at global value chain level and local economic growth especially job creation, Gwadar port is placed as centrally

important region (BiBi et al. 2023). Furthermore, the ongoing communication (road and rail) and energy (transmission lines with Iran) infrastructure can significantly aid Balochistan fill the gap regarding economic resilience through diversification, integration with national, regional and global value chains and technology transfer and modernization (Rehman et al. 2018).

The development of Balochistan as a priority component of regional or global market and value chain will require a significant effort to ensure that the development is inclusive for the local communities. This can also be a runner in mitigating the security risk in Balochistan in the long-term, and in turn, can result in investor confidence in various regions of the province. The design of these market opportunities should be directly synched with the local priorities. The development of infrastructure should be sustainable and include local businesses. This coupled with improved access to finance and institutional regulatory reforms can be used to develop the private sector in the province beyond services sector. This concerted effort can assist in developing strong strategy and sustainable process for Balochistan to step away from the current marginalized status of the area (Sajjad and Muhammad, 2025).

3.2. Fiscal Autonomy and Budget Constraints

One of the major issues in Balochistan's ability to tap opportunities offered through CPEC is the fiscal limitation. A major portion of development financing is almost wholly dependent on federal transfers under the National Finance Commission (NFC) Award with a very low (less than 8 per cent of the provincial budget) attributed to own source revenue. After the 18th Constitutional Amendment, this low level of revenue generation is making the provincial government not being able to respond according to the local development priorities (Shabbir and Ambreen, 2022; Ghaus-Pasha et al. 2010; Finance Department, 2024).

Legally, Article 172(3) of the Constitutions upholds provincial ownership over the natural resources, yet implementation challenges persist. This has led to delays in the royalty payments and incapacitated administrative mechanisms weaken the devolution framework that will work on preventing the true exercise of constitutional rights over the natural endowments. The provincial level regulators lack an overall revenue generation capacity giving rise to regional inequalities and sometimes negative competition. The smaller provinces are left with no choice but to depend on federally distributed funds and hence have very restricted fiscal flexibility and weaken a provincial to initiative design to local needs (Iqbal et al. 2012). Furthermore, delay in the processing and transfer further reduces the effectiveness of the distributive mechanisms (Shabbir and Ambreen, 2022). Furthermore, despite the NFC's attempt at fiscal equalization, the structural gap between federal allocations and provincial revenue generation continues to downgrade the provincial development policy planning required to fully exploit opportunities for long-term and large-scale programmes such as CPEC (Ghaus-Pasha et al. 2010).

3.3. Institutional and Regulatory Landscape

Balochistan's development under CPEC depicts a mixed trajectory. While using Pakistan Regulatory Modernization Initiative (PRMI) and other relevant measures, the government has made significant efforts to create a substantial modernization in regulation and investment facilitation. For instance, the e-licensing portal for the mines and minerals department is not only expected to bring in transparency in mineral concessions. Similarly, the digitization of mineral maps has been supported by the World Bank illustrating the use of evidence-based resource management by the provincial government. However, monitoring, evaluation and learning aspects remain weak and are hardly covered in public domains (Agarwal et al. 2018).

Furthermore, the institutional capacity gaps exist which constraints the reform effectiveness. The provincial regulatory system remains fragmented with a very weak legal underpinning in key areas such as public-private partnerships (PPPs), land tilting, and acquisition. The legal ambiguity around these and other regulatory subjects coupled with the regulatory inconsistencies lead to low investor confidence. This is further exacerbated by the security situations. In terms of international examples such as Mexico's pilot adaptation by the United Nations Framework Classification (UNFC) for petroleum-related projects evaluation highlights that standardized regulation can lead to transparent at the project level and overarching investor engagement. The literature is limited in

terms of any such classification system applied in Balochistan (Breux and Gordon, 2013; Kerber and Wendel, 2016).

The Board of Investment and Trade has published an investment guide (Balochistan Board of Investment and Trade, 2022) and sector specific briefs that have an overview of sector-wise opportunities and regulatory pathways. The strategy highlights the integrated development strategy as well, which links regulators, for instance coordination with Environmental Protection Agency (EPA) leading to streamlined and inter-departmentally coherent procedures and regulations. These policy-level developments have a resolve toward reform, but the actual result will be dependent on effective evaluation and credible evaluation (Latilo et al. 2024).

3.4. Infrastructure and Connectivity Enhancements

As discussed earlier, Balochistan has witnessed infrastructure development as part of the early harvest projects of CPEC 1.0. These projects included Gwadar East Bay Expressway, N-85 Highway, M-8 Motorway, and Gwadar International Airport. These projects have significantly connected the province at national and global trade networks. These developments are responsible for the provincial-level geopolitical and economic relevance elevation through interconnectivity to Gwadar Port in global value chain leading to improved access to markets especially in China and the Gulf region (Khetran and Saeed, 2017; Akram et al. 2025)

As for as infrastructure development is concerned, Balochistan still requires a lot of work, especially for connectivity. There is an absence of a structured network of secondary and tertiary level roads, and the required improvements around the limited railway connectivity will be seen as a friction for future development of Special Economic Zones and overall industrial prospects of the province. The major routes developed under CPEC are very critical arteries. Considering the landmass of the province and to fully tap the opportunities, a broader and localized development strategy is needed to create local and international investor confidence. Furthermore, the power transmission coverage and electrification is also required for the local market to benefit from these macro capital inflows under CPEC (Khan et al. 2018; Khan and Nawaz, 2021; Jaleel et al. 2023).

