

CONFERENCE PROCEEDINGS

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INTERNATIONAL CONFERENCE ON

CPEC: COLLABORATION IN HIGHER EDUCATION & SUSTAINABLE DEVELOPMENT

(19th - 21st February 2019)

Prof. Dr. Zahid Anwar (Editor)
CHINA STUDY CENTRE,
University of Peshawar, Pakistan.



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Chief Organizer of the Conference

Prof. Dr. Zahid Anwar

CHINA STUDY CENTRE,
UNIVERSITY OF PESHAWAR, PAKISTAN.

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EXECUTIVE SUMMARY

The experts from different academic institutions of Pakistan and China shared their perspectives regarding CPEC through their presentations, discussions, questions and answers and have analyzed different aspects of the mega project.

Secondly, the participants have analyzed collaboration in higher education between Universities of Pakistan particularly in Khyber Pakhtunkhwa (KP) and China.

Thirdly, experts have critically evaluated the outcomes and impact of CPEC and BRI such as: implications for regional peace and prosperity, influence on the regional integration, and development in South-Asian region.

Fourth, through this conference attention has been brought to the opportunities of CPEC as the experts through this conference have evaluated sustainable development through connectivity and economic cooperation under CPEC.

Fifth, learned scholars through this conference have evaluated the prospects of integration of regional countries into the global value chains under BRI/CPEC and thereby enhancing role of trade and investment.

Sixth, professionals have scientifically analyzed the socio-cultural, geo-economic, politico-strategic, biological and environmental aftermath of CPEC on Pakistan and the region.

Last but not the least, solid measures have been suggested towards mutual exploratory cooperation as a result of which Pakistan Particularly Khyber Pakhtunkhwa province would get much benefits from CPEC. The International conference has highlighted that through concerted efforts of both China and Pakistan, CPEC with passage of time will galvanize economic development in the region generally and Pakistan particularly.

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ADVISORY COUNCIL

- Prof. Dr. Muhammad Asif Khan** (*Vice-Chancellor, University of Peshawar*)
Prof. Dr. Razia Sultana (*Vice-Chancellor, Shaheed Benazir Bhutto Women University, Peshawar*)
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Dr. Muhammad Sajid (*University of Peshawar*)
Dr. Jamal ud Din (*Qurtaba University of Science & Information Technology Peshawar*)



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INAUGURAL SESSION

- Welcome speech by Prof Dr Zahid Anwar, Director, China Study Centre, UOP
- Keynote Address by DG CPEC CELL, Higher Education Commission
- Prof. Dr. Zhang Jiaodong Fudan University, Shanghai, China
- Dr. Muhammad Asif Khan, Vice Chancellor, University of Peshawar
- Dr. Habib Ahmad, Vice Chancellor, Islamia College University Peshawar
- Dr. S.M. Saqlan Naqvi, Vice Chancellor Bacha Khan University, Charsadda
- Dr. Muhammad Azhar Khan Niazi, President, QURTUBA University of Sciences and Information Technology
- Vote of Thanks by Prof. Dr. Razia Sultana, Vice Chancellor, Shaheed Benazir Bhutto Women University, Peshawar



COLLABORATIVE INSTITUTIONS:

China Study Centre, University of Peshawar in collaboration with Embassy of the People Republic of China, Higher Education Commission Pakistan, Higher Education Department Khyber Pakhtunkhwa, Bacha Khan University Charsadda, FATA University, Khyber Medical University, Qurtuba University of Science and Information Technology, Shaheed Benazir Bhutto Women University Peshawar, University of Engineering and Technology, Peshawar and Islamia College University Peshawar has organized an International Conference on, “**CPEC: Collaboration in Higher Education and Sustainable Development**” on **19th to 21st February 2019** at the University of Peshawar.

INTRODUCTION

The 21st century highlights a speedy expansion and explosion of knowledge leading to technological breakthroughs that have transformed the way people live, work and relate to one another and the range, gauge, and perplexity of this transformation are unparalleled. The world's Economic Architecture based on capitalistic perceptions, neoliberalism and free-market economy is endorsing a go-slow since the global economic crunch. Trade and investment are declining and cited reasons are rather structural than cyclical. Monetarist and macro-economic approaches are proving less effective and certain unconventional measures for economic growth and stimulation are high on the debate. Economic policy debates center around industrial and services sector promotion for fostering employment opportunities through infrastructural development on an enormous scale, along with trade development and economic integration through people's connectivity across borders.

China is the fastest-growing economy globally and investment in physical infrastructure is the most imperative factor in her economic development, besides labor stock and private and public investments. China's experience has a lesson for the developing world to improve physical infrastructure and human capital for economic growth & sustainable development. The pivot of economic power is shifting from the West towards the developing countries in the East due to the implementation of a futuristic outlook by China in the form of the Belt and Road Initiative (BRI).

China's Belt and Road initiative (BRI), launched in 2013, denotes the New Silk Road Economic Belt and the 21st Century Maritime Silk Road. The Economic Belt would connect China to Europe along West Asia and Central Asia, while the Maritime Silk Road would link her to Southeast & South Asia, Africa, and Europe. The strategy responds to the well-placed economic policy of linkages and growth-foster through investment in physical infrastructure. BRI is surfaced as a "strategic relationship" among countries and regions for strengthening trade and investment and; therefore, lends new imperativeness to the development trajectories of Asia, Europe and beyond. BRI is expected to potentially benefit the implying countries through intensified regional supply chains for sustainable development. Expectation imparts the project will ease importing inputs and will favor participation in value chains through lowering tariff and non-tariff barriers to cross border trade. Since developing countries are badly in need of institutionalized policies for fostering entrepreneurial development and promotion of innovative productivity and sustainable development, BRI is expected to shift economic policy debate from macroeconomic and cyclical policies to structural policies.

CPEC is one of the 6th economic corridors of BRI and China and Pakistan are giving much importance to CPEC by declaring it a flagship project of BRI. Gwadar deep-sea port which is part and parcel of CPEC provides easy access to the sea to the Central Asian States

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including Afghanistan and its location at the exit of the Persian Gulf further increases the likelihood of its becoming a major hub of economic activity shortly. BRI is an ambitious plan, so is CPEC as its part, and certainly would have to face many challenges, but it has enormous potential and the opportunities related to the project are much more deep-seated and optimistically would give prosperity to the connecting region in a much resilient way. Stronger policy proponents may not only cope with the challenges in the way ahead but may also turn challenges into opportunities for multilateral cooperation among the nations economically connected under the umbrella of BRI.

Potentiality and vitality of these policy proponents are maximized by the fact that the majority of the nations in the way of BRI are developing countries with potential scarcities of resources in terms of infrastructure, economic growth, industry, and technology. The conceptual framework for the analysis of the vision and motivations in terms of challenges to CPEC and the opportunities lying ahead to reap multifaceted benefits from the project are need of the hour. Academia is at the tip of expectations to analyze formulations, contextualize recommendations, and engage all the stakeholders for developing the required conceptual framework, as well as the policy guidelines, as a course of action for institutions engaged in coordination and connectivity.

Institutions of Higher Education, the “Creative Industry” for adaptive learning, innovation and enhancing research for the well-being of humanity, are meant for the production of new knowledge, updating existing understanding, disseminating information, and preserving data for the coming generation. Formulating policy proponents on multi-dimensional issues need extensive evaluation by experts in diverse fields in Universities and institutions of higher learning, which have a two-way effect; it not only results in the ultimate progress of the society but also creates collaboration for the institutes itself. CPEC is also a conglomeration of many important projects and needs to be objectively analyzed for roadmap charting from multiple angles under different contexts by all the stakeholders.

For this purpose, China Study Centre (CSC) University of Peshawar, in collaboration with other institutions of higher education in Khyber Pakhtunkhwa has organized an international conference on, “CPEC: COLLABORATION IN HIGHER EDUCATION AND SUSTAINABLE DEVELOPMENT”, held at China Study Centre, University of Peshawar from the 19th to 21st February 2019.

The conference have engaged academicians, scholars, government officials, practitioners, diplomats, journalists and development specialists from all over the world, especially Pakistan and China, in constructive interaction with the participants who have generated critical thinking over policy formulations and coordination and integration across borders. Vice-Chancellors and academicians of various public & Private sector universities of the Khyber Pakhtunkhwa province have been invited to participate in the conference. The Federal and Provincial level senior leadership has also been invited to grace the event.

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Development Specialists from Pakistan China and the developed world have analyzed the project's trajectories objectively to help in reaping the opportunities and addressing the challenges in an efficient manner. Keynote Speakers and presenters at the conference had engrossed the participants in a constructive interaction of learning and contributing to the understanding of CPEC and its implications for Pakistan and the region at large. The conference has provided opportunities for discussion, exchange of ideas and developing realistic perspectives on different aspects of CPEC. The approach of the conference was interactive which had provided opportunities to the participant to not only learn from the speakers but also from one another by sharing their ideas. Students from various faculties like Social Sciences, Natural Sciences, Numerical Sciences, Arts and Humanities, Life and Environmental Sciences, Islamic and Oriental Studies, Management and Information Sciences have participated in the conference and learnt to disseminate the valuable information on CPEC and its significance. Without an iota of doubt, the International conference has helped in developing a better understanding of CPEC and the perceived sustainable development in its wake.

