



Transitional Relations of China and Myanmar: A New Economic Geography Approach to the Mandalay- Ruili Road Connection

Nattapon Tantrakoonsab *

Faculty of Political Science and Public Administration, Chiang Mai University, Thailand

Received 2 June 2020; Received in revised form 3 September 2020

Accepted 6 October 2020; Available online 25 November 2020

Abstract

This article explores the function of a transnational road in China-Myanmar relations from a perspective that reflects on Myanmar's experience. The analysis focuses on economic activities at the city level, in order to assess advantages and disadvantages to the relationship between both countries. The cities that were chosen as the units of analysis are Ruili and Mandalay. Using a New Economic Geography approach, a core-periphery pattern was applied as the theoretical framework to explain industrial relocation and agglomeration. In addition, this article also highlights the political and economic transitions in Myanmar since 2010 that led to change in the relational structure.

The article makes two key points. Firstly, Myanmar's dependent relationship with China is illuminated if one applies a New Economic Geography perspective to economic processes. The road played a role in the process by which Ruili was transformed into an industrialized core and Mandalay became an agricultural periphery. Secondly, the core-periphery relation is not static. At least 3 factors from the Myanmar side such as the border situation, forest policy and special economic zone policy that launched after 2011 country's reformation have impacted the relational structure.

The latter point indicates that China's influence is greatly contested by the smaller country, and that the interaction of economic and political factors impact the Myanmar-China relationship, particularly at local sites.

Keywords

China-Myanmar relations, China's influence, Myanmar border trade, Transnational road, New Economic Geography

Introduction

This article explores the function of a transnational road in China-Myanmar relations by focusing on economic activities at the city level, in order to assess advantages and disadvantages of the relationship between both countries. The cities that were chosen as the units of analysis are Ruili and Mandalay. As the cities are situated on the main road connecting Myanmar to China, the relationship is quite intense. Using a New Economic Geography approach associated with the work of Krugman (Behrens & Robert-Nicoud, 2009), a core-periphery pattern was applied as the theoretical framework to explain industrial relocation and agglomeration in Ruili and Mandalay. In addition, this article also highlights the political and economic transitions in Myanmar since 2010 that led to change in the relational economic structure between the 2 cities. It also draws on fieldwork, which is used to illustrate how connectivity has impacted Mandalay and northern Myanmar.

Application of the New Economic Geography approach in this article reveals that the Mandalay-Ruili Road facilitated the construction of a core-periphery pattern. Border openings along with construction of the road led to reduced transportation costs, which led to increased trade passing through the 2 cities. A key trading pattern emerged: Raw materials from Myanmar, especially jade and wood, were directly supplied to industries in Ruili where industrial agglomeration emerged (i.e., a clustering of similar and related firms). At the same time, Mandalay and northern-Myanmar increased agricultural production to supply the growing demand from China. The road played a role in the process by which Ruili was transformed into an industrialized core and Mandalay became an agricultural periphery.

However, this article argues that the core-periphery pattern is not static. Indeed, it will show how important policy changes emanating from Myanmar after 2010 impacted the relational structure. Border tension sparker is the provision in the 2008 constitution that ethnic armies have to assimilate to the national army. As a consequence, cross border trade experienced ebbs and flows. Moreover, in 2013 the government introduced a new policy that limits log extraction and prohibits of log export. Both policies have created risk for the wood and jade processing industries in Ruili that depend on raw material from Myanmar. Finally, the implementation of the polar growth strategy guideline since 2011 may boost economic growth and industrial agglomeration in Mandalay. Together, the three policies may herald a transformation of the core-periphery pattern, with industrial decline in Ruili and industrial agglomeration in Mandalay.

The impact of Myanmar's policy responses to Chinese economic penetration suggests that the expansion of China's influence in economic terms does not always translate into the capacity to shape Myanmar policy towards its own ends. By studying such an important example as the Mandalay-Ruili Road, it becomes possible to see that arguments about economic dependency are often overstated or at least not sufficiently

qualified. Equally important, the attention given to Myanmar's agency in this article highlights that a smaller country like Myanmar can impact the dynamics of core-periphery relations.

Overview of the Impact of the Mandalay-Ruili Road on China-Myanmar Relations

China-Myanmar relations rapidly expanded in the early 1990s, largely as a result of Myanmar being isolated by Western sanctions after 1988. Myanmar thus had to resort to reliance on China, especially for economic assistance. Myanmar also had to increasingly open its economy to China through the development of transport networks that were undertaken by the Chinese. It was in this context that the border of the two countries was opened for formal economic interactions. The main priority for Beijing since the announcement of the "West Development Strategy" in 2000 was development of China's south-western region, and a key aim was to develop cross border links that would fuel economic development. China accelerated the development of road networks to link the two countries. The "Yunnan International Passage," which links Myanmar and China, starts at Guizhou and then proceeds through Sheng Jingguan-Qujing-Kunming-Dali-Baoshan and Ruili at the Myanmar border. This inner passage continues from Ruili to Yangon via Mandalay. The inner road from Kunming to Ruili has been built section by section since 2004 and was completed in 2012 (Fan, 2011). The road from Ruili to Mandalay was improved by a private company in 1998 (Kudo, 2013). With the rapid rise in China's foreign trade, bilateral economic relation and cooperation between the two countries have expanded accordingly, leading to the improvement of the Mandalay-Ruili route, which services that trade. The Ruili border check point is the most active area for trade between China and Myanmar. For Myanmar the importance of trade through this area is immense, accounting for 65% of total border trades (Nuchpiam, 2010).

The expansion of transportation routes is often regarded as an important factor facilitating the extension of China's engagement to various countries. Writing a decade ago, Garver (2006) understood that these new lines of transportation would be bearers of China's influence. In this sense, the better roads would bring Chinese goods, businesspeople, investment, and cultural influences. Trade flows and interdependencies would develop. Chinese manufactured goods would occupy a growing market share, while distant natural resources would be increasingly plugged into China's industries. Furthermore, Holslag (2010) argued that the expansion of international transportation routes was driven by China's fear of losing influence to other powers and the desire to pursue economic interest. A regional transportation network was seen as an important contribution to China's economic leadership in Asia, helping China to diversify its supply lines, penetrate consumer markets, and counterbalance other powers' attempts to project economic influence.

