CPEC in the Perspective of Pakistan Economy: Analysis of Past, Present and Future

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Sequence of Presentation

- Introduction
- Present Scenario
- A Critical Assessment
- Data and Methodology
- Results and Discussion
- Conclusions

Introduction

- CPEC as Game Changer for Pakistan
- Corridor for China
- CPEC and Other Countries
- Proponents and Opponents in Pakistan
- Objective of this study

Present Scenario of CPEC

- Belt and Road Initiative (BRI)
- BRI is combination of Silk Road Economic Belt and Maritime Silk Road
- CPEC starts from Kashgar (China) and ends in Gwadar (Pakistan)
- China is financing 75 Projects
- In CPEC, 90% Projects will be financed by China while 10% will be financed by Pakistan

Critical Assessment

- Expectations from CPEC & Realities
- China's Vision to heavily influence region
- Interweaved fabric of society
- Governance structure of country
- Rivalry configuration with neighboring countries
- Financial obligations and environmental issues

Critical Assessment

- Comprehensive factual information and exiting literature
- Globally commanding media houses and literature
- Explorations are based on personage exposures
- Contributions are generally from Political Science and empirical analysis is very rare

Data and Methodology

- Annual data for the period 1980-2016
- Pakistan Economic Survey (Various issues)
- Construction of variables (Infrastructure index, Economic Infrastructure, Energy Infrastructure, Social Infrastructure)
- Causality analysis in framework of VAR
- VAR and VECM

Results & Discussion

- Unit Root Test (All variables are integrated of one)
- Models for sustainable development
- Models for economic component of sustainable development
- Models for social component of sustainable development
- Models for environmental component of sustainable development

Models for Sustainable Development (Co-integration Analysis)

Variables for VAR Model	Trace values	Eigen values
SDI and INF	15.337	12.00625
SDI and ECINF	13.997	13.27059
SDI and ENINF	12.853	9.377697
SDI and SINF	4.2307	4.199708

Models for Sustainable Development (Granger Causality)

Dependent	Chi Square
SDI	4.25157
INF	1.01722
SDI	2.53254
ECINF	18.2171*
SDI	12.0792*
ENINF	2.7262
SDI	2.57375
SINF	5.76138

Models for Economic Components of Sustainable Development (Co-integration Analysis and VECM)

Variables for VAR Model	Trace values	Eigen values
ECSD and INF	47.617*	40.26111*
ECSD and ECINF	10.1841	10.13704
ECSD and ENINF	15.3676	10.4261
ECSD and SINF	9.42885	9.22615

Dependent Variable	Adjustment	Independent
ECSD	-0.020242	-0.201547
INF	-0.103508*	-0.159531

Models for Economic Components of Sustainable Development (Granger Causality)

Dependent	Chi Square
ECSD	0.068174
ECINF	7.730706**
ECSD	8.702923**
ENINF	2.055085
ECSD	4.186231
SINF	1.911506

Models for Social Components of Sustainable Development (Co-integration Analysis and VECM)

Variables for VAR Model	Trace values	Eigen values
SSD and INF	40.9624*	38.8642*
SSD and ECINF	13.2618	0.800231
SSD and ENINF	7.08990	4.266064
SSD and SINF	4.94936	4.949004

Dependent Variable	Adjustment	Independent
SSD	-0.000176	-0.133112
INF	-0.002203*	-0.091786

Models for Social Components of Sustainable Development (Granger Causality)

Dependent	Chi Square
SSD	14.01492*
ECINF	12.12307*
SSD	2.935545
ENINF	2.818905
SSD	4.424418
SINF	1.691404

Models for Environmental Components of Sustainable Development (Co-integration Analysis and VECM)

Variables for VAR Model	Trace values	Eigen values
ENSD and INF	49.4502*	41.4535*
ENSD and ECINF	13.2107	13.19093
ENSD and ENINF	11.0352	7.178881
ENSD and SINF	15.787**	15.620**

Dependent Variable	Adjustment	Independent
ENSD	-0.007454	0.102289
INF	0.081339*	0.007
ENSD	-0.7651*	0.146667
SINF	-0.181775	-0.231268

Models for Environmental Components of Sustainable Development (Granger Causality)

Dependent	Chi Square
ENSD	7.0979**
ECINF	6.9571**
ENSD	3.937474
ENINF	0.452003

Future Scenario of CPEC

- Causality analysis is performed by using data up to 2013 (to forecast the model).
- Forecasts are calculated and scenario based analysis is utilized.
- Forecasts of core components.
- Forecasts for Sustainable development and Economic Components models have been performed.
- It has not been performed for environmental components model as it is not proved to be normally distributed.

Future Scenario of CPEC

- For scenario based analysis, values of exogenous variables are inflated 10, 20 and 50 percent.
- Forecasts for sustainable development and economic components of sustainable development are solved.
- In this way, comparison between baseline and inflated scenarios from 1 to 3 can be drawn.
- Higher the increment in energy infrastructure, higher will be the response in sustainable development.
- However, intensity of increase in sustainable development is bit more than ECSD.

Future Scenario of CPEC

- Baseline forecasts of all the components of SD are also performed.
- Trends of ECSD is apparent to be stagnant while those of social and environmental components are bit increasing and declining respectively.
- The scenario based analysis highlight the situation that overall the energy infrastructure may cause economic and social component of sustainable development to increase and environmental component to decrease.

Future Scenario of CPEC

- But decreasing trend in environmental component of SD is higher than increasing trend in economic and social, therefore, energy infrastructure investment could be considered as important element for SD but with serious caution that its adverse effects on environment should have been considered on priority.

Conclusions

- **Present**: 75 Projects included in CPEC, 32 percent are related to energy, others related to infrastructure, mass transit, Gwadar port, special economic zones etc.
- 12 percent projects are operational and 23 percent will be completed till 2025 while 65 percent are long term and are under consideration.
- Pakistan's financial contribution is 10 percent and rest will be financed by China.

Conclusions

- **Past:** Causality in the long-run actually runs from economic and social components of SD to overall infrastructure.
- It is also evident that energy infrastructure plays its role effectively. It has causal connection with economic component of SD and also with overall SD.
- **Future:** Energy infrastructure has force to affect future behaviors of economic component of SD and overall SD

Thank You