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Regional Integration and Macroeconomic Dynamics Beyond
COVID-19 Pandemic

Speaker: Dr. Lv Zhiping

Xinjiang University of Finance and Economics





**Pakistan's economic recovery and development in the
post-epidemic era (Covid-19) --
to explore the prospects of China-Pakistan energy
cooperation**

Xinjiang University of Finance and Economics

**Lv Zhiping
Li Jinhang**

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Prospects of China-Pakistan
Energy Cooperation

China-Pakistan Energy Cooperation's Background

- **October 3, 2013, President Xi Jinping :** " opened the grand blueprint of China's joint construction of "One Belt And One Road".
- **May 2013, Premier Li Keqiang :** The China-Pakistan Economic Corridor (CPEC) is a landmark project in China's joint construction plan of "One Belt And One Road ".
- **Energy cooperation has been one of the key areas of the China-Pakistan Economic Corridor.**
- **China-Pakistan energy cooperation is of great significance to Pakistan's energy self-sufficiency, power generation rate and cost reduction.**

China-Pakistan Energy Cooperation's Background

- Chinese investment in Pakistan has accounted for more than 30% of foreign investment in Pakistan in most years, as shown in Figure .

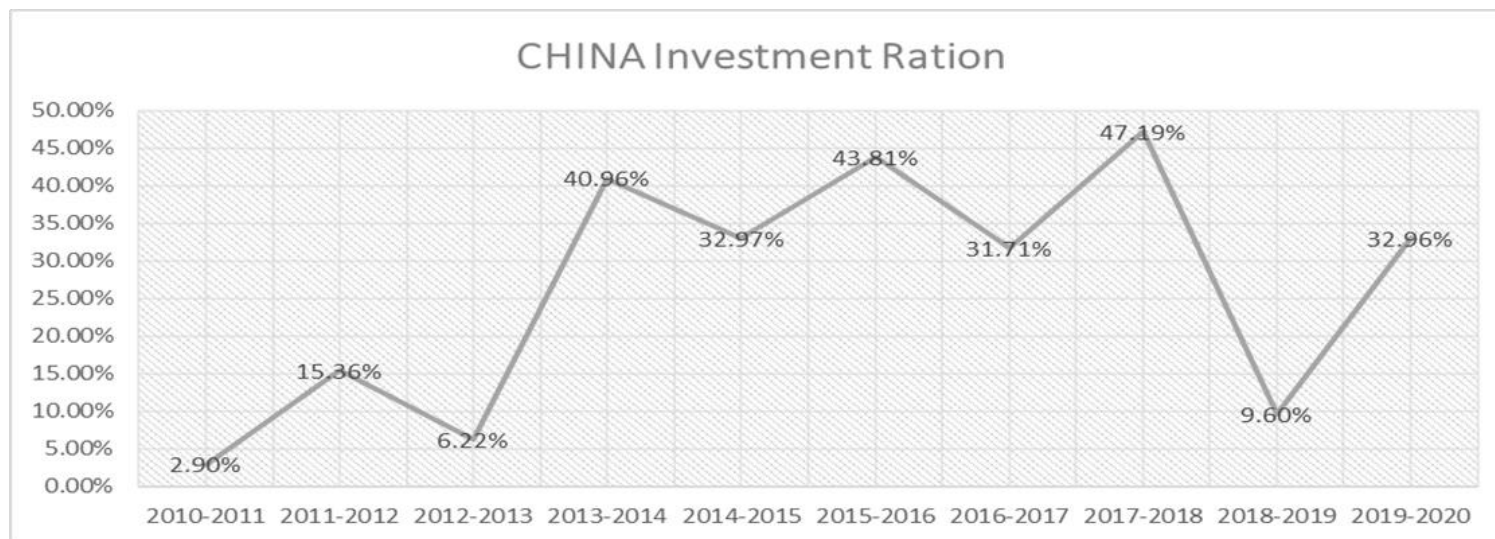


Figure China's proportion of direct investment in Pakistan

About 70% of investment projects are energy projects

China-Pakistan Energy Cooperation's Current Situation



- With the launch of the Qasim Port Thermal Power Project, the first energy cooperation project under the CPEC, on May 6, 2014, eight energy projects have been completed and now provide more than 3,640 MW of energy to Pakistan's national grid.