Studies by Garver (2006) and Holslag (2010) about the expansion of China's transportation routes tend to portray China's engagement with its neighbors from the

perspective of an overriding “China influence.” This Sino-centric perspective tends to focus on China’s interests and actions, while giving less focus to China’s interlocutors. Of course, more recently such ambitions have mushroomed in the One Belt, One Road policy (OBOR).

Pu (2015) argues that OBOR is China’s new geo-economic strategy that tries to create “*a new, China-led economic, diplomatic, and security system*” (p. 111). While the OBOR strategy is not the focus of this article, case studies such as the one presented here, will help form a picture of the transnational economic consequences of Chinese ambitions and of course the challenge from neighboring countries like Myanmar.

Furthering the theme of dependency, Chinese engagement via the road has been perceived as a potential threat. An early study by Maung (1994) analyzed and evaluated the socioeconomic impact of China’s access to Myanmar from 1988. He emphasized the opening of the Sino-Burmese border, the settlement of ethnic Chinese in Mandalay, the flooding of local markets with Chinese goods and the opening of modern high-rise buildings owned and operated by ethnic Chinese and Yunnanese merchants that had caused the relocation of Mandalay people and the subjugation of Buddhist monks. For him, the result was the erosion of the traditional Burmese Buddhist cultural life in Mandalay transforming it into a center for drug and jade trafficking. Maung (1994) argued that the changes represented a form of Chinese colonization of Mandalay and northern Myanmar. He wrote that “*the Chinese takeover of Mandalay and northern Burma replicates the economic consequences of the British colonization of Burma, which included a massive importation of Indian and, to a lesser degree, Chinese manpower and capital*” (p. 455). In a more recent study Zin (2012) also confirms that “*since at least the mid 1980s, there has been an observable negative attitude among the people of Burma against the Chinese. Such sentiment is not just transient public opinion, but an attitude*” (p. 115). Such sentiment, he explained, is caused by massive Chinese migration, aggressive purchasing of real estate and the resulting rise in living costs and fears of cultural intrusion. Zin (2012) added that the political liberalization since the 2010 election has allowed the circulation via local media of anti-Chinese attitudes throughout the country.

The negative perception of China’s influence as a form of colonization, or the creation of dependency is also evident in attitudes towards China’s transportation routes. These kinds of attitudes are not only present on the streets of Mandalay but appear in the work of major scholars analyzing the interaction of China and neighboring countries through a framework conceptualized by Goh (2014) as the “*Modes of China’s influence*”. Using the case of South East Asia, she argues that China has converted its power resources into influence over its southern neighbors’ decision making that have lead to outcomes favorable to China. She proposes a new framework for analyzing China’s influence. Three

key modes of influence are proposed. The first one is “preference multiplying” that aims “*to exploit structural position for mutual benefit using policies to generate deliberate collective outcomes*” (p. 831). The second one is “persuasion” that aims “*to tell the better story, to assure and convince*” (p. 831). The last one is the “ability to prevail” that aims “*to ensure that self-interest and preferences are protected by altering other actors' preferences and behavior*” (p. 831).

Goh's conceptualization is excellent in showing the range of strategies by which China exercises its influence and how it gains from regional interactions. However, the China centric view is insufficient to explain local reaction or adaptation of the neighboring countries that play an important part in structuring the relationship. Therefore, the attempt of this article is to move beyond the theme of dependency and the perception of a China threat that circulates in both academic and Mandalay society. Indeed, those perceptions have to be re-evaluated. A greater understanding of the bilateral economic relations will be forthcoming by focusing on the agency and benefits from the Myanmar perspective. That is the purpose of this article.

New Economic Geography and the assumption of spatial inequality relation

In order to clarify economic relations between China and Myanmar, New Economic Geography (NEG) is applied as the theoretical framework in this paper. Mandalay and Ruili, Myanmar and Chinese cities respectively, were chosen as a unit of analysis in that they form an agglomeration that is a central observation of NEG. The approach is used to explain the economic relation between these two cities. The purpose is to illuminate aspects of economic development that are not simply products of dependency but reflect significant policy interests of Myanmar which shape the characteristics of the bilateral relationship.

The New Economic Geography approach focuses on spatial distribution of populations and processes of development that reflect spatial relations of production and consumption characteristics. In this approach, an important character of the space is the formation of a large variety of economic agglomerations. In other words, explaining the emergence of large agglomerations in geographical space is the defining issue of new economic geography. The agglomeration can be found in the emergence of industrial districts and even the formation of cities (Fujita & Krugman, 2004).

The agglomeration is dynamic and even cannibalistic. It tends to remove some economic activities from one space to agglomerate in another. So, extensions of this approach provide a number of further insights concerning not only the existence of cities, but the presence of regional and international inequalities (Venables, 2008). According to Fujita and Thisse (2013), in a globalized world where factors of production can be moved independently. Economic activities tend to be more concentrated in areas of advantageous productions, leading to more inequality between location and regions.

The dominant factor causing inequality of location is the decreasing transport cost. Krugman and Venables (1995) state that when transportation costs are sufficiently low an inequality of rich and poor regions will occur depending on the location of manufactures. Transport cost plays a role by making economic activities more footloose. It especially makes firms more sensitive to minor differences between locations.

Krugman (1991) illustrates by use of his Core-Periphery Model, which became the basis paradigm of NEG (Currie & Kubin, 2006), that when transport costs decrease below a critical value, the relational structure between two regions will change. One region can endogenously become differentiated into an industrialized "core" and the other will become an agricultural "periphery". This is because manufacturing firms tend to be located in regions with larger demand in order to realize scale economies while minimizing transport costs. The factor mobility such as capital, raw material and worker also become concentrated in the industrialized core. Firms benefit from the availability of both cheap and skilled workers and with a growing workforce consumer demand also increases in that region.

Therefore, the cost of production will decrease by this economics of agglomeration and "increasing returns to scale" can be possible. This means that the output increases by a larger proportion than the increase in inputs during the production process. In the words of Marshall (1980), "*An increase of labour and capital leads generally to improved organization, which increases the efficiency of the work of labour and capital. Therefore, an increase of labour and capital generally gives a return increased more than in proportion*" (Chapter 13). At the same time, the region with lesser demand that lost factor mobility but remain immobile factor especially land became agricultural periphery region.

