The Influence of the Belt and Road Initiative on Cross Border E-Commerce

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Abstract. This paper examines the impact of China's Belt and Road Initiative (BRI) on cross-border e-commerce. Starting in 2013, the BRI has significantly enhanced the connection between China and over 150 countries through substantial infrastructure investments and particular policies. The study analyzes how these developments have reshaped the landscape for cross-border e-commerce. This paper discusses three vital changes: infrastructure construction, market demand changes, and policy implementation. The improvement of infrastructure increases the efficiency of e-commerce platforms. Besides, the BRI promoted the demand in the new market, inspiring e-commerce companies' prosperity. Furthermore, as proposed by China and participating countries, many supportive financial policies, such as Bilateral Currency Swap Agreements, have also facilitated smoother cross-border transactions. However, the paper also reveals some challenges, including cultural and linguistic barriers, intense local competition, and logistical hurdles. Despite these barriers, the study finally concludes that the BRI has created a more interconnected economic landscape with substantial potential for the growth of cross-border e-commerce, likely to reshape global trade patterns in the coming years.

Keywords: E-commerce; belt and road initiative; market demand; international trade.

1. Introduction

In 2013, the concept of the Belt and Road Initiative (BRI) was primarily raised. The BRI has two routines: one maritime routine, the 21st Century Maritime Silk Road, across the Indian Ocean. And one terrestrial routine, the Silk Road Economic Belt, across Central Asia. For Chinese government, their primary goal is to bolster China's connectivity to over 100 countries and international organizations in various aspects. Specifically, by investing in relevant infrastructure, enacting policies, and enhancing cultural ties, the BRI strengthens the international linkage between China and other countries [1].

Xinhua News Agency's current report reveals that more than 150 countries and 30 international organizations had participated in the BRI until 2023. Until 2023, overseas economic cooperation zones had created nearly 412,000 employment positions. The trade between China and cooperative countries in goods hit a record of 2.8 trillion dollars, increasing from 1.26 trillion dollars in 2013. Besides, "a series of landmark projects had promoted, such as China-Europe regular railway cargo service, offering services for over 10,000 enterprises and institutions." In recent years, the Chinese government has coordinated its original strategies, prioritizing small-scale, environmental-friendly projects over large-scale infrastructure investment [2].

Due to the rapid advancement of the internet, e-commerce technology plays a vital role in the global economy and financial market. As a digital process for purchasing and selling products and services, e-commerce significantly impacts domestic and foreign enterprises by exploiting new markets, improving the efficiency of communication, and strengthening a firm's international position. UNCTAD points out that e-commerce had a 27 $ trillion industry, occupying three-quarters of the global GDP. In China, the e-commerce sales achieved at $4.5trillion in 2022. In the same year, American e-commerce sales had $11 trillion [3].

Therefore, the progress of the BRI leads to a huge potential market for e-commerce. Not only does BRI open new markets for domestic and international firms, but also does sign a series of contracts and pacts for the prosperity of commercial development and freer trade. Many economic entities, whether enterprises, organizations, or individuals, could access potential clients and fresh markets through e-commerce technology, as the increasing number of participating countries and organizations.

This paper aims to analyze the impact of the BRI on cross-border e-commerce. The first part of the paper will illustrate the relevant influence of the BRI on infrastructure construction. The second part of this paper will explain the changes in business strategies and shifts in focus of cross-border e-commerce enterprises under the circumstances of BRI. The third part of this paper will discuss the challenges and issues encountered by cross-border e-commerce while entering the market of the cooperative countries that signed BRI. The final part will show the future expectations and feasible suggestions for a better development of e-commerce.

2. The Influence of the Belt and Road Initiative on Cross Border E-Commerce

2.1. Infrastructure Construction

To enhance the connectivity between China and cooperative countries, the BRI promotes investment in infrastructure construction, covering a large span of countries and regions. In detail, the Chinese government facilitates the target countries to build a large amount of infrastructure. For instance, the China-Pakistan Economic Corridor (CPEC), valued at $62 billion overall, requires enlarging ports, constructing hundreds of miles of highways, building high-speed railways, laying optical cables, and establishing economic zones [4].

