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Century of the East and Peaceful coexistence of China and India: Moderating role of Belt and Road Initiative in Emerging Asian Economies

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Abstract

The study focusses on historical perspective, contemporary historical perspective as well as futurologist perspective of Sino-India relations, economic development and bilateral trade. The economic growth has been examined with the interaction effect of Belt & Road Initiative. The purpose of this study is to find out the reasons of correlation between Sino-India economic growth patterns for last two thousand years as well as making recommendations for the optimal level of the relations in the region in the emerging century of East. The study further aims to examine the cross-country impact of infrastructure development on other countries. A total of thirty countries which are a part of Belt and Road Initiative were selected. The data is collected from World Bank Database from 1990 to 2019 (n=900). The data were analyzed using penal data regression models (fixed random effect regression models) to test the effect of macro-economic variables on economic growth, while hierarchical moderated regression analysis was used to determine the moderating effect of Belt and Road Initiative on the economic growth of participating economies. Belt & Road Initiative significantly moderate the relationship of economic growth with its factors. Therefore, we conclude that Belt & Road is pivotal for economic growth of region. In the century of Asia, China and India must understand that trade cooperation and congenial relations with in the region is beneficial for all the stakeholders in Asian Region while West and USA want to utilize India to halt the progress in the region and converting India a leading state to fight with China in the best interest of West. The only resolvable issues in Sino-India relations are border marketing in Tibrt, Arnachal Perdesch and Kashmir which are not only hampering the economic growth of these areas but also deviating the focus from economic growth towards militarization of the region. The limitations of this article is that the idea of Belt & Road was initiated in 2013 and different countries have joined BRI in different years. We have taken only those countries which have become a part of BRI till 2017. Another limitation is that we have selected few macroeconomic and social variables to test their effect on economic growth. We have selected those variables which are important for developing economies since majority of countries in BRI are developing. It is a unique study from the perspective, that it is using the available and estimated GDP of last two thousand years to find out the correlation between China's and India's economic growth and based on empirical analysis rather than theoretical one, suggesting the optimal level of relationship between China and India, why active participation of Bel & Road Initiative (BRI) by India is necessary for India's growth.

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Keywords: GDP, FDI, Belt and Road Initiative, Personal remittances, Kashmir, Tibe, Asian Economies.

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INTRODUCTION

The story started from the ancient times but from recorded historical perspective, we can approach it for last two thousand one hundred years as Chung (1994) and Reddy (2017) explained the history of the linkage between the China and India start from the time of Christ. This is the story of the historical relationship of Sino-India relations which were generally very peaceful and congenial till 1949. The recognition and spread of Buddhism in China is significant evidence of the influential cultural exchanges between India and China (Kavitha 2017). But the contemporary history of Sino-India relations can be characterized with the word "Border disputes" which led the 1962 Sino-India War, the Chola incident in 1967, and 1987 Sino-India Skirmish (Reddy, 2017). "Pakistan factor" always played significant role in Sino-India relations and the triangle of China-India-Pakistan relations is difficult as well as complex to understand (Saxena, 2019).

From the economic perspective, according to Maddison (2008), the two countries were the large global GDP contributors at the time of the arrival of Christ back to 2100 years and remained mainstream leaders for following 1500 years and then their collective contribution fall down with the emergence of Europe in the last one thousand years. Since last seventy years, in the ear of nation states, China and India are striving on the economic front, since 1980's, the two are making phenomenal economic growth and considered to be the emerging economic powers of the world with the expectation to produce an impact of around 50% of global GDP in 2030 as illustrated in Table 1:

Table 1.
Shares of World GDP, 1820-2030

	1820	1950	1973	2003	2030
Western Europe	23	26.2	25.6	19.2	13
US	1.8	27.3	22.1	20.7	17.3
Other Western offshoots*	0.1	3.4	3.3	3.1	2.5
West	25	56.8	50.9	40.4	32.8
China	32.9	4.6	4.6	16.8	23.8
India	16	4.2	3.1	6.1	10.4
Japan	3	3	7.8	6.1	3.6
Other Asia**	7.4	6.8	8.7	13.6	15.4
Latin America	2.1	7.8	8.7	7.7	6.3
Eastern Europe & former USSR	9	13.1	13.8	6.1	4.7
Africa	4.5	3.8	3.4	3.2	3
Asia as % of world	59.3	14.9	24.2	42.6	53.3

* Australia, Canada and New Zealand; ** includes Bangladesh & Pakistan from 1950

Source: Maddison (2007a).

BACKGROUND OF THE STUDY

The Belt and Road Initiative (BRI), announced by China in 2013, is a massive infrastructural and economic development project aiming at improving connectivity and encouraging commerce and investment throughout Asia, Africa, and Europe. The Silk Road Economic Belt, which focuses on land-based infrastructure connecting China to Europe via Central Asia and the Middle East, and the 21st Century Maritime Silk Road, which emphasizes maritime routes connecting China to Southeast Asia, South Asia, Africa, and Europe, are the two main components of the initiative. This study initially will capture the impact of BRI on the economic growth of the participating countries. The design of study will capture the interaction effect of BRI on the determinants of economic growth. The proxy of economic growth is GDP and

its determinants are Foreign Direct Investment (FDI), Lending Rate (LR), Inflation (INF), Personal Remittances (PR) and Secondary School Enrollment (SSE) for construction of study model. The second problem which will be addressed in the study is testing the simultaneous and cross-country growth. This is a new approach towards capturing the impact of economic growth of one country in consequence of infrastructure development of another country. An example to it is the development of western China through development of Gawadar Port. Therefore, one can infer that infrastructure development of Gawadar is generating economic growth in western China by providing a nearest and cost-effective port to western and central China.

Another objective of the study will be the establishment of the optimal level of relationship between the two of the most populated countries China and India along with Pakistan as the importance and role of Pakistan cannot be denied in the Sino-India relations in special context of BRI. The Indian strategy towards BRI is pragmatic (Wu, 2020). The Indian strategy while opposing CPEC and motives of BRI, at the same time it became the member of Asian Infrastructure Investment Bank (AIIB), therefore reluctance of India towards BRI is motivated by its threat perception which is hampering BRI progress specially CMEC along with the economic growth of bordering regions of both countries while cooperation of India is based to acquire the absolute gains.