The requirement for the support infrastructure in addition to the headline projects has seen a mismatch, which will require target interventions. The inclusion of secondary and tertiary road networks, a vastly spread railway infrastructure, and improvement in the energy distribution systems will lead to achieving a provincial level benefit of the early harvest projects under CPEC through a trickle-down approach (Khan et al. 2018). The benefits now are fully concentrated, which create difficulty in terms of governance but provincial development uptake. If the whole of Balochistan approach to industrial development under CPEC 2.0, it is necessary to include all areas in the development agenda going forward (Khetran and Saeed, 2017).

4. INVESTMENT OPPORTUNITIES BY SECTOR

The long-term viability of the megaprojects, for instance the infrastructure development under CPEC 1.0 will require an integrated focus on economic, social, and environmental factors concerning the projects. This will assist the province in becoming a more integral part of the national economy and a conduit into the world. The CPEC 2.0 is expected to bring in investment in sectors, including but not limited to mining, agriculture, livestock, fisheries, renewable energy, and logistics through improved market connectivity, reduction in supply chain and logistic inefficiencies (Hassan et al. 2022).

In mining, Balochistan mineral wealth remains unexplored and underutilized due to a) limited access to remote areas due to lack of secondary and tertiary transport infrastructure, and b) inefficiencies around the existing infrastructure, halting the way towards integration with global value chains. The improved connectivity both in terms of air and seaport development in Gwadar, and the improvement of rail and road infrastructure can lead to lower operational costs of goods and services and can be used to build better inroads into the regional and finally global value chains. This will, in turn, improve investor confidence and increase the chances of investment in more sustainable sectors of the economy focusing on active development planning and development objectives (Bashir et al. 2019).

The rural economy of Balochistan mainly revolves around agriculture and livestock. It faces issues of market isolation, very limited access to technological interventions in the sector, and poor infrastructure. CPEC 2.0 should be focused in a way that the agricultural and livestock based activities are boosted. Hassan et al. (2022) suggest that the major areas in which CPEC 2.0 can offer investment is infrastructure and logistic efficiency improvement focusing on a more value chain-based approach. This can also enhance the connections between the rural and urban economies resulting in more inclusive and sustainable development in the long run (Awez et al. 2023).

The fisheries, especially along Balochistan's coastline, may also be a potential beneficiary sector of CPEC 2.0 investments. Though Gwadar port development will expand access to newer markets, indigenous development of sectors like fisheries will increase socio-economic outcome in the long run resulting in fishery industry product improvement for both national and export markets across the globe. This may also require extensive capacity building of the local labour force (Bian et al. 2019).

Another potential area of investment to cater for the energy issues of Balochistan is the renewable energy sector. This can be a cornerstone to achieve the full-fledged functioning of the Gwadar port and port city through the reduction of persistent power deficits in the province. This will require investment in solar, wind and other non-fossil fuel based technologies to ensure continued electricity supply. However, concerted efforts are required in terms of reducing entry barriers for the private sector to invest in energy sector of Balochistan. This will, in turn, result in a sustainable industrial growth and development and is highly in line with the overall agenda of CPEC going forward (Akbar et al. 2021).

4.1. Mining and Mineral Resources

Balochistan has an abundance of mineral resources, which makes this landmass unique among all the provinces. It is a very prominent area for any type of B2B correspondence. It is estimated that the province hosts almost 600 million metric tons of resources, which include high grade Copper, Gold, Chromite, Barite, Marble and Onyx. These have significant commercial prospects both in terms of raw material market and for the establishment of local value-added processing industries. These are particularly found in districts of Chagai, Khuzdar, and Kalat. This sector can make substantial contributions to the national economy if reforms in the mineral policy framework are continuously formulated and implemented (Murad et al., 2021; Ashraf and Cawood, 2017).

In Chagai, Reko Diq is considered the most prominent project. It is thought to be one of the world's largest under-developed copper-gold deposits. The agreement between Barrick Gold and the government of Pakistan is one of the major boosters for the investor's confidence and has placed Pakistan as a player in the large-scale mining process (Gul et al. 2023). The exploration efforts have been strengthened by using advanced technologies and use of non-destructive exploration techniques. The technologies being currently employed include but are not limited to gamma-ray

spectrometry and hyperspectral which have been used to identify gold and copper alteration zones to enhance the geological map using less data and complex regulatory regime (Hegab, 2021; Ashraf and Cawood, 2017).

Another interesting aspect that is of interest is an integral role towards the sector by utilizing effective, sustainable, integrated infrastructure, and innovative public private partnership approaches. This can include the potential of mineral processing plants in Chagai and Khuzdar. The technical nature of these partnerships can include chromite beneficiation units and smelting facilities for Copper and Barite. In this way, a long term local value chain will be created which will have a strong integration with the global value chain as well (Yakubova et al. 2021; Vaslavskaya, 2020). The technology related interventions pertaining to funding of these aspects require governance related focus on the mutual understanding and coordination between both private and public parties of interest. Although Balochistan Public Private Partnership Act is fully intact and several commitments are outlined in the relevant public sector development programme, the barriers pertaining to institutional bottlenecks, overlapping licensing systems and incomplete geological survey are acting as barriers for growth in the sector (Gul et al. 2023; Ashraf and Cawood, 2017).

The exports in mines and minerals category mostly in the form of a raw product especially considering marble being sent to China. One reason is the limited processing capacity and gives excellent viability to the initiatives such as Marble City as a potential for long term expansion and increasing returns from the same resource base (Ashraf and Cawood, 2017). However, a coherent and integrated policy intervention is required for this plan of action to be implemented to promote a full value chain approach to miners and minerals sector.

