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Impact of Transport Infrastructure Development under BRI on Trade: A Case Study of CPEC in the Context of Pakistan

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Abstract: The study is conducted with the objective of analyzing transport infrastructure impact on Pakistan's trade volume, especially infrastructure developed under the China Pakistan Economic Corridor (CPEC) project of the Belt and Road Initiative (BRI). The study is conducted in two phases. In the first phase, the study explains infrastructure development's impact on the trade volume in Pakistan, without taking into account the CPEC, by utilizing time-series data from 1991 to 2020 by employing the ARDL model. The results confirm that trade has significantly increased with infrastructure development. For robustness of these results Granger Causality test is carried out, which confirms that the results are robust. Similarly, in the second stage of the study, the impact of CPEC and transport infrastructure development has been checked on Pakistan's trade from 1991 to 2020 by applying the Ordinary Least Square techniques model. From results, we find out that CPEC and transport infrastructure development have a significant positive impact on Pakistan's trade promotion. Along with the main variable, some control variables such as foreign direct investment, exchange rate, Institution quality, and population also have a significant positive impact on trade promotion, but still in some cases, their impact is insignificant. This study explored a new dynamic measurement of transport infrastructure by including qualitative variables in the construction of transport infrastructure index, based upon this new measured transport infrastructure index, we concluded that CPEC has significant impact on Pakistan's trade volume.

Keywords: Trade, Transport infrastructure, ARDL, CPEC, Pakistan

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INTRODUCTION

Background

BRI was started in 2013, by Chinese president Mr. Xi Jinping to expand China's trade, through economic cooperation with the rest of the world. In this regard, his special focus was on developing economies. The idea behind BRI was the expansion of Euro-Asia development and the creation of an economic belt with the Silk Rout. The project focus on infrastructure development such as transport, energy, communication, and financial infrastructure that plays an important role in connectivity (Dunford, 2021) and enhancing trade.

The top priority of BRI is regional participation for cooperation. Pakistan was among the few countries that pledged BRI cooperation from the first day. To put this cooperation into practice, a Memorandum of Understanding (MoU) was signed between Pakistan and China in 2013 as top-level long-term action plan of the CPEC. CPEC is an important project of BRI that includes the construction of transport infrastructures like highways, networks and railways, energy infrastructure, and Economic Zones in Pakistan (GoP, 2017). The transport infrastructure project of CPEC in Pakistan extends above 3000 kilometers from Islamabad to Kashghar and the port cities of Gwadar and Karachi (Ali, 2022; Hamid, Jam, & Mehmood, 2019; Jam et al., 2010).

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Theoretical Framework and Research Hypothesis

Trade is based upon on opportunity or an average cost of production of tradeable goods and services (Rehman & Nouman 2020). The traditional trade theories have ignored trade cost in assessing global trade analysis as (Smith, 1776) focused on absolute advantage (Ricardo, 1817) on comparative advantage and (Baldwin 1982) on constant opportunity cost. These theories are based upon cost differences in a monetary terms, such as labor wages paid for the production per unit output. Economists, like Ricardo (1817) and Mill (1848) concentrated on trade gain from specialization that a country will specialize in the production and export of goods in which there is a comparative advantage, and its comparative production cost is low. Now, the question is what underlines the difference in comparative cost between countries? This question is answered by Heckscher-Ohlin's (H-O) theory that different goods have different intensive factors inputs and endowment factor are different for countries. According to the theory, trade will exist till the comparative price of goods and their factor of production, aside from transport cost, become equal between the countries. Here, transport cost has been acknowledged without special consideration. The general, equilibrium of trade theory, transport, and other transaction, cost are neglected. This general equilibrium of trade theory without consideration of transport cost is not realistic because transport cost affects specialization which is a dominant factor of trade. An interesting point is that, on the one hand, classical economists ignored transport costs in international trade, but still on the other hand, regional development and interregional trade theories give much more importance to transport (Rehman & Nouman, 2020; Jam, Mehmood, & Ahmad, 2013; Khan et al., 2018; Shahbaz et al., 2016). Perhaps, regional trade is not compiled by exchange rate, tariff, and non-tariff barriers. International trade history has an interesting dichotomy by ignoring the importance of transport cost by the classical economists in the 19th century, but transport has gained significant development in that era. International trade gained significant development in the 19th century, and one of the main factors for this development was the transport revolution of railways and sea transport (Rehman et al., 2020; Shahbaz et al., 2016; Shahbaz et al., 2014). That time underdeveloped regions of the USA, Australia, Argentina and Canada were opened for the export of their traditional agricultural products through rail transport, and at the same time, sea transport developed to increase trade volume by connecting courtiers separated by sea (Xu, 2020).