SCOPE AND SIGNIFICANCE OF THE STUDY

This study is significant because it is the first to completely explore the effects of the Belt and Road Initiative (BRI) on economic development and regional dynamics, with a particular focus on China, India, and Pakistan. The research aims to shed light on the interconnectedness of regional economies and the transformative potential of infrastructure initiatives in fostering growth across national borders by pioneering a novel exploration of simultaneous and cross-country growth dynamics, particularly regarding infrastructure developments facilitated by the BRI. The paper illustrates the concrete implications of BRI projects on regional economic integration and prosperity by using case studies such as the Gawadar Port development and its rippling effects on economic growth in western China. Furthermore, the study's efforts to determine the ideal amount of engagement between China, India, and Pakistan under the BRI framework have important implications for regional cooperation and stability, particularly given Pakistan's critical position in Sino-Indian ties. By deconstructing India's strategic approach to the BRI and illuminating its motivations and concerns, the study adds vital insights into the prospects and difficulties for regional collaboration and economic growth within the BRI environment. Finally, this analysis offers politicians, economists, and stakeholders with practical insights into the intricacies of the BRI and its consequences for regional interactions and economic growth, therefore helping to informed decision-making and long-term development in the area.

Despite the growing importance of the Belt and Road Initiative (BRI) in shaping regional economic dynamics, there is a critical gap in understanding the BRI's overall implications for economic growth and regional relations, particularly in China, India, and Pakistan. Current research lacks a comprehensive examination of the simultaneous and cross-country growth dynamics promoted by BRI infrastructure projects, as well as an in-depth investigation of the ideal degrees of collaboration between various nations under the BRI framework. In order to elucidate the motives and discern the opportunities and challenges for regional cooperation and economic development, it is also necessary to dissect India's strategic approach to the BRI,

including its participation in the Asian Infrastructure Investment Bank (AIIB) and its reservations about specific BRI projects such as the China-Pakistan Economic Corridor (CPEC). Addressing these gaps is critical for informing policymakers, economists, and stakeholders about the BRI's possible consequences on regional interactions and economic growth, allowing for more informed decision-making and supporting sustainable development in the area. Subsequently, the paper will follow in these parts: Section 2 will comprise review of literature and construction of hypothesis. Section 3 will reveal the methodological part of this paper. Section 4 will explain the results while in the last part section 5 will conclude the paper.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

The section consists of two parts, one is the review of Sino-India relations and it is followed with the review of our variables in our econometric model along with the conceptual model.

Review of Sino-India Relations

India got independence from British colonial rule in 1947, while in 1949 the Communist Party of China (CPC) succeeded in the civil war. With the empowerment of Communist Party, the new face of China emerged as Peoples Republic of China. It is evident that these two changes have changed the course of action for the Asia as well as to the whole World. With the emergence of nation states, the contemporary relations of Sino-India can significantly have characterized with the word "Border disputes" which led the 1962 Sino-India War, the Chola incident in 1967, and 1987 Sino-India Skirmish (Reddy, 2017). "Pakistan factor" always played significant role in Sino-India relations and the triangle of China-India-Pakistan relations is difficult as well as complex triangle (Saxena, 2019). The relationship of China with Pakistan always remained friendly and exemplary. After 1962 Indo-China War, the bilateral relations between China and Pakistan strengthened. Chines media supported Pakistan in 1965 and 1971 wars with India although no physical intervention was made by China. The Indo-Soviet Treaty played significant role in restraining China from any physical intervention in 1965 and 1971 wars with Pakistan. In 1975, the annexation of Sikkim to India was denounced by the China.

Acharya (1995) discussed the overall relations of India and China from 1965 to 1975 shifting gradually from "hostile co-existence" moving towards cultural and diplomatic ones. The restoration of bilateral relations of China and India in 1976 was the only considerable event in of the decade. In 1977 elections in India, Janata Party came into power, which was welcomed by Chines media although Morarji Desai, the new Indian premier had opinion that it is China that had occupied Indian Territory so China had to withdraw from those territories. Therefore, the change of government did not work towards the acceleration of normalization of relationship.

The influential international events of 1980's like Afghan invasion by Soviet Union and the economic development of Japan and Western Europe which was creating threat to United States supremacy, the Sino-Soviet relations were improved, and strengthening of non-alignment moment paved new avenues to the developing world remained extremely favorable for China and India. The two nations had concluded that futuristic power don't depend on the military but additional technological as well as economic empowerment will ultimately decide the bargaining power in the World. China adopted a very successful policy of equidistancing between the two superpowers. Another dimension of the new Chines

foreign policy was to increase the circle of friends of China especially in the developing world. Finally, the last purpose of new foreign policy was to create a perception of China as a country which stands for "just demands and reasonable proportions" for the under developed and deprived world against unfair economic order of the world. The largest development in Sino-India relations during 1980s were frequent interaction of leadership of two sides and shifting of dialogues from resolving border issues but rather towards economic ties and trade agreements. Although the border meetings were taking place frequently between New Delhi and Beijing but no progress took place since the two sides emphasized on different ways of solving issues. The Chinese delegation focused on "Packaged deals" while Indian counterparts emphasized on "sector to Sector" solution, which made situation difficult to make any progress. On the higher government level, both countries desired to have good friendly relations. The stability of Sino-India relationship was not only a desire of two people, but it was desirable for peace and stability of Asia as well as to the world (Kumar, 2020). On the government level, the contacts were increasing as well as diversifying.

Both countries signed different contacts related to trade and commerce, science and technology and diversification of culture. In 1980s both countries reiterated the importance of good relationship referring the linkage of two of the oldest civilizations and discussing the revival of Panchsheel. During his visit to New York in 1985, the Prime Minister of India Mr. Rajiv Gandhi met with Mr. Zhao Ziyang. Followed by that meeting five rounds of border meetings took place and sixth round was scheduled in November 1985. Mr. Zhao Ziyang discussed the border issues stating as "Historical leftover "and it will take time to resolve while Indian Prime Minister considered it the crux of mutual relationship and must be addressed immediately. Sumdorong Chu a valley in Arunachal Pradesh incident in August 1986, where allegedly China build a helipad in valley and while in December 1996, Arunachal Pradesh was given statehood by the India which was strongly protested by PRC since the area was disputed between the two countries. This was the most crucial times in the relationship of two countries after 1962 war. Despite the mounting tension of these two events, Rajiv Gandhi visited China in 1998.