OBJECTIVES:

The objectives of the conference are:

1. To explore collaboration in higher education between Universities of Pakistan particularly in Khyber Pakhtunkhwa (KP) and China.
2. To discuss the avenues of strengthening joint research projects, faculty exchanges, and students` mobility.
3. Understanding the Chinese double first-class initiative in the realm of higher education.
4. To learn and disseminate the achievements and successful experiments of HEC (Higher Education Commission of Pakistan) and CAHE (China Association of Higher Education).
5. To assess the prognosis of growth and sustainable development through connectivity and economic cooperation under BRI/CPEC.
6. To examine opportunities and challenges to CPEC and to weigh CPEC's five key areas: policy coordination, facilities connectivity, unimpeded trade, financial integration, and people-to-people bonds.
7. To evaluate the prospects of integration of regional countries into the global value chains under BRI/CPEC and thereby enhancing trade and investment.
8. To scientifically analyze the socio-cultural, geo-economic, politico-strategic, biological and environmental impacts of CPEC on Pakistan and the region.

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CONFERENCE THEMES:

The conference has been divided into different themes and there have been parallel sessions and each session has focused on distinct sub-theme dealing with various aspects of the main topic.

1. Bilateral Collaboration in Higher Education and Sustaining Intellectual Capacitation
2. Capacitating the Youth: Challenges and Opportunities
3. Enabling potential: Developing Capacity for Professional Opportunities in CPEC
4. Security and Dividends in Natural Resource Exploitation & Infrastructure Development
5. Securing Futures: Opportunities and Challenges in Employment with the CPEC
6. Mineral Exploration in KP: Safeguards and Maximizing Return
7. Technological Roadblocks: Developing Domestic Capacity for Mineral Extraction and Processing
8. Prospects for Human Resource Development in Metallurgy Research
9. Strengthening Agricultural Capacity
10. Avenues for increasing Agricultural Exports to China and the Broader Region
11. Increasing Domestic Yield: Potential for Collaboration in Technology Transfer
12. Facilitating Product Export: Developing Post-Harvest Infrastructure
13. Developing the Tourism Industry: Opportunities and Challenges
14. Bio-diversity and Ecotourism
15. Ancient Architecture: Avenues for Collaboration in Heritage Conservation
16. Securing Nature: Pre-empting Ecological Costs and Preserving the Environment
17. Environmental and health challenges
18. KP, AJK, GB, and CPEC: Challenges and Prospects
19. Human Resource Potential and Strengths
20. CPEC: Peace, security and higher education
21. Resources to Benefit Local Populations
22. Social sustainability in CPEC
23. Water resource development
24. Equitable inclusive and balanced development growth
25. SEZs and Urban development
26. Building new cities under CPEC
27. People to people contact for joint venture, entrepreneurs and businesses
28. CPEC: Institutional development and reforms
29. CPEC: Intellectual Property
30. Export promotion and import substitution
31. CPEC: Connectivity and regional integration

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IMPACT:

The impact of the mega event i.e., International conference on CPEC with focus on higher education and sustainable development would be both short-term and long-term. *Firstly*, about two hundred participants—students, scholars, faculty, diplomats, journalists, businessmen and practitioners have attended the different sessions of the conference. The exposure of the participants has broadened their understanding of CPEC which is considered a regional game-changer project. Directly and indirectly, it would benefit policymakers and the general public through the dissemination of information by media coverage and publication of the conference proceedings. *Secondly*, this conference would create opportunities for collaboration in higher education among institutes of Pakistan and China. There are more than two thousand Universities and Degree Awarding Institutes in China with about six million students’ induction annually. These institutions offer various scholarships and faculty exchange programs. This conference would provide opportunities to Institutes of Higher Education in Pakistan to strengthen educational cooperation which would benefit our youth and polish their talents.

INAUGURAL SESSION:

The inaugural session took place at the Khushal Hall, Pearl Continental Hotel, Peshawar at 3 PM on 9th February, 2019. A large number of experts on BRI and CPEC, diplomats, intellectuals, journalists, government officials, faculty and students of different universities of Khyber Pakhtunkhwa participated in the inaugural session. In the inaugural session / opening ceremony of the conference the following distinguished guests delivered speeches.



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WELCOME ADDRESS

Prof. Dr. Zahid Anwar

(Director, China Study Centre, University of Peshawar)

The chief organizer and Director, China Study Center, Prof Dr. Zahid Anwar welcomed the distinguished guests and thanked all the participants particularly Chinese delegates for their participation in the inaugural session of the International conference. He said that the purpose of the conference is to invite experts from diverse fields in order to express their expert opinion regarding the mega project and explore opportunities of the CPEC flagship project and discuss the challenges and their possible solutions. He said that CPEC is a mega project and it is imperative to analyze its opportunities and challenges keeping in view its impact on regional peace and prosperity. He stated that the participants in this conference are from different disciplines and their discourse during the International conference on different aspects of the CPEC will culminate in an enriching analysis. He further stated that a report on the conference presentations will be prepared and shared with concerned institutions which would enhance awareness in public and will help in building a more realistic image of CPEC based on objective analysis.

Dr. Safdar Ali Shah, Director General of CPEC Cell, HEC, Islamabad

HEC, CPEC Cell's Direct General Dr. Safdar Ali Shah has given presentation on the topic: CPEC and collaboration in Higher Education. He stated in his presentation that as 21st century is the era of connectivity; therefore, he stressed on the significance on the growth of association among the universities. He stated that under CPEC the cooperation has increased between the institutions of Pakistan and China and stated that the Platform of HEC is always there for the expansion of assistance.

Prof. Dr. Zhang Jiadong, Director, Center for South Asian Studies, Fudan University, China

While delivering his speech he stated it is his first visit to Peshawar and praised panoramic view of Peshawar. He appreciated the idea of organizing international conference on this important theme in Peshawar and stated that it will help to understand the regional developments



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particularly in the context of BRI and CPEC. He also discussed the changing political landscape of South-Asia. He said that Pak-China friendship is important for the Peace of South-Asia. For sustainable development and higher education, Pakistan and China universities should cooperate and establishment of China Pakistan consortium is a good step in right direction.

Dr. Habib Ahmad, Vice Chancellor of Islamia College University, Peshawar

Islamia College is one of the oldest colleges in Pakistan. Recently, it has become a university. The vice Chancellor of Islamia College University, Peshawar has welcomed collaboration with Chinese counterparts. He praised the efforts of China Study Center, University of Peshawar, for the initiative to organize international conference on this topic.

Prof. Dr. S.M. Saqlan Naqvi, Vice Chancellor of Bacha Khan University

Prof Dr. S.M Saqlan Naqvi in his address has stated that Bacha Khan University is a new University. In a short time it has developed its teaching and research quality. It has become one of the best universities of the province. The worthy Vice Chancellor welcomed collaboration between his Universities with the academic institutions of China.

Dr. Muhammad Azhar Khan Niazi, President, Qurtuba University of Sciences and Information Technology, Peshawar

It's an honor to be at this conference as it is a reflection of the sturdy bond between Pakistan and China's friendship. It has provided a chance to exchange views among stakeholders to make CPEC a hit story for the region and also the world. Cooperation between educational & developmental organizations would make Qurtuba University a win-win situation as Qurtuba University is located in the middle of the CPEC route at D.I. Khan. Qurtuba University of Science and Information Technology was established in 2001. University provides excellent research facilities in the fields of Computer Science and information technology. Our Engineering laboratories provide excellent facilities for material testing. We have also included Chinese language in our engineering course curriculum. I am confident that during the panel presentation, consensus would be developed amongst the stakeholders in coming up with some concrete steps to be taken to achieve fruitful results commensurate with the objectives of this conference. I expect recommendations of the conference will be circulated to all the participants to work towards the achievement of objectives in collaboration with the stakeholders. I would like to express my profound gratitude to friendly country China for its unwavering commitment to provide world-class infrastructure for the development of Pakistan.

Long live Pakistan China friendship. Pakisitan Zhongguo Youyiwansui

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Dr. Razia Sultana, Vice Chancellor of Shaheed Benazir Bhutto Women University, Peshawar

Razia Sultana who is Vice Chancellor of Shaheed Benazir Bhutto Women University in her vote of thanks speech said that this international conference on CPEC is a continuation of a series of conferences.

In 2018, Shaheed Benazir Bhutto Women University in collaboration with some other universities of Khyber Pakhtunkhwa particularly University of Peshawar has organized international conference on CPEC. SBBWU has

welcomed the idea of collaboration between the universities of China and Pakistan. SBBWU is unique university of the province which is established wholly and solely for development of higher education among the female of the province. She praised the earnest effort of Dr. Zahid Anwar, the chief organizer of the conference, to make this event successful. In the end she thanked all the distinguished guests for their participation in inaugural session of the conference.



CHIEF GUEST SPEECH

Prof. Dr. Muhammad Asif Khan, Vice Chancellor of University of Peshawar

Prof. Dr. Muhammad Asif, who was chief guest of the conference stated that climate changes are occurring in the region which requires a collective response of the regional states particularly China and

Pakistan. He turned the attention of the experts towards the impact of global warming on the glaciers of Himalaya and Karakorum mountain systems and its implication for the South –



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Asian region. He hoped for collaboration between the universities of China and Pakistan particularly in the fields of Geology, Geography and disaster management. He also appreciated the earnest efforts of Prof Dr. Zahid Anwar for organizing the conference.