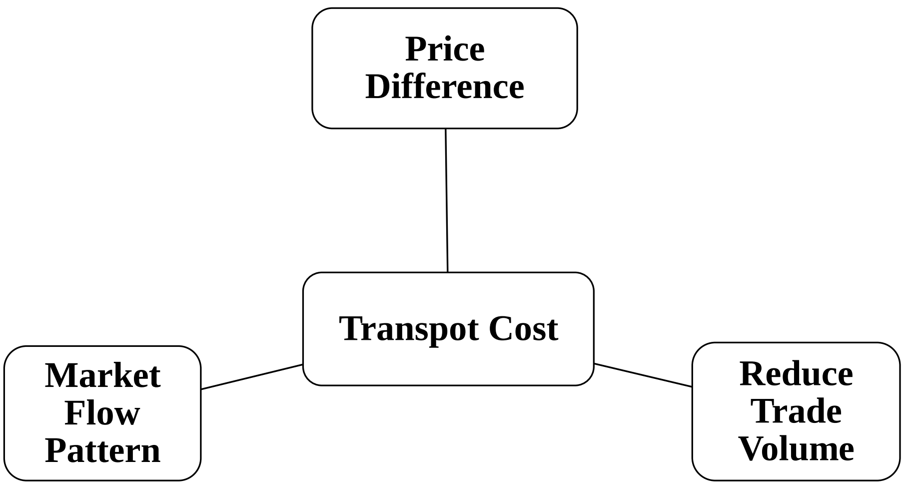

Figure 1: Theoretical Framework

Like classical theories, neoclassical and modern international trade theories also ignored trade cost in assessing global trade analysis. Recently, some attempts have been made to incorporating trade costs in models of international trade directly or indirectly by including the location aspect of trade entities. Israd and Peck (1954) linked the opportunity cost concept in international trade with the theory of location in their model and pointed out that variation in the distance caused specialization and trade composite. Samuelson (1952) explained the spatial equilibrium model of trade that consider transport cost, demand, and supply interrelationship in different countries. Based on the Samuelson's framework, applied economists like Takayama and Judge (1964) and Bawden (1966) made a significant contributions to international trade modeling by including transport cost factors. Transport cost effect price and trade volume in 03 ways. 1; Due, to the existence of transport costs, price difference exist in global market. The price received by exporting country is less than the price paid by importing country due to transportation costs. 2; Transport costs plays a natural tariff role, thus reducing trade volume. Since, only those goods will be imported which, prices, including transport costs are less compared to locally produced, thus substantially international specialization will be less. The transport costs act as that of tariff and non-tariff trade barriers. 3. Transport cost has an effect on patterns of flowing goods in channels of the world market. It is summarised in the above given diagram.

The Objective of the Study

To find out the impact of transport infrastructure development under the CPEC project of BRI on Pakistan's trade.