For railways, due to the BRI, CHINA RAILWAY Express (CR Express) and China–Laos Railway (CLR) have operated for over one decade. To be specific, began in March 2011, CR Express provides a new routine to Europe, East Asia, and Southeast Asia. Another significant transportation facility, CLR has operated for nearly three years, operated from December 2021. An official report reveals that the CLR has supervised a total of 1000.2 million tons of imported and exported goods, which are valued at 40.77 billion yuan. China-made mechanical and electrical products and agricultural products, carried by CLR, exports to Laos and Thailand. At the same time, the natural rubber and tropical fruits derived from Laos and Thailand travel to China via the railway. In the first eight months of this year, a total of 30.627 million yuan worth of goods crossed the border on the two railway freight trains.

Another vital route in the BRI is a maritime line, which is related to the ports, ships, and containers. In 2016, China Ocean Shipping Company (COSCO) acquired a 67% stake in the Port of Piraeus, having a full takeover. Today, COSCO operates routes covering more than 1,500 ports in over 160 countries and regions around the world. COSCO has invested 642 billion yuan in the BRI. The increase in the number of sea routes and the control of ports has allowed cross-border e-commerce companies to better transport goods using water.

Optical cables, as an elementary transportation for messages, are also promoted by BRI. For instance, in CPEC, the China-Pakistan optical cable connects the Xinjiang province with Pakistan by entering the Khunjerab port. Another case is the joint venture project between the Chinese Hengtong Group and Egyptian HitekNOFAL Group, constructing Egypt's first local fiber optic cable factory. The BRI upgrade several countries’ digital infrastructure, covering Thailand, Nepal, Papua New Guinea, and other cooperative countries. Foregone outdated digital infrastructure negatively impacts cross-border trade efficiency, while the current optical cable provides firms with higher efficiency for processing mass digital data and a stable communication network. In general, the construction of optical cable builds a cornerstone for the prosperity of e-commerce.

With the support and response of BRI, some giant private enterprise, such as Alibaba, also participates in building infrastructure. Specifically, Alibaba expands its business in Southeast- Asian market by investing in Lazada, a large online shopping platform. Alibaba cooperated with local government agencies and institutions, building “hard infrastructure (such as transfer centers) and soft infrastructure (such as its online payment systems)”. It is undeniable that Alibaba contributes a lot to the development of e-commerce by upgrading local technologies and offering employment positions, although it monopolized the Southeast-Asian market [5].

Table 1. Total volume of trade and growth rate of trade.

Year	Total volume of trade: China and BRI member states (billions of dollars)	The total volume of trade: China and the World (billions of dollars)	The growth rate of trade between China and countries along the Belt and Road (%)	Growth rate of China's trade with the world (%)
2006	2830.49	17603.96	/	/
2007	3746.14	21761.75	32.35	23.62
2008	4656.62	25632.55	24.3	17.79
2009	3838.9	22072.02	-17.56	-13.89
2010	5247.47	29737.65	36.69	34.73
2011	6616.25	36417.83	26.08	22.46
2012	7047.26	38669.81	6.51	6.18
2013	7479.08	41590	6.13	7.55
2014	7853.44	43015.27	5.01	3.43
2015	7015.94	39530.33	-10.66	-8.1
2016	6632.08	36855.58	-5.47	-6.77
2017	7544.78	41071.63	13.76	11.44
2018	8754.62	46292.13	16.04	12.71
2019	9363.19	45675.2	6.95	-1.33
2020	9342.33	46461.91	-0.22	1.72

Table 1 shows trade growth trends over the years [6]. Notably, in 2009 and 2015, the global market faced financial crises and economic downturns, reflected in the negative trade growth for both China and the world, as well as China and Belt and Road countries. However, starting in 2016, the first year after the signing of the BRI, trade between China and BRI countries began to recover. The economies of China and the Belt and Road member countries showed signs of recovery, and trade volumes resumed steady growth.