This was the second visit by any Prime Minister of India and 30 years after the first visit of Mr. Nehru in 1955. During the five-day visit, the leadership of two countries discussed different bilateral issues and reiterated that it is the time to renew our old friendship. Along with many other agreements on trade and commerce, civil air transport, science and technology, the establishment of Joint Working Group (JWG) was the most significant achievement of the visit of Mr. Rajiv Gandhi. The composition of JWG comprises officials from Foreign Ministry, representatives of Armed Forces, cartographers, technical surveyors and legal experts to explore and answer the border questions scientifically. PRC and its foreign policy remained dynamic and changed after post-Soviet era, the adjustment measures were necessary. 1990s remained to be the most cordial phase of Sino-India relations since independence until 1998 nuclear explosions.

Different delegations from both sides exchanged visits, many bilateral agreements were signed in this period. With all the political, economic and technological cooperation between the two countries, the academia and intellectuals in both the countries debated on the strategic and security concerns while border issue between two most populated countries remained unresolved. In 1993, Prime Minister of India Mr. Narasimha Rao visited China and signed a landmark agreement for maintain the

peace along the Line of actual control (LAC). This agreement had designed a framework which is based on peaceful and friendly negotiations while facing border conflicts. Along with the Joint Working Groups (JWG) the agreement of LAC to resolve issues peacefully seems to be the significant first steps to resolve the prolonged border issues. The presidential visit of Mr. Jiang in South Asia consist Islamabad, New Delhi and Kathmandu. PRC has shifted its foreign policy as President Jiang did not highlighted Kashmir Issue during visit to Islamabad while he suggested that India and Pakistan should settle all their outstanding disputes through bilateral dialogues and amicable negotiations. He emphasized normalcy in the bilateral relations and controversial and contentious issues should be "temporarily shelved" or frozen (Acharya, 1995). The same policy was adopted in disputed Paracels and Spratly Islands in South China Sea where China proposed to Philippines and Vietnam to shelving the disputes and work jointly to explore the economic benefits on these islands. Mr. Xi, the President of China laid down a plan for the revival of ancient Silk Road during his historic visit to Kazakhstan in late 2013 and discussed it in the following visit of Indonesia with the detailed plan of developing a strategy based on coordination of participating countries of Belt and Road Initiative (BRI) towards improving connectivity, trade and people relationship with cultural exchanges (Cullinane et al., 2018; Lee et al., 2018; Wang et al., 2020).

The expected results of simultaneous development and connectivity were reduction in trade cost along with the market integration in Asia, Africa, Europe and Latin America (Ten et al., 2019; Yang et al., 2018). Although India is a member state of BRI with China-Myanmar-Bangladesh-India Economic Corridor (CMEC) but it is reluctant with the objectives of BRI, India don't want increasing influence of China in South Asia and considers China Pakistan Economic Corridor (CPEC) as a threat to India (Ranjan, 2015; Deepak, 2018). India raised serious questions on the objectives and transparency of BRI projects. In August 2019, the government of Mr. Narendra Modi revoke the article 370 of the Indian constitution which ensures the special status of Jammu and Kashmir. Largely the international community remained silent but Pakistan and China had criticized, objected and protested against the step of Indian government in Kashmir (Sodhi, 2021; Mohyidin, 2021). Mohyidin (2021) discussed the Chinese Claim in Indian administrated Kashmir led to a discussion on the topic after lapse of decades of silence on the dispute in UNSC. The special status of Jammu and Kashmir was given in 1954 and since then it was enforced without any interruption. The event was "an interruption of routine" by the Indian government. Therefore, the revocation of special rights of Jammu and Kashmir raised serious questions on the legality as well as morality of Indian step.

This step was a violation of eleven United Nations resolutions on Jammu and Kashmir dispute. In consequences of August 05, 2019 steps by Indian government whole population of Indian held Jammu and Kashmir was held under stark lockdown, followed by arresting all the pro-freedom politicians. The precautionary steps were taken to suppress any outbreak in response to the revocation of special status of the valley. Although the Kashmiris living in Pakistani Administrated part of Jammu and Kashmir as well as the Kashmiri diaspora protested across the World on various diplomatic, political, social, academic and media outlets but the world perspective see the India from trade perspective, therefore, these protests made intangible impact and the rearrangements and human rights violation of India are unabated in the Valley (Haroon & Hussain, 2021). There were only two indigenous constituencies left for campaign and raising voices; Pakistani-administered J&K and Kashmiri diaspora. The diaspora's feeling of being backstabbed created a sense of dispossession and alienation. Kashmiri diaspora across the globe mobilized on various

fronts ranging from diplomatic, social, political, academic, and media. Though they managed to highlight the Kashmir conflict internationally, but they could not make some tangible impact as India's constitutional re-arrangements and the human rights violations in Jammu & Kashmir continued unabated. Purayil and Mufsin (2021) studied the ontological impact of Ladakh standoff (2019) between Indian and Chinese troops. The incident captured the tantamount local as well as international attention. The stability along the Line of Actual Control (LAC) has been shattered by the uncertainty and looming instability. In India, it is perceived as national security threat from China. The nuances unfolding and exploration about how the crisis emerged and how the clashes erupted, make it conclusive that its impact is far border than actually perceived on India's insecurity. It has its physical impact as well as ontological impact.

Tarapore (2021) studied Ladakh crisis and emphasized the new strategic reality for India as belligerent political relations with China and militarization of Line of Actual Control (LAC). The cost of new reality is different for China and India. He suggested Indian leadership to defer the much needed military modernization and maritime expansion and focus should be on LAC although it would impair India's ability to strategically with China. From the perspective of China, the costs were marginal and immaterial. The China was more concerned about the relationship with the India.

Foreign Direct Investment (FDI) and Gross domestic product (GDP)

All the goods and services produced in a year by country known as Gross Domestic Product (GDP). The term GDP growth means the increase in the production of goods and services. The plausible rational behind the expansion is increase in factors of production like increase in land by exploration of natural resources, capital induction leading to adaptation of new technologies, training of labor increasing their productivity. Another interesting plausible explanation to the phenomenon can be the increase of productive efficiency which means which means that without the production units in a country producing more at the same level of inputs.

