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The Pan-Asian Railway: Opportunities and Challenges

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Abstract: This study explores the profound impact of the Pan-Asian Railway (PAR) on Southeast Asia's economy, regional security, and geopolitics. As a key part of China's Belt and Road Initiative, the railway improves regional infrastructure, boosts trade, tourism, and industrialization, particularly by reducing transportation costs and enhancing exports. The project has strengthened regional security cooperation, especially in combating drug trafficking and cross-border crimes. China's influence in Southeast Asia has grown through economic and political ties, furthering its geopolitical presence in the region. Despite significant economic benefits and regional integration, the Pan-Asian Railway faces challenges such as environmental impact, financial sustainability, and geopolitical tensions. The success of the project will depend on political cooperation, environmental safeguards, and effective financial management in the future.

Keywords: Pan-Asian Railway, Geopolitical Influence, Regional Security, Internation Relations.

1. Introduction

1.1. China's Distinctive Geopolitical Features

China's geopolitical landscape is shaped by its vast territory, diverse landscapes, and strategic location in East Asia. The region to the south of China is crucial for its maritime routes, however, it is embroiled in ongoing territorial disputes with Southeast Asian nations like Vietnam and the Philippines, creating geopolitical tensions. Despite these strained relations, the southern border facilitates cultural and economic exchanges with countries such as Vietnam, Laos, and Myanmar. The South China Sea is also strategically vital for China's naval capabilities and regional influence.

1.2. Relations Between Southeast Asia and China

The relations between Southeast Asia and China involve a complex interplay of economic cooperation, political partnerships, cultural exchanges, and security dynamics. Economically, China is the major trading partner for many ASEAN countries. The ASEAN-China Free Trade Area (ACFTA), effective since 2010, has significantly enhanced trade and promoted economic integration. Additionally, China is a key source of foreign direct investment in Southeast Asia, focusing on infrastructure, technology, and energy sectors [1].

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Politically, China engages with the ASEAN through frameworks like the ASEAN Regional Forum and the ASEAN+3 mechanism, which includes Japan and South Korea. China also maintains strong bilateral relations with individual ASEAN nations, often prioritising partnerships based on strategic interests and historical ties.

In terms of security, China collaborates with ASEAN nations on issues such as counter-terrorism, drug trafficking, and maritime security. However, several nations' claims over parts of the South China Sea have led to disputes not only between China and these nations but also between other member nations of ASEAN.

1.3. The Pan-Asian Railway and the Countries Along the Route

The Pan-Asian Railway (PAR) is a vital transcontinental initiative aimed at enhancing connectivity and promoting economic integration across Asia. As part of China's Belt and Road Initiative, it seeks to improve infrastructure and trade routes among member countries. The Pan-Asian Railway is often viewed positively by several Southeast Asian nations, particularly by those seeking economic development and regional connectivity. For instance, Zhang emphasised that countries like Thailand and Malaysia see the railway as a crucial infrastructure project that can enhance trade, tourism, and investment, fostering economic growth and integration within the ASEAN [2]. Furthermore, Arnold suggested that railways can promote the industrialisation of the less economically developed areas in Southeast Asia [3]. Ambekar also claimed that the construction of the Pan-Asian Railway could strengthen regional security and promote regional peace [4].

Conversely, there are notable concerns regarding the Pan-Asian Railway, particularly related to environmental impacts and debt sustainability. A study by Shen underscored that the railway may also lead to increased environmental degradation and social displacement despite the prospective development brought by the railway [5]. Additionally, Pavlićević and Kratz stated their concern that over-reliance on Chinese funding could compromise national sovereignty and create economic vulnerabilities [6].

Lastly, opinions on the Pan-Asian Railway in countries like Cambodia and Vietnam tend to be more neutral, reflecting a cautious optimism. Research by Ng noted that these countries are weighing the economic advantages against the political implications of greater Chinese influence in their domestic affairs [7].

2. Economic Benefits

There is a common saying in China, 'If you want to be rich, build roads first', which also applies to the Pan-Asian Railway.

2.1. Tourism Industry

In terms of tourism, the construction of the Pan-Asian Railway can greatly improve the infrastructure in Southeast Asia, especially the development of local tourism. Vang Vieng, a famous leisure and tourist destination in Laos, is located between the two major cities of Vientiane and Luang Prabang. Before the Pan-Asian Railway was opened, it took four hours to travel from Vientiane to Vang Vieng; now it takes only 50 minutes. In the first six months of 2024, Vang Vieng received 600,000 international tourists, including more than 100,000 from China. The opening of the Pan-Asian Railway provides opportunities and favourable conditions for the development of tourism along the line and will further improve the quality of transportation, improving the experience of tourists and increasing tourism income. This is of great significance to the consolidation and expansion of the tourism market.