4.2. Agriculture and Livestock

Balochistan has only 04 per cent of arable land yet plays a significant role in overall agricultural output, especially in the fruit sector. The province contributes around 75 to 80 per cent to the country's grape and cherries production and around 65 per cent of the almonds being produced in Loralai, Pishin, and Killa Saifullah (Khan and Yu, 2022). The uniqueness of Balochistan's geography and climatic diversity makes the cultivation of high value agri-products including apples, pomegranates, dates, grapes, and olives. Several of these are now being exported to China. This has improved the income of local farmers. In addition, it also plays a role in the global value chain. The demand for these products is growing in the neighbouring countries which can lead to a larger economic benefit going forward. (Manzoor and Wei, 2018; Khan et al. 2020).

Similarly, the livestock sector is another very prominent sector of Balochistan's economy. The province accounts for around 30 per cent of the Pakistan's total livestock population with insufficient infrastructure for meat processing, dairy production, and leather manufacturing. The increasing demand of *halal* meat and dairy products can increase chances of Balochistan's economic integration with global value chain (Khan and Yu, 2022; Mujahid, 2022, Muhammad et al. 2020).

Cold storage and post-harvest infrastructure facilities in Balochistan can significantly avoid the food product loss maintaining their quality for exports (Ahmed et al. 2020). This can include commercial orchards for olives and dates, which can meet domestic and export based orders particularly for the middle eastern markets (Manzoor and Wei, 2018; Younis et al., 2020). For the livestock related products, state of the art abattoirs and *halal* meat processing facilities for export can allow international quality certifications and export readiness (Mujahid, 2022; Amjad and Danish, 2024).

Some barriers to market capturing in agricultural domain are inadequate market access and weak logistic infrastructure from farm to market with diminishing profitability (Khan and Yu, 2022; Ahmed et al. 2020). Another issue is the chronic water scarcity and water governance which is caused by recurring droughts affecting both the crop yields and livestock health, requiring focused water governance and sustainability relevant interventions (Ullah et al., 2023). Furthermore, the awareness around export requirement, need for traceability, and sanitary compliance mechanisms are also missing leading to export barriers (Muhammad et al. 2020)

4.3. Fisheries and Marine Economy

The development of Balochistan under CPEC 2.0 also provides opportunities in the fisheries sector. The province has a coastline stretching over 750 kilometers and has a significant contribution to marine catch. This natural endowment has not been converted into an economic advantage due to lack of development on the processing component of the fisheries value chain making the region unable to tap into the export market (Shahzad, 2022). Secondly, the differential export still takes place through Karachi as the Balochistan region does not have adequate facilities for ancillary services infrastructure including but not limited to storage, handling, and quality control pertaining to the fisheries sector (Rehman et al. 2019).

There is a great variety of commercially valuable fish species including but not limited to tuna, shrimp, sardines, and anchovies. The resources remained underutilized due to lack of compliant processing units especially in terms of Hazard Analysis and Critical Control Points (HACCP) standards. This standardization would ensure the safety of fisheries related products and leads to the better marketability at the global level especially from ports in Gwadar and Pasni (Boulfoul and Brabez, 2022). In this regard, investment under CPEC 2.0 can value-add the produce into processed products such as fish fillets, canned products, and fish meal. This will require coupling with development of cold chain logistics for integral maintenance of the products during transportation (Ramadhan, 2023). Furthermore, the opportunity also lies in deep-sea fishing joint ventures as an innovative mean to support economic diversification in the sector (Hayat and Ishaq, 2023).

These opportunities come hand in hand with some issues and challenges that provide hurdles in the growth of fisheries in Balochistan. This may include access to compliance and certification infrastructure and its proper enforcement to enable exports to China and European Union (Hayat and Ishaq, 2023). Furthermore, the practice of fishing is primitive with a minimum modernization and technology-based integration. Although in 2023, the Fisheries Department of Balochistan introduced a revised regime for the promotion of sustainability in the sector, the enforcement mechanism and capacity needs a certain level of improvement for its full implementation (Olorunfemi et al. 2019). The traditional fishing practices and fragmentation makes modernization very difficult (Ramadhan 2023).

4.4. Renewable Energy

The renewable energy sector of Balochistan has significant market opportunities especially considering the CPEC framework. Solar irradiance is high averaging from 5.9 to 6.2 kWh/m²/day enabling solar power for both utility and decentralized scale energy solutions. This will not only assist in environmental side but also economic side to chase the energy poverty away with over 60 per cent of Balochistan reported as unelectrified or under-electrified. The opportunity is present in terms of solar mini (Kouser et al. 2020; Shah et al. 2018).

The renewable energy electric power sector investments in areas such as Kharan, Washuk, and Panjgur with regard to suitability for mini-grid development in supporting localized systems that can help in rural electrification in the province. Larger solar parks can also be established along the load centers to improve transmission and distribution efficiency (Shah et al. 2018). Additionally for the coastal districts, including Gwadar and Lasbela, multi-complimentary systems combining solar, wind, and fossil fuel-based generators can offer a viable alternative. Wind corridors in Balochistan are expected to have significant potential, so consistent power can be generated and transmitted (Baig et al. 2020).

The major barrier in this sectoral development is the weak transmission infrastructure which limits the scaling up of these renewable energy projects. From the policy perspective, absence of a renewable energy policy resulted in regulatory complexity and uncertainty. The issues pertain to tariff determination and return on investment assurance. These challenges coupled with high upfront costs, can discourage local and international investor (Malik and Rehman, 2021).

Since CPEC is playing a pivotal role in the economic planning of Balochistan, the barriers require a strong policy focus, as it is pivotal around the other economic sectors and support sustainable development of the province. This will require an integrating policy with implementation steps in a coherent and long-term manner to ensure all sustainable, inclusive and integrated approach for energy sector and will automatically result in investor confidence (Sandao and Khatwani, 2022).