In the ear of globalization when our world is converted into a global village, the importance of Foreign Direct Investment (FDI) cannot be denied. Previous hundred years witness the importance of FDI in the acceleration of economic growth of different countries. The operational definition given by International Monetary Fund (IMF) to FDI is that the injection of capital in the resident country must be long term which enables the lasting impact on the resident economy. The World Bank gave a more practical elaboration as the investment that cause 10% or more voting rights in the resident firm while operating in country other than its host country. The study of Griffin & pustay (2007) applied the definition of World Bank in their study. While Following the Endogenous growth theory, the impact of FDI can be direct as well as well as indirect one which trickle down to the resident economy into cycles. Farrel (2008) define FDI as an arrangement which facilitate the foreign firms to run operations in another country with the accumulation of factors of production.

The linkage and relationships of FDI inflows with the expansion of economic growth has empirically examined in numerous studies with contrasting findings. Some of the research studies conclude positive relationship like the studies of Kalai and Zghidi (2019); Sokhanvar (2019); Sarkodie and Strezov (2019) while Zandile and Phiri (2019); Nyoni (2018); Abdouli and Hammami (2017) and Herzer (2012) reached to negative impact of FDI on economic growth. Demena and Sylvanus (2020) studied the FDI with the induction of green technology and found positive impact of FDI on economic growth. While evaluating FDI theoretically, its impact is positive in the developing

countries and since our sample consist majority of developing countries, we hypothesize positive impact of FDI on economic growth. In this regard we propose the following hypothesis:

H1. Foreign direct investment positively affects GDP growth.

Lending rate and Gross Domestic Product (GDP)

Contrasting results of the relationship of lending rate and economic growth are available in the literature. Maran (2021) conclude positive relationship between lending rate and economic growth while Toker (1966) reached to the conclusion of insignificance of monetary policy. The study of Jacob et al. (2020) denies any causal relationship between public debt and growth. Decreasing lending rate or interest rate can create both positive and negative impact on economic growth. Jacobs et. al, (2020) studied the causal relationship of economic growth with public debt in 31 European union countries. However, reducing the lending rate due to expansionary monetary policy will enhance economic growth (Jelilov et al., 2016). Tight monetary policy slow down the economic growth by maintaining a relatively high lending rates in developing countries (Foo-zor, 2009). Maiga (2017) concluded that lowering interest rate results increase in investment in Nigeria. Since most of economies in this study belongs to developing countries, in this regard we propose the following hypothesis:

H2. Lending rate negatively affect Gross Domestic Product.

Inflation and Gross Domestic Product (GDP)

The prime objective of Central Banks around the globe is price stability, which is important to create confidence in the investor friendly environment to speed up economic growth. Therefore, the dialectic understanding of inflation is crucial for economic policy makers. The ideal situation for economic policymakers is high economic growth with small and manageable inflation (Seleteng et al., 2013; Vinayagathan, 2013). High inflation carries its negative impacts through redistribution and welfare effect (Eggoh and Muhammad, 2014). Therefore, explaining the relationship between the inflation and economic growth is difficult as little bit inflation help growth of economy while soaring inflation create distrust among the investors. The linearity in the relationship of two factors was rejected by Urom et al. (2020) providing a threshold rate of 10.2% and suggested that if inflation goes above threshold, it generate negative impact on economic growth. Mosikari and Eita (2018) gave a threshold of 12% of inflation while studying economic growth of Swiziland. The study concluded that if inflation increases above threshold, it decreases the economic growth by 1.02%. while granger causality analysis affirms that there is a causality flowing from inflation to economic growth. In this regard we propose the following hypothesis:

H3. Inflation has negatively and significantly affect GDP

Personal remittances and Gross Domestic Product

Cao & Sung (2020) examined the personal remittance and its role in economic growth. The study sampled twenty-nine economies with the special focus that selected economies are transitional. The results affirm the significant positive relationship of the two variables. The study further evaluated that the size of global personal remittances has expanded in the last thirty years but its contribution inflowing to developing countries was small till mid 1990's.

During the last 30 years, the size of global personal remittances has been increasing steadily although remittances to developing countries were small in 1990s. However, after mid 1990's the paradigm shifted and personal remittances have expanded to that level that it is considered as one the main source of external finance. The study of Ceesay et, al. (2019) establish the importance of personal remittances in the economic growth of Gambia. Oppong, and Vitenu (2019); Ceesay et, al (2019); Cao & Sung (2020) supported the significant and positive role of personal remittances in the economic growth and our hypothesis is in line with their rational judgement. As per above discussion we thus propose the following hypothesis:

H4. Personal remittances affect GDP positively and significantly.

Secondary School enrollment and Gross Domestic Product

Fischer (1992) examined the linkage of macroeconomic stability along with the economic growth in the region of Sub Sahara and Latin America. The period of study was 15 years from 1970-1985. The study applied cross section regression with the findings that human capital play pivotal role in acceleration of economic growth. The basic elements of analyzing and skill building starts from the school education. The importance of school education and its relationship with economic betterment is affirmed by Nadia & Arshad (2016). Another study about economic growth along with how it is influenced by education and health is conducted by Ogundari and Titus (2018). They applied the balanced panel data of 35 countries. The finding validates the earlier studies and confirm that human capital specially the elements of good health, good education plays pivotal role in the economic growth. Our hypothesis is in line with the Fischer (1992), Nadia and Arshad (2016) and Ogundari and Titus (2018). We have taken secondary school education as proxy of education reflecting social impact of Belt & Road Initiative. In this regard, our hypothesis is:

H5. Secondary School enrollment affects GDP positively and significantly.

Moderating role of Belt & Road Initiative

Huang (2016) confirm that development of infrastructure reflects positive impact and generate positive externalities which lead to expansion in economic activities. The uniqueness of BRI is that it is simultaneously involved in the infrastructure development of many neighboring countries. The study projected that BRI project are estimated to affect 64% of global population in Asia, Africa, Europe, Latin American and Carrabin. However, it is too early to gauge the impact of BRI empirically. The study of Enderwick (2018) confirms that BRI will change the patterns of trade in the World. The Obvious economic impact of BRI is cost reduction and saving to time in participating countries, BRI is joining hands with the developing countries in Asia and Africa for connecting them with global village and reap the benefits of globalization,

Following the Chines model of economic development which forces on the phrase of "Looking for development, building highways first", the BRI is a platform to expand the chines model into a global development model. Although BRI is China led development project, but it will benefit to the other participating countries. Another aspect which will be tested thorough testing of these interaction effects is to confirm simultaneous growth of connected and participating countries in such a way that infrastructure development of one country leading to create positive economic conditions for another country which is creating a new type of cross-country economic growth.

