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COMPETITIVENESS INDEX OF PENINSULAR MALAYSIA'S NORTHERN BORDER DISTRICTS

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Abstract

Competitive cities are known for their substantial economic growth, high incomes, and the ability to attract foreign investments. While a strong economy is crucial, other factors such as effective governance, efficient transportation, adequate housing, social inclusivity, and environmental sustainability also contribute to a city's competitiveness. This paper aims to assess the economic competitiveness of border districts in northern Peninsular Malaysia. Border cities hold significant importance following their proximity to neighbouring countries, subsequently offering advantages in terms of trade opportunities, cultural exchange, diplomatic relations, security, and socio-cultural integration. This research employed the quantitative method to measure the competitiveness level of 10 districts using economic and socioeconomic statistical data from the Department of Statistics Malaysia. The results indicated a distinct disparity among the districts along the Malaysia-Thailand border. In particular, the western districts of Perlis and Kubang Pasu displayed a higher level of economic development compared to the rural eastern districts due to their economic diversity and close proximity to industrial hubs such as Penang, Sungai Petani, and Songkhla in Southern Thailand. Furthermore, the strategic locations of the busiest international entry points, Bukit Kayu Hitam and Padang Besar, contribute significantly to the importance of logistics in these areas. In contrast, the middle and eastern districts heavily rely on agricultural activities, resulting in lower average incomes and higher poverty rates.

Keywords: Competitive cities, Competitiveness index, Economic growth, Border towns, Malaysia-Thailand

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INTRODUCTION

Cities around the world continue to urbanise and eventually compete with each other. Competitive cities typically experience significant economic growth, high incomes, and attract foreign investments. While economies play a crucial role in city competitiveness, the phenomenon is also believed to be contributed by various other factors, such as good governance, efficient transportation and traffic management, sufficient housing, social inclusivity, and environmental sustainability.

There is a growing body of literature that studies city competitiveness (see Sáez & Perriáñez, 2015; Sáez, Perriáñez, & Saizarbitoria, 2017; Sgambati & Gargiulo, 2022; Tennøy, Gundersen, & Øksenholt, 2022). However, many of these studies use different approaches to define and measure urban competitiveness due to the multitude of variables and factors involved. Sáez et al. (2015) introduced three dimensions to examine city competitiveness: basic dimension, efficiency dimension, and innovation dimension. Harris (2007), on the other hand, used different dimensions related to transportation, security, and housing. Moreover, the Economic Planning Unit (2015) created a multidimensional framework to define city competitiveness, which includes economic growth, good urban governance, social inclusion, and environmental sustainability. Due to the complexity of factors driving city competitiveness, researchers have been unable to establish a universal definition or standardised measurement methods. Therefore, studying these various dimensions and factors can provide a better understanding of city competitiveness and identify strategies to enhance it.

The aim of this research was to evaluate the competitiveness of northern international border cities in Peninsular Malaysia. Border towns are significant due to their proximity to neighbouring countries and unique geographic location. They offer advantages such as trade opportunities, cultural exchange, diplomatic relations, security, and socio-cultural integration. Additionally, these towns serve as trade hubs, promote cross-cultural understanding, facilitate diplomacy, ensure border control, and encourage collaboration in various fields. Harnessing the potential of border towns can bring substantial benefits to both local communities and the broader region. Assessing various dimensions and factors of such notion will offer insights into the competitiveness of these districts. Findings from this research shall provide valuable information for policymakers and city planners in enabling them to identify strengths and weaknesses, develop strategies for improvement, and enhance the overall competitiveness of the districts.

LITERATURE REVIEW

Definition of urban competitiveness

Researchers have used various methodologies and criteria to evaluate cities' competitiveness. However, there is currently no widely accepted universal set of definitions, methodologies, frameworks, and criteria for assessing competitiveness (Economic Planning Unit, 2015). Studies on urban competitiveness recognise that it is complex in nature, involving multiple dimensions and characteristics that influence cities' ability to attract investments, generate employment, and attract a skilled workforce (Sgambati & Gargiulo, 2022).