It should now be apparent that this article sees the Mandalay and Ruili route primarily through the prism of transport cost and its implications, as theorized by NEG. In answering how the economic relation between the two cities developed on the road, a greater understanding of the structure of relationship is possible. It should be noted that the road here is conceived as transport cost, which is defined broadly to include all impediments to trade and movements. Spulber (2007) mentioned that this includes not only transport costs but also time costs, transaction costs and tariff costs.

Spatial economic structure of China-Myanmar relations via the road

Increasing trade

The trade relation between Mandalay and Ruili has rapidly developed since the border opened in 1988. The Myanmar government has liberalized its trade policy and lifted the restrictions on trading by the private sector. Thus, the volume of trade has greatly increased. In 2005 the volume of trade was \$422.83 million which was around 4 times the volume in 1992. The Myanmar-Yunnan border trade accounts for about 55% of the total

trade value of the overall Sino-Myanmar trade; over 80% of Myanmar exports to China and about 40% of Myanmar imports from China are through the border trade (Myoe, 2007).

Ruili, bordering the Myanmar town of Muse, is in terms of trade with a neighboring country the largest land port in China. It has 6 formal passageways and 21 informal ones with Myanmar (Nuchpiam, 2010). In 1992, China's central government also established border economic co-operation zones for the development of trade and export processing in border regions. The Ruili Border Economic Co-operation Zone has played an active role in the development of economic and trade relations between China and Myanmar (Fang & Ran, 2010). Muse remained underdeveloped compared with Ruili but the government aimed to develop Muse to be "the biggest border trade zone in the country" by 2018. The project included commercial zones, condominiums, office towers, a jade market for finished products, 300 luxury villas, three hotels, supermarkets, police and fire stations, and a Shan "ethnic village" as tourism destination (Hamond, 2016). Furthermore, the road between two cities was paved and expanded to accommodate larger trucks in 1998 (Kudo, 2013). In addition, Kubo (2016) points out that transaction costs at the border are relatively low compared with those in other channels because of the weak law enforcement. This allows traders to save time and costs for compliance with formal procedures.

These complementary conditions of infrastructure and low transaction cost enabled the road to be the main route of trade between the two countries. The road, 387 kilometers long from Ruili to Mandalay, is a comfortable channel for trade between Myanmar and China. The value of trade via Ruili port reveals the importance of the road. Kudo (2013) estimated that about half of Myanmar's exports and more than 30% of its imports are transacted through border trade. Border trade with China accounted for about 70% of Myanmar's total border trade in 2006, Ruili port shared 65.4% of Myanmar's total border trade. For China, Myanmar is Yunnan Province's largest trading partner. In 2008, it accounted for around 40% of Yunnan's exports and 32% of its imports.

The kinds of goods that trade in the route reflects the kind of economic relation between the two cities and countries. Almost all exports from Myanmar are raw materials. In 2010 the major exports were wood, precious stones, mineral products and vegetables. These commodities occupied around 80% of the exports to China (Mizuno, 2016). According to Chinese customs statistics, during 2003 96% of China's imports (i.e., logs and sawn wood from Myanmar) entered China's Kunming customs district overland (X. Sun et al., 2004). For jade trade, around 50-80% of jade stone in Myanmar was smuggled through the border (Global Witness, 2015). The data in Figure 1 shows the increased wood extraction and jade production in Myanmar that ends up being traded across the border.

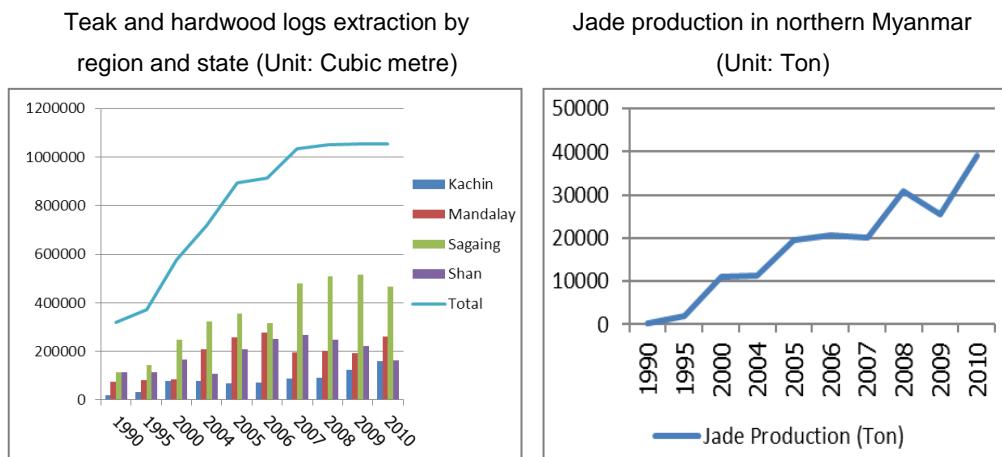


Figure 1 Production of log and jade in northern Myanmar, 1990-2010 (Central Statistical Organization, 2017)

Interviews with the business people affiliated with Mandalay Federation of Chambers of Commerce and Industry (MDCCI), in 2015, corroborated that China has been a major destination for exports from Mandalay and all of Myanmar's northern areas. This is a strong perception among entrepreneurs, and China figures as the key destination of trade. Trade statistics show that apart from wood and jade, Mandalay's exports consist of agricultural products, such as peanuts, corn, and fruits such as water melons. Almost all of the exported products of Mandalay are exported to China, and the distribution of these products principally relies on Chinese agents who come to Myanmar to collect them for export through the Chinese border. They estimated that nearly 80% of products such as peanuts and cereals of various types are exported to China, the rest being exported to other countries or locally consumed. The interviewees, with an eye to the future, also expressed that the Chinese market is able to absorb more as Chinese demand remains strong.

Meanwhile, the imported commodities from China via the road include furniture, fertilizer, agricultural machinery, motorcycles, food, drinks, medicine, medical instruments, construction instruments, garments, etc. As pointed out above, virtually all types of Chinese products are available; it is mostly Myanmar merchants who bring these products from the Chinese border and distribute them to other towns. Motorcycles are the only products for which the Chinese have their own sale outlets; or, alternatively, they may operate motorcycle shops under the names of Burmese. Interviewees noted however, that there are only a small number of businesses of this latter type.