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2.2. Export of Goods

In terms of resource exports, the construction of a pan-Asian Railway network will greatly promote product exports and increase product output. According to data from the Union of Southeast Asian Nations Statistics Bureau, trade between Southeast Asia and China increased by around 20% from 2020 to 2022, with improvements in rail transport seen as one of the main factors [8]. For example, China imports a large number of timber, agricultural products, rubber and other primary industrial products from the countries along the railway. At the same time, the exports of Vietnam and Thailand increased at an average annual growth rate of 15% -25%. Vietnam's fruit and vegetable exports to China increased by 30% after the railway passage. According to the Asian Development Bank, rail transport costs have fallen by an average of 30 to 40 per cent, directly driving export growth in Southeast Asia [9].

2.3. Industrialisation of the Countries Along the Pan-Asian Railway

The Pan-Asian Railway network has great significance for the industrialisation of the countries along its route, facilitating the transportation of raw materials, components, and finished products and thus making it easier for industries to efficiently source inputs and distribute products. The railway construction teams also help local workers improve their skills, ensuring the sustainable development of the project as well as providing employment opportunities for local residents. The railway construction can also reduce transportation costs and thus enhance the profitability of industries, allowing for increased investment.

Furthermore, the railway network can encourage local production of goods, reducing reliance on imports and stimulating domestic industries. Local industries can more easily access local natural resources, fostering sectors such as mining, agriculture, and manufacturing as well as the upgrading of the local agricultural industry. In addition, industrial growth driven by improved connectivity creates job opportunities and further boosts local economies. The establishment of new industries often necessitates training and skill development and further enhances the workforce's capabilities. Greater connectivity may also facilitate partnerships between local firms and international companies, promoting knowledge sharing [10].

2.4. Expansion of the International Market

The Pan-Asian Railway has facilitated the expansion of China's international market and Southeast Asian exports to China have increased as a percentage of its total exports. For example, according to the United Nations Conference on Trade and Development in 2021, Southeast Asian countries' exports to China accounted for more than 40 per cent of their total exports, an increase of 5 per cent from 2019 [11]. Furthermore, according to the General Administration of Customs of China, trade between China and Southeast Asian countries has increased by about 20 per cent between 2020 and 2022 [12]. In summary, the railway network promotes regional economic cooperation and facilitates the implementation of the Belt and Road Initiative.

3. Security Cooperation

3.1. The Remote and Mekong River Regions

Some parts of Southeast Asia are plagued by local armed forces, drugs and security problems, especially in the Golden Triangle region and the Mekong River region in northern Myanmar, however, the construction of the Pan-Asian Railway can effectively alleviate these problems.

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Firstly, the construction of the Pan-Asian Railway can help improve the infrastructure so that the regions which used to be inaccessible to law enforcement can now be properly governed by governments on various levels. According to Chanthavong, the number of joint operations against drug trafficking in participating countries has increased by 25 per cent since the launch of the railway project, indicating that the infrastructure construction has enhanced regional security and governance capacity [13]. The construction of the railway project is also accompanied by improvements in infrastructure, such as roads, electricity and communication facilities. These improvements not only provide better living conditions for local residents, but also enable governments on various levels to be more efficient in resource allocation and public security management, so as to reduce the dark corners of public security.

Secondly, the construction of the Pan-Asian Railway has turned some drug-stricken regions of Southeast Asia into tourist areas. According to the United Nations Office on Drugs and Crime, the area of opium poppy cultivation in Southeast Asia has decreased year by year since 2016 [14]. Drugs in Southeast Asia are gradually being replaced by a tourism boom, with significant tourist growth in some countries since the opening of the Pan-Asian Railway, for example, the rail links between Thailand and Vietnam have seen increased visitor traffic, with the number of visitors from China hitting a new high in 2019, at about 10.2 million. Enhanced economic activities can provide more employment opportunities, thus reducing poverty levels and indirectly reducing criminal activities caused by economic problems, for example, Vietnam has provided more development opportunities in some rural areas with serious security problems that were due to inconvenient transport. Thus, the crime rates in these areas have decreased by about 15% since the opening of the railway [15].