PRESENTATIONS:

Chinese and Pakistani scholars have delivered presentations on diverse impactful aspects of CPEC, which are hereinafter;

1. Topic: China-Pakistan Economic Corridor and Its Connection with the Middle East.

Huang Minxing
Department of Middle East Studies,
Northwest University, Xian China

a) Geographical, Economic and Political Position of China-Pakistan Economic Corridor (CPEC):

- Located in an important position at the exit of the Strait of Hormuz.
- Connects South Asia, East Asia, West Asia, Central Asia and Africa, the Indian Ocean and the Pacific Ocean.

b) Communication Between Pakistan and the Middle East:

Pakistan is closely related to the economy, politics, and society of the Gulf countries.

- **Politics:** As a Sunny Islamic country, Pakistan has a long history of contact with the Middle East in both politics and the military.
 - **History:** British rule in the Gulf: colonies in Yemen, Oman, Trucial Emirates, and India before World War II.
 - **Personnel Exchanges:** A large number of Pakistani workers work in GCC countries (1.74 million in 2002).
 - **Trade:** Pakistan has good trade complementarity with the Gulf countries. Products produced in Pakistan are easier to market in the Gulf countries.
 - **Investment:** Saudi Arabia has just agreed to join the CPEC project with an investment of \$20 billion, in oil processing in Gwadar.
 - **Russia:** plans to invest \$14 billion in the energy sector.
 - **Others:** include Italy, UAE, Turkmenistan, and Azerbaijan.
- #### **c) Improving Relations of Other Asian Economies and the Middle East through CPEC.**

CHINA:

- As the world's second-largest economy, China has good trade complementarity with the Gulf countries, Iran and Iraq. Important fields for cooperation include new energy and infrastructure, etc.

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- China is the largest trading partner of 10 Arab countries: Bahrain, the UAE, Qatar, Egypt, Jordan, Kuwait, Lebanon, Morocco, Oman, and Saudi Arabia.
- CPEC is a flagship project of "Belt and Road Initiative ", Pakistan is the hub linking China- Central Asia-Western Asia Economic Corridor.
- The Strait of Malacca is a long and risky journey.

JAPAN & KOREA:

- As the world's main developed economy, Japan and Korea have also good trade complementarity with the Gulf countries, Iran and Iraq.
- The Strait of Malacca is a long and "risky" (South China Sea) journey.

MONGOLIA:

- As Asia's one of the undeveloped inland economies, Mongolia has also good trade complementarity with the Gulf countries, Iran and Iraq.

CENTRAL ASIA:

- As the world's main oil & gas producers, Central Asian countries compete with the Gulf countries. Iran is also planning to develop similar cooperation with Central Asia.

AFGHANISTAN:

- As Asia's one of the undeveloped inland economies, Afghanistan has also good trade complementarity with the Gulf countries, Iran and Iraq.
- A possible member of CPEC in the future.

d) Influence on the Ports along the Gulf and Other Planned Trade Routes:

- Some international observers claim that CPEC will have a negative influence on Chabahar and Bandar Abbas of Iran, Dubai of UAE, also important transit trade centers in the area.
- Such negative influence will be minimal through increasing trade in the area and other possible measurements.

e) Possible competition of CPEC with other trade routes:

- Iran's planned transport and trade cooperation with Central Asia and the Caspian Sea
- China-Kazakhstan (Akta) - Iran (Anzali) transport corridor for trade.
- The Kazakhstan-Turkmenistan-Iran railway project: in December 2014, the railway was connected.
- Oman-Iran-Turkmenistan-Uzbekistan Transport Corridor Project --- planned in 2015
- Central Asian Railway will enjoy 40% and 50% discounts on freight to Pakistan and Turkey through Iran, respectively.
- Turkey's planned transport and trade cooperation with Central Asia.

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- The transport corridor of Afghanistan-Turkmenistan-Azerbaijani-Georgia-Turkey discussed in 2015.
- Baku-Jayhan Oil Pipeline.
- Myanmar's planned transport and trade cooperation with China.
- China-Myanmar Economic Corridor's agreement signed in 2018.
- Complementary relationship with CPEC.

SUMMARY:

We are in times of communication, and all the countries are doing their best to establish a connection with neighboring countries and other countries, to promote economic development. CPEC is certainly a wonderful project.

2. Topic: Online & Offline --- Efficient Integrated Approach for CPEC High Education and Capacity Building Collaboration.

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| <p>LI Tao Institute of Belt & Road, Northwest University, China</p> |
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a) Review of UoP & Shaanxi Academic Institutions:

- 2017-2018, Collaboration between UoP & NWU.
- 2017-2018, Collaboration between UoP & XETU.
- 2018, Collaboration between UoP & XJTU.
- 2018, Collaboration between UoP & NWPLU.

b) Collaborative fields between UoP & Shaanxi Academic Institutions:

- NWU: Archaeology, Cultural Heritage Conservation, History, International Relations, Language, Information Science & Technology, Geology, Ecology & Environmental Research, etc.
- XETU: information Science & Technology.
- XJTU: International Commercial Law, Intellectual Property Law, Medical & Medicine, Online Education/E-Learning, Public Management, Architecture, Information Science (AI and Mega Data), etc.
- NWPLU: Counter-terrorism Law, South Asia Studies.

c) Collaboration & Communication

➤ Challenges:

- Security.
- Long Distance.
- The Difference between Institution & Mechanism.

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- Limitation of Student Exchange.
- Low Efficient.
- High Cost.

- **Opportunities:**
 - CPEC.
 - Common Interests.
 - Profession.
 - Governmental Support.
 - Funds.
 - Online Education/ E-Learning.

- d) **What shall we do?**
 - **Basics**
 - Basic Studies for both sides.
 - Long term collaborative win-win capacity building.
 - Potential field.

 - **Applied**
 - Applied science, technology and studies for CPEC project.
 - Efficient & Practical
 - Potential field.

 - **Online**
 - Long-distance and e-learning system.
 - Union: UoP, NWU, XETU, XJTU, NWPLU, etc.
 - Field: language, cultural heritage, geology, medical, management, law, history, and international studies, etc.
2019 – 2021 program

 - **Offline**
 - Traditional educational exchange program.
 - Union: UoP, NWU, XETU, XJTU, NWPLU, etc.
 - Field: language, cultural heritage, geology, medical, management, law, history, and international studies, etc.
 - Event: summer camp, workshop, conference & internship

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3. Bilateral Collaboration in Higher Education and Sustaining Intellectual Capacitation.

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| <p>Prof Dr Ran Wanli Dean school of cultural heritage, Northwest University Xian China</p> |
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Prof Dr Ran Wanli, who did PhD from Japan and has expertise on Buddhist and Chinese archaeology currently Dean school of cultural heritage, Northwest University Xian China delivered his presentation on Bilateral Collaboration in Higher Education and Sustaining Intellectual Capacitation. He thoroughly discussed the issue of collaboration in the field of Archaeology between Pakistan and China. He also highlighted the archaeological connection between Pakistan and Xinjiang Uighur Autonomous Region of the People Republic of China. His paper was well received by experts in the University and Archaeology Department University of Peshawar and Sahibzada Abdul Qaum Khan Museum at the University of Peshawar held meetings with the Chinese delegation and a draft agreement for collaboration in the field of archaeology was finalized.

4. Topic: CPEC: A Gateway to Prosperity (The Unfolding Story) 21 Feb 2019.

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| <p>Prof. Dr. Amir Khan Email: amirkhan65@gmail.com Centre of Excellence for CPEC, Islamabad.</p> |
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The China Pakistan Economic Corridor (CPEC) aims to build as a gateway to prosperity for the people of Pakistan, China, and the region at large. The corridor would open many doors of prosperity including;

- Socio-Economic Development & Poverty Reduction
 - Agriculture Modernization
 - Global Value Chains & Industrial Development
 - Oil City Gwadar & Blue Economy
 - Regional Connectivity & Third Country Participation
- a) **Socio-Economic Development & Poverty Reduction:
(Salient Sectors from Socio-Economic Development Working Group)**
- 70% literacy rate through CSR component of CPEC.
 - 6% of people are homeless, another 12% living in rented houses.
 - Reduce the maternal mortality ratio from 178 to less than 100 per 100,000, through Healthcare.
 - 36% population of Pakistan has access to clean drinking water. At least 60% population will have clean water by setting up desalination plants in the coastal regions.
 - Job Portal for CPEC.