According to Sáez and Perriáñez (2015), urban competitiveness refers to the ability of cities to meet the demands of national and global markets while improving the socioeconomic quality of life for their residents through sustainable development. Cities with strong and stable economies have a certain level of autonomy from their national economies and can compete on a global scale. The performance of a country's economy is influenced by the competitiveness of its cities, which are less dependent on domestic markets. It involves creating favourable conditions for economic activities to thrive, subsequently attracting investment as well as generating wealth and employment (Sáez, Perriáñez, & Saizarbitoria, 2017).

Competition and competitiveness are two interconnected yet distinct concepts. Competitiveness is the result of competition, and cities need to be competitive to thrive (Sáez & Perriáñez, 2015). A competitive city creates an environment that is conducive to competitiveness with effective public institutions, innovative businesses, and supportive infrastructure. Achieving true competitiveness requires the presence of resources, capabilities, and institutions that leverage the city's competitive advantage. However, not all cities compete under the same conditions and they vary in terms of resources, strength, and capabilities to contend with competitors.

A recent study conducted by the UNHABITAT & CASS (2020) indicated that the global economic competitiveness of cities in 2019 and 2020 was influenced by a decline in the average urban competitiveness across major countries such as China, the United States, and Europe. This subsequently prompted a slight decrease in global urban competitiveness. Essentially, the ongoing trade war among these countries not only undermines the urban competitiveness of each nation but also carries negative implications for global urban competitiveness and overall welfare.

Characteristics of competitive cities

According to the 2005 to 2012 data from the World Bank Group (2015), the difference between comparative and average cities mainly lies on four main characteristics. The first characteristic is accelerated economic growth where the top 10 percent of cities experienced an impressive annual Gross Domestic Product (GDP) per capita growth of 13.5 percent, while the average cities only saw a growth of 4.7 percent. The second characteristic is significant job growth where the top 10 percent of cities achieved an annual job growth rate of 9.2 percent, which was significantly higher than the 1.9 percent obtained by the remaining 90 percent of cities. The third characteristic is increased income and productivity where the top 10 percent of cities recorded a notable yearly increase of 9.8 percent in the average disposable income of their households. The final characteristic is attraction for Foreign Direct Investment (FDI) where the top 5 percent of cities attracted an amount of FDI that was equal to the combined FDI of the bottom 95 percent of cities.

Furthermore, the study by Sáez, Perriáñez, and Saizarbitoria (2017) also confirmed the importance of economic activity and innovation dimension as the key drivers of urban competitiveness and development in Europe. The service sector emerged as highly significant across all factors related to economic activity. This sector relies on a skilled workforce and higher education, making it a crucial determinant of urban competitiveness. Similarly, factors such as knowledge generation, information and communication technologies (ICT), and the sophistication of high-value organisations play a critical role within the innovation dimension.

Apart from economic factors, Harris (2007) examined the competitiveness of cities in four Latin American countries by focusing on three sectors: transportation, security, and housing. The transportation sector emerged as the most critical following its involvement in global supply chains. While the physical infrastructure of transportation (e.g., highways, airports, and seaports) often receives the most attention, effective management of traffic flow within the city holds even greater economic significance. This indicates that insufficient traffic management can directly impede the cities' economic competitiveness. Moreover, these cities play a vital role in meeting the demands of external consumers through markets, retail trades, and the provision of producer services.

Similarly, a study by Gundersen, Langeland, and Aarhaug (2016) explored the factors that made certain parts of the city in the Oslo region, Norway to be more appealing to businesses and individuals. They examined the attractiveness of cities by considering factors such as location, proximity, and accessibility. Both accessibility and the efficiency of the transport system were found to be significant in enhancing the city's appeal and fostering industrial development, although certain variations existed across industries. However, it is important to note that an efficient transport system alone is insufficient to make

specific areas of a city attractive to particular industries. Several other location-based factors, including labour availability, land availability, access to capital, and the presence of managerial and technical skills, can also influence the overall attractiveness and competitiveness of a city.

In addition to these empirical studies, several dimensions have also been identified as contributing factors to urban competitiveness. This includes social and cultural capital, housing, quality of life and place, public institutions, infrastructure, accessibility, environment, economy and employment, city branding, as well as research and innovation (Sgambati & Gargiulo, 2022).