This trading relation facilitated by the decreasing transport cost resulting from the transnational road shows that the spatial relation started to develop when raw materials from the Myanmar side flowed to China because of heavy demand. At the same time, Mandalay, the main destination of goods from China, emerged as a consumer.

In this relationship, Ruili functions as a logistics center for both China and Myanmar, as around 80% of goods imported from Ruili are sold to other provinces, and 80% of goods exported from Ruili come from other provinces (Fang & Ran, 2010).

Industrialized Ruili and its effect on Mandalay

The dramatically increased flow of commodities between the two cities has caused Ruili to rapidly change. Since the opening of the border, Ruili has been considered a port city for international trade. Business leaders from the well-developed provinces of Zhejiang and Fujian invested in the city, and soon the small city was enlarged. Ruili has established trade and relations not only with 23 provinces on the Chinese mainland, but also with Taiwan, Hong Kong, Myanmar, Thailand and Singapore. The Dehong government on August 28, 2000, implemented a special policy tailored to creating a "Special Export Processing Zone" policy. The processing zone is 1.92 square kilometers in size with the major function of trade, machining, storage and tourism in Jiegao. All goods in the processing zone are duty-free (Fang & Ran, 2010). In 2011, Ruili's population increased to 0.1 million, up 20% from 2005. GDP was 3.52 RMB billion, over double that of 2006. Fixed asset investment was 3.2 RMB billion, a whopping more than 600% increase from 2005 (CEIC, n.d.).

The growth of the city has resulted not only from increasing trade, but also industrial agglomeration. The industrial developments in Ruili are associated with its imported commodities. Logging and primary processing are highly concentrated on the Yunnan side of the Yunnan-Myanmar border. The total number of logging companies and intermediaries in border towns is unclear; many are not registered and are highly mobile. A report from the Department for International Development revealed that the number of sawmills along the border that process logs from Myanmar is probably between 800 and 950. A majority of Yunnan's log imports from Myanmar undergo processing into sawn wood at the border on the China side and are shipped to Dali and then on to Kunming, or often directly to Kunming. Kunming serves as an intermediary processing, wholesale and retail hub for Myanmar sawn wood, and some round wood. Increasingly, however, Kunming is instead an intermodal transit point between the Yunnan-Myanmar border and wholesale markets and manufacturers in China's east coast cities (X. Sun et al., 2004).

The jade industry is another industry that agglomerates in Ruili. Since the 1990s, Ruili has dedicated itself to developing the jewelry industry. There are over 40,000 professionals engaged in the jewelry trade and industry in Ruili, with the annual trading volume reaching 2 billion RMB. The famous "Street of Jewelry in Ruili" has become a well-known tourist attraction. Five large-scale jewelry markets have been formed in Jiegao Border Trade Zone and Ruili City: these are the Whole Sale Market for Rough Jade Stone, Huafeng Jewelry Processing Industrial Park, Ruili Jewelry Jade Street, Jeigao Sino-Myanmar Street and the New Oriental Jewelry Town. There are more than 800 jewelry processing factories,

and 1,000 jewelry stores. More than 6,000 people engage in this processing field, and jewelry trade has been active. Customs records show that around 6,000 tons of rough jade stone produced in Myanmar are imported annually by China, of which 4,000 tons enter the Chinese market via Ruili border gate that is known as "the path of jade" (Nuchpiam, 2010).

The growth of the wood and jade industry in Ruili has negatively impacted industrial growth in Mandalay. Since 1990, many industries in Mandalay have declined, especially the wood processing industry. Mandalay was formerly the largest wood processing industry in Myanmar. Saw mills, re-cutting mills and domestic industrial mills decreased from around 900 mills in 1990 to 500 mills in 2010, a decline the government has sought to reverse (Aye Thida Kyaw, 2014).

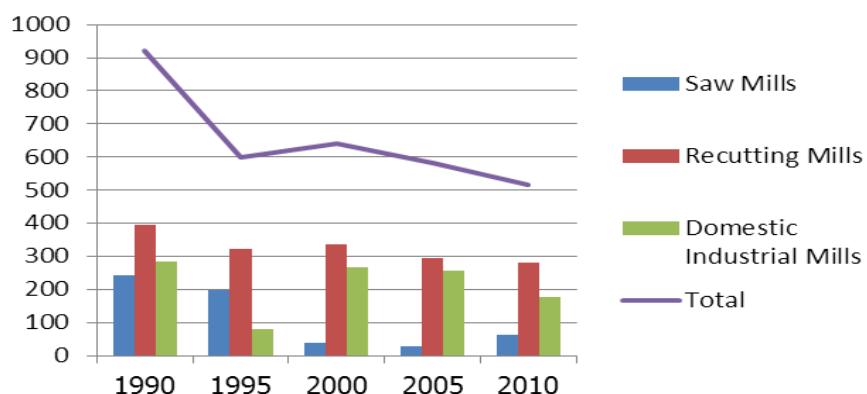


Figure 2 Wood processing mills in Mandalay (Central Statistical Organization, 2017)

As for the jade industry, Mandalay is regarded as a distribution center of raw jade. Mandalay's central market for raw gemstones is Mahar Aung Myay, where most sellers are Burmese. Chinese buyers have come in an increasing number. Chinese often arrive to purchase raw gemstones, which they take back for processing in China. Chinese buyers have thus competed with people from Myanmar who also want to buy raw gemstones. Interviews conducted with Myanmar gemstone merchants at Mahar Aung Myay revealed that there have been quarrels between Chinese and Myanmar merchants because the Chinese who come to buy the raw materials have a higher capital for their businesses than buyers from Myanmar; they can thus often fetch gemstones of higher quality. As a result, most high quality jade has been sent to fuel the jade industry in China instead of Mandalay (Egreteau, 2012).

The Myanmar industry struggles to survive, and a number of large, medium and small factories across a range of industries have been forced to close. Some industrialists have been reported as saying that small- and medium-sized enterprises (SME) at the Mandalay industrial zone are on the brink of collapse (Htay Hla Aung, 2016).