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b) **Agriculture Modernization:**

- Packaging
- Storage
- Transportation/Shipment
- Aqua Farming
- Surplus crops – Wheat and Sugar cane
- Small Investors in Pakistan
- Efficient Irrigation Practices (Drip Irrigation, Sprinklers)
- Milk, Meat, and Honey production enhancement.
(Live Stock and Agriculture Products)
- Value Addition, improved supply chain, Co-branding.
(Quantify the impact on livestock and fisheries)
- Fisheries \$2billion exports potential?

c) **Global Value Chains & Industrial Development:**

- Export promotion
- Import substitution
- Relocation of Light Manufacturing Industry
- What is EPZ potential (Quantify)?

d) **Oil City Gwadar & Blue Economy:**

- What is the total requirement for refined oil per year?
- The Requirement for Three refineries VS crude oil share
- Blue Bonds impacts.

e) **Trade Enhancement under CPEC:**

- Attaining Import substitution in 30 items mostly light engineering item to save \$4.5Bn/year
- Export enhancement by 1Bn\$/yr. due to the energy projects contribution of CPEC
- In petroleum category, imports substitution of refined petroleum with the crude petroleum up to 190,000 BPD (\$5.74B total import of 588,000 BPD) (12.5% of the total imports) while crude oil \$1.9B (4.32%)

f) **Industrial Development under CPEC:**

- Focus on the Relocation of Light mfg. add to export basket another 41Bn\$
- Prospects of 800,00 jobs under CPEC SEZs
- Enhancement of Total factor productivity (TFP) from the current average of 1.5% to 2.5% which enhance competitiveness
- Product diversification in the established sectors (textile, livestock, leather, foot ware, chemicals, Agri-products) to boost exports

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g) Agriculture Development under CPEC:

- Most of the agriculture products are produced from 22 million hectares which are 27.5% of available cultivated land. Efforts will be made to extend cultivated land up to 30% this will improve crop production and other agriculture products to enhance the GDP by 0.72%.
- Efficient and equal water distribution and ease in access to water resources would enhance agro-productivity from \$40 billion worth crops with 135 MAF (both surface and underground water) to \$51 billion worth crops.
- To enhance efficiency in agriculture sector through value addition and provision of supply chain particularly cold supply chain, investment and transfer of technologies such as “genetically modified seeds, modern machinery, GIS, mechanization, advanced cultivation procedures, etc.” will enhance agriculture yields up to 40% and reduce 25% of crop losses.
- To initiate dialogues on value-added exports of agriculture produce particularly with China will improve the agriculture export growth on average by 0.5% annually.
- Investment to maximize the water storage capacity from 30 days to at-least 80 days to supply water for agriculture use in time of water shortage and floods protections.

h) Socio-Economic Development & Poverty Alleviation under CPEC:

- The target of the education sector is to achieve a 70% literacy rate with as low gender discrepancy as possible under the CPEC projects. Current expenditure on education is just 2.2 % of our GDP, through the CSR projects and programs under CPEC this expenditure will go up.
- Currently, around 6% of people are homeless while another 12% are living in rented houses with an overcrowded situation. The target of affordable housing is to provide 5 million housing units to both homeless and rented people of Pakistan.
- Health-care is an essential component of social sector development and over the next few years, the target is to provide affordable health-care to all people, universal immunization and bringing down the maternal mortality ratio from 178 to less than 100 per 100,000.
- Only 36% of the total population of Pakistan has access to clean drinking water. The objective is to make clean drinking water available to at least 60% of the total population by setting up desalination plants in the coastal regions in Sindh and Baluchistan and other water purification technologies to be implemented.
- Development of Gwadar under CPEC
- Unleashing the transshipment potential of Gwadar port associated with 60% of global oil trade of the region
- Transforming the Gwadar Free Zone (GFZ) as a hub of re-exports

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- Establishment of Gwadar Oil City to substitute imports of refined oil with crude oil and secure revenues.
 - Making Gwadar an Eco-civilization to attain sustainable people-centric development and expansion.
- j) Job Growth & HRD under CPEC:**
- Connecting Skills with Opportunities by developing a national job portal for CPEC intends to connect the foreign firms with a database of 300,000 graduates.
 - Enhancement of jobs under CPEC SEZs/EPZs up to the level of 1 million.
 - Enhancement of Skill, Training and Human Resource Development using the job portal.
- k) Promotion of Investment under CPEC:**
- Investment under CPEC would further enhance GDP growth by 1.6%.
 - Both countries may encourage and strengthen the cooperation between the stock exchanges and raise the opportunities for project financing of CPEC.
 - They also need to support the companies and financial institutions for direct financing of the CPEC projects in each other's capital markets.
 - Specialized securities, like infrastructure and SEZs Bonds, may be launched in Chinese financial markets for financing SEZs under CPEC.
- l) 3rd Party Participation under CPEC**
- Plenty of development projects are under consideration for CPEC for which involvement of the third party would be supported in terms of investments especially in SEZs.
- 4. Traditional Chinese Medicine going global: Opportunities for Belt and Road Countries.**

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- By 2020, China aims to issue 20 TCM international standards, register 100 TCM products and build 30 overseas TCM centers in BRI countries.
- Distinctive theories and practices, such as herbal medicine, acupuncture, massage, and dietetics are all integral parts of TCM. BRI initiative is intended to expand TCM understanding and increase exchanges between researchers and healthcare experts through a new hospital alliance and a health policy research network.

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- Interestingly, due to intergovernmental cooperation, a cooperative framework will be designed, which will help in the removal of legal barriers in TCM qualification, TCM education accreditation, drug access, and medical insurance.
- Worldwide trade in TCM services, including clinic treatment, education and training, and health tourism is estimated to be at about \$50 billion.
- TCM has become a vital area of health and trade cooperation between China and the ASEAN, EU, Africa, and Central and Eastern Europe.
- In the present scenario, BRI countries also have the opportunity to promote their own traditional and complementary/alternative medicine systems globally such as: Ayurveda, homeopathy, and Unani systems of medicine along with yoga, naturopathy, etc.
- In this scenario, it's vital for the herbal practitioners, scientists, industry, and policymakers in Pakistan to exploit the opportunity given by BRI and CPEC to both promote their herbal values globally and learn the practices of TCM to enhance their overall skills.

5. Mapping Value Stream and Policy for Furniture Making Industries through the Perspective of CPEC.

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- In the wood-related product, particularly the furniture industry is a major contributor in exports and as a matter of fact exports play integral role in developing the economy of any country.
- China is one of the biggest exporters of furniture around the globe as in 2014; China's exported furniture revenue was about USD 93.4 billion.
- One of the major resources for this industry i.e. the raw material is considerably available in Pakistan, but the absence of advanced technology, sequential and flexible processing, and increase lead times make Pakistan unfavorable for the manufacturing of furniture for export.
- In the meantime, developing special economic zones (SEZs) in the project of China Pakistan Economic Corridor (CPEC) has compelled the researchers to discover the most appropriate product industry for these industrial zones.
- This paper discusses the things need to be done such as identifying a suitable location and the kind of technology used to make Pakistan suitable for the building of furniture industry for export purpose.

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6. China-Pakistan Economic Corridor (CPEC): Impact on South Asian Security Environment

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Improved security in Pakistan is the result of the development of China Pakistan economic corridor. The researchers have highlighted major concerns of the US, and India regarding CPEC's expansion also its impact on southern Asia.

US CONCERNS OVER CPEC:

- Sixteen US Senators sent a letter to Mike Pompeo, US Secretary of State.
- OBOR is considered as a challenge to US hegemony.

INDIA'S CONCERNS OVER CPEC:

- India considers CPEC as a danger to their sovereignty and dominance in southern Asia.
- China has been striving to establish naval and air bases in the Jiwani peninsula and Pentagon and New Delhi is afraid of it.
- It is purported that China has deployed about 3000 soldiers in Azad Kashmir and this a threat to the security of India.
- It is stated by the Indian ministry for external affairs and secretary of defense for the US that "CPEC violates the sovereignty and territorial integrity of India". Indian ministry for external affairs while addressing Lok Sabha criticized CPEC and said that China should stop working on this project in the area of Kashmir and Gilgit-Baltistan
- Beijing is encircling India.
- China is challenging the Indira Doctrine.
- Beijing is challenging India in Afghanistan

IMPACT ON SOUTH ASIA:

- A Revival of the Cold War Scenario
- The Signing of the COMCASA (Communications Compatibility and Security Agreement)
- Changes in Indian Military & Nuclear Doctrine
- Likelihood of Surgical Strikes, Escalation.

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7. The influence of Karakoram highway on educational and health development of Gilgit-Baltistan Pakistan.

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Education and health are the core indicators of socio-economic development. Before the construction of KKH, both education and health were immaterial sectors in Gilgit-Baltistan.

- The majority of the population was facing difficulties in education and health is concerned.
- In the whole area of Gilgit-Baltistan, there have been only three middle and 80 primary schools.
- Talking about the health sector there have been only two hospitals and 10 smaller dispensaries.
- The construction of KKH has brought a revolutionary change in education and health.
- The number of Schools, Colleges, and Hospitals increased in the past two decades.

SUGGESTIONS AND RECOMMENDATIONS:

- Gilgit-Baltistan is the gateway to China and Central Asia; the circumstances suggest that human resource should be developed in the area to get maximum benefits from CPEC.
- For this purpose, it is necessary to give more training and employment to the local educated people.
- Higher education needs more attention, the number of degree colleges should be increased at least two in each district for male/female both.
- Currently the only Public Sector University "KIU" has only four campuses i.e. Gilgit, Skardu, Chillas, and Hunza. It is suggested that every district should have its campus.
- The health sector needs much attention, as it lags as for as basic health facilities are concerned.

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8. The Silk Route: Smart and Environmentally Friendly.

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The impact of global climate change has the potential to threaten Pakistan's economic growth and security as well.