In the Malaysian context, the Economic Planning Unit (2015) adopted a multi-dimensional framework to define competitive cities in order to provide recommendations that can assist Malaysia in advancing towards a system of competitive cities. The key elements encompassed within this framework include economic growth, effective urban governance, social inclusion, and environmental sustainability. First, cities drive economic growth through the availability of skilled workers, connectivity, and a thriving knowledge-based economy. Nevertheless, challenges like inadequate infrastructure may hinder growth. Second, effective urban governance is important to provide services, fair markets, and a sustainable environment. Third, inclusive cities often promote social or public participation and well-being, subsequently addressing inequalities and reducing crime. Finally, environmental sustainability is vital for cities to balance economic and social needs; however, it requires a careful assessment of infrastructure trade-offs. Additionally, green and resilient investments are crucial for cities to achieve economic returns, enhance quality of life, and attract talent, ultimately contributing to its competitiveness.

RESEARCH METHODOLOGY

This research employed the quantitative method to measure the competitiveness level of 10 districts at the northern border of Malaysia: Perlis, Kubang Pasu, Padang Terap, Sik, Baling, Hulu Perak, Jeli, Tanah Merah, Pasir Mas, and Tumpat (Figure 1). Quantitative methods were chosen to evaluate the economic and socio-economic performance based on statistical data produced by the Malaysian government. All data were gathered through secondary sources obtained from the Department of Statistics Malaysia (DOSM). Economic and socio-economic factors were chosen as variables in this research following their significant contribution to the competitiveness level of cities, as reported by past literature (See Literature Review section). These factors include the number of non-citizen populations, the values of imports and exports in the trading sector, the investment value in manufacturing projects, the labour force, the working population, the labour force participation rate, the unemployment rate, the number of domestic university graduates, the average income, and the absolute poverty rate.

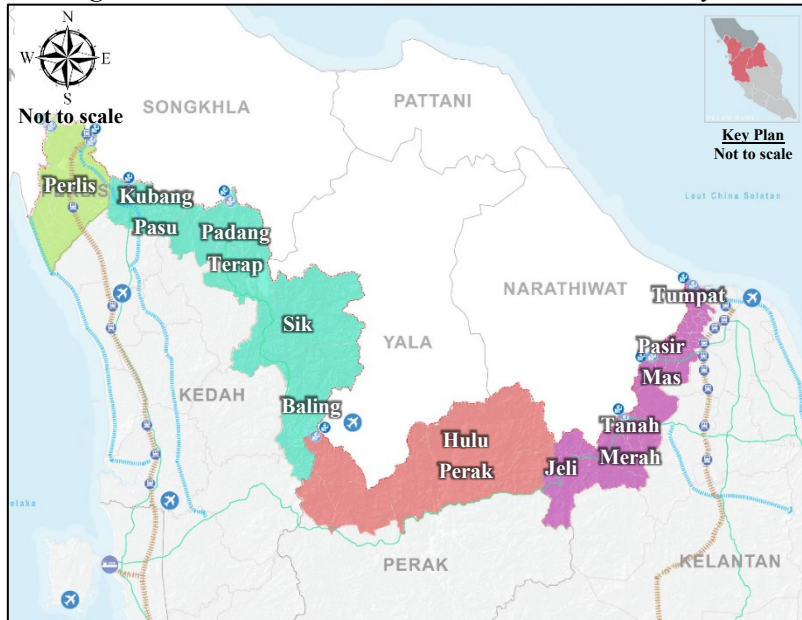
To quantify the variables, mean and standard deviation were used to determine the score, categorised as 0 (no contribution if no value/data), 1 (low contribution), 2 (average/high contribution), or 3 (high contribution).

Mean values were used as an indicator for low and high contributions if a variable only contained a few data – e.g., only a few districts obtained investment in manufacturing projects, therefore, only the score of 1 (low) or 2 (high) was given. Meanwhile, score 0 was assigned in the presence of no data. For example, if the values of a variable are above the mean, the score given is 2. On the contrary, if the values are below the mean, the score will be 1.

On the other hand, standard deviation was used as an indicator for low, average, and high if a variable contained data for all districts – e.g., labour force and working population. For example, if the values of a variable fall within the first standard deviation, the score will be 2. In contrast, if the values fall within the second standard deviation, the score will be either 1 (low-end) or 3 (high-end).