Mandalay's industrial profile has changed not only because of an avalanche of Chinese goods being made locally available as a consequence of industrial agglomeration in Ruili, but also because of the wave of Chinese business immigration that facilitates the export of raw material to Ruili. In interviews with members of the Yunnan Chinese Association in Mandalay, it was revealed that the Chinese who have migrated to Myanmar in recent times largely engage in business activities. They often have their own trade partners in Myanmar, who thereby give them assistance in conducting their businesses. There are both Burmese and ethnic-Chinese Burmese, who serve as trade partners. Most of the new Chinese migrants are not from Yunnan but from other regions in China. In addition, the pattern of their migration has changed; that is, they come for a temporary stay for business purposes and not for permanent settlement. Guotu and Wangbo (2010) also argue that since the 1990s over one million Chinese migrants have settled in Myanmar. The majority of them are traders and hawkers. Many of them are floating business people between China and ASEAN who seek better opportunities. As a diasporic community they keep close relations with their homeland (Guotu & Wangbo, 2010).

It is evident that a wave of Chinese mobility to Mandalay occurred after the border opened in 1988. The wave has changed much of Mandalay's economic landscape especially in the city. In addition, trade activities between migrant Chinese and their Myanmar counterpart is the important mechanism by which the economic relation between two countries via the road is constructed. This migration has been the instrument by which many kinds of raw material produced in Myanmar has made its way to fuel agglomeration in Ruili and other Chinese cities, while leading to deteriorated industries in Mandalay.

Agriculturalized Northern Myanmar

Ruili has gradually changed to be an industrial core whereas Mandalay and the other cities in northern Myanmar have shifted to support agricultural exports (agricultural periphery). Agricultural land in Northern Myanmar has rapidly expanded, driven by China's opium substitution program together with Myanmar's policy to promote the development of the agricultural sector. The former, with the support of the Myanmar government, is aimed at supporting the shift towards an export-led, large-scale agro-industrial sector in which land-use rights are allocated to domestic and foreign agribusiness (Kollert & Walotek, 2015). More than 30 Chinese entrepreneurs from Ruili have applied for agricultural development and production in the north of Myanmar. By the end of 2006, the accumulated value of this kind of trade had reached 100 million Yuan. Direct investment by Chinese entrepreneurs includes investment in seeds, seedling, chemical fertilizers, as well as training to produce rice, maize, grains, rubber, sugarcane, tea, and other crops that are transported back to China to repay the investors (Nuchpiam, 2010).

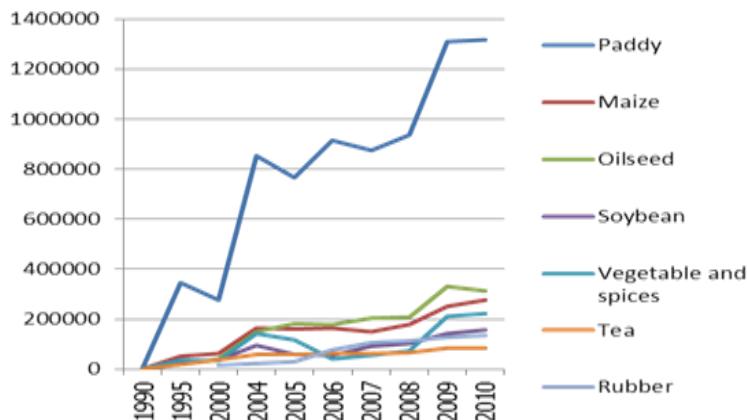


Figure 3 Sown acre of annual and perennial crops substituting for opium poppy in border area (Acre) (Central Statistical Organization, 2017)

From the early 1990s to 2010 the sown area that substituted opium production was paddy, occupying approximately 1.3 million acres. This was beneficial to the Chinese, as China became one of the world's largest rice importers since 2013 because it was facing stagnation of supply and increasing domestic demand (Peng et al., 2009). Chinese demand for rice has led to the growth of production in mountainous areas of Myanmar. Intensive rice farming was first introduced in the border area to China and was strongly enhanced by the government. From the late 1990s, it became the latest growth phases of rice production in Myanmar that boomed in the mountainous zone instead of delta and central zone as in the past (Matsuda, 2009). According to the Ministry of Commerce, Myanmar exports rice to over 50 countries and more than 70% of exported rice goes to China. Between April 2016 and January 2017, Myanmar exported 1.15 million tons of rice and broken rice to China. Traders export rice to China mostly via border routes (Nilar, 2017).

The expansion of the agricultural area and the increasing export to China demonstrate that Mandalay and the northern region of Myanmar have become the agricultural periphery in the core-periphery relation between Mandalay and Ruili.

Myanmar's changing policies and its implication for spatial economic relation

After Myanmar shifted to a semi-civilian government in 2011, the country has been regarded as undergoing political and economic reform (Taylor, 2012). These shifts could also be observed in the realm of foreign policies. The crucial aim has been to reengage with western states and create some distance with China. The overwhelming dependence on China is said to be one factor that pushed Myanmar to transition. Myanmar's economic and security dependence on China was said to be worrying to the generals who eventually sought to dilute Chinese dominance by reengaging with the West. This played a role in allowing

limited democratization of the country (Zin & Joseph, 2012). The consequence is that since 2011 the government's attitude toward Chinese investment projects shifted. It has come under increasing scrutiny, criticism, and even opposition in the case of the suspension of the Myitzone dam project (Y. Sun, 2012). Unlike the earlier period of high dependence, during the liberalization period the suspension of the dam project shows that China was unable to prevent Myanmar from threatening China's interest in Myanmar (Goh & Steinberg, 2016). It also shows that Chinese influence can be challenged by a smaller country like Myanmar and that the simple assumption of dependency should be reassessed.

The changing policy of Myanmar toward China is also reflected in the Mandalay-Ruili relation. A key question of this article is what Myanmar has done and might do in the future to change the relational structure that has been well established in Mandalay-Ruili spatial relations since the 1990s, and which was discussed above. Additionally, what is the implication for the core-periphery relation between the two cities. As the model applied in this article suggested, the central factor to form such a relation was the transport cost – but such an account also needs to be complemented by other factors that impact that cost. The policies that affect the cost that can be addressed here are changing the border policy, centralizing the natural resource management and the polar growth strategy policy.