- However, in general, the situation of short supply of electricity in Pakistan has not been completely reversed. It is still faced with problems such as high power generation costs aggravating recurring debt and excessive capacity of old power generation to be phased out. Therefore, energy companies are required to help Pakistan solve these problems.

China-Pakistan Energy Cooperation's Current Situation

some China and Pakistan's energy cooperation projects(2015-2020)



Project name	mark date	project function
Port Qasim coal fired power	may 2015	alleviate power shortage
PV power station in Punjab	June 2016	industrial power consumption
Gwadar Port	November 2016	energy, transportation and trade
Dawao wind power project	in April 2017	alleviate power supply shortage
Sahiwar coal fired power plant	July 2017	alleviating power shortage
Thar coal-fired power	July 2019	alleviate power supply shortage
Hubu coal fired power station	August 2019	alleviate power supply shortage
Sukkinali hydropower station	September 2019	adjust energy structure
karot project	March 2020	Flood control and Impoundment
Azadepa hydropower station	July 2020	adjust energy structure
Mertiari Lahore ± 660kV DC transmission project	October 2020	Reduce power generation cost and power transmission loss

The State of Pakistan's Energy Industry

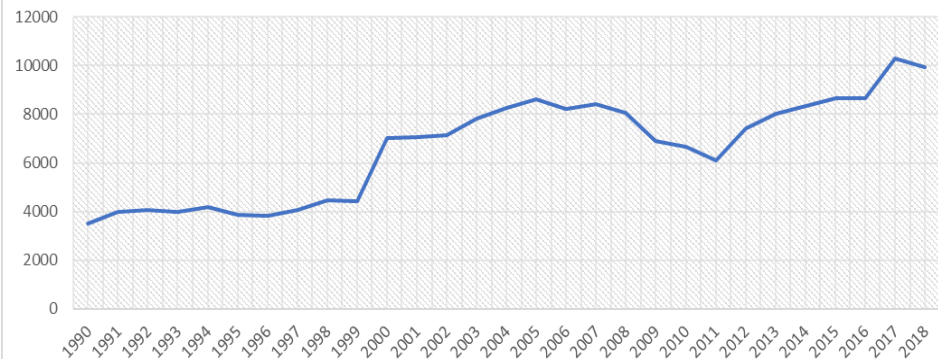
Among the energy projects involved in China's "One Belt And One Road" and "Pakistan Economic Corridor", power construction is more important than oil, gas and chemical projects. This preference is closely related to the current situation of Pakistan's energy structure.

According to the International Energy Agency, natural gas accounted for about 30% of Pakistan's primary Energy consumption in 2013, followed by petroleum and other liquids (26%).

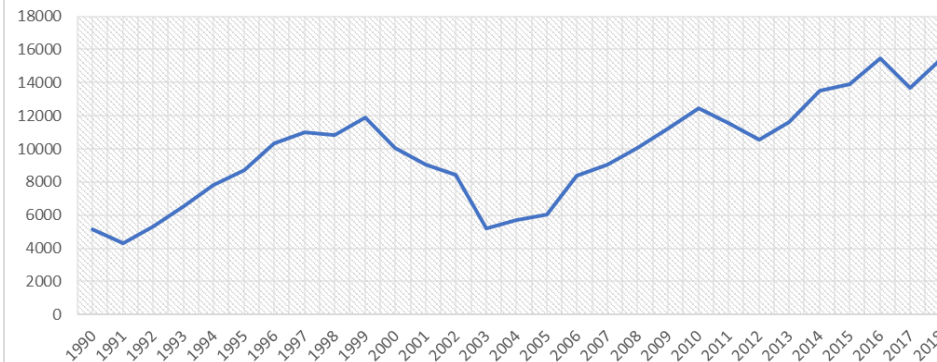
The WWEA notes that Pakistan is severely affected by climate change and that the impact is likely to worsen through continued use of fossil fuels. Effective deployment of renewable energy could increase the country's electrification rate, boost economic development, decarbonize the power system and help Pakistan meet its obligations under the Paris Agreement.