2.2. Market demand Change

The operation of the CLR has significantly altered the demand for products, particularly time-sensitive agricultural and food products, due to its shortened transportation time. Compared to the past, the CLR enables goods to reach their destination much faster. For example, a traveler would previously have spent at least two days traveling between Vientiane and Boten, but now tourists can make the trip in just three hours using the CLR. Goods that were once transported by road or via expensive shipping methods, which were inefficient and limited in capacity, are now more efficiently exchanged thanks to the CLR's ability to carry large quantities [7]. Another report supports this conclusion. Following the launch of the Belt and Road Initiative, ASEAN, CIS, and South Asian countries have shown the highest demand for food products. Demand for non-essential items has also increased in some member states [8].

Not only does the demand for necessary products increase, but also the goods with elasticity, covered from cosmetics to technological products. According to an analysis of Alibaba AliExpress search activity from Kazakh consumers, product preferences varied by region. In Almaty, users made over 21 million searches for beauty and fashion items. In Nur-Sultan, digital products, fitness equipment, and clothing were popular, with search numbers reaching 1.7 million, 3.9 million, and 500,000, respectively. In Pavlodar, over 800,000 searches were made for cosmetics, particularly lipstick and eyeliner [9].

In 2018, due to the Chinese authority's policies, 33 least-developed countries in Africa could export their products exported to China with zero tariffs. From these countries, China imports large quantities of fruit, seafood, cotton, and coffee. Therefore, when Chinese people can buy many items with zero tariffs, it also means that cross-border e-commerce companies in Africa have received a positive signal. Therefore, not only for the Asian market but also for companies in the African market, their strategic goals in the future may be to invest in products that enjoy preferential policies.

In general, e-commerce companies are facing a brand-new and expansive market with a large amount of demand. The BRI, in other words, effectively connects foreign e-commerce companies with local citizens. The surprising demand for a variety of goods is influencing both corporate strategies and government policies, which could continue to evolve over the coming decades.

2.3. Policy Analysis of the Belt and Road Initiative

As mentioned before, Chinese authorities invest in elementary infrastructure, such as railways, ports, and power grids, building a compound infrastructure system. Encouraged by an entire improvement of the infrastructure, the e-commerce platform is more accessible to attach to their clients. At the same time, despite the investment in infrastructure, China also tries to inspire the prosperity of the economy for both countries by enacting financial policies and providing special loans. Contributed to these actions, e-commerce across borders is positively impacted.

The first vital action is Panda Bonds. Started in 2005, Panda Bonds is a Renminbi-denominated bond issued by international financial institutions, which could be used for raising funds for investing projects. As of 2013, only 5 Panda bonds had been issued. After the conception of BRI, the number of Panda Bonds is increasing. In 2024, 95 panda bonds have been issued with a total issuance amount of 161 billion yuan [10]. When export-oriented infrastructure projects are constructed and foreign exchange incomes, they could repay the bonds. Another important event was the foundation of the Asian Infrastructure Investment Bank (AIIB) in 2015. As an Asian regional multilateral development institution of an intergovernmental nature, it provides nearly 17 billion dollars in loans for member states in BRI. Benefiting from these financial institutions and organizations, the better infrastructure system inspires the development of e-commerce. As a result, a positive feedback loop is cycling.

Another significant measure enacted by Chinese authorities is signing Bilateral Currency Swap Agreements (BCSAs) with various member states [11], such as ASEAN countries. Specifically, a BCSA means that two countries exchange their currency at a predetermined rate for a specific period. For e-commerce companies, especially SMEs, which means that they could price goods and services more consistently without concern about losses from currency fluctuations. Furthermore, with BCSAs, businesses in both countries could transact directly in their national currencies without the intervention of third-party currency conversion services. Besides, the agreement reduces transaction costs and makes payments between buyers and sellers more efficient in cross-border e-commerce. It streamlines the payment process for international e-commerce and makes it easier for companies to obtain foreign currency. This enables faster payment settlements, reduces delays in cross-border transactions, and enhances the customer experience.