LITERATURE REVIEW

The role of transport infrastructure in trade is recognized by extensive literature (Rehman et al., 2020). An adequate transport systems reduce trade costs and promote trade. Economic growth and development are achieved with infrastructure development, and the quality infrastructure of a country, gives an edge to its trade promotion (Rehman & Noman, 2020) and (Adedoyin et al., 2020). Transportation cost is cut off by quality infrastructure, either directly or indirectly, it creates supply chain possibility and increases trade volume. For example, a reduction of 10 percent transport cost enhances about 6 percent trade volume, and a 1 percent an increase in infrastructure investment would lead to increase of about 6 percent in export and 1 percent import (David, 2019). Generally, such types of infrastructure elasticities are higher in the case of developing countries compared to developed countries (Donaubauer et al., 2018; Waheed & Leisyte, 2020; Waheed, Klobas, & Kaur, 2017). Further, Limo and Venables (2001) assessed the transport cost ratio of coastal and landlocked countries, and found that it is 40 to 60, i.e, 40 percent of transport cost is for coastal and 60 percent for landlocked countries.

The absence of quality institutions, lack of capital formation, and skills labor are barriers to trade and investment, but one can't ignore infrastructure's role in trade. Such examples are (Xu et al., 2020; Estache & Wren-Lewis, 2011) that the channel of sectoral infrastructure role in promoting of trade. Results of these studies pointed out that trade and export are enhanced significantly by the energy, financial, communication, and transport sectors in Southeast Asian countries. Other studies (Bhattacharyay, 2014; Andres et al., 2014) pointed out that trade is significantly promoted with improvement in energy sector infrastructure. Infrastructure importance in the promotion of trade in Southeast Asia can be arbitrated by Asian Development Bank (2017) that for promotion of trade Southeast Asia requires special attention in investing in infrastructure sector.

Earlier literature that has linked infrastructure with trade Limao and Venables (2001), Roller and Waverman (2001), Hoffmann (2003), Ismail and Mahyideen (2015), had some shortcomings. The main flaw of these studies are issues in infrastructure measurement. These studies have used mobile quantity and number of users of landlines as telecommunication infrastructure proxy, length of roads and railway lines for transport, and percentage of people having accessibility to electricity as energy infrastructure proxy. These types of measurement issues in infrastructure do not provide a clear picture of its relationship with trade. Considering these limitations, a new global infrastructure index developed by (Donaubauer et al., 2015) is used in this study by applying the Unobserved Component Model (UCM) for the construction of a transport infrastructure index on 12 annual indicators of land, sea and air transport.

Hypothesis of the Study

H1: Transport infrastructure development under BRI have positive impacts on Pakistan's trade volume.

RESEARCH METHOD

The Data

The study utilizes Pakistan's time-series secondary data for the period 1990-2020, which is taken from various sources as mentioned against each variable.

Variables of the Study

Variables of the study and data sources are summarized in the following table

Table 1: The Description of Variables

Variables	Notation	Unit	Source of Data
Dependent Variable			
Trade (Export + Import)	TR	USD	World Bank (2020)
Independent variables			
Transport sector Infrastructure	TINFR	Index	See Table 2
Control Variables			
Institutional Quality	QI	Index	International Country Risk Guide (ICRG) (2020)
Exchange rate	EXR	Official exchange rate	World Bank (2020)
Foreign Direct Investment	FDI	USD	World Bank (2020)
Population	POP	Total population	World Bank (2020)

Econometric Model

The study is conducted in two stages. First stage of the study finds out the impact of transport infrastructure on Pakistan's trade volume before the announcement of CPEC (transport infrastructure without CPEC). In the second stage, we find the effect of the inclusion of CPEC in Pakistan's transport infrastructure. As CPEC was started in 2015 for the first time, we take twenty-four years from 1991 to 2014 a pre-strategy period, time and six years from 2015 to 2020 a post-strategy period, time. Six years may not be sufficient for incorporation of transport infrastructure development under CPEC impact on the trade volume of Pakistan. Therefore, we take CPEC as a dummy in the model of our study, and dummy value for pre-strategy is taken as (0) and post-strategy is (1).