The State of Pakistan's Energy Industry

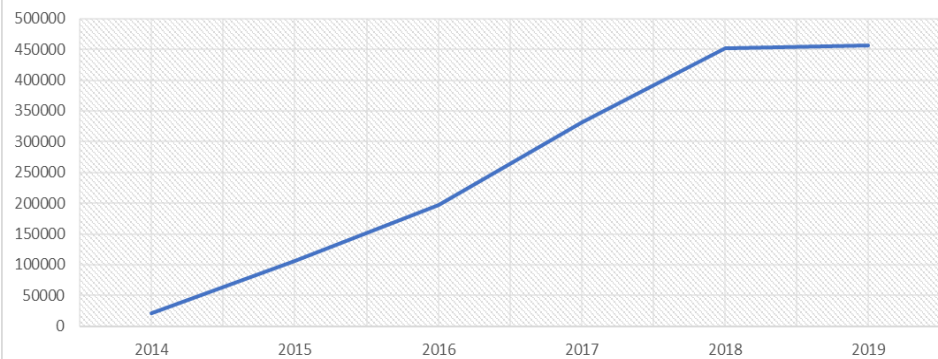
Crude oil-imports(Kt)



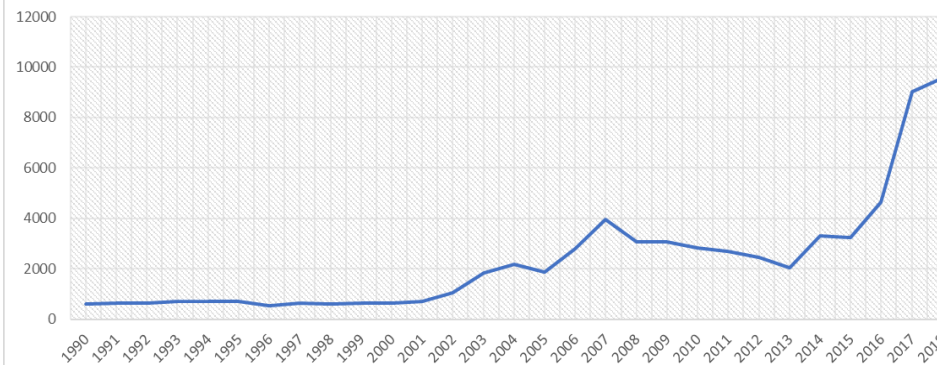
oil products-imports(Kt)



Natural gas imports(TJ-gross)

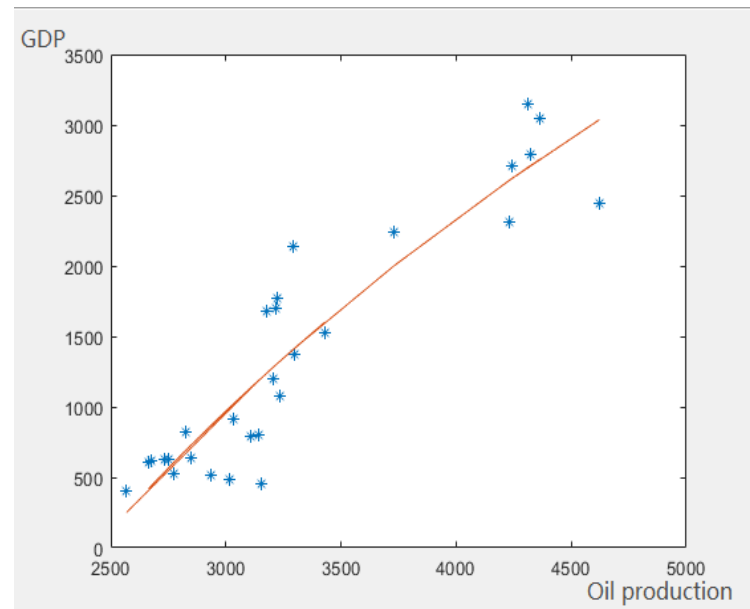


Coal-imports(Ktoe)