The scores for each variable were then accumulated to obtain the total score. The total score served as an indicator to measure the economic and socio-economic competitiveness among the selected districts, where a higher score indicated higher economic performance.

Figure 1: Districts at the northern border of Peninsular Malaysia



ANALYSIS AND DISCUSSION

Table 1 shows the eleven variables used to measure the competitiveness of 10 Malaysian districts bordering Thailand. These variables were mainly related to the economic and socio-economic indicators. Each indicator was given a score between 0 and 3, with 3 being the highest (Refer Research Methodology section for detail explanation).

Table 1: Competitiveness index among 10 districts at the northern Malaysia's border

Malaysia's northern border State/ districts		Variables / Value (Score)					Working population (^{'000})
		Non- citizen population (^{'000})	Trade – export (Jan- Apr 2021) (RM million)	Trade – import (Jan- Apr 2021) (RM million)	Investment value (Domestic) of approved manufacturing project (RM ^{'000})	Labour force (^{'000})	
Perlis		7.5 (3)	1,420 (2)	1,394 (2)	612,902 (2)	110.3 (3)	105.6 (3)
Kedah	Kubang	6.2 (3)	6,191 (2)	7,549 (2)	0	105.3 (3)	101.3 (3)
	Pasau	1.9 (2)	0	0	0	32.7 (2)	31.4 (2)
	Padang	2 (2)	0	0	0	32.4 (2)	31.4 (2)
	Sik	2.7 (2)	0	0	0	70.4 (2)	67.7 (2)
	Baling	2.8 (2)	0	0	82,293 (2)	43.6 (2)	41.8 (2)
Perak	Hulu Perak	1.6 (1)	0	0	0	19.3 (1)	18.7 (1)
Kelantan	Jeli	5.1 (2)	0	0	0	57.6 (2)	55.9 (2)
	Tanah Merah	4.6 (2)	0	0	0	81.4 (2)	77.6 (2)
	Pasir Mas	2.4 (2)	639 (1)	123 (1)	37,140 (1)	66.9 (2)	64.7 (2)
	Tumpat	3.7 (2)	825	907	73,234	61.9	59.6
Mean		2.0	1,942	2,374	191,534	30.9	29.6
Standard Deviation							

Cont. Table 1: Competitiveness index among 10 districts at the northern Malaysia's border

Malaysia's northern border State/ districts	Variables / Values (Score)					Total Score	
	Labour force participation rate (%)	Unemployment rate (%)	University graduates (citizen)	Average income (RM)	Absolute poverty rate (%)		
Perlis	63 (2)	4.3 (1)	1617 (3)	5,476 (2)	3.9 (3)	26	
Kedah	Kubang Pasu	61.8 (2)	3.9 (2)	1769 (3)	6,291 (3)	4.8 (3)	26
	Padang Terap	65.7 (3)	4 (2)	431 (1)	4,781 (2)	9.1 (2)	16
	Sik	61 (2)	3.1 (3)	395 (1)	4,960 (2)	7.6 (2)	16
	Baling	66.9 (3)	3.8 (2)	901 (2)	4,313 (2)	17.9 (1)	16
Perak	Hulu Perak	65.7 (3)	4 (2)	689 (2)	4,554 (2)	12.9 (2)	19
Kelantan	Jeli	57.1 (2)	3 (3)	288 (1)	3,872 (1)	18.5 (1)	11
	Tanah Merah	58.7 (2)	3 (3)	902 (2)	4,338 (2)	12 (2)	17
	Pasir Mas	54.8 (1)	4.6 (1)	1,586 (3)	4,745 (2)	13.1 (2)	15
	Tumpat	55.4 (1)	3.3 (2)	1,216 (2)	4,838 (2)	12.5 (2)	18
	Mean	61.0	3.7	979	4,817	11.2	
Standard Deviation	4.4	0.6	544.7	673.3	4.9		

Source: Department of Statistics Malaysia (2021)