At last but not least, China has signed 21 Free Trade Agreements (FTA) by 2021, which enable nearly ninty percentage of trade between China and its trade partners to be tariff-free. In fact, Chines government is constantly lowering the import tariff on countires along the BRI over recent years. Figure 1 exhibits the changing trend of China's weighted average tariffs on imports from countries along the Belt and Road from 2000 to 2019. During 2000-2005, China lowered import tariffs on most countries to fulfill its tariff reduction commitments under its WTO accession. Since the launch of the BRI in 2014 and the implementation of a series of relevant policies, China's import tariffs on member countries have continued to decline [12]. Obviously, tariff reduction boost trade between countries, providing the variety of products for consumers. As e-commerce enterprises, they could enjoy the lower price of raw materials, increasing the profit margins.

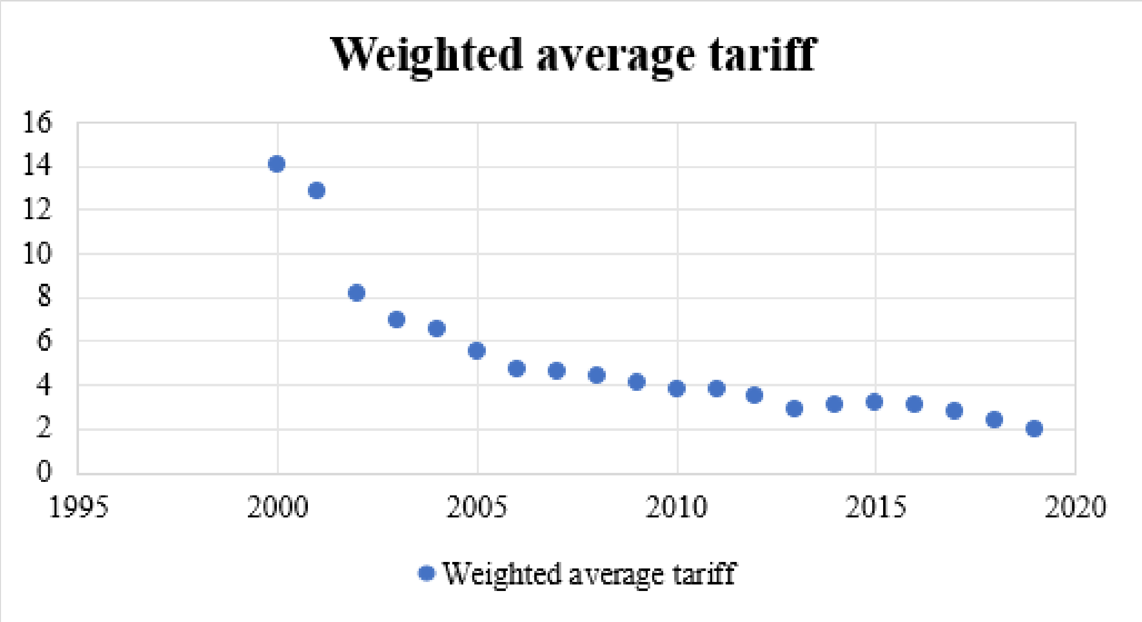

Fig 1. Changes in China's import tariff levels for Belt and Road countries from 2000 to 2019.

3. Analysis of Challenges in E-commerce Trade

When entering a new market, linguistic and cultural obstacles, other national competitors, local government's relevant laws, and the high cost of logistics transportation might prevent the e-commerce companies from developing successfully.

First, the religious faith and native customs determine the market demand. Specifically, while attempting to grab market share, enterprises have to consider how to avoid local religious taboos and coordinate their business strategy effectively. When outlining a specific product, differences in cultural and linguistic habits between the two countries can easily cause ambiguity, which might be a huge challenge for the e-commerce industry.