- To meet the challenges, the country first must have to learn and earn new smart and environmentally-friendly innovations and techniques to keep her pace with the other developing countries.
- The growth of the People's Republic of China has been slowing down since the onset of finding new routes. This slowing down is the start of new growth trends with an immediate injection of new economic corridors and strategies.
- The gushing of Chinese booming economy from top Central Asian countries to the low gradient Arabian Sea will not only provide poor economies as of Pakistan and Central Asian countries with the unique opportunity to exploit a mammoth source of potentials and monetary energy but also with the powerful back substitution of potentials and monetary benefits from Africa to Central Asian countries.
- The objective of this research is to create a smart community around the Silk Route every 30 km. These communities are connected, with Pakistan, China and the rest of the world keeping in view smart route, smart transportation, dust-free and energy, and water conservation

9. China Pakistan Economic Corridor: A Perception Changer for Pakistan.

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- The impact of CPEC on the image of Pakistan at a global level is widely ignored by the mainstream researcher; therefore, the main objective of this study is to explore the effect of CPEC on Pakistan's image at the international level.
- Pakistan is suffering from various socioeconomic and security-related bewitched problems that have adversely affected Pakistan's image in the community of states internationally.

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FINDINGS:

Following are the findings of the study:

- CPEC provides a unique opportunity for Pakistan to transform its perception through improving its reputation and providing unprecedented soft power to Pakistan.
- CPEC has the potential to change the perception of Pakistan through these four factors:
 - i. Pakistan as Convergence of Civilization
 - ii. Soft Power
 - iii. importance of Pakistan in overall OBOR
 - iv. Pakistan as the connector of Central Asia and South Asia.

SUGGESTIONS:

- Through bringing different nations and civilizations together in the project, the CPEC negate the theory of Clash of Civilization which suggests that civilizations will necessarily clash with each over unbridgeable differences.
- CPEC would help Pakistan to improve its education, health, and physical infrastructure which will transform the soft image of Pakistan of being an impoverished and third world country to a country progressing with impressive socio-economic sectors.
- To mention the challenges and prospects of the materialization of these four points in Pakistan.

10. Productivity Enhancement of Industrial Equipment using Six Sigma Approach: A case study from Pakistan

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- Overall Equipment Efficiency i.e., OEE is a technical Key Performance Indicator (KPI) to achieve set goals in manufacturing as well as it has a direct impact on increasing the productivity of systems.
- In global manufacturing, the OEE has gained large acceptance as producing better quality and cost-effective products is the key to remain competitive globally.
- Tools such as Total Quality Management (TQM), Total Productive Maintenance (TPM) and Lean Manufacturing assist in hereafter factors:
 - i. To eliminate any wastage in manufacturing processes
 - ii. Produce quality and economical products by enhancing OEE.
 - iii. Maximization of the efficiency of equipment

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- iv. To eliminate the losses impedes the improvement of efficiency.
 - These losses are the real problems; therefore, the purpose of this research is to improve the equipment efficiency and analyze the factors that become the main cause of low productivity. A case study of the local industry has been analyzed and reported for future industrial processes from the perspective of China Pakistan Economic Corridor (CPEC).
- 11. China Pakistan Economic Corridor (CPEC) as Motivating Factor for Green Supply Chain Management and Sustainable Performance.**

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- Degradation of the environment, drastic changes in the climate and increased carbon dioxide (CO₂) emissions are some of the problems that have threatened human survival and the existence of natural inhabitants as well. As a result, the concept of Green Supply Chain Management (GSCM) has gained fame and popularity in the business world as well as in academia.
- The current study steps to provide a conceptual framework of GSCM and sustainable performance covering economic, environmental and social for the firms operating in CPEC. The framework covers some internal and external pressures as well as motivating factors such as: strategic commitment and CPEC operating procedures that can influence the overall adoption of GSCM and sustainable performance.
- The study brings novel insights and implications for the academia, practitioners and regulatory bodies towards the cleaner and sustainable productions and operations.

CONCLUSION & IMPLICATIONS:

- The capabilities of a firm for sustaining the environment are found to be enhanced by implementing green practices along with the strengthening of the financial viability of an organization.
- This paper would motivate business entities to join hands for the green movement.
- The process of greening the economy of Pakistan is hoped to be accelerated by this paper.

12. China-Pakistan Economic Corridor: Ecological and environmental issues for Pakistan.

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- In the present world, the development of economic corridors has become the most important instrument to enhance trade as well as for expanding economic relations, regional integration and political harmony. These corridors are useful to provide interconnectivity among various economic nodes and hubs along a defined geography. These also provide the new opportunities to accelerate commercial activities in the region which leads to the socio-economic development and regional integration (K. M. Butt & Butt, 2015).
- Pakistan among 21 worst countries in environmental pollution (EPI report,2018)
- Pakistan is among 10 countries affected most by climate changes (Global climate Index, 2018).
- To cope with these crises, Pakistan and China jointly initiated a mega project in the name of China-Pakistan Economic Corridor.
- It is a flagship project under China's Belt & Road Initiative involving more than 50 billion dollars of Chinese investment in Pakistan.
- Whether or not the road and energy infrastructure proposed under the CPEC would adversely affect the existing ecological balance of Pakistan?
- The corridor encompasses a rail, road network linking Kashgar with Gwadar, gas, and oil transportation pipelines, optic fiber connectivity between the states, installing thermal and coal power stations and developing several Special Economic Zones.
- The CPEC would be the game-changer for the fragile economy of Pakistan but the repercussions in terms of pollution and environmental problems might be much more than its benefits.
- The instant study would explore the ecological implications of the CPEC projects for Pakistan and the redressed measures to be taken by the concerned institutions.

WHY CPEC IS IMPORTANT FOR PAKISTAN?

- To fulfill the energy requirements.
- To boost economic activities.
- To develop infrastructure.
- Maximum utilization of natural resources.
- Strategic importance: Balanced in South Asia.

WHY CPEC IS IMPORTANT FOR CHINA?

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- Helpful to maintain its growth momentum.
- Helpful to utilize its installed but under-utilized capacity in steel, cement, chemicals and heavy machinery at their maximum.
- Extension of Trade with CARs and the Middle East.
- Time and Cost-efficient for energy import.
- Helpful to maintain the uninterrupted energy transportation to keep its industry operational.

RECOMMENDATIONS:

- To provide pollution free environment government should formulate and implement the policies to reduce the gasses emission.
- Supercritical technology should be used in coal-fired power plants to minimize the GHGs emissions.
- Transport policy should be devised to harmonize climate change, environmental protection, and sustainable development.
- To control the transport and industrial carbon emissions, Catalytic rectifiers should be installed in vehicles.
- Coordinated and aggressive plantation campaign should be launched to make the environment free from pollution.
- Deforestation in the name of infrastructural development should be banned completely
- Rail networks should be augmented as public transport and time and cost-effective freight transportation.
- Political parties should make the "pollution-free environment" agenda to their manifestoes.

13. China-Pakistan Economic Corridor: Opportunities and Challenges for Khyber Pakhtunkhwa.

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- CPEC a project of multi-billion dollars is said to be the destiny changer. It is beneficial for Pakistan as well as for the whole region as it would announce a new period of economic development for the areas including Gilgit-Baltistan, Khyber Pakhtunkhwa, and Baluchistan.
- In KP eight important projects including MOU'S that are signed with the province worth the US \$24 billion in concern project of CPEC which include agriculture, communication, energy along with many other fields.

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- Due to the huge size of the scale of this project, it will face many problems as well in the way of its implementation.

CPEC Investment in Khyber Pakhtunkhwa (Estimated):

- KP Govt. has signed 84 MoUs worth the US \$ 24 billion in different areas.
- These areas include Agriculture, Archeology, Energy and Power, Higher Education, Housing, Industries, Information Technology, Water Supply and Sanitation, Mines and Minerals, and Transportation.

CPEC Investment in Khyber Pakhtunkhwa: Signed Projects:

- Some of the major CPEC projects to be carried out in KP are:
- Suki-kinnari Hydropower Project
- Havelian Dry Port
- KKH Phase II (Havelian-Thakot)
- Up-gradation of D.I.Khan-Quetta Highway (N-50)
- Optical Fiber Cable Project from Rawalpindi to Khunjab
- KKH-III (Raikot- Thakot)

CPEC: Economic Opportunities for Khyber Pakhtunkhwa,

- Economic Development
- Stabilized and improved security in **Khyber Pakhtunkhwa**
- Overcoming energy crises

CPEC: Challenges for Khyber Pakhtunkhwa,

- Political Unrest
- Economic Crisis
- Security Risks
- Provincial Resentments

RECOMMENDATIONS:

- CPEC is considered a game-changer for the whole region including underdeveloped areas of Khyber Pakhtunkhwa.
- It would open up the province to both domestic and foreign investment.
- Khyber Pakhtunkhwa due to its strategic location plays an important role in regional peace and stability and acts as a gateway to Central Asia for CPEC.
- The project would bring economic progress and prosperity in the province.
- There is a need to bring political harmony in all the provinces of Pakistan.
- It is important at present for Pakistan`s drive for economic development and regional connectivity

14. CPEC and Human Resource Development Challenges to Pakistan: What Should Be Next?

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The CPEC provides Pakistan with a unique opportunity to improve managerial practices (including change management, total quality management, contingency leadership, etc. in institutions of the entire country to progress through embracing and transmitting this collective move.

EXORDIUM:

The CPEC project (as a part of BRI) involved with the amalgamation of almost every industry providing Pakistan with a vision to excel with new value-added practices and technologies.

- The components of HRD include organizational development (OD), career development and training & development.
- The strategies shift from training and development to learning leads organizations to career development and organizational development.
- Career development is a lasting process of managing work, learning, leisure, and change to move towards the desired future.
- HRD has a broader scope and many aspects with a cohesive reputation of covering HR development like emotional intelligence, skills, capacity building, economic, physical, social, political, psychological and intellectual.