4.5. Infrastructure and Industrial Development

The progress on the physical infrastructure side in CPEC has been significant, the B2B engagement and industrial response has been limited. This suggests the presence of barriers that are halting the underlying assumption of translating investment into economic benefits as a primary theory of change for CPEC. In this regard, planning work on the Special Economic Zones (SEZs), including but not limited to Hub and Boston, and the partially operational Gwadar Free Zone Phase II have a central role in the CPEC industrialization strategy. The public sector development programme has several projects that aimed at developing cold storage and fishery logistics (Planning and Development Department, 2024). This is coupled with announcements of relevant tax incentives for Gwadar, including exemptions from duties and refunds on sales tax (Khan et al. 2023). Despite these incentives, the industrial uptake has been slow and face challenges such as delayed land acquisition, lack of facilitation, and broader bureaucratic red-tape, in turn, reducing overall investors' confidence. (Sharif, 2022; Ali and Rizwan, 2024)

Balochistan spatial strategy recognizes Quetta, Hub, and Gwadar as the centers of Urban growth in the future (Ali and Rizwan, 2024). These cities will act as central hubs of economic development yet considering several factors their current socio-economic and infrastructural conditions are sub-par of the requirements of sustainable urban growth. Major limitations include municipal services, living conditions, and weak connectivity at local and global levels. This diminishes the vision of the overall strategy along with several geopolitical and security reasons (Mahmood et al. 2022, Ali et al. 2018)

In order to capture the whole value chain approach, the opportunities in logistics and supply chain need to be considered as well. These include bonded warehouses and trade facilitation infrastructure in Gwadar and Hub. This will not only assist in creating jobs but also aid in unlocking trade potential and strengthen the supply chain across provinces (Hussain et al. 2023). At the same time, it will facilitate the development of SME-based clusters in all vendor industries and Balochistan specific sectors, including but not limited to furniture, marble and fisheries. This will assist in diversification of the economy and employment generation (Jaleel et al. 2023). The major issues curtailing growth in this are the constraints at utility level especially in terms of water scarcity and power. This is further constrained by the weak local governance mechanisms in the province (Sheikh et al. 2019, Kiran and Akhter, 2023, Khalid et al. 2021)

5. ENABLING ENVIRONMENT AND INSTITUTIONAL CONSTRAINTS

The business regulatory environment in Balochistan is fragile due to low institutional capacities and socio-economic disparities. This has made it difficult for the province to face development challenges despite the significant investments made under CPEC in infrastructure sector. CPEC 2.0 aims to provide a prospective platform for supporting private sector participation through industrial relocation and B2B connections resulting in more sustainable and inclusive market-based growth. Significant efforts are required in this regard in terms of improvement in institutional frameworks, regulatory structures, and the security landscape in Balochistan.

In terms of the institutional capacity, Balochistan has marked weaknesses especially from the component of the provincial government engaged in economic planning. Furthermore, fragmentation in the business regulatory environment further weakens the overall investment facilitation agenda of Balochistan Board of Investment and Trade (BBoIT). Significant efforts in this regard were made by the BBoIT through the Pakistan Regulatory Modernization Initiative (PRMI)² which is primarily focused on the overall business regulatory reforms at the national level. The main issues pertain to lack of digital systems and infrastructure throughout the province, lack of technically proficient staff members, and lack of coordination between departments. Although these issues are common for all provinces of Pakistan, Balochistan lacks a proper reform based policy framework in providing solutions. Finance Department (2024) suggests that less than five per cent of the PSDP was allocated to institutional strengthening (Planning and Development Department, 2024, BiBi et al. 2023). The issue is further exacerbated by the fragmentation of governance structures providing incidents of duplication, inefficiencies and discourage private sector investors (Malik and Rehman, 2021). The overall investment climate will require stronger regulatory systems and streamlined administrative procedures (Khan and Yu 2022).

The complex and uncertain licensing procedures further enhance the investors' risk. This, coupled with the security situation, has made local and foreign investors to be reluctant to invest in Balochistan and in turn creates negative competition amongst provinces. For Balochistan specific industry like mining, extensive paper-based processes and requires obtaining multiple no objection certificates (NOCs) from various uncoordinated agencies. This induce delay in the overall process and reduces the overall investor confidence. (Razzaq, 2023). Additionally, the lack of a dedicated effort for contextualization of the national SEZ regulation of 2012 into a more focused Balochistan specific SEZs is required. This is an attributable factor in the development of SEZs although many such zones have been planned.

Furthermore, the efforts in terms of Public Private Partnership Authority (PPPA) in not only development of frameworks but also implementing over-arching standardized agreements, overall governance of the projects, and developing multi-sectoral PPP projects are providing overarching support to the provincial government³. This endeavour further requires support to the line departments in order to build their capacity to conceive and design projects under the overarching public private partnership framework. (Rehman et al., 2018)

Another layer of regulatory risk arises in legal and regulatory uncertainty and introduces additional risk in the province. Most of the economic frameworks are generic and outdated and lack contextualization to Balochistan's core issues. The regulatory uncertainty makes it difficult for long-term project and business planning negatively affecting business confidence (Ali and Rizwan, 2024). Another effort by the government was to digitize the land records in Quetta and Gwadar but the administrative procedures have a strong reliance on primitive processes and outdated laws for instance the 1894 land acquisition act which does not translate well into the modern development needs and the envisaged agenda (Jaleel et al., 2023, Muhammad et al., 2020). The investor confidence is heavily reliant on the land governance legislation and clarification of the land-use rights in order to develop certainty, reduce transaction costs and avoid unnecessary legislation.

² See <https://business.gov.pk/regulatory-reform-activities/>

³ See <https://bpppa.gob.pk/pipeline-projects/>

Additional issues related to security remain a major challenge in the provincial performance adversely affecting the smaller scale and localized investment opportunities. The issues that pertain to targeted attacks and unresolved grievances related to land and resource distribution create a long-term uncertainty in the province. The larger CPEC projects are provided with the dedicated protection by Special Security Division, but security constraints are more prevalent in the smaller projects, which lack this facility. So, for more active B2B engagement, this needs to be focused (Qumber et al. 2018; Kanwal et al. 2019). One way to reduce this issue is by introducing the formal grievance redressal mechanism to build investor confidence and improve the local community relations (Bashir et al. 2019).