In the first stage of the study, we investigate the short-run and long-run relationship between regresand and regressor i.e., trade and transport infrastructure, by applying ARDL co-integration, developed by Pesaran and Shin (1999); Pesaran et al. (2001). This technique is applicable to variables whether that is stationary I(0) or I(1) or a mixture of both I(0) and (1). By linear transformation, error correction terms can be easily derived (Banerjee 1993). Additionally, ARDL co-integration is more effective than Johansen and Juselius's co-integration, in a small sample, it provides short-run adjustment along with retaining information of long-run (Pesaran & Shin, 1999). For assessing the relationship between regresand and regressor, ARDL estimate unrested ECMs as follows.

$$\begin{aligned}\Delta \log \mathrm{TR}_t = \alpha_{oTR} &+ \sum_{i=1}^{p} \psi_{iTR} \Delta \log \mathrm{TR}_{t-i} + \sum_{i=1}^{p} \emptyset_{iTR} \Delta \log TINF_{t-i} + \sum_{i=1}^{p} \delta_{iTR} \Delta \log FDI_{t-1} \\ &+ \sum_{i=1}^{p} \omega_{iTR} \Delta \log IQ_{t-1} + \sum_{i=1}^{p} \partial_{iTR} \Delta \log EXR_{t-1} + \sum_{i=1}^{p} \phi_{iTR} \Delta \, \mathrm{LogPOP}_{\text{t-1}} \\ &+ \sum_{i=1}^{p} \pi_{iTR} \Delta \log D_{t-1} + \gamma_{1TR} \log \mathrm{TR}_{t-i} + \gamma_{2TR} \log TINF_{t-i} + \gamma_{3TR} LogFDI_{t-1} \\ &+ \gamma_{4TR} \log QI_{t-1} + \gamma_{5TR} \log EXR_{t-1} + \gamma_{6TR} \log POP_{t-1} + \gamma_{7TR} \log_{t-1} + \mu_{1t}\end{aligned} \quad (1)$$

For estimation of long-run association between dependent and independent variables, the bound test is applied. The bound test is based upon the Wald test, which is a test of a hypothesis without co-integration between variables against the existence of co-integration between variables. In the long-run following are null and alternative hypotheses. For the co-integration test, Pesaran et al. (2001) provided both lower and upper critical values. When the *F*-statistic estimated value is higher than critical value of upper bound, the null hypothesis (no co-integration) is rejected. If F-statistic estimated value is less than lower bound critical value, null hypothesis can't be rejected, and the results can't be conclusive; for this situation, Groenewold and Tang (2007) suggested applying the Granger causality test if long-run equilibrium exists among variables. But (Naryan & Smyth, 2004) pointed out that the Granger causality test depends on VECM for short-run system dynamic among integrated variables. Engle and Granger (1987) pointed out that conventional Granger causality use variables with a first difference by VAR that give ambiguous results in the existence of co-integration in variables. Therefore conventional Granger causality test, including the error correction term, is formulated in VECM as followings.

$$\begin{aligned}\Delta \log \mathrm{TR}_t = \alpha_1 + \omega_{ii}^{p}(L) \log_t + \omega_{ii}^{q}(L) TINF_t + \omega_{ii}^{q}(L) FDI_t + \omega_{ii}^{q}(L) QI_t + \omega_{ii}^{q}(L) EXR_t \\ + \omega_{ii}^{q}(L) POP_t + \omega_{ii}^{q}(L) D_t + \phi_1 ECT_{t-1} + \mu_{1t}\end{aligned} \quad (2)$$

Here, ECT_{t-1} is the error correction term first lag.

RESULTS AND DISCUSSION

Stage 1

Before going to find out the long-run potential relationship between transport infrastructure development on Pakistan's trade, it is necessary to find out the integration order in variables of the study because if integration in variables of order 1(2) or more exists, then the calculated F-statistic will not be valid. Therefore first, we apply ADF and DF-GLS to find integration order in the study variables.