CONCLUSION:

- The major challenge to Pakistan is not just the establishment of the economic corridor but sustainability. CPEC consist of an immense supply chain among contributing regions that need makeover with the value addition at totality level i.e. supply chain management with zero defects.
- The crucial role of sustainability can only be played by a quality workforce.
- Human resource quality can be measured in terms of education, training, health and socio-economic conditions.
- Other quality domains can be improved if primacy is given to knowledge, soft skills like leadership, creativity, managerial & learning skills and acceptance of change skill.
- HRD is a combination of intellectual, emotional, physical and competency development through training and development. Furthermore, career development leads human resources to gain socio-economic development with more learning and overall consequence in terms of organizational development.

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- It is essentially an economic project meant to bring prosperity to the region and instead of making CPEC a controversial slogan, the people of Pakistan should understand the importance of the project as soon and should arm themselves with all required skills and competencies to enjoy the most out of it.
- The success in achieving this is possible through training and development of the workforce of every profession in change management, total quality management, contingency leadership, etc. as an additional requisite qualification.

RECOMMENDATIONS:

- Pakistan needs to provide a concrete platform for the development of human resource by providing educational opportunities that not only develop and prepare the local workforce ready to face the challenges of CPEC but also a mean to attract expatriates to come over, get training and work in Pakistan, minimizing the threat of brain drain.
- Attracting and retaining talents would be among the key milestones for Pakistan requiring a highly-knowledgeable workforce.
- There has to be a continuous appraisal of the challenges facing CPEC in economic, financial and logistic areas including human resource development. Only the highly qualified and skilled technocrats can check the feasibility and transparency of the mega projects especially those are by debt finance. Serious actions need to be taken to reduce corruption.
- In Pakistan, the ministry of human resource development, TEVTA, and HEC, Pakistan should collaborate with universities, technical institutes and other developmental authorities like SMEDA, PARD, etc. to provide long-term HRD structures that would help the country in economic, social and societal development.
- Such collaborations must work extensively in the areas of organization development, performance management, leadership, project management, HRD interventions, change management, knowledge management, and total quality management. Diploma and short certifications in these areas may be enforced to the professionals from all disciplines to enrich them with skills and attitude.
- The national curriculum review committee of HEC has a serious responsibility to revise the curriculum at par to industry demands. Academia can guide, suggest and create upgraded human resources who can cope up with the challenges of the entire supply chain, to enhance good governance and to meet international standards.
- The NCRC of HEC should have uninterrupted collaboration with HEC, CPEC cell to know the updates and required strategies.
- University teachers and scientists in Pakistan should be given the utmost facilities and support to research and innovations. The above of all is the economic conditions of the teachers and scientists.
- (German quote: make teacher free from worries of livings, and let them make a nation).
- Pakistan has to extract positive technology transfer effects from the ventures under CPEC agreements. For the sustainable growth of the Pakistani economy, the

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technocrats should polish their skills and competencies to convince the Chinese corporate sector for joint ventures instead of merging with the local industry to have dual benefits of the two friends.

- "Managing employment relations" should be a foremost course for the professionals at higher studies level in all disciplines to have insight into the practical and conceptual significance of change processes including regulatory frameworks, corporate governance and cultural issues globally.
- The law and order situations in Pakistan need to be supportive of the successful implementation of the project. The media should play a prognostic role in CPEC for attracting investment and imparting confidence in the international community.

15. CPEC- Tourism Industry: Opportunities and Challenges.

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- In the contemporary age of globalization and the 19th century, newly independent states, have given birth to the emergence of a new phenomenon "soft power" which led towards the development of the tourism industry.
- Traditionally, the tourism industry considered being insignificant for the country's economic peace and stability thus, with the help of Beijing, Islamabad is determined to overcome its economic crisis parallel to improving the national image of the country at the international stage.
- The Chinese economic cooperation will enhance the chances of foreign direct investment in Pakistan; it will further produce numerous employment opportunities.
- Therefore, the central theme of this research revolves mainly around the ongoing Sino-Pak economic cooperation. It is an effort to exclusively emphasize the scope of economic progress through an appropriate promotion of the tourist industry.
- It is an endeavor to academically reveal a new dimension of economic corridor project.

16. Corruption, Trade Openness and Environmental Quality: Evidence from Developing Countries.

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- The effects of corruption and trade on environmental quality have significance in open economies.
- This study has explored the impact of corruption and trade openness on environmental quality in 70 developing countries by using panel GMM techniques, from 2002 to 2016.
- The results show that the impact of trade openness has mixed findings with environmental quality variables of CO₂ and N₂O emissions.
- Corruption has a positive effect on CO₂ and N₂O emissions.
- The study has also suggested some policies to improve environmental quality.

17. **Economic Freedom and Growth: Are they related to Pakistan and India?**

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- In the process of nations' well-being economic freedom is considered one of the prominent key factors that actively take part in economic progress.
- This study empirically investigates the impact of economic freedom on economic growth in Pakistan and India by using the ARDL technique for the period of 1995-2015.
- The results exhibit that the impact of economic freedom on economic growth is positive and statistically significant in both countries.
- The study has also suggested policies to enhance economic growth via accelerating economic freedom in both countries.

18. **Modeling Agriculture Business Value Chain from Producer to Multinational Market.**

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- The agricultural sector contributes around 18% to the GDP, employs 42% of the total labor force, and constitutes 75% of total export revenue.

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- CPEC is our best bet at enhancing our trade, reducing the trade deficit, increase exports and make our agricultural industry competitive in the regional and global playground.
- The proposed special economic zone (SEZ) in Khyber Pakhtunkhwa (KP) is named Rashakai Economic Zone (REZ) located in Mardan, M1 Motorway intersection and links to CPEC route through Burhan interchange.
- Due to its central position, the economic zone most likely becomes a trade hub for KP as It can be valuable in expanding transit trade to Afghanistan and Central Asian countries.
- The economic zone has the potential of exponential development as several agricultural products can be grown nearby which helps to ease out logistics issues.
- This paper proposes to integrate producer to end-user in the local and international market. It provides a looping mechanism to translate the need from user to producer.

19. CPEC: Economic Integration and Regional Connectivity.

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- This theory guides empirical research and identifies the stronger multilateral trade, unity, and regional cooperation.
- CPEC would enhance the trade and connectivity in the region, through infrastructure and development.
- Afghanistan's involvement in China Pakistan Economic Corridor would be CBMs for Afghanistan Pakistan rapport which has been tense for some time
- The enclosure of Afghanistan into this mega project would enhance regional connectivity and would reduce Afghanistan's reliance on foreign aid.
- China is confident about Afghanistan being part of an economic corridor would be instrumental in regional connectivity. Furthermore, a broader perspective to bring economic integration in the region through the OBOR initiative could benefit Kabul and Islamabad with the opportunity to improve ties between Pakistan Afghanistan and China, heading towards trilateral cooperation peace and prosperity in the region. However, these benefits could only be achieved, when the security challenges of the region will be addressed properly.

CONCLUSION:

- CPEC has the potential to revolutionize regional cooperation in the field of socio-economic development, trade, shipping, road and railway linkages besides Sea routes energy corridors, communications and industry. it would also encourage tourism in the region.

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- The operationalization of CPEC leads to a new era of regional socio-economic stability through the enhanced regional cooperation for development.

20. **Impact of Factors of Production on Innovation: A spatiotemporal approach in case of Pakistan.**

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This paper develops a model for factors of production effect on spatial innovation by following the method of Desmet and Hansberg (2014). The model works with continuous spatial location and supposing labor and capital both to design the regional innovation in the manufacturing and services sector. We found that the service sector employs a maximum of the country's labor force and adds more to the value-added sector than manufacturing. Finally, we prove that capital productivity is much higher than labor productivity, further capital to the service sector as the main ingredient for innovation in the country.

21. **CPEC – A Way for Education Uplift – A Meta-Analysis**

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- Under the umbrella of CPEC, Higher Education Collaboration (HEC) between China and Pakistan would benefit both countries.
- Education uplift, development of uniform policy and standards for certification along with modernization of syllabus and facilities has to be improved for availing opportunities offered by CPEC.
- The comparative analysis has first made theoretically and then analyzed using multiple analysis approaches, including ground theory analysis, content analysis, and qualitative interview method. The sample universities would be from all 23 provinces of China and 4 provinces of Pakistan including both public and private universities of both countries. The facilities provided in universities, the annual publication and the infrastructure provided by the discussed parameters selected for analysis.
- After doing the detailed analysis, the paper would discuss how CPEC would help the education system of Pakistan to sync with the ongoing educational development of the world.

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22. Beijing's Declaration, CPEC, and Opportunities for Women Empowerment in Pakistan.

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- "Beijing's declaration in 1995, the fourth world conference on women, safeguarded women's access to opportunities, participation and leadership in state affairs on equal footings with men.
- The key-note address declared 'Women Rights Are Human Rights' and participants decided the 'Beijing plat-form for action' as an agenda for women's empowerment.
- CPEC is a momentum between Beijing and Islamabad to push trajectories towards prosperity.
- This paper has reviewed:
 - a) How Beijing's declaration has affected women's political empowerment in Pakistan since 1995?
 - b) Does CPEC have any privileges for Pakistani women?

Conclusion:

On the celebration of "International Women's Day" in 2017, movements like: "#Me Too" and "#Times Up". These have shown much-needed spotlight on the discrimination, degradation, and violence that women all over the world, even powerful ones in advanced economies, routinely contend with.