Thirdly, the construction of the Pan-Asian Railway is not only an improvement in transport infrastructure, it also has a positive impact on the local education, crime rate and the quality of the population. The construction can improve the transport accessibility of remote regions, enabling the easier distribution of educational resources to rural and marginal regions. With more job opportunities, local governments are likely to launch vocational training programs for young people to improve the overall quality of the workforce. In Thailand, for example, skill training programs for farmers have been implemented along certain railways, facilitating their adaptability to the new economy [16].

3.2. Police Cooperation

The Pan-Asian Railway involves cooperation between many countries, promoting the sharing and cooperation of security information, for example, safety measures along the railway need to be developed and maintained to prevent cross-border crimes. During part of the railway construction from Kunming to Vientiane, the China and Laos police launched a series of joint operations to ensure safety and stability during the construction stage and in the early stage of operation. This regional security cooperation, which extends from the police to the military, can enhance regional security and promote peace in remote regions [17].

The first notable example of increased police cooperation due to the railways can be seen when we consider that prior to the railway, most of the police in Southeast Asia relied on water transportation which made it difficult to achieve timely coverage of the police force in remote regions. After the construction, the combined transport of river and railway could be realised in the countries along the route and the railway and waterways could jointly be used to transport police forces.

Secondly, the construction of the railway could promote the diversification of destinations, for example, previously remote areas can now be reached by railway transport, avoiding safety dead corners and allowing the police force to cover more areas.

Thirdly, the construction of the railway can promote the diversification of police equipment. In the past, only small, light weapons could be delivered due to the limitations of transportation, whereas now large police armoured vehicles can be transported to maintain local stability. Finally, the

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construction of the railway can promote deeper police cooperation along the route, improve the frequency of joint actions, and enhance the region's overall capacity to tackle security issues.

3.3. Quasi Military Cooperation

With the construction of the railway, the countries along the route can further improve the quasi-military power cooperation and thus promote the security and stability of the region. The railway provides greater access for countries to attend security meetings on various levels. With the railway, there can be more timely negotiations to prevent conflicts from escalating into wars.

4. Geopolitical Influence: China and the Countries Along the Railway

4.1. China's Influence in Southeast Asia

Since the completion of the railway, China's influence in Southeast Asia has undergone some significant changes. Firstly, the economic ties between China and Southeast Asia have deepened. The railway has promoted international trade and accelerated the transportation of goods, enabling China to better realise its 'going out' strategy and promote regional economic integration.

Secondly, China has increased its investment in infrastructure in Southeast Asia through the project, especially in areas such as roads, ports and railways, leading to a significant improvement in the infrastructure of Southeast Asian countries while also giving China greater economic benefits.

Thirdly, its political influence has increased. With the deepening of economic ties, China's political influence in Southeast Asia has also increased accordingly. Some Southeast Asian countries are increasingly inclined to cooperate with China, affecting their foreign policy formulation to some extent.

4.2. The Increasing Influence of Southeast Asian Countries

The Pan-Asian Railway has led to an increased influence over Southeast Asian countries. Firstly, in terms of economic connectivity, the railway facilitates trade and commerce across borders, allowing Southeast Asian countries to better integrate their economies. This connectivity boosts Southeast Asian trade, attracting investments and fostering economic growth.

Secondly, the railway can improve infrastructure and accordingly elevate the strategic importance of Southeast Asian countries in regional and even world geopolitics, enabling them to play more influential roles on security and trade issues with geopolitical powers like China and the U.S.

Thirdly, the railway can make it easier for visitors to access Southeast Asian countries, benefiting local economies and cultural exchanges and thus raising the profile of Southeast Asian destinations on the global stage. The railway also fosters collaboration within the ASEAN, promoting joint projects and initiatives that strengthen regional ties and enhance collective bargaining power.

4.3. Setting an Example of Stability and Development to Solve Regional Conflicts

The construction of the Pan-Asia Railway can serve as a model for stable development. This can be seen in the China-Laos railway section of the Pan-Asia Railway which was successfully completed and opened in 2021 and has brought great changes to northern Laos.

Firstly, the railway has enhanced connectivity between Laos and China, leading to a projected increase in trade volume. In 2022, trade between the two countries reached approximately $6.9 billion, a significant jump compared to previous years. Northern Laos has seen a rise in foreign direct investment, especially in sectors like tourism, agriculture, and manufacturing; the government reported an increase of 25% in FDI in 2022 compared to that in 2020. The railway project itself created around 8,000 jobs during construction [18].