Therefore, in this regard, we propose following set of Hypotheses:

H6a. Belt and Road Initiative will moderate the relationship between Foreign Direct Investment and GDP growth.

H6b. Belt and Road Initiative will moderate the relationship between lending rate and GDP growth.

H6c. Belt and Road Initiative will moderate the relationship between inflation and GDP growth.

H6d. Belt and Road Initiative will moderate the relationship between personal remittances and GDP growth.

H6e. Belt and Road Initiative will moderate the relationship between secondary school education and GDP growth.

CONCEPTUAL MODEL

As we all understand that availability of modern infrastructure of highways, rail roads, airports, and ports are fundamental for acceleration of economic activities leading to economic growth. Under the umbrella of BRI, simultaneous infrastructure developments in the participating countries which are 140 countries is underway. It is not only reviving the abundant ancient Silk Route on the modern basis but it is revamping and modernizing the infrastructure of participating countries. Furthermore, BRI is creating new infrastructure where needed. The shortage of energy is addressed in BRI helping the participating countries to generate energy through all possible ways. BRI is helping the connectivity through telecommunication infrastructure development in the participating countries and finally BRI is developing special economic zones in the participating countries. An estimate by the World Bank (2018) suggest that BRI is going to affect 40% of World's population as well as trade patterns.

The endogenous growth theory supports the spill over impact of infrastructure development and creation of positive externalities through such development. The studies of Bleaney et. al, (2001); Zhang, (2013); Donaldson, (2018); Maparu & Mazxumder, (2017) and Achourand & Belloumi, (2016) support the argument. Therefore, positive impacts such as reduction of cost and ease in accessibility leads to flow of resources hence attract investment in the shape of Foreign Direct Investment (FDI) and Personal remittances (PR), low lending rate, low inflation rate along with human development through education lead to economic growth. Another latent dimension is the explained with the following words "Simultaneous and cross country growth". An example of this new concept is that the growth of Gawadar is creating positive impact on the growth of central and western China as the nearest port to these parts of China is Gawadar. Another way of viewing things is that Gawadar is providing shortest and cheapest route to China for middle east and Africa. Keeping India as active participant of BRI, the model is addressing the moderating impact of BRI on India's economic growth and addressing the question of optimal level of relationship between China and India. The proposed conceptual model is shown below (Figure 1):

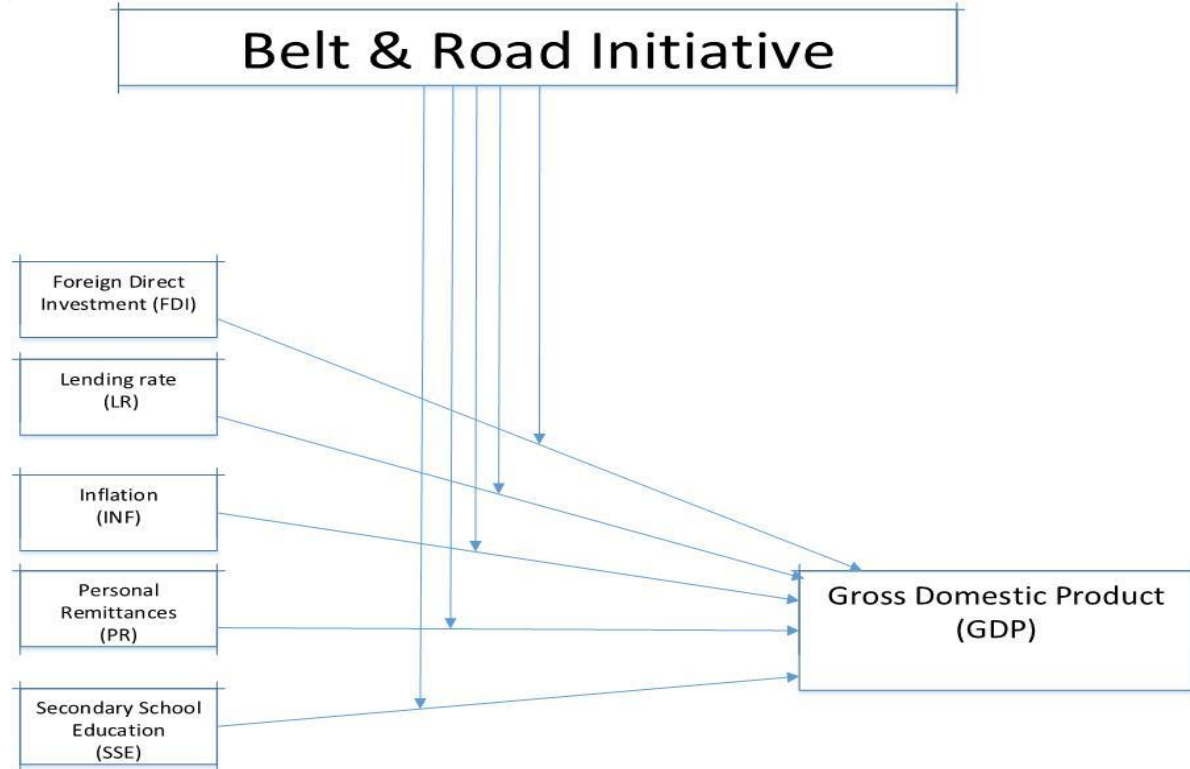


Figure 1.
The Conceptual Model

DATA AND METHODOLOGY

Data sources and sample size

To test our hypothesis, we have taken a panel data of thirty countries namely China, Pakistan, India, Malaysia, Indonesia, Thailand, Turkey, Bangladesh, Bulgaria, Chile, Costa Rica, Czech Republic, Hungary, Kenya, Korea Rep., Malta, Namibia, New Zealand, Nigeria, Romania, Russia, Singapore, Sri Lanka, South Africa, Poland, Kyrgyz Republic, Madagascar, Egypt, Cambodia and Magnolia which are part of Belt & Road Initiative. The data were collected from World Bank from 1990 to 2019. We used proxy of economic growth Gross domestic product (GDP) as dependent variable while independent variables are foreign direct investment (FDI), Lending rate (LR), Inflation (INF), Personal Remittances (PR) and Secondary School Enrollment (SSE). Belt & Road Initiative (BRI) was assessed as moderating variable in this study. We applied the fixed and random effect models on the data to analyze the regression models while hierarchical regression analysis was used to test the moderating effect of Belt & Road Initiative. In the light of above discussion, our regression equation and model are:

$$\begin{aligned} \text{GDP}_{it} = & \alpha + \beta_1 \text{FDI}_{it} + \beta_2 \text{LR}_{it} + \beta_3 \text{INF}_{it} + \beta_4 \text{PR}_{it} + \beta_5 \text{SSE}_{it} \\ & + \beta_6 \text{BRI}_{it} + \beta_7 (\text{FDI} * \text{BRI})_{it} + \beta_8 (\text{LR} * \text{BRI})_{it} + \beta_9 (\text{INF} * \text{BRI})_{it} + \beta_{10} \\ & + \beta_{11} (\text{SSE} * \text{BRI})_{it} + \varepsilon_{it} \end{aligned}$$

$$\begin{aligned} \text{GROSS DOMESTIC PRODUCT}_{it} = & \alpha + \beta_1 \text{Foreign Direct Investment}_{it} + \beta_2 \text{Lending rate}_{it} + \beta_3 \text{Inflation}_{it} \\ & + \beta_4 \text{Personal remittances}_{it} + \beta_5 \text{Secondary School Enrollment}_{it} \\ & + \beta_6 \text{Belt \& Road Initiative}_{it} + \beta_7 (\text{Foreign Direct Investment} \\ & * \text{BRI})_{it} + \beta_8 (\text{Lending Rate} * \text{BRI})_{it} + \beta_9 (\text{Inflation} \\ & * \text{BRI})_{it} + \beta_{10} (\text{Personal Remittances} * \text{BRI})_{it} \\ & + \beta_{11} (\text{Secondary School Enrollment} * \text{BRI})_{it} + \varepsilon_{it} \end{aligned}$$

Measurement of variables

Variables	Abbreviation	Measurement
Dependent Variable		
Gross domestic product	GDP	GDP (current US\$). Data is collected from the world bank database.
Independent Variables		
Foreign Direct Investment	FDI	Foreign Direct Investment (current US\$). Data is collected from the world bank database.
Lending rate	LR	Lending interest rate (%). Data is collected from the world bank database.
Inflation	INF	Yearly inflation rate. Data is collected from World Bank database
Personal Remittances	PR	Personal remittances as a percentage to GDP. Data is collected from World Bank database
Secondary School Enrollment	SSE	Gross enrollment in secondary school enrollment. Data is collected from World Bank database.
Moderator		
Belt & Road Initiative	BRI	1-Belt & Road Initiative period 0- Non-Belt & Road Initiative period
Interaction FDI * BRI	BRFDI	Interaction of Foreign direct investment with Belt & Road Initiative
LR * BRI	BRLR	Interaction of lending rate with Belt & Road Initiative.
INF * BRI	BRIN	Interaction of inflation with Belt & Road Initiative.
PR * BRI	BRPR	Interaction of Personal remittances with Belt & Road Initiative.
SSE * BRI	BRSS	Interaction of Secondary School Education with Belt & Road Initiative.

Results

Univariate analysis

Table II shows the statistical outputs, means, standard deviation and correlation between variables. Results showed significant positively correlation between foreign direct investment (FDI), lending rate, personal remittances and secondary school education and gross domestic product (GDP).

Table 2.
Descriptive statistics

	Mean	SD	GDP	FDI	LR	INF	PR	SSE	BRI	BRFDI	BRLR	BRIN	BRPR	BRSS
GDP	3772	12121	1											
FDI	91.87	285	.823*** (0.000)	1										
LR	15.70	17.19	-0.129*** (0.000)	-.152*** (0.000)	1									
INF	15.29	57.37	-.034 (0.278)	-.059** (0.038)	.503*** (0.000)	1								
PR	27.90	49.75	0.546*** (0.000)	.421*** (0.000)	-.156*** (0.000)	-0.052* (0.059)	1							
SSE	76.19	26.07	.154*** (0.000)	.158*** (0.000)	-.130*** (0.000)	0.015 (0.329)	0.010 (0.385)	1						
BRI	0.00	1.00	.232*** (0.000)	.158*** (0.000)	-.161*** (0.000)	-.085** (0.005)	.332*** (0.000)	.210*** (0.000)	1					
BRFDI	.16	1.64	.644*** (0.000)	.564** (0.000)	-.034 (0.157)	-0.009 (0.397)	.348*** (0.000)	.064* (0.029)	.179*** (0.000)	1				
BRLR	-0.16	0.69	-.136*** (0.000)	-.079** (0.009)	-.384*** (0.000)	-.261*** (0.000)	-.107** (0.001)	-.126*** (0.000)	-.426*** (0.000)	-.201*** (0.000)	1			
BRIN	-0.08	0.46	-.080** (0.009)	-0.032 (0.168)	-.382*** (0.000)	-.88*** (0.000)	-0.065** (0.025)	-.122*** (0.000)	-.348*** (0.000)	-.096*** (0.002)	.480*** (0.000)	1		
BRPR	0.33	1.64	.517*** (0.000)	.347*** (0.000)	-0.046* (0.086)	-0.018 (0.299)	.595*** (0.000)	0.037 (0.137)	.374*** (0.000)	.529*** (0.000)	-.211*** (0.000)	-.150** (0.001)	1	
BRSS	0.21	0.98	.162*** (0.000)	.106** (0.001)	-.089** (0.004)	-.057* (0.040)	0.060* (0.036)	0.002 (0.831)	.393*** (0.000)	.199*** (0.000)	-.379*** (0.000)	-.158*** (0.000)	0.031 (0.176)	1

Notes: p-values significant at *p < 0.10; **p < 0.05; ***p < 0.01; N=870

Panel Regression Analysis

Through application of Random effect model (REM) and Fixed effect model (FEM) the problem of endogeneity is addressed. The value of the Hausman test p-value 0.6545 > 0.05 allowed us to accept the null hypothesis and to conclude that the random effect model favorable in the leading model. The covariance between Foreign Direct investment and inflation, Personal remittances and inflation, Secondary School education and inflation, and secondary school education and Personal remittances is insignificant meaning no endogeneity existed in our penal. Furthermore, while testing interaction model and the issue of endogeneity,