1. *Anggaran Pendapatan Isi Rumah dan Insiden Kemiskinan 2020*
2. *Jadual Statistik Perdagangan Malaysia Mengikut Negeri 2021*
3. *Laporan sosioekonomi Negeri Kedah, Kelantan, Perak and Perlis 2020*
4. *My Local Stats Perlis, Kubang Pasu, Padang Terap, Sik, Baling, Hulu Perak, Jeli, Tanah Merah, Pasir Mas and Tumpat*
5. *Perangkaan Perdagangan Luar Negeri*
6. *Pocket Stats Kedah, Kelantan Perak and Perlis Quarter 2 2021*

Based on the scores assigned to the variables, it was determined that Kubang Pasu and Perlis obtained the highest overall score with 26 points. Hulu Perak scored the second highest (19) followed by Tumpat (18). Meanwhile, Jeli scored the lowest competitiveness index with 11 points.

There is a significant development difference between the western (Perlis and Kedah), central (Hulu Perak), and eastern districts (Kelantan), with

the western districts being more advanced. The western districts obtained the highest scores due to the concentration of manufacturing and service activities in these areas, as well as their role as logistics hubs. The Eastern districts, on the other hand, focus on agriculture and small-scale trading activities. The eastern districts of the border area have good potential for intensive and competitive agricultural and eco-tourism activities.

Additionally, the busiest entry points into Malaysia from Thailand, namely Bukit Kayu Hitam and Padang Besar, are located in the western districts. These immigration complexes handle over 90 percent of the trades passing through the Malaysia-Thailand border, with Bukit Kayu Hitam alone handling up to 65 percent of the total cargo. The Western districts of the border have the highest economic and socio-economic index due to their proximity to major industrial and urban areas in northern Peninsular Malaysia, such as Penang, Sungai Petani, and the bordering Songkhla province in Southern Thailand, which is the most industrialised among the four provinces bordering Malaysia. As the main industrial, logistics, and commercial hubs along the border, both Perlis and Kubang Pasu have more diversified economic activities, resulting in higher average incomes in these areas. Most high-impact projects are located in the western districts due to the availability of better infrastructure, including Immigration, Customs, Quarantine and Security (ICQS) complexes, as well as improved highway and rail systems.

Household incomes in the border areas are also lower than the national average, while the absolute poverty rates are much higher than the national rates (except for Perlis and Kubang Pasu). Kubang Pasu has an average income of RM6,291, which is nearly twice than that of Jeli, the district with the lowest average income of RM3,872. The average incomes in other districts range between RM4,000 and RM5,000. In terms of absolute poverty rates, the highest percentage was recorded in the middle of the border areas, specifically in Baling, Jeli, and Pasir Mas where the absolute poverty rates in these districts are two to three times higher than the national rate. These districts primarily rely on small-scale agriculture activities, which yield low returns. In fact, the absolute poverty rate of 18.5 percent in Jeli is nearly four times higher than that of Perlis (3.9 percent) and Kubang Pasu (4.8 percent).

Furthermore, the labour force participation rates at the border districts are lower than the national average. In other words, the number of working populations in the border districts is lower than the national average. Therefore, there is a need for a catalyst project to attract employment and higher income opportunities, especially for the locals. In terms of unemployment, the rate is almost equal to the national rate. However, Jeli and Tanah Merah recorded lower unemployment rates than other more industrialised areas in the western districts

CONCLUSION

This research provides valuable information on the overview of competitiveness in the international northern border districts of Peninsular Malaysia. The competitiveness index revealed the disparity among the districts along the Malaysia-Thailand border. By analysing eleven economic and socio-economic indicators, the study concludes that the western districts, specifically Perlis and Kubang Pasu, are more economically developed compared to the rural eastern districts like Baling, Jeli, and Tanah Merah. The economic diversity in Perlis and Kubang Pasu is attributed to their proximity to industrial areas such as Penang, Sungai Petani, and Songkhla in Southern Thailand. Additionally, the presence of the busiest entry points, Bukit Kayu Hitam and Padang Besar, contributes to the significance of logistics in these areas. Conversely, districts in the middle and eastern regions heavily rely on agriculture, resulting in lower average income and higher absolute poverty rates. The competitiveness index developed in this study aims to assist the government in formulating appropriate policies to address the developmental gaps in the Malaysia-Thailand border regions compared to other areas in Peninsular Malaysia.

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