The latest Gender Gap Report (2015) from the World Economic Forum estimated that keeping in view the current trends; it would take another 217 years before the world achieves gender parity.

23. CPEC: Socio-Economic Impacts on Pakistan.

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- The CPEC will help to strengthen the economies of Pakistan and China, by solidifying their impact in the region and opening new routes to the resource-rich Middle Eastern region through the Arabian Sea.

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- This would be a great chance for the region as a whole to be gradually self-reliant through enhanced intra-regional interdependence. This corridor is not only important for the development of Pakistan, but the peace and stability of the region and has more importance for rising China to rise quickly and cost-effectively.
- The CPEC has the potential to transform Pakistan into the regional hub for trade and investment and provide a unique opportunity for Pakistan to boost her strategic and economic position.
- It is a great opportunity for Pakistan to Improve its education sector under the umbrella of CPEC as China is advanced in this field.

RECOMMENDATIONS:

- Pakistani educational institutions need to manage their education system to make them compatible in the various fields emerging out of CPEC, which must also incorporate a grant of professional and specialized aptitudes and instructing of Chinese language as well.
- Pakistan needs to overcome the crisis in the education sector as soon as possible and make them internationally compatible.
- Pakistani universities should sign more MOUs with Chinese universities for an exchange program.
- Pakistan must introduce CPEC to the public through social media for awareness of their benefits.

24. Prospective of CPEC for Pakistan and implications of Chahbahar on CPEC.

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- Although China and Pakistan have strong geopolitical and strategic relations over the decades, the visit of China President Mr. Xi Jinping to Pakistan in April 2015 has enormous importance.
- China decided to invest in Pakistan under its One Belt One Road vision through the CPEC project.
- China and Pakistan economic corridor are one of the initiatives of structural change in the world for reducing distance and trade cost among countries.
- The paper concludes with the benefits for both China and Pakistan through the CPEC as well as the implications of Chahbahar on CPEC

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25. Future Prospects for Local Community through Scientific Means via CPEC (A Review of Nanotechnology)

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- Nanotechnology deals with the matter at atomic and molecular levels, usually with structures ranging from 1-100 nm at the minimum in one dimension and deals with changing or preparing materials within that range.
- Currently, Institutes affiliated with the University of Peshawar, dealing with science subjects are Department of Physics, Institute of Chemical Sciences, Department of Botany, Department of Zoology, Department of Geology, Department of Environmental Sciences, as well as other institutes like University of Engineering and Technology, Khyber Medical College and The University of Agriculture Peshawar have many issues regarding research on nanotechnology.
- The students working on nanotechnology are unable to complete research at their institute and are dependent on other labs (local and international) which are costly and time-consuming.
- Recent studies showed that China became a powerhouse of nanotechnology as China has been ranked first while publishing about 56,648 nanotechnology-related articles.
- CPEC can bring a revolutionary change in providing skilled people, easy access to technology and generating funds as no such institution in Pakistan is providing financial support to fully accomplish this novel field.

Recommendations:

- Infrastructure improvement.
- Funds generation.
- Awareness seminars.
- Initiating a new department.
- Training to unskilled people.
- Strengthening of standard labs.

26. CPEC`s Influence and Regional Integration.

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- China Pakistan Economic Corridor (CPEC), a project based on "One Belt - One Road", is inevitable and of high significance for the region.
- CPEC would bring a revolution in the areas of industry and the living standard of the concerned will be raised.
- For regional integration and economic development, the economic corridor has become a necessity.
- CPEC would push Pakistan towards strong and deep-rooted economic growth and development but for China, it would be a tranquil route to the Arabian Sea both; by distance and time.
- It would be a milestone for Afghanistan and Central Asian States (CARs) to stir their economic activities whose trade will get a boost with it.
- The trade relations totally modify the societies and connect the people with shared assumptions.
- The central idea behind the corridor is only the acceleration of trade ties and relations between and among the refined/defined geography.

27. CPEC: Augmenting the Security Environment in Khyber Pakhtunkhwa, Pakistan.

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- The route Gwadar (Pakistan) connects to Kashgar (China) and passes through terrorism hit regions of Pakistan especially Khyber Pakhtunkhwa and Baluchistan.
- An important step in this direction is Pakistan's deployment of more than 10 thousand security personnel in Baluchistan, whereas in Khyber Pakhtunkhwa there is no such deployment recorded.
- As CPEC is a game changer project and it direly needs good security and backup; therefore, National Highways & Motorway Police is the first respondent on highways and motorways.
- Khyber Pakhtunkhwa Police also should be made well equipped and tactful to inhabit the filtration of criminals and terrorists of attacking CPEC.
- The government should provide and impart basic anti-terrorism training to National Highways & Motorway Police and Khyber Pakhtunkhwa police to get the desired ends.

28. China Pakistan Economic Corridor: Challenges and Prospects for Regional Integration.

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CPEC is going to change the regional scenario by providing China, Pakistan, and other regional states to come close and experience a more comprehensive model of cooperation through increased infrastructure connectivity and enormous trade opportunities.

- CPEC may prove the driver for regional economic integration by increasing cooperation among states of Central Asia and South Asia in the fields of energy and infrastructure.
- CPEC may face real-time challenges stretching from security concerns, internal instability to tension and rivalry among various regional and international actors.

29. CPEC: Prospects of Emergence of New Professions And Skills.

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- The long-term investment by China under the umbrella of CPEC has the potential of the creation of more than 1.2 million jobs by 2030 which would result in to diversify the job market portfolio of Pakistan.
- With more than 42 agreed projects and yet more under consideration, there is ample opportunity to use the new technologies not only in the implementation stage but also to use these inputs to identify and develop new skills and professions.
- Pakistan needs to integrate the opportunities arising under the CPEC pact, into sets of institutions and frameworks to knit itself competitively into the global network.

30. Regional Connectivity through CPEC: Challenges and Prospects.

Muhammad Khan

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IUII, Pakistan, Pakistan.

- As a part of the Chinese Belt and Road Initiative, the China Pakistan Economic Corridor has the potential to integrate various regions of Asia.
- Within Pakistan, CPEC would connect all provinces and economically deprived and underdeveloped regions, raising the stakes and providing opportunities for their economic uplift.
- Compared to the European Union and ASEAN, the South Asian region remained least integrated into all three crucially needed aspects, leaving the region in turmoil.
- The paper aims to highlight the challenges and prospects of regional integration between various regions of Asia apart from Pakistan and China.

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STRATEGIC SIGNIFICANCE:

- Converging strategic interests in CPEC and geo-strategic realignment enhances Chinese stakes in Pakistan's security paradigm with broader implications.
- China is uniquely placed to favorably influence key regional states boasting the prospects of regional connectivity.
- Pakistan's natural gravitation towards China and the latter's strategic leverage vis-à-vis Russia; underscores strategic re-alignment in the making.
- Access to the Indian Ocean via Gawadar will increase Chinese influence and intensify competition with India, while also mitigating the effects of US rebalancing towards the Asia Pacific.
- Indian frustration at the emerging corridor which perceives economically ascending Pakistan as a hurdle in the realization of her aspirations for regional dominance.
- Significance of Gawadar port immensely becoming a hope for economic development in Pakistan on one side but also posing a challenge; source of concern for regional countries including Iran & GCC.
- Prospects of Iran's collaboration with India may increase ramifications for China and Pakistan However, the possibility of Iran joining CPEC will open new eco / geo-pol dimensions.

CONCLUSION:

- A well-thought-out and deliberated economic integration would pave the way for Economic Uplift of Pakistan in particular and region in general
- Will overcome challenges, allow greater political and economic integration
- Provide a step towards resolution of issues & bring an end to the existing distrust; internally & externally.

31. China-Pakistan Economic Corridor (CPEC): Impact on Afghanistan.

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- In April 2018 Asian Competitiveness Annual Report have released on the sidelines of China's Boao Forum for Asia annual conference. It has been claimed that CPEC is extended to Afghanistan. China's state-run news agency Xinhua has reported that it would reduce poverty in war-torn Afghanistan. In May 2018 President Xi Jinping and Premier Narendra Modi during meeting agreed to jointly invest in economic projects in Afghanistan.
- China can play a positive role in overcoming the trust deficit and improve bilateral relations between Afghanistan and Pakistan. Consequentially, the lives of Afghan people will be uplifted. Enable Kabul to access Middle East, North Africa, Southeast

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Asia and the South China Sea through Arabian Gulf. In return, it will connect Pakistan with Central Asian republics.

- From Pakistan's perspective, Beijing's increased role would counter New Delhi in Afghanistan.
- By extending the hand of cooperation in the context of CPEC, the Afghan government can open the door of opportunities and change the future of Pakistani and Afghan people.

32. Demystifying CPEC: A Critical Study

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- After the launch of China-Pakistan Economic Corridor in 2015, it is believed to be a game-changer for the ailing economy of Pakistan. The Chinese government is grabbing land from locals in Pakistan, with the support of the Pakistani government, for the construction of new roads and houses. Sea and dry ports are being built paving ways to export Chinese goods to the world market. The motive is to help improve the lives of many Pakistanis.
- Of course, we can say that if there are opportunities, there are also serious risks. Realizing this overall situation, this paper, is, hence, an effort to serve as a 'harbinger' – alarming policymakers, scholars, and locals of the positive impacts and the perceived dangers of the project.
- Therefore, there is a desperate need to critically evaluate this mega project and its positive and adverse effects on Pakistan's political, social, religious, and economic aspects.