The results of ADF and DF-GLS are summarized in Table 2, which indicate that all variables of the study have integration order of I(0) or I(1), and none of them have integration order I(2) or more, that support ARDL estimation techniques instead of any other co-integration technique. Wald base bound test is applied to explore of the long-run association between variables of the study. Optimum lag length (*p*) selection is based on AIC for model assessment. The results are presented in Table 3, indicating a long-run association between variables of the study. Equation 1, estimated *F*-statics value at 1% significance level are higher than the upper bound critical value, therefore null hypothesis of no co-integration in variables of the study is rejected.

Table 2: Results of Unit Root-Test

Variables of The Study	ADF		DF-GLS	
	t-Statistic Intercept	*t*-Statistic Intercept with Trend	*t*-Statistic Intercept	*t*-Statistic Intercept with Trend
Log TR	-3.525***	-5.661***	-3.378***	-5.798***
Log TINF	-0.1399	-2.267	-0.119	-2.140
Log FDI	-1.129	-2.140	-0.869	-1.189
Log QI	-1.574	-2.007	-1.405	-2.081
Log EXR	-1.340	-1.384	-1.320	-1.489
Log POP	-4.718***	-4.617***	-3.640***	-3.893***
Log D	-1.323	-2.601	-1.448	-2.569
ΔLog TR	-6.060***	-5.940***	-6.127***	-6.163***
ΔLog TINF	-7.749***	-7.565***	-1.640	-5.917***
ΔLog FDI	-5.116***	-5.029***	-5.201***	-5.199***
ΔLog QI	-4.231***	-4.124***	-3.773***	-4.160***
Δ Log EXR	-5.011***	-4.951***	-4.869***	-5.020***
ΔLog POP	-6.969***	-7.241***	-7.753	-6.949
Δ Log D	-6.970	-7.133	-6.551***	-7.340***

Note: *** shows 1% significance level

Table 3: Long-run Results

Variable	*F*-statistic Value	Critical Value	
		Lower	Upper
Log TR/TINFR	12.743***	6.83	7.83
Log TR/TINFR/FDI	9.251***	5.16	6.35
Log TR/TINFR/FDI/QI	6.749***	4.30	5.59
Log TR/TINFR/FDI/QI/EXR	7.299***	3.75	5.07
Log TR/TINFR/FDI/QI/EXR/POP	5.807***	3.39	4.67
Log TR/TINFR/FDI/QI/EXR/POP/D	7.119***	3.16	4.42

Note: *** shows 1% significance level

Table 4: Granger Causality Test Results

Dependent Variables	Long-run F-statistic Results						
	Log TINFR	Log FDI	Log QI	Log EXR	Log POP	Log D	ECT_{t-1}
ΔLog TR	9.216***						-0.92
ΔLog TR	1.382	6.442***					-0.94
ΔLog TR	0.930	5.143***	4.899***				-0.94
ΔLog TR	0.681	2.529**	2.803**	4.8773***			-0.93
ΔLog TR	0.49	2.435**	2.644**	4.654***	3.909***		-0.95
ΔLog TR	0.700	2.347*	2.014*	2.418**	2.237**	3.370***	-0.96

Note: *, ** & *** shows 10%, 5% and 1% significance level respectively

Table 5: ARDL Bound Test Results

Dependent Variables	Long-run F-statistic Results						
	Log TINFR	Log FDI	Log QI	Log EXR	Log POP	Log D	ECT_{t-1}
ΔLog TR	1.397***	0.079***					
	(0.059)	(0.018)					
ΔLog TR	1.346***	0.055*	0.046				
	(0.079)	(0.031)	(0.047)				
ΔLog TR	0.012***	0.106	0.006	0.235			
	(0.428)	(0.072)	(0.079)	(0.297)			
ΔLog TR	1.470***	0.79	0.002	0.130	0.236**		
	(0.475)	(0.068)	(0.069)	(0.277)	(0.130)		
ΔLog TR	1.459***	0.081	0.003	0.137	0.235**	0.003	
	(0492)	(0.069)	(0.074)	(0.296)	(0.131)	(0.029)	
ΔLog TR	1.401***	0.086	0.008	0.208	0.172	0.009	0.331
	(0496)	(0.069)	(0.072)	(0.307)	(0.156)	(0.035)	(0.448)