The second significant challenge is fierce competition in the market. For instance, Allegro, the fifth most visited marketplace in Europe, has relatively more competitive capacity because it had focused on the primitive market for many years and gained national trust, compared with most large e-commerce foreign companies, such as AliExpress. Scholars predict that new e-commerce enterprises are accessible in the market only if they are willing to offer at least a 10 percent price drop in price. It is a similar situation for those e-commerce enterprises that participated in BRI. Although BRI opens the door to thriving on the new land, those e-commerce enterprises must compete with indigenous giant enterprises with sufficient experience [13].

Another worse news for these e-commerce enterprises is that some countries' enacted laws, also prevent them from growing steadily in the fresh market. To be specific, the tension from geopolitical relations affects the authorities' attitude. For instance, the European Union's anti-dumping and countervailing duty measures predominantly focus on China. A current case is the anti-dumping policies against Chinese vehicle enterprises. In September 2023, the European Commission announced the launch of an anti-dumping investigation into electric vehicles imported from China. To protect its automotive industry and less relying on the Chinese industry, the European Commission imposes high tariffs. According to the report, the Commission has claimed potential countervailing duties on Chinese BEV imports, ranging from 17.4% to 38.1% depending on the manufacturer [14]. As a result, although some countries are involved in the BRI, various factors, such as Protectionism, may limit their active participation in certain areas of cooperation with foreign cross-border e-commerce.

Lastly, the high cost of logistics and transportation remains a significant challenge that needs to be addressed. Member countries of the BRI vary greatly in terms of GDP and population density, making it difficult for e-commerce enterprises to develop without specific business strategies or policy support. For instance, Kazakhstan has a low population density, forcing online shopping platforms to focus primarily on urban areas. As a result, it leads to the fact that cross-border enterprises find it difficult to attract clients who live in rural areas. In other words, given the current logistics and transportation capabilities, cross-border e-commerce enterprises face high costs and time investments if they wish to capture markets in remote areas. This situation underscores the requirement for tailored approaches and potentially supportive policies to overcome these logistical hurdles and expand e-commerce reach effectively across diverse regions [9].

4. Conclusion

Proposed by multiple countries and China, the BRI significantly impacts the global financial system and creates new markets for a large number of businesses, especially for those cross-border e-commerce platforms. Focused on making substantial improvements in infrastructure, such as railways, maritime routes, and digital connectivity through optical cable networks, BRI enhances the efficiency of those e-commerce companies. Besides, the BRI also plays a significant role in stimulating market demands. Specifically, BRI improved transportation systems and raised national incomes, which generated new consumer appetites for a wide range of products. For e-commerce companies, they are easier to access local markets, although it also means that they have to coordinate after investigating local preferences.

Another vital aspect of the BRI is that it signed a suite of financial policies and agreements. In detail, the introduction of Panda Bonds, the establishment of the Asian Infrastructure Investment Bank, and the signing of Bilateral Currency Swap Agreements have created a relatively more favorable financial environment for cross-border trade, lowering currency risks, reducing transaction costs, and streamlining payment processes for e-commerce businesses. For enchancing the trade between China and countries along the BRI, Chinese government also constantly reduce the tariff for recent years.

However, e-commerce companies benefiting from Belt and Road member countries still face numerous challenges, including language and cultural barriers, fierce competition from established local players, and even the possibility of protectionist policies. In areas where infrastructure investment is lacking, particularly in remote regions, cross-border e-commerce companies struggle to obtain sufficient benefits.

Therefore, cross-border e-commerce companies should investigate consumer preferences in participating country's markets by learning about different cultures, which may lead to an increased demand for interdisciplinary talent. An enterprise with sufficient international experience and a multicultural system might be easier to occupy the market. For countries, especially developing ones, to promote the growth of cross-border e-commerce, it would be beneficial to actively participate in financial projects to obtain sufficient investment for improving national infrastructure. Simultaneously, these countries must prepare for potential protectionist policies while trading with each other. Indeed, only a positive trade environment can foster the growth of cross-border e-commerce, which is a highly valuable market.

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