6. POLICY RECOMMENDATIONS

The policy recommendations outlined below present a comprehensive roadmap for translating the second phase of the China-Pakistan Economic Corridor (CPEC) into inclusive and sustainable economic development for Balochistan. Each suggestion addresses a core constraint whether it is regulatory, fiscal, infrastructural, or institutional.

6.1. Establish A Balochistan Investment Facilitation Unit (BIFU)

To overcome fragmented regulatory processes and limited post-approval support, there is a need to establish Balochistan Investment Facilitation Unit (BIFU) that should serve as a single-window facility embedded in the Planning & Development Department. Legislative backing through an act of Balochistan Assembly would ensure autonomy. The unit should include sectoral desks (e.g. mining, agriculture, energy), digitize workflows across key departments (e.g. EPA, Mines, Bol), and implement a time-bound grievance redressal mechanism within a 30-day process period. A governing board with the Chief Secretary as its chair may provide institutional anchoring.

6.2. Create a Provincial Investment Tribunal and Dispute Resolution Mechanism

To address legal uncertainty, a dedicated tribunal with exclusive jurisdiction over SEZ and commercial disputes should be set up under Balochistan Judicial Academy. The tribunal should devise UNCITRAL-aligned arbitration and mediation procedures to ensure timely and predictable outcomes for investors.

6.3. Introduce a Framework for Fiscal Autonomy and Mineral Revenue Devolution

Operationalizing Article 172(3) of the Constitution is essential to ensure that mineral royalties are shared with district governments in a transparent way. A Consolidated Development Fund, financed through SEZ revenues and resource royalties, should be created. Moreover, Third-party audits and public disclosure will enhance accountability and build trust.

6.4. Launch a Tiered Security Framework for Private and Mid-Sized Investments

Though large CPEC projects have formal security systems, smaller ventures remain exposed. A CPEC Security Facilitation Cell under the Home Department should provide scalable services. Community liaison officers can support early warning systems, and subsidized security services for SMEs that can be introduced under a regulated model.

6.5. Expand and Institutionalize Sectoral Cluster Development Programmes

Three clusters should be prioritized:

1. **Mining (Chagai):** Establish a processing zone with smelting, testing, and logistics support.
2. **Agriculture (Pishin, Loralai):** Develop agro-processing units and export-certified hubs.
3. **Fisheries (Gwadar, Pasni):** Build seafood processing facilities with HACCP and EU compliance.

These clusters should be supported through matching grants, tax holidays, and export facilitation tools.

6.6. Reform Land Use and Acquisition Mechanisms

There is a need to repeal Land Acquisition Act 1894 and enact a Balochistan Land Use and Investment Facilitation Act. Digitize land records, zoning data, and ownership across key districts. Standardized PPP and lease templates will reduce transaction risks.

6.7. Expand Infrastructure with Strategic Federal-Provincial Coordination

Rail links to Gwadar, grid connectivity for SEZs, and investments in desalination and solar water recycling must be prioritized. High-speed broadband should be extended to economic corridors. A quarterly joint steering mechanism between CPEC Authority and Government of Balochistan should monitor implementation.

6.8. Operationalize Local Economic Participation and Inclusion Framework

Local content obligations must be formalized: 40% local hiring (with gender and youth quotas) and 20-25% SME procurement targets in SEZs. Technical institutes should partner with employers for apprenticeships. Conflict-affected districts should be integrated into labour planning. Annual social audits should be displayed publicly.

6.9. Establish an Investment Marketing, Diaspora, and JV Facilitation Platform

Investment desks in Beijing, Dubai, and Istanbul should be linked to digital portal listing pre-approved projects. Annual conferences should showcase land banks and incentives. Chinese-language promotional content should target priority sectors. Diaspora-led ventures can be supported through co-financing and credit guarantees.

6.10. Institutionalize ESG Compliance and Grievance Redressal Mechanisms

Environmental and Social Impact Assessments (ESIAs) must be made binding and time-bound. A provincial environmental tribunal should be established for industrial oversight. District-level grievance forums should publish complaint data and outcomes. This will support compliance with national ESG standards and attract climate-linked financing.

6.11. Establish an Independent Investment Policy Monitoring and Evaluation Cell

Housed within the P&D Department but with independent governance, this cell should monitor investment flows, job creation, and policy effectiveness. It should also develop a Balochistan Investment Climate Index aligned with global benchmarks. Data verification partnerships with thinktanks like SDPI will ensure credibility.

Each recommendation must be sequenced through a rolling five-year roadmap, with clear milestones and cross-agency coordination. Political ownership at provincial level and alignment with federal CPEC institutions will be critical. Without structural reforms, Balochistan risks remaining a transit corridor rather than an integrated part of the national value chain. The success of CPEC in the province depends not only on physical investments but also on regulatory modernization, institutional capacity, and community inclusion.

7. CONCLUSION

The study reveals that critical impediments such as fiscal centralization, weak regulatory implementation, low productivity, and underdeveloped human capital continue to constrain Balochistan's ability to convert infrastructure investment into broad-based economic gains. Addressing these gaps requires not only physical connectivity but also procedural clarity, policy accountability, and localized economic participation frameworks.