Table 3.
Panel Regression Model

Variables	Pooled Effect		Fixed effects	Random Effects		
	B	β	B	B	β	B
Main effect						
Constant					-	
	-2009.423*** (0.007)	-2115.20*** (0.0036)	-3991.74*** (0.0031)	-5468.89*** (0.000)	3414.39** (0.0110)	-4544.15*** (0.000)
FDI	30.507*** (0.000)	25.786*** (0.0000)	26.591*** (0.000)	20.484*** (0.000)	27.211*** (0.0000)	21.148*** (0.0000)
LR	14.913 (0.308)	13.303 (0.4016)	20.114 (0.1877)	15.137 (0.3447)	18.740 (0.2114)	14.459 (0.3601)
INF	2.6417 (0.537)	-27.323 (0.2417)	0.748927 (0.8505)	-31.997* (0.1147)	1.0218 (0.7958)	-32.011 (0.1133)
PR	0.571397*** (0.000)	0.3983*** (0.0000)	0.6429*** (0.000)	0.3868*** (0.0000)	0.638*** (0.0000)	0.4000*** (0.0000)
SSE	14.56516* (0.087)	21.8702*** (0.0060)	41.999** (0.0166)	73.8110*** (0.0000)	33.995** (0.0232)	60.375*** (0.0000)
ZBRI	470.6097* (0.0420)	-1001.58 (0.1061)	305.9068 (0.1561)	-1072.451** (0.0448)	336.28 (0.11541)	-1054.60** (0.0478)
Interactions						
FDI × BRI		1194.976*** (0.0000)		1526.709*** (0.0000)		1487.38*** (0.0000)
LR × BRI		638.7603 (0.1405)		371.05 (0.3216)		401.47 (0.2818)
INF × BRI		-4100.04 (0.1825)		-4162.23 (0.1164)		-4215.49 (0.1108)
PR × BRI		1038.0*** (0.0000)		811.3830*** (0.0000)		826.89*** (0.0000)
SSE × BRI		926.47*** (0.0006)		504.3718*** (0.0143)		540.40*** (0.008)
F-statistics	400.2319*** (0.000)	274.93*** (0.000)	102.5106*** (0.000)	124.36*** (0.0000)	259.05*** (0.000)	204.45*** (0.0000)
R-squared	0.729	0.773616	0.80646	0.853187	0.63588	0.717615
Adj. R-squared	0.727775		0.79860		0.63334	
Hausman Test (Prob)		0.770802		0.846327	4.16417 (0.6545)	10.9247 (0.4496)

Notes: N= 870 for all models; the numbers inside parentheses are p-values significant at *p < 0.10; **p < 0.05; ***p < 0.01 respectively

we have developed five interaction variables through SPSS and ran the PLS and the finding of Husman to check whether endogeneity was present in the second step interaction model we assigned five interaction variables on SPSS and then ran a penal regression analysis. The Hausman test p-value was 0.4496; thus, we accepted the null hypothesis and concluded that the random effect model was favorable, there was

zero covariance and no association between FDI, inflation, lending rate, personal remittances and Secondary School Education.

Hierarchical Regression Analysis

The application of hierarchical regression and its testing with the standardization of independent as well as moderating variables to minimize the impact of multicollinearity. The interaction effect variables were placed in Model 1 and Model 2 is carrying the main effect variables.

H1 posted that Foreign direct investment positively affects GDP. The results in Model 1 which reflect the positive and significant relationship between FDI and GDP. Therefore, we are rejecting the null hypothesis ($0.000 < 0.05$). H2 predicted that Lending rate negatively affect Gross Domestic Product. The results of Model 1 ($0.302 > 0.05$) concluding failure to reject the null hypothesis, permit us to conclude that lending rate do not have significant negative effect on GDP. H3 predicted that Inflation has negatively and significantly effect on GDP. The results in model 1 supported ($0.308 > 0.05$) leading to the conclusion of failure to reject null hypothesis. H4 predicted that Personal remittances affect GDP growth positively and significantly. The results in model 1 ($0.000 < 0.05$) so the null hypothesis was rejected. H5 examine role of Secondary School enrollment affecting GDP positively and significantly. The results show ($0.087 < 0.10$) so the null hypothesis was rejected at the 90% confidence interval.

The findings in model 1 are in line with the findings of Siddue et al. (2017) with the conclusion that FDI, PR and SSE plays significant as well as positive role in economic growth. In order to testing the hierarchical regression, Model 2 was applied to test $H6(a)$, $H6(b)$, $H6(c)$, $H6(d)$ and $H6(e)$ about the moderating effect of Belt and Road initiative on Gross domestic product as well as finding evidences about "Simultaneous and cross country growth". since we are applying data of interconnected countries in the path of BRI. The findings related to $H6(a)$ predicted that Belt & Road Initiative moderated the relationship between Foreign Direct Investment and Gross domestic product. The model ascertains ($0.000 < 0.05$) therefore the null hypothesis was rejected. It allows us to conclude that BRI positively and significantly moderated the relationship between FDI and GDP. $H6(b)$ states that Belt and Road Initiative has negative moderating effect on lending rate and GDP. Model 2 allowed acceptance of the null hypothesis ($0.404 > 0.05$) indicating insignificant effect of lending rate and GDP growth. $H6(c)$ tested whether BRI would negatively moderate the relationship between inflation and gross domestic product. The results of Model 2 ($0.247 > 0.05$) leading a failure to reject the null hypothesis and conclude that BRI is insignificantly effect of inflation on GDP.

$H6(d)$ states that Belt & Road Initiative moderated the relationship between Personal remittances and Gross domestic product. The results of Model 2 ($0.000 < 0.05$) conclude rejection of null hypothesis. Therefore, we can conclude that that BRI positively and significantly moderated the relationship between Personal remittances and GDP. $H6(e)$ predicted that BRI moderated the relationship between Secondary School Enrollment and GDP. The results in the Model 2 ($0.006 < 0.05$) suggest the rejection of null hypothesis which allows us to conclude that BRI positively and significantly moderated the relationship between Secondary School enrollment and GDP.