First is the national integration policy. This policy changed after 2008 and led to the war between the Myanmar military and ethnic insurgent groups in the border area to re-erupt. Many ethnic armed groups have been salient stakeholders in economic activities along the border because they control areas that involve jade mining, logs extraction and large-scale plantations. The new policy is that the Myanmar government intends to assimilate ethnic arm groups into the national army, leading to further conflict. The main clashes arose between the Kachin group taking a stake in the jade mine and the clashes with the Kokang group that controls border trade and a large farmland bordering China. Massive clashes took place in 2009 and 2011. These clashes were so violent that there was a wave of more than 100,000 refugees that crossed the border into China. And jade mining, including agricultural areas along the border, were affected.

Instability in border areas created a downturn in economic activities. For example, jade production and the timber trade in Kachin state were hurt, and agricultural land in Kokang was impacted significantly. In terms of the core-periphery relation outlined above, fighting along the border has made the "transport costs" higher, and that has impacted, at the least, the wood and jade industries in Ruili and also agricultural activities near the border.

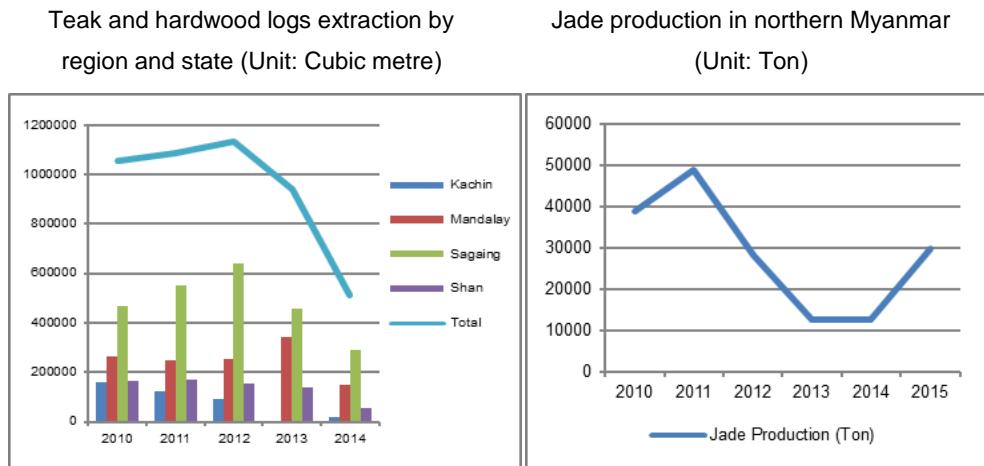


Figure 4 Production of log and jade in northern Myanmar, 2010-2015 (Central Statistical Organization, 2015)

The second policy that impacted the relationship was the new forest policy, which aimed at greater national control in the use of timber and wood. Support and pressure by civil society groups and the EU led in 2013 to the initiation of a formal 'Forest Law Enforcement, Governance and Trade' (or FLEGT), which resulted from a bilateral process between the European Union and the Government of Myanmar (Springate-Baginski et al., 2014). Since 2014, a log export ban has been in force across Myanmar. Xinhua reported that the ministry of forestry said:

Three schemes are being laid down with the timber extractive industry with the first one being that timber production is allowed every two years to fulfill the requirement of raw materials for the value-added export products. The second scheme allows timber production only for self-sufficiency, while the third one permits import of products substituting wood to fulfill the local requirement for raw materials (Shaohui, 2016).

The log export ban in Myanmar has had a distinct impact on the Chinese markets. China, which imports 80% of its teak from Myanmar and still demand for high-quality logs, coupled with a sharp rise in teak prices from about US\$750/m³ at the end of 2013 to almost US\$2,000/m³ in January 2014 (Kollert & Walotek, 2015). In the short term, businessmen in Ruili told Xinhuanet that the policy has made hard wood raw material prices "crazy up". The soaring cost of wood has led to a sales market downturn to which wood enterprises have needed to diversify. Some Chinese companies have turned their attention to factories in Myanmar in order to secure access to high quality wood at a lower price in order to continue their business (China Broadcasting Network, 2013).

Regarding the jade industry in Ruili, the status to be the “Jade Center” of Ruili is undermined by at least 2 factors. First, there is decreasing demand in China since the 2000s (Júzi, 2017). Additionally, there is insecurity of raw jade supply sourced from Myanmar. The insecurity comes from the strict export control of raw jade and also the monopoly of jade export companies (X. C. Sun, 2015). Both factors have led to downturns in the jade trade and industry in Ruili. The Chinese newspaper Global Times reported that only a few buyers can be found on jade street, some jade stores have already shut down and businessman are looking for business diversification (Zhang Ye, 2016). The situation shows that the “core” status of the jade industry in Ruili is also in decline.

Finally, Myanmar’s assertion of independence, as it attempts to break from the core-periphery relationship is evident in the two polar growth strategy guidelines. The two polar growth strategy was launched by the Thein Sein government and was present in National Comprehensive Development Plan (2011-2031) (Myanmar Investment Commision [MIC] & Japan International Cooperation Agency [JICA], 2015). Initially, the policy impacted the emergence of industrial agglomeration in Ruili but in actuality the two polar growth strategy aimed at higher and balanced economic growth of both Yangon and Mandalay. The government proposed a two polar growth strategy in which Mandalay would be the second growth pole and the first would be Yangon (Kudo & Kumagai, 2012).

In the growth strategy, Mandalay was projected to become an industrial city by promoting three existing industrial zones and the creation of a new zone, the Mandalay Myotha Industrial Park (MIP), located about 58 km from the city of Mandalay and 45 km from Mandalay International Airport. The latter was developed under a joint venture between the Mandalay city government and the Mandalay Myotha Industrial Development Public Co. (MMID). MIP will be developed in three phases: Phase 1 during 2013-2017, Phase 2 during 2017-2022 and Phase 3 during 2022-2025. The park includes areas for industrial development, warehouse and logistics development, residential development, road transportation development, and the development of commercial facilities. The MIP is expected to create a new industrial and logistic hub in upper Myanmar, enhancing the overall competitiveness of Mandalay in the future (Tsui, 2016).