The study intentionally limits its scope to economic, regulatory, and institutional considerations. Geopolitical dynamics, broader national security concerns, and international relations, while undeniably relevant, remain beyond the scope of this study. These dimensions, particularly as they pertain to cross-border investments and regional security calculus, warrant a separate, specialized treatment. The findings here, therefore, are aimed at equipping policymakers, private sector actors, and development partners with a focused roadmap for enabling market-driven, equitable growth in Balochistan anchored in the opportunities offered by CPEC's transition into its industrial and business-to-business phase.

8. REFERENCES

- AGARWAL, S., STEYSKAL, S., ANTUNOVIC, F. & KIRrane, S. Legislative compliance assessment: framework, model and GDPR instantiation. 2018 2018. Springer, 131-149.
- AHMED, A., MOHAMMAD, N. & WADOOD, A. 2020. Balochistan: Overview of its Geo-economic and Socio-economic Perspectives. *Review of Applied Management and Social Sciences*, 3, 235-246.
- AKBAR, M., HASSAN, M. T. & ASHRAF, M. T. 2021. Role of CPEC in energy and industrial development of Pakistan. *Global Political Review*, VI, 74-90.
- AKRAM, M. R., MUSTAFA, G., TAIMOOR, M. & ANWAR, M. W. 2025. Geopolitical Paradigms of CPEC (China-Pakistan Economic Corridor): Challenges and Opportunities. *The Journal of Research Review*, 2, 243-253.
- ALI, A. & RIZWAN, M. 2024. From Silk Road to China-Pakistan Economic Corridor (CPEC): A comprehensive analysis of economic, geopolitical, socio-cultural and environmental landscapes of Pakistan. *Annals of Social Sciences and Perspective*, 5, 9-29.
- ALI, L., MI, J., SHAH, M., SHAH, S. J., KHAN, S., ULLAH, R. & BIBI, K. 2018. Local residents' attitude towards road and transport infrastructure (a case of China Pakistan economic corridor). *Journal of Chinese Economic and Foreign Trade Studies*, 11, 104-120.
- AMJAD, S. & DANISH, M. 2024. Effectiveness of microfinancing on women's entrepreneurial intentions through structural equation modeling in Balochistan, Pakistan. *Human Systems Management*, 43, 1062-1081.
- ASHRAF, H. & CAWOOD, F. 2017. Mineral development for growth: the case for a new mineral policy framework for Pakistan. *Journal of Science and Technology Policy Management*, 8, 246-274.
- AWEZ, J., KHAN, T. & FALAK, A. 2023. China-Pakistan Economic Corridor: A Comprehensive Guide to Enhancing Economic and National Security, Stability, and Sustainability. *Journal of Economic Sciences*, 2, 13-26.
- BAIG, S., QASIM, M., XUEMEI, L. & ALAM, K. M. 2020. Is the China-Pakistan economic corridor an opportunity or a threat for small and micro-entrepreneurs? Empirical evidence from Northern Pakistan. *Sustainability*, 12, 1727.
- BALUCHISTAN BOARD OF INVESTMENT AND TRADE 2022. Balochistan Investment Guide: Version 2. Quetta, Pakistan: Balochistan Board of Investment & Trade.
- BASHIR, S., ARSHAD, M. & BARECH, S. 2019. Local communities participation in China-Pakistan economic corridor (CPEC): The case of Balochistan. *Pakistan Journal of Applied Social Sciences*, 9, 71-87.
- BIAN, J., LI, A., ZUO, J., LEI, G., ZHANG, Z. & NAN, X. 2019. Estimating 2009-2017 impervious surface change in Gwadar, Pakistan using the HJ-1A/B constellation, GF-1/2 Data, and the random forest algorithm. *ISPRS International Journal of Geo-Information*, 8, 443.
- BIBI, K., ALAM, A. & AHMED, B. 2023. Gwadar deep seaport: Challenges and opportunities in context of Balochistan. *Journal of Pakistan-China Studies (JPCS)*, 4, 40-50.
- BOULFOUL, N. & BRABEZ, F. 2022. Implementation of food safety management in the food industry in Algeria: benefits and barriers factors. *Turkish Journal of Agriculture-Food Science and Technology*, 10, 1342-1351.
- BREAUX, T. D. & GORDON, D. G. Regulatory requirements traceability and analysis using semi-formal specifications. 2013 2013. Springer, 141-157.
- BUREAU OF STATISTICS, P. A. D. D., GOVERNMENT OF BALUCHISTAN 2022. Health Statistics of Balochistan 2022. Quetta, Pakistan: Bureau of Statistics, Planning & Development Department, Government of Balochistan.

BUREAU OF STATISTICS, P. A. D. D., GOVERNMENT OF BALOCHISTAN 2023a. Balochistan at a Glance 2022-23. Quetta, Pakistan: Bureau of Statistics, Planning & Development Department, Government of Balochistan.

BUREAU OF STATISTICS, P. A. D. D., GOVERNMENT OF BALOCHISTAN 2023b. Development Statistics of Balochistan 2023. Quetta, Pakistan: Bureau of Statistics, Planning & Development Department, Government of Balochistan.

FINANCE DEPARTMENT, G. O. B. 2024. Budget White Paper FY 2024-25: Government of Balochistan. Quetta, Pakistan ER: Finance Department, Government of Balochistan.

GHAUS-PASHA, A., PASHA, H. A. & ZUBAIR, A. 2010. Fiscal equalisation among provinces in the NFC awards. *The Pakistan Development Review*, 563-576.

GUL, H., SIRAJ, B., RUKHSHANDA, Z. & SHAKEEL, A. 2023. Natural resource management: legal and governance issues of Reko Diq project. *Bulletin of Business and Economics (BBE)*, 12, 493-501.

HAFEEZ, M. 2023. Perception mapping of coastal communities of balochistan on socioeconomic issues in relation to cpec. *Pakistan Journal of Humanities and Social Sciences Research*, 6, 70-93.