Table 5.
Hierarchical Regression Analysis

	Model 1	Model 2		
Variables	B	β		
Main effect				
Constant	-2009.422 (0.008)	-2115.731 (0.004)		
FDI	30.518 (0.000)	25.786 (0.000)		
LR	14.914 (.302)	13.251 (0.404)		
INF	2.642 (0.308)	-27.056 (0.247)		
PR	0.571 (0.000)	0.393 (0.000)		
SSE	14.565 (0.087)	21.874 (0.006)		
BRI	470.608 (0.042)	-996.093 (0.108)		
Interactions				
FDI × BRI		1195.906 (0.000)		
LR × BRI		634.830 (0.145)		
INF × BRI		-4063.503 (0.187)		
PR × BRI		1034.731 (0.000)		
SSE × BRI		828.453 (0.001)		
	R Square	R Square change	F	Sig
Model 1	.854	.730	400.232	0.000
Model 2	.880	0.44	34.432	0.000

Notes: N= for all models; the numbers inside parentheses are p-values significant at * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$ respectively.

Table 6.
showing the correlation of Sino-India GDP

		Correlations		
		China	India	
China	Pearson Correlation	1	.993**	
	Sig. (2-tailed)		.000	
	N	68	68	
India	Pearson Correlation	.993**	1	
	Sig. (2-tailed)	.000		
	N	68	68	Years

** . Correlation is significant at the 0.01 level (2-tailed). Angus Maddison (2008)

The correlation between the economic ups and downs of the China and India is not spurious one with the following debate:

The population of India and China before 2000 years was 60 Million, both were agriculture based economies, Buddhism spread in China from India, large cultural exchanges, no invasion attempts from China to India or India to China, no water and

border issues. At that time, China was global GDP leader while India was next to China in global GDP contribution. From 1500 A.D on ward, the global GDP contribution of both countries fall. Maddison (2008) contributed it towards the economic growth of West based on intellectual growth with the reasons like institutionalization of trade, establishment of Universities based on modern scientific courses of Baconian, Newtonian and Galilean Sciences, the invasion of printing of books in fifteenth century, exploration of navigational technology which played pivotal role in expansion of Western influence and colonialism in the World, Breaking up family system and focusing on individualism and nationalism rather than tribalism and familyism which is the driving force of innovation, decreasing religious and dysfunctional instructional influence and laying foundation of strong and efficient institutions based on empiricism and finally the industrialization in Western Europe.

The downfall of East is based on the lagging behind in modern educational system and instructions in the same ear along with facing invasion. In India colonialism while in China Opium and Japan Wars were undergoing in the same era, Strong roots of religions dysfunctional institutions in India and finally the Strong tribal and family systems which served as barrier in individualism as well as innovation. Finally, the increasing trend of East in the global GDP as illustrated in Table 1 has the following grounds: The Population of China is 1.4 billion while the India's population is 1.33 Billion. China's Industrialization is Hardware oriented while India's industrialization is software oriented, China exports relatively high-tech capital-intensive products while India exports mainly low technological products, therefore complementariness exist in bilateral trade (Qureshi et al. 2008). In 2008, the trade between the two countries extended and China became the largest trading partner of India (Reddy, 2017).

DISCUSSION AND CONCLUSION

The aim of the study is to find out impact of BRI on the participating economies. The BRI is tested in the moderating role therefore interaction effect of BRI is evaluated on the macroeconomic and social determinants of economic growth. The study includes India as actively participating country of BRI infrastructure development although India is reluctant towards the objectives of BRI along with its flagship project of CPEC. On one hand, application of fixed and random effect regression models help us to capture the economic growth being influenced by macroeconomic and social factors, on the other hand, we applied hierarchical regression analysis to capture the moderating effect of BRI on the participating economies. The findings suggest that economic growth of participating countries accelerated with the infrastructure development of BRI investment.

Hence BRI significantly moderate the relationship of FDI and economic growth and the finding are in line with the findings of Kalai and Zghidi (2019); Sokhanvar (2019); Sarkodie and Strezov (2019). The relationship of Personal remittances and economic growth is significantly moderated by Belt and Road Initiative. The results are in line with Ceesay et al (2019); Cao & Sung (2020). The relationship of enrollment in secondary school which is the proxy of education and economic growth is significant and in line with the studies of Ogundari and Titus (2018). The interaction effect of BRI is captured by Model 2. The results are indicating significant positive impact of BRI as moderator of macroeconomic determinants of economic growth. The conclusion is in line with the results of Siddique et al. (2017) and Mishchenko et al. (2018). The findings are further validating the "Simultaneous and cross-country growth" since the sampled countries has one similarity which is common in all the countries and that is BRI

participation otherwise no prevailing common point is similar in all the sampled countries. The BRI is connecting these countries in such a way that economic growth of one country, leading to acceleration of economic growth of another country. The logical example of it is Gawadar Port, it will accelerate the economic growth of Western and Central China because it is the closest port rather than south China ports for these parts of China. Another example of it is that Gawadar Port will accelerate the economic growth of Central Asian landlocked countries serving them as the closest deep-sea port. In this way, the development of China and central Asian states leading development of Pakistan. Another example is the development of numerous ports in Africa under BRI, While the closest route to Africa for Chines exports will be Gawadar. Hence we can conclude that the development of African ports as well as increase in the demand of goods, leading to increase in exports also lead to economic growth of Pakistan. Therefore, the new phenomenon is the simultaneous and cross-country growth.

Finally, as projected in Table 1 by Maddison (2008), the projected contribution of Asia in the global GDP is going to be more than half of the global GDP in 2030 with major contribution from China, South Asia and Southeast Asia along with the results of correlation of GDP in last 2000 years between China and India infer the importance of resolution of conflicts in Asian countries to rationalize the situation. The conflicts like Kashmir, Tibet and Arunachal Pradesh can be addressed with collective wisdom in the best interest of the region. If not realized the importance of peaceful coexistence, the heavy price will be paid by the people living in Asia, faced centuries of colonialism and now moving forward towards their destination through economic growth. The conflicts in Asia are in the interest of West to incite India as well as China along with Pakistan to waste their energies in disputes. Backing India and being violent with China is the strategy to hamper the happening of the "RISE OF EAST". All the stakeholders in the East must understand and preempt it.

The limitations of this article is that the idea of Belt & Road was initiated in 2013 and different countries have joined BRI in different years. Even some countries are joining BRI in 2019. We have selected those countries which have joined BRI till 2017. The BRI is relatively new concept for the evaluation of the its impact. Another limitation is that we have selected few macroeconomic and social variables to test their effect on economic growth. We have selected those variables which are important for developing economies since majority of countries in BRI are developing. On the other hand, there are other important variables of economic growth which are feasible for developed countries of Europe but insignificant for under developed countries or developing countries in Africa. An example of such variables is market capitalization and therefore left for future studies.

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