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Secondly, the introduction of the railway has significantly boosted tourism. In 2022, northern Laos saw an increase in international visitors by about 40% compared to pre-railway levels, primarily from China. The revenue from tourism in the region has also risen, contributing to local economies. In 2022, tourism revenue in northern provinces like Luang Prabang reached approximately $50 million, up from $30 million in 2019 [19].

Thirdly, economic growth driven by the railway has contributed to poverty alleviation in this region. According to the data from the World Bank, the poverty rate in northern Laos has decreased from 23% in 2015 to around 19% in 2022 [20]. These obvious changes since the opening of the China-Laos railway can provide a model for the international development of turbulent regions such as Iraq and Africa.

4.4. External Interference

In the face of the confrontation between China and the United States, the international community is very concerned about the 'China hegemony theory' or the 'China threat theory'. In the planning and construction of the Pan-Asian Railway, China needs to be vigilant about these statements and avoid misunderstandings by the local people in Southeast Asia. Attention should be paid to the impacts of local military instability on China to prevent unstable forces from entering and affecting the stability of southwest China.

5. Challenges to the Pan-Asian Railway

5.1. Impacts on Environment

The railway construction also faces challenges and risks. The complex terrain of Southeast Asian countries poses many challenges for railway construction. The construction needs to overcome mountain ranges, which increases construction difficulty and budgets as tunnels and bridges are required. The construction may be easier in places such as Cambodia and Thailand, but there is a need to consider the damage to agricultural land and the protection of groundwater resources along the railway.

Furthermore, the great number of volcanoes in Malaysia and Indonesia has caused unstable geological structures, which poses another challenge for construction. Therefore, extra attention should be paid to the reasonable destruction of local resources and the protection of the natural environment. Some examples show that it is necessary to control noise and pollution to avoid affecting the environment when the railway passes through farmland or villages. Other examples show that special attention needs to be paid to the protection of tropical rainforests and biodiversity. In addition, local residents along the railway also need to be relocated reasonably and properly.

5.2. Fund Risk

Railway construction needs a large amount of funding and a large number of workers. Thus the countries along the railway need to take debt repayment into consideration to avoid the risk of national debt. Countries should identify the main sources of financing, including government investment, loans from international financial institutions, private sector investment, etc., to ensure the diversity and stability of the sources of financing and assess the whole life-cycle costs of the project, including construction, operation, maintenance and possible upgrade costs. Participating countries should budget appropriately to avoid overspending and design a reasonable financing structure, in order to ensure the financial viability of the project and risk control. Countries should also identify and assess risks associated with financing, such as market volatility, policy changes and natural disasters, and formulate corresponding response strategies, as well as establish a transparent and standardised

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financial management system to ensure that the use and flow of funds are in compliance with the law, so as to enhance the trust of investors and the public.

5.3. Military Issues

Armed conflicts in some regions along the railway must be taken into consideration. Some regions in Southeast Asia have sharp conflicts with the central governments, such as northern Myanmar. Thus, the railway construction must avoid casualties and staff members must live peacefully with local armed forces. In the meantime, interference from extraterritorial powers such as the United States must be noted and the U.S.'s financial aid to Cambodia and Myanmar may also pose challenges to the railway construction [21].

6. Conclusion

This paper examines the economic benefits, security cooperation and geopolitical influence which have been and will be brought by the Pan-Asian Railway. Though it is a huge and ambitious project connecting Asia's diverse countries, it also faces some challenges. Firstly, the disputes between countries, different political systems, and varying levels of political stability significantly impact the feasibility of the project. Secondly, the environmental impacts of constructing and operating such an extensive rail network need to be seriously considered and corresponding measures need to be taken. Thirdly, it is vital to ensure the safety and security against terrorism and other threats. Lastly, the sheer scale of the project requires enormous financial investments. Differences in economic development levels across these countries further complicate equitable cost sharing.

In the future, the countries along the railway should strengthen political and economic cooperation, including fostering trust, addressing geopolitical issues, and establishing clear agreements regarding construction, financing, and operation. Moreover, each country should integrate environmental considerations into the planning and construction stages. Governments, international organisations, and private sectors should also maintain significant and sustained investments.

In conclusion, the Pan-Asian Railway project presents enormous opportunities for economic growth and connectivity across Southeast Asia and those challenges will be gradually resolved.

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