HASSAN, M., MAHMOOD, Z., JANJUA, S. & ASIF, N. 2022. Evaluating megaprojects from a sustainability perspective: a case of China-Pakistan economic corridor (CPEC). *Journal of Chinese Economic and Foreign Trade Studies*, 15, 150-170.

HAYAT, N. & ISHAQ, F. 2023. Cross-border factors and trade agreements affecting meat, milk and fisheries exports from Pakistan: evidence from the gravity model analysis. *Forman Journal of Economic Studies*, 19, 1-30.

HEGAB, M. A. 2021. Remote sensing and gamma-ray spectrometry based gold related alteration zones detection: case study (Um Balad area), North Eastern Desert, Egypt. *Pure and Applied Geophysics*, 178, 3909-3931.

HUSSAIN, H., BOGHEIRY, A. & ALAM, T. 2023. China Pakistan Economic Corridor (CPEC): Opportunities and challenges for Implementation. *Pakistan Journal of International Affairs*, 6.

IQBAL, N., DIN, M. U. & GHANI, E. 2012. Fiscal decentralisation and economic growth: role of democratic institutions. *The Pakistan Development Review*, 173-195.

JALEEL, S., QURBAN, S. & THONGNIM, P. 2023. Understanding the dynamics of transport infrastructural development under the China-Pakistan Economic Corridor: an analysis. *Liberal Arts and Social Sciences International Journal (LASSIJ)*, 7, 137-154.

KANWAL, S., PITAFI, A. H., PITAFI, A., NADEEM, M. A., YOUNIS, A. & CHONG, R. 2019. China-Pakistan Economic Corridor (CPEC) development projects and entrepreneurial potential of locals. *Journal of Public Affairs*, 19, e1954.

KERBER, W. & WENDEL, J. 2016. Regulatory networks, legal federalism, and multi-level regulatory systems. *Law and Economics in Europe and the US: The Legacy of Juergen Backhaus*. Springer.

KHALID, I., AHMAD, T. & ULLAH, S. 2021. Environmental impact assessment of CPEC: a way forward for sustainable development. *International Journal of Development Issues*, 21, 159-171.

KHAN, A., ZHONG, L. H., ILMAS, F., RASHID, A. & JAN, A. 2023. The Impact of CPEC on Pakistan Economy: An Analysis Framework. *Russian Law Journal*, 11, 252-266.

KHAN, H. & YU, S. 2022. China-Pakistan Economic Corridor: Meeting Security Challenges in Balochistan Through Trade and Development. *Вестник МГИМО Университета*, 15, 135-149.

KHAN, K. S., ALI, S. M., ULLAH, Z., SAMI, I., KHAN, B., MEHMOOD, C. A., FARID, U., SALEEM, J. & RO, J. 2020. Statistical energy information and analysis of Pakistan economic corridor based on strengths, availabilities, and future roadmap. *IEEE Access*, 8, 169701-169739.

KHAN, M. & NAWAZ, T. 2021. Regional connectivity through China Pakistan economic corridor: Challenges and prospects. *Journal of Pakistan-China Studies (JPCS)*, 2, 1-23.

- KHAN, N., AHMAD, R. & XING, K. 2018. China Pakistan Economic Corridor (CPEC): Regional Development, Employment Opportunities and Policy Challenges. *Global Political Review*, 3, 12-23.
- KHETRAN, M. S. B. & SAEED, M. A. 2017. The CPEC and China-Pakistan relations: a case study on Balochistan. *China Quarterly of International Strategic Studies*, 3, 447-461.
- KIRAN, F. & AKHTER, F. 2023. Media Advocacy on Health Hazards of CPEC's Coal Power Project: The Sustainable Development Goal# 3 is under threat. *Pakistan Journal of Applied Social Sciences*, 14, 79-92.
- KOUSER, S., SUBHAN, A. & ABEDULLAH 2020. Uncovering Pakistan's environmental risks and remedies under the China-Pakistan economic corridor. *Environmental Science and Pollution Research*, 27, 4661-4663.
- LATILO, A., UZOUGBO, N. S., UGWU, M. C., ODURO, P. & AZIZA, O. R. 2024. Developing legal frameworks for successful engineering, procurement, and construction projects. *International Journal of Applied Research in Social Sciences*, vol. 6, pp. 1868-1883.
- MAHMOOD, S., ALI, G., MENHAS, R. & SABIR, M. 2022. Belt and road initiative as a catalyst of infrastructure development: Assessment of resident's perception and attitude towards China-Pakistan Economic Corridor. *PloS one*, 17, e0271243.
- Malik, AS 2025, Reshaping the Education Landscape in Balochistan, Article, May 29, Unicef | for every child, Pakistan
- MALIK, H. U. & REHMAN, T. 2021. China Pakistan economic corridor projects in Balochistan; Opportunities and challenges. *Journal of Higher Education and Development Studies (JHEDS)*, 1, 61-78.
- MANZOOR, F. & WEI, L. A review of China-Pakistan economic corridor and tourism opportunities. Third International Conference on Economic and Business Management 2018 2018 Hohhot, China. Atlantis Press, 79-82.
- MUHAMMAD, F., KARIM, R., QURESHI, J. A., RAZZAQ, N. & ALI, A. 2020. Environmental Pollution a Negative Externality from China Pakistan Economic Corridor (CPEC): Policy implications for Pakistan: Environmental Pollution a Negative Externality from China Pakistan Economic Corridor (CPEC): Policy implications for Pakistan. *International Journal of Economic and Environmental Geology (IJEEG)*, 11, 5-8.
- MUJAHID, I. 2022. Balochistan and CPEC: Analyzing the Indian Factor. *BTTN Journal*, 1, 51-67.
- MURAD, F., GHAFFAR, A., ULLAH, I., MASTOI, A. S. & ZAMAN, M. T. 2021. The Alteration and Mineralization Characteristics of Miocene Porphyry Cu-Au Deposits of Chagai Magmatic Belt, District Chagai, Balochistan, Pakistan: The Alteration and Mineralization Characteristics of Miocene Porphyry Cu-Au Deposits of Chagai Magmatic Belt, District Chagai, Balochistan, Pakistan. *International Journal of Economic and Environmental Geology (IJEEG)*, 12, 1-8.
- OLORUNFEMI, T. O., OLORUNFEMI, O. D., ADEBAYO, S. A., LETSOALO, S. S. & MODIRWA, S. 2019. Competency Needs of Extension Agents On Value Added Fish Production: Evidence From Kwara State, Nigeria. *South African Journal of Agricultural Extension*, 47, 86-95.
- PAKISTAN BUREAU OF STATISTICS 2021. Pakistan Social and Living Standards Measurement Survey (PSLM) 2019-20: District Level. Islamabad Pakistan Bureau of Statistics, Ministry of Planning Development & Special Initiatives.
- PLANNING AND DEVELOPMENT DEPARTMENT, G. O. B. 2024. Public Sector Development Programme 2024-25: Government of Balochistan. Quetta, Pakistan ER: Planning & Development Department, Government of Balochistan.
- QUMBER, G., ISHAQUE, W. & SHAH, S. J. 2018. Regional Security Implications of ChinaPakistan Economic Corridor (CPEC). *Global Regional Review*, 3, 46-63.
- RAMADHAN, H. A. 2023. Determinants of Economic Value Addition of Industrial Tuna Fish Processors in the Sea Food Processing Sub-Chain in Malaysia. *Journal of Economics Business Industry*, 1, 40-46.
- RAZZAQ, N. 2023. China-Pakistan Economic Corridor (CPEC) and Climate Change in Balochistan: Problems and Prospects. *Journal of Development and Social Sciences*, 4, 433-438.