Note: *, ** & *** shows 10%, 5% and 1% significance level respectively and bracket values indicate error term

Table 6: Digenetic-Tests Results

	BreuschGodfrey Serial Correlation LM Test	Breusch-PaganGodfrey Test (Heteroskedasticity)	Ramsey RESET Test
Log TR/TINFR	0.5033 (0.9509)	2.7397 (0.079)	0.8807 (0.3559)
Log TR/TINFR/FDI	0.3580 (0.0726)	1.6685 (0.1964)	1.3089 (0.2625)
Log TR/TINFR/FDI/QI	0.3130 (0.7339)	1.2136 (0.3279)	1.4209 (0.2439)
Log TR/TINFR/FDI/QI/EXR	1.2137 (0.3279)	1.2134 (0.3279)	0.3259 (0.5754)
Log TR/TINFR/FDI/QI/EXR/POP	0.3792 (0.6885)	1.7317 (0.1628)	0.3127 (0.5840)
Log TR/TINFR/FDI/QI/EXR/POP/D	0.5469 (0.5859)	1.5123 (0.2149)	0.3899 (0.5417)

Empirical results of the ARDL Bound test unveil the long-run stable relationship between transport infrastructures and trade in Pakistan. Table 4 summarize Granger Causality test results and indicate that there exists a short-run relation in the trade and transport infrastructure of Pakistan. The Error Correction Term (ECT) is significantly high at all regression of transport infrastructure with Pakistan's trade. These results reveal a long-run relationship between dependent variables, and independent variables along with control variables of the study such as FDI, QI, EXR, POP and Dummy in Pakistan.

Table 5 represent ARDL test results which confirm that dependent variables of the study are affected by independent variable i.e., infrastructure development is positively significant at 1% with transport infrastructure, but is insignificant when applied with other control variables such as FDI, QI, EXR, POP, and Dummy. Table 5, further explore whether the control variables do not have any significant impact on trade volume. Because Pakistan is a developing country, and due to its poor infrastructure and inadequate institutional quality (Shah et al., 2015), the country can't attract foreign investors to here which leads to low trade and exports.

Table 6, indicates that models of the study are specified correctly as all diagnostic-test F-statistic values are insignificant. F-statistic values of Breusch-Godfrey Serial Correlation LM are insignificant for every case that confirms that the model has not any Serial correlation issue, in the same way, F-statics values for Breusch-Pagan-Godfrey Test for diagnosis of Heteroskedasticity and Ramsy RESET-test have not indicated any misspecification or non-linearity issues in the model of the study. The alternative hypothesis, in all diagnostic test, is rejected mean the model has no econometric problems.

Table 7: Ordinary Least Square Regression Results (TR Is Dependent)

Dependent	Long Run Coefficient				
Variables	Constant	Log CPEC	Log TINF	Log QI	Log D
Log TR	3.0470***	1.0056***			
	(0.0664)	(0.1598)			
Log TR	0.1742	0.5766***	1.7651***		
	(0.6995)	(0.1110)	(0.4243)		
Log TR	0.5688	0.3669***	0.6331*	0.4810***	
	(0.5633)	(0.0289)	(0.3992)	(0.0759)	
Log TR	1.3993***	0.2554***	0.4260	0.3877***	0.3421
	(0.7369)	(0.1031)	(0.3839)	(0.0682)	(0.9329)

Note: * & *** shows10% and 1% significance level respectively and bracket values indicate error term

Table 8: Ordinary Least Square Regression Results (TINF Is Dependent)