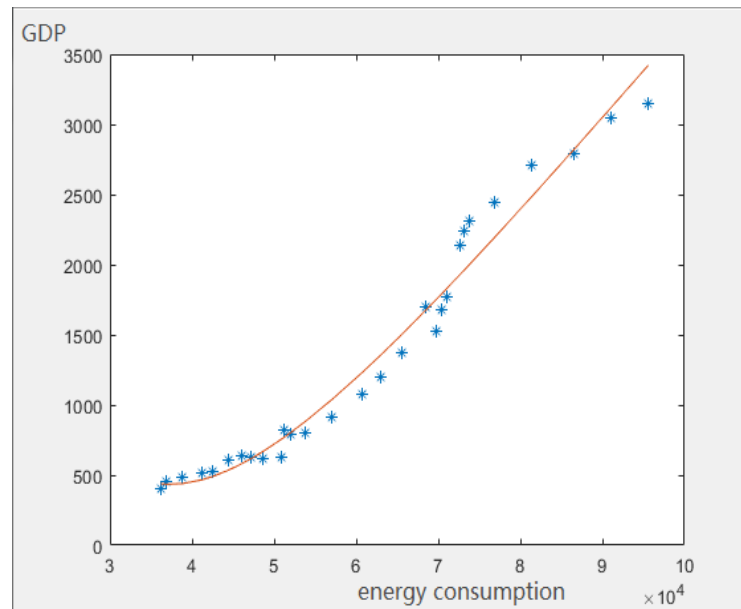


An Empirical Study on Energy and Economic Development in Pakistan

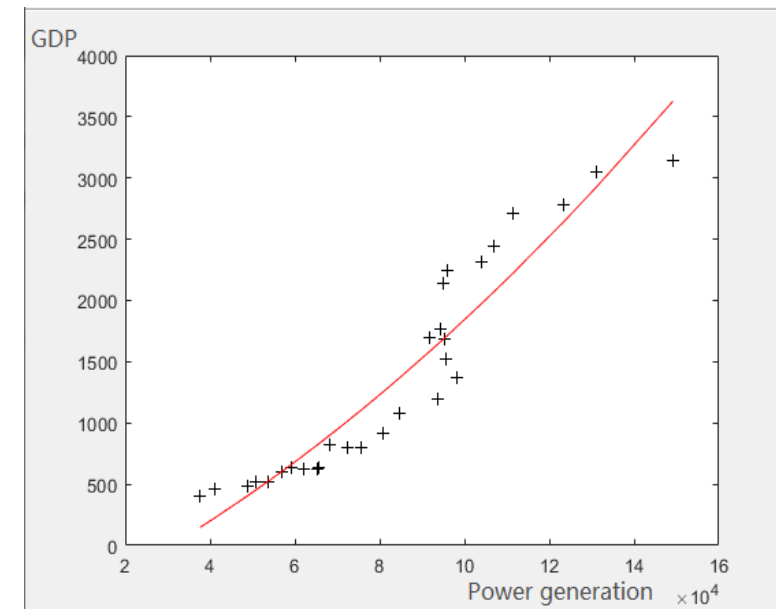
The relevant data	Pakistan's GDP, and domestic energy generation (selected the data from 1990 to 2018, IEA) .
Using the software	Matlab statistical ; Eviews7 metering .
Logical relationship	there is a linear relationship between Pakistan's domestic energy generation and GDP
The empirical process	The model was $\text{LNY} = -13.6\text{C} + 1.83\text{LNX}$
conclusion	This paper draws the above conclusions through empirical methods, in order to provide a way of thinking for the economic recovery and development of Pakistan in the post-epidemic era.



scatter plot of Pakistan's oil production and GDP
from 1990 to 2018



scatter plot of energy consumption and GDP in Pakistan
1990-2018



Scatter chart of energy generation and GDP in Pakistan
1990-2018

To be specific, Pakistan's domestic energy production and energy consumption can promote economic development, Pakistan's domestic energy production for power generation can boost economic development.

The problem :

Although Pakistan's energy generation capacity has been increasing over the past decades and Pakistan's energy cooperation with other countries, especially with China, has been increasing, Pakistan's domestic electricity problem remains severe, the energy industry and energy cooperation appear to have limited impact on the power-hungry economy.

In recent years, Pakistan's economic development is not stable, and its domestic reality and energy industry problems have hindered foreign energy cooperation and its own economic development.

Analysis of Problems Existing in Energy Cooperation Between China and Pakistan

5.1 Economic Backwardness
and Limited Supporting Funds

5.2 The Debt Burden Is
Heavy and The Tax Is
Unreasonable

5.3 High Power
Generation Costs in The
Energy Industry

5.4 The Problem of
Triangle Debt Among
Enterprises Is Serious



Prospects of China-Pakistan Energy Cooperation

- **6.1 Further Expand China-Pakistan Energy Cooperation Model**
- **6.2 Improve The Energy Production System Under Guidance of Government**
- **6.3 Energy Cooperation in Digital Financial Services**
- **6.4 Explore The Energy Financial System with Capital Market Participation**
- **6.5 Promote The Driving Effect of the Energy Industry on the Economy**

Thanks for watching!

Xinjiang University of Finance and Economics

Lv Zhiping
Li Jinhang