- REHMAN, A., DEYUAN, Z., HENA, S. & CHANDIO, A. A. 2019. Do fisheries and aquaculture production have dominant roles within the economic growth of Pakistan? A long-run and short-run investigation. *British Food Journal*, 121, 1926-1935.
- REHMAN, A. U., HAKIM, A., KHAN, K. & KHAN, I. U. 2018. Role of CPEC in development of trade, transport and economy of Pakistan. *Romanian Journal of Transport Infrastructure*, 7, 77-92.
- SAJJAD, S. A. & MUHAMMAD, R. 2025. Assessing Human Security in Balochistan: Evaluating Development through Evidence-Based Indicators. *Journal of Research in Social Sciences*, 13, 1-16.
- SANDAO, I. A. & KHATWANI, M. K. 2022. CPEC: AN ULTIMATE OPTION FOR NTS CHALLENGES. *Asia-Pacific-Annual Research Journal of Far East & South East Asia*, 40, 129-144.
- SHABBIR, A. & AMBREEN, F. 2022. Impact of Intergovernmental Fiscal Transfer on Inter-Provincial Fiscal Disparity in Pakistan. *Journal of Applied Economics & Business Studies (JAEBS)*, 6.
- SHAH, S. A. A., VALASAI, G. D., MEMON, A. A., LAGHARI, A. N., JALBANI, N. B. & STRAIT, J. L. 2018. Techno-economic analysis of solar pv electricity supply to rural areas of Balochistan, Pakistan. *Energies*, 11, 1777.
- SHAHZAD, S. M. 2022. Fish industry: a discourse analysis of the future perspective of Pakistan. *Biological and Clinical Sciences Research Journal*, 2022.
- SHARIF, S. 2022. Financing of CPEC Projects: Implications for Pakistan. *Journal of Public Policy Practitioners*, 1, 99-133.
- SHEIKH, S. M., ZAFAR, M., NAWAZ, S. & NAWAZ, A. 2019. CPEC Investment Opportunities and challenges in Pakistan. *Journal of Accounting and Finance in Emerging Economies*, 5, 123-128.
- ULLAH, H., AKBAR, M., KHAN, F. & AMJAD, M. 2023. Performance evaluation of Standardized Copula-based Drought Index with Reconnaissance Drought Index and Standardized Precipitation Temperature Index using severity-duration frequency curves over Balochistan, Pakistan. *International Journal of Climatology*, 43, 2465-2480.
- VASLAVSKAYA, I. Y. 2020. Public-private partnership and financing the development of national infrastructure: safeguarding public finance sustainability. *Social, economic, and environmental impacts between sustainable financial systems and financial markets*. IGI Global.
- WORLD BANK GROUP 2025. Pakistan Development Update: Reimagining a Digital Pakistan. Washington, D.C.: The World Bank.
- YAKUBOVA, S., YUNUSOVA, S., SHAISLAMOVA, N., MURODOV, S., AVAZOV, N. & SHOVKATOV, N. The role of public-private partnerships in financing infrastructure projects. E3S Web of Conferences 2021 2021. EDP Sciences, 07018.
- YOUNIS, S., RAMZAN, S. & GUL, N. 2020. Assessing the Impact of Vocational and Technical Education. *Global Social Sciences Review (GSSR)*, V, 224-236.
- ZAHOOR, M. & GEBRU, M. 2024. CPEC 2.0 and Special Economic Zones: Analyzing the Existing Regulatory Framework for Chinese Investors in Pakistan. *Journal of Social and Political Sciences*, 7, 191-201.
- ZUBAIR, M., ALI, A., NAEEM, S., JAMAL, F., ANAM, S. & BUKHARI, S. A. 2018. The Economic Corridor Between China and Pakistan has an Impact on Pakistan's Economy. *Journal of Statistics*, 25.