33. CPEC: A Voyage to Shared Destiny.

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- Pakistan and China are all-weather strategic partners and have a glorious history of a relationship.
- From the very beginning after the independence of the People Republic of China in 1950, Pakistan was among the first country to recognize China as a sovereign state.
- Subsequently, In the 1965 war between Pakistan and India, China supported Pakistan.

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- For the longtime trade relations between the two countries have signed the Free Trade Agreement (FTA) in 2006.
- In 2015 Pakistan and China entered into a new era of friendship as Chinese President Xi Jinping visited Islamabad and billions of dollars mega project known as CPEC was formally launched.
- The multi-billion-dollar (US\$ 62 bn) CPEC is a network of roads, railway tracks, oil and gas pipelines, fiber optics for communication, dams, ports, airports and economic zones.
- CPEC is considered a game-changer project which will bring peace and prosperity in South Asia and it would usher era of prosperity in Pakistan.

A NEW METAMETHOD TO GUIDE DIRECTED EVOLUTION

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Directed evolution (DE) is a well-established approach for optimizing and engineering novel functions in both nucleic acids and proteins. However, a particular challenge is to know, which residue/s has to be mutated in a specific protein. Evolution of genes is one of the major sources to accumulate useful mutations to change the activity and stability of a protein. Coupling of positively selected sites with site-directed mutational studies is an emerging field of research that we explored for the first time. This knowledge will be used to predict the specific amino acid in a protein that could be used to evolve a protein in a specific direction. Using caspase-7 gene as an example, we have predicted three positive selective sites i.e., R102, Q120 and H281 by employing different bioinformatics tools. Substitutional mutation of the positively selected site H281R mutant of caspase-7 showed significant effects on the stability and mutation energy etc. We also found that the critical positive selective site resides on the flexible loop region, adjacent to the active site of the enzyme. Our study provides new insight into the directed molecular evolution of enzymes.

DEVELOPMENT OF XINJIANG AND GWADAR PORT

Dr. Kausar Takrim, College of Home Economics, UOP, Pakistan.

Natural resources are integral to economic development and therefore, areas rich in natural resources are prioritized in economic installations. China with the same strategy is having high speed growth in the coastal regions. Rich in energy resources Xinjiang is ready for the booming development like the other regions of China but challenged by the unavailability of Sea port. Xinjiang is one of the most arid regions and farthest location from any ocean or sea, making it one of the most ecologically vulnerable areas of China. Through Gwadar port of Pakistan China wants to open Xinjiang to the world markets for fast economic development. The increasing importance of the Central Asia for its oil resources, the ever-increasing energy demand of China from the Persian Gulf, and the go west policy of China

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for the development of its western region are among the reasons for China to assist Pakistan in the development of Gwadar port. The paper argues that *China will choose Gwadar port as a gateway for Xinjiang's products instead of its own eastern ports.*

PROF DR RONG YING

VICE PRESIDENT, CHINA INSTITUTE OF INTERNATIONAL STUDIES (CIIS) BEIJING CHINA:

The concluding session of the International conference was held on 21st February 2019 at the conference hall of the China Study Centre, University of Peshawar and the keynote address was delivered by Prof Dr



Rong Ying, Vice President, China Institute of International Studies (CIIS) Beijing China. CIIS is a Think Tank under the Ministry of Foreign Affairs of the People's Republic of China. It came into existence in 1956 and primarily focuses on issues related to global politics and economics. Dr Rong Ying said that keeping in view recent developments in Afghanistan particularly the talks between the USA and Taliban raised hopes and concerns and underlined that it is more important to ensure that history will not repeat itself. To manage situation in Afghanistan Dr Rong highlighted few points. Unpredictability or uncertainty caused by the Trump administration and its policy towards Afghanistan. Interactions and responses of regional countries and extra regional powers which all have huge stakes in peace and stability in Afghanistan and the challenge or problem for us we all know that these major countries. He explained that these countries have various problems for instance geopolitical and as a result of strategic realignment and certainly first and foremost posed by the United States and possible implications of China and US rivalry or competition, Russia and the United States relationship is very tense, Saudi Arabia and Iran have very heated competition in the region and last but not least the most recent tension between Pakistan and India. The big question, he asked is it possible that we through consensus achieve peace and stability in Afghanistan? And how we can make sure that these extra regional powers find a way to go beyond their growing and intensifying geopolitical rivalry and to develop minimum understanding for restoration of peace and stability in Afghanistan. He said that he is very much encouraged by the efforts of Pakistan. Another complicated point he discussed was intra-Afghan dialogue and last but not least changes at regional and global levels making it increasing difficult to keep understanding and support for resolving the crisis in Afghanistan. He also highlighted that China and Pakistan are standing at critical period to work together to make a difference and find a way to help Afghan people to prevent history to repeat itself. He further stated that he shares optimism in the long run but pretty

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cautious about the near future. He suggested that the China Study centre under the leadership of Prof Zahid Anwar should come up with something concrete and applicable for recommendation of the Government. Dr Rong Ying said that it is a responsibility and an opportunity for China and Pakistan to play a leading role and help Afghanistan and Afghan people to find a way to address these issues. Prof Dr Rong Ying said that Pakistan and China relations have strengthened with passage of time. Both countries have synergy regarding regional and global issues and that China and Pakistan can play constructive role in the reconciliation efforts in Afghanistan.

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MR. SHAHRAM KHAN

**MINISTER OF LOCAL GOVERNMENT,
GOVERNMENT OF KHYBER PAKHTUNKHAWA:**

Mr. Shahram Khan, and Minister of Local Government, Government of Khyber Pakhtunkhwa, who was the chief guest in the concluding session of three day international conference entitled as “CPEC: Collaboration in Higher Education and Sustainable Development” from 19th to 21st February 2019 at the China Study Centre, University of



Peshawar emphasized better understanding between the China and Pakistan through CPEC initiative. He further stated that the provincial and federal governments both support CPEC initiative and hoped that it will strengthen regional peace and development. In the end of the session Prof. Dr. Zahid Anwar thanked the large number of scholars, faculty, journalists, government officials, practitioners, and students for their support and participation in the conference.



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AN EXCURSION TO THE TAKHT-E-BHAI ARCHAEOLOGICAL SITE, MARDAN AND HUND ARCHAEOLOGICAL MUSEUM

The conference concluded with an excursion to the Takht-e-Bhai Archaeological site, Mardan and Hund Archaeological Museum, Swabi, Khyber Pakhtunkhwa, Pakistan on 23rd February 2019. A delegation from Northwest University Xian China, comprising of Prof. Dr. Ran Wanli, Prof. Dr. Huang Minxing and Dr. Li Tao surveyed Takhtbhai and Hund for promotion of tourism between Pakistan and China, integral to the people-to-people contact between the two countries. Takht-e-Bhai ("Throne of the Spring of Water"), or Takht-e-Bhai ("Brother's Throne") is an Indo-Parthian site of an ancient Buddhist monastery in Mardan, Khyber-Pakhtunkhwa, Pakistan. The site is well-preserved and is one of the most influential relics of Buddhism in the Gandhara region. The Chinese delegation also visited Hund (Swabi) archaeological sites and museum: one of the oldest cities in Swabi district on the right bank of River Indus. Alexander the Great in 327 BCE also passed through the same city and spent a night in Hund City. Famous Chinese Buddhist monk, scholar, traveller, translator and pilgrim, Hiuen Tsang (644 AD) passed through this area. After Peshawar and Charsadda, it



was the third capital of the Hindushahi dynasty. The Hund archaeological and tourist site project was approved in 1994. Excavations started at Hund in June 1996. At the time of the excavations, Indo-Greek beautiful houses, coins, jewelry and other and royal Kushan, Hindushahi and Islamic era buildings

were found. 33 kanals of land were acquired in 2002 to establish the Hund Museum at the bank of Indus. Prof Dr Ran Wanli, Dr Li Tao and Prof Dr Huan Minxing praised the richness of the sights and expressed that these museums and sights carry great potential for Chinese tourists.

Editor's Note



International Conference on “CPEC: Collaboration in Higher Education & Sustainable Development” provided an opportunity to experts from different academic institutions of Pakistan and China to exchange their perspectives regarding CPEC. The participants through presentations, discussions and Q&A discussed different aspects of the mega project and analyzed collaboration in higher education between Universities of Pakistan, particularly in Khyber Pakhtunkhwa (KP), and China. Experts from both the countries critically evaluated the implications of CPEC and BRI for regional peace and prosperity, regional integration, and development in South-Asian region. The conference brought opportunities of CPEC to the limelight by discussing sustainable development through connectivity and economic cooperation under CPEC. Prospects of integration for regional countries into the global value chains under BRI/CPEC was discussed as a motor of enhancing trade and investment. Professionals scientifically analyzed the socio-cultural, geo-economic, politico-strategic, biological and environmental aftermath of CPEC on Pakistan and the region. Last but not the least, solid measures have been taken towards mutual exploratory cooperation as a result of which Pakistan, particularly KP, would benefit the most from CPEC. The International conference highlighted that through concerted efforts of both China and Pakistan, CPEC with passage of time will galvanize economic development in the region generally and Pakistan particularly.

Prof. Dr. Zahid Anwar

Director
China Study Centre
University of Peshawar