The discussion above shows that Myanmar since 2009 has set in motion a gradual reversal of the core-periphery pattern that developed after the border opening in 1988. Ruili as an industrialized core has tended to decline, especially in those industries that depend on raw material from Myanmar. Myanmar government policies that have created instability on the border have tended to increase the transportation cost which was the heart of the relationship. At the same time, stability and policy initiation to boost economic growth in Mandalay can be the push factor to attract investment not only from Ruili but also from other

parts of the country and also from aboard, with a view to transform Mandalay from the agriculturalized periphery to the new industrial core.

Conclusion: transitional Myanmar under China influence

This article has suggested that the core-periphery model of the NEG school helps us to illuminate the economic relation between Mandalay and Ruili, which in part mirrored the broader economic relationship between the two countries. When the border opened in 1988, and the road was completed in 2000, the transport costs between the two cities reduced significantly and trade rapidly increased. The major goods that flowed between the two cities were complementary and led to a core-periphery relationship. The flows of raw materials to Ruili and manufactured goods to Myanmar led to the industrial agglomeration in Ruili and agriculturalization in Mandalay and northern Myanmar.

Such a pattern of core-periphery relations as described in this article confirms the dependency structure between China and Myanmar that has been discussed in the literature. However, this article illustrates how economic processes that flow from transport costs can emerge at regional and sub-regional levels, without necessarily reflecting overall government policy. It is unlikely the Myanmar government sought a core-periphery relationship with China, and indeed once it emerged in relation to the two cities discussed, the government has worked to reverse the trend. The changing policies of Myanmar since 2011 show that the dependency structure is not permanent and can be mitigated. This point indicates that China's influence is greatly contested by Myanmar, and that the interaction of economic and political factors impact the Myanmar-China relationship, particularly at local sites.

This article also reveals that emphasizing the role of a bigger country like China may lead to misunderstanding about "China's influence", and ignore the complex ways in which a core-periphery relation may emerge. The empirical evidence offered in this article also suggests that a smaller country like Myanmar can make a change to that relationship.

References

Aye Thida Kyaw. (2014, August 18). *Timber tender to feed domestic sawmills*. Myanmar Times. Retrieved from <http://www.mmtimes.com/index.php/business/11370-timber-tender-to-feed-domestic-sawmills.html>

Behrens, K., & Robert-Nicoud, F. (2009). Krugman's papers in regional science: The 100 dollar bill on the sidewalk is gone and the 2008 Nobel Prize well-deserved. *Regional Science*, 88(2), 467-489. Retrieved from <https://doi.org/10.1111/j.1435-5957.2009.00241.x>

CEIC. (n.d.). *CEIC Data*. Retrieved from <https://www.ceicdata.com/>

Central Statistical Organization. (2015). *Myanmar statistical yearbook 2015*. Central Statistical Organization, Ministry of Planning and Finance.

Central Statistical Organization. (2017). *Myanmar statistical yearbook 2017*. Central Statistical Organization, Ministry of Planning and Finance.

China Broadcasting Network. (2013, December 2). *缅甸禁止红木原料出口 中国红木行业或将重新洗牌 (Myanmar bans export of rosewood raw materials to China's redwood industry or reshuffle)*. Retrieved from http://news.cnr.cn/native/gd/201312/t20131202_5142961_34.shtml

Currie, M., & Kubin, I. (2006). Chaos in the core-periphery model. *Journal of Economic Behavior & Organization*, 60(2), 252-275.

Egreteteau, R. (2012). The Burmese Jade trail: Transnational networks, China and the (relative) impact of international sanctions on Myanmars gems. In N. Cheesman, M. Skidmore, & T. Wilson (Eds.), *Myanmar's transition: Openings, obstacles, and opportunities* (pp. 89-116). Institute of Southeast Asian Studies. Retrieved from <https://doi.org/10.1355/9789814414173-013>

Fan, H. (2011). China's "Look South": China-Myanmar transport corridor. *Ritsumeikan International Affairs*, 10, 43-66.

Fang, X., & Ran, Y. (2010, October). *Jiegapo: the first special economic zone on the inland border*. China Daily. Retrieved from http://www.chinadaily.com.cn/m/dehong/2010-10/18/content_1142533.htm

Fujita, M., & Krugman, P. (2004). The new economic geography: Past, present and the future. In R. J. G. M. Florax & D. A. Plane (Eds.), *Fifty years of regional science: Advances in spatial science* (pp. 139-164). Springer.

Fujita, M., & Thisse, J. F. (2013). *Economics of agglomeration: Cities, industrial location, and globalization* (2nd ed.). Cambridge university press.

Garver, J. W. (2006). Development of China's overland transportation links with Central, South-west, and South Asia. *The China Quarterly*, 185, 1-22.

Global Witness. (2015). *Jade: Myanmar's big state secret*. Author.

Goh, E. (2014). The modes of China's influence: Cases from Southeast Asia. *Asian Survey*, 54(5), 825-848. Retrieved from <https://doi.org/10.1525/as.2014.54.5.825>

Goh, E., & Steinberg, D. I. (2016). Myanmar's management of China's influence: From mutual benefit to mutual dependence. In E. Goh (Ed.), *Rising China's influence in developing Asia* (pp. 75-76). Oxford University Press. Retrieved from <https://doi.org/10.1093/acprof:oso/9780198758518.003.0003>

Guotu, Z., & Wangbo, W. (2010). Migration and trade: The role of overseas Chinese in economic relations between China and Southeast Asia. *International Journal of China Studies*, 1(1), 174-193.