Dependent	Long Run Coefficient				
Variables	Constant	Log CPEC	Log TR	Log QI	Log D
Log TINF	1.6010***	0.5329***			
	(0.0263)	(0.0629)			
Log TINF	0.4837***	0.3259***	0.3613***		
	(0.1702)	(0.1101)	(0.0537)		
Log TINF	0.350	0.2459***	0.2649***	0.2708***	
	(0.1793)	(0.0929)	(0.0761)	(0.1028)	
Log TINF	0.3539	0.1879***	0.2086***	0.2107***	0.0559
	(0.7329)	(0.1004)	(0.0730)	(0.942)	(0.8929)

Note: *** 1% significance level and bracket values indicate error term

Stage II

Results of Table 7 shows that CPEC has a significant positive impact on transport infrastructure. It means that CPEC project has a positive impact on transport infrastructure development. CPEC is a megaproject whose aim is infrastructure development for the promotion of trade, where transport infrastructure is the dominant sub-sector of infrastructure. Besides the main variables of the study, control variables like IQ, EXR, POP, etc have a significant positive impact on trade in Pakistan. For coefficient robustness check, the independent variable is regressed on the dependent individually, and then, one by one control variable is checked. The results reveal that are coefficients are consistent. Further, variables are selected from equation 1, but still, these have consistent coefficients.

On the other side, TR is replaced with TINFR for variables robust check as mentioned in Table 8, but still, results of the coefficient are consistent with Table 7. Table 8, shows a significantly positive impact of CPEC on transport infrastructure development in Pakistan. With the main variables of the study, control variables like FDI, IQ, EXR and POP are also positively significant.

CONCLUSION

BRI is a worldwide infrastructure development initiative; in, Pakistan, CPEC is a mega project of BRI that focuses the development on transport, energy, financial, and communication infrastructure development. Most of the studies have been conducted on CPEC's impact on economic growth and trade in the context of Pakistan. Still these studies are based on overall infrastructure development impact, and very few study have been conducted on investigating specific transport infrastructure development under BRI in Pakistan impact on its trade. Further, for transport infrastructure, previous studies have used the length of roads & railway line, and the number of cargo freights, thus these studies have taken into account the quantitative side of transport infrastructure and have ignored the qualitative side. Still, in this study, we have included qualitative variables along with quantitative variables while constructing transport infrastructure index. After the construction of the transport infrastructure index, in the first stage, transport infrastructure impact on Pakistan trade was analyzed, without taking into account the CPEC impact. In the second stage, Pakistan's trade is analyzed in the light of transport infrastructure development under CPEC.

Most importantly, as per our knowledge, we are the first to analyze the transport infrastructure development in Pakistan under CPEC and its impact on the trade volume of the country. This gap is filled through this study by taking CPEC as a dummy variable in our model to check the impact of transport infrastructure under CPEC on Pakistan's trade. ARDL estimator is employed on time series annual data from 1991 to 2020 to observe long-run and short-run relationship of the independent variables with dependent variable in the first stage of the study. To get efficient results, important economic parameters have been taken as control variables in an empirical model of the study, which are very important for finding out the main independent variable impact on dependent variables, like FDI, institutional quality, exchange rate, and population. The study finds out the strong relationship between Pakistan's transport infrastructure developments with trade volume, i.e, there exist a significant positive impact of transport infrastructure on trade both in the short-run and the long-run. The results confirm robustness; first we applied the main independent variable transport infrastructure and then regressed other controlled variables one by one that provided consistent coefficients. The results are consistent with (Limo & Venables, 2001) that the transport infrastructure development enhance trade volume. Besides that, CPEC has a significant positive role in transport infrastructure development in Pakistan. In the second stage of the study, CPEC's impact on Pakistan's trade is analyzed by applying OLS estimator to time-series annual data of Pakistan from 1991 to 2020. The study confirms that transport infrastructure development under CPEC enhances Pakistan's trade volume.

LIMITATIONS AND FUTURE SCOPE OF THE STUDY

The study is limited to transport infrastructure development under CPEC's impact on Pakistan's trade. Future studies should analyze transport infrastructure development under CPEC on economic growth and employment in Pakistan.

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