Hamond, C. (2016, January 31). *Restive border town of Muse to be recast as commercial center*. Nikkei Asian Review. Retrieved from <http://asia.nikkei.com/Politics-Economy/Economy/Restive-border-town-of-Muse-to-be-recast-as-commercial-center?page=1>

Holstag, J. (2010). China's roads to influence. *Asian Survey*, 50(4), 641-662. Retrieved from <https://doi.org/10.1525/as.2010.50.4.641>

Htay Hla Aung. (2016, December 29). *Mandalay SMEs on verge of collapse*. Asia News Network. Retrieved from <https://annx.asianews.network/content/mandalay-smes-verge-collapse-36250>

Júzi. (2017, March 19). *玉石市场面临行业调整面临洗牌 (The jade market is facing industry adjustments and a reshuffle)*. Sina. Retrieved from <http://collection.sina.com.cn/yjjj/2017-03-19/doc-ifycnpiu9070298.shtml>

Kollert, W., & Walotek, P. J. (2015). *Global teak trade in the aftermath of Myanmar's log export ban* (Planted Forests and Trees Working Paper No.49). Food and Agriculture Organization of the United Nations. Retrieved from <http://www.fao.org/forestry/plantedforests67508@170537/en>

Krugman, P. (1991). Increasing returns and economic geography. *Journal of Political Economy*, 99(11), 483-499. Retrieved from <https://doi.org/10.1086/261763>

Krugman, P., & Venables, A. J. (1995). Globalization and the Inequality of Nations. *The Quarterly Journal of Economics*, 110(4), 857-880.

Kubo, K. (2016). *Myanmar's cross-border trade with China: Beyond informal trade* (IDE Discussion Papers No. 625). Institute of Developing Economies, Japan External Trade Organization (JETRO). Retrieved from <http://hdl.handle.net/2344/1601>

Kudo, T. (2013). Myanmar's border trade with China: Roads, gates, and peace. In M. Ishida (Ed.), *Border economies in the Greater Mekong Sub-region* (pp. 279-295). Palgrave Macmillan.

Kudo, T., & Kumagai, S. (2012). *Two-polar growth strategy in Myanmar: Seeking "high" and "balanced" development* (IDE Discussion Papers. No. 371). Institute of Developing Economies, Japan External Trade Organization (JETRO). Retrieved from <https://www.ide.go.jp/English/Publish/Download/Dp/371.html>

Marshall, A. (1980). Book four: The agents of production: Land, labour, and capital and organization. In A. Marshall (Ed.), *Principles of economics*. McMaster University. Retrieved from <https://www.marxists.org/reference/subject/economics/marshall/bk4/ch13.htm>

Matsuda, M. (2009). Dynamics of rice production development in Myanmar: Growth centers, technological changes, and driving forces. *Tropical Agriculture and Development*, 53(1), 14-27.

Maung, M. (1994). On the road to Mandalay: a case study of the Sinonization of Upper Burma. *Asian Survey*, 34(5), 447-459. Retrieved from <https://doi.org/10.2307/2645057>

Mizuno, A. (2016). Economic relations between Myanmar and China. In K. Odaka (Ed.), *The Myanmar economy: Its past, present and prospects* (pp. 195-224). Japan: Springer.

Myanmar Investment Commission (MIC), & Japan International Cooperation Agency (JICA). (2015). *Mandalay Investment Opportunities Survey 2015*. Retrieved from http://www.dica.gov.mm/sites/dica.gov.mm/files/document-files/en_mandalay_investment_opportunities_survey_final_report_160217_mic_jica_mmrd.pdf

Myoe, M. A. (2007). *Sino-Myanmar economic relations since 1988* (Working Paper Series No. 86). Asia Research Institute, National University of Singapore. Retrieved from <https://pdfs.semanticscholar.org/e428/effe57296dd48aab25ff49a98325412f0d6.pdf>

Nilar. (2017, February 13). *70% of rice exported to China*. Eleven Myanmar. Retrieved from <http://www.elevenmyanmar.com/local/7855>

Nuchpiam, T. (2010). *Study on cross border economic and social transformation in the Greater Mekong Sub-region (GMS): Impacts and implications*. Institute of Asian Studies, Chulalongkorn University.

Peng, S., Tang, Q., & Zou, Y. (2009). Current status and challenges of rice production in China. *Plant Production Science*, 12(1), 3-8. Retrieved from <https://doi.org/10.1626/pps.12.3>

Pu, X. (2015). One belt, one road: Visions and challenges of China's geo-economic strategy. *Journal of Mainland China Studies*, 59(3), 111-132. Retrieved from [https://doi.org/10.30389/MCS.201609_59\(3\).0004](https://doi.org/10.30389/MCS.201609_59(3).0004)

Shaohui, T. (2016, September 12). *Myanmar to allow resumption of timber production in next financial year*. Xinhua. Retrieved from http://www.china.org.cn/world/Off_the_Wire/2016-09/12/content_39281890.htm

Springate-Baginski, O., Thein, A. K., Neil, A., Thu, W. M., & Doherty, F. (2014). Democratising timber: An assessment of Myanmar's emerging Forest Law Enforcement, Governance and Trade (FLEGT) process. *Forest Policy and Economics*, 48, 33-45. <https://doi.org/10.1016/j.forepol.2014.09.004>

Spulber, D. F. (2007). *Global competitive strategy*. Cambridge University Press.

Sun, X., Katsigris, E., & White, A. (2004). *China and forest trade in the Asia-Pacific region: Implications for forests and livelihoods*. Forest Trends.

Sun, X. C. (2015). The development strategy of Tengchong jade processing industry. *Cross-Cultural Communication*, 11(5), 30-37.

Sun, Y. (2012). China and the changing Myanmar. *Journal of Current Southeast Asian Affairs*, 31(4), 51-77.

Taylor, R. H. (2012). Myanmar: From army rule to constitutional rule? *Asian Affairs*, 43(2), 221-236. Retrieved from <https://doi.org/10.1080/03068374.2012.682367>

Tsui, W. (2016, June 8). *Myanmar rising: The Mandalay opportunity*. HKTDC Research. Retrieved from <https://hkmb.hktdc.com/en/1X0A6RN4/hktdc-research/Myanmar-Rising-The-Mandalay-Opportunity>

Venables, A. J. (2008). New economic geography. In S. N. Durlauf & L. Blume (Eds.), *The new Palgrave dictionary of economics* (2nd ed.). Palgrave Macmillan.

Zhang Ye. (2016, August 8). *Jade and redwood traders in China face challenges*. Global Times. Retrieved from <http://www.globaltimes.cn/content/999231.shtml>

Zin, M. (2012). Burmese attitude toward Chinese: Portrayal of the Chinese in contemporary cultural and media works. *Journal of Current Southeast Asian Affairs*, 31(1), 115-131. Retrieved from <https://doi.org/10.1177/186810341203100107>

Zin, M., & Joseph, B. (2012). The democrats' opportunity. *Journal of Democracy*, 23(4), 104-119.