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Laos: the dilemma of being a landlocked country

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Abstract: *The Southeast Asian region is of strategic importance on a global scale, yet Laos, as the only landlocked country in Southeast Asia, is handicapped. This paper analyzes the development dilemma of landlocked Laos from three perspectives: a) isolation from foreign markets, b) availability of infrastructure and border crossing points, and c.) efficiency of logistics services, and attempts to determine the extent to which Laos is affected by its status as a "landlocked country" and the likelihood of overcoming this barrier.*

Keywords: *Laos PDR, Landlocked Countries, Economic Development*

1. Introduction

The only landlocked nation in Southeast Asia, the Lao People's Democratic Republic, with a surface area of 236,800 square kilometers, or 6.7 Hainan islands. In the north, the Yunnan Province of China borders it; in the south, Cambodia; in the east, Vietnam; in the northwest, Myanmar; and in the southwest, Thailand. The topography of Laos has a length of 1,050 kilometers from north to south and a breadth of 500 kilometers from east to west. It is high in the north and low in the south, and it slopes from northwest to southeast. The country is divided into three regions: upper Laos (the northern region), middle Laos (the center region), and lower Laos (the southern region). Upper Laos is the highest region and is referred to as the "Roof of Southeast Asia"[1]. Laos's terrain is primarily mountainous and hilly, with mountains making up around 80% of the nation's total land. [2] The main river, the Mekong, flows across the entire nation from north to south, with the majority of its parts in Laos being the rivers that share borders with Thailand and Myanmar.

Laos, the only landlocked country in the South Central Peninsula, has been listed by the United Nations as one of the 49 least developed countries (LDCs) in the world since 1975, with a low GDP per capita, a weak human resource base and a high degree of economic vulnerability, and remains one of the 46 LDCs until now.[3] This characteristic of a "landlocked country" has severely hampered the development of Laos, and "the lack of access to the sea, remoteness from world markets, and isolation from them have exacerbated poverty, significantly increased transportation costs, and diminished its overall participation in the global economy."[4] Additionally, this already vulnerable nation has been ravaged and has developed slowly as a result of protracted periods of colonization, war, and civil struggle. [5]

Twenty-one of the world's 46 least developed nations, as listed by the UN in 2021, are landlocked. The problem of being landlocked as a barrier to national development is not exclusive to Laos; Adam Smith observed centuries ago that the least economically developed regions of the world were those in Africa and Asia that were landlocked.[6] Why do developing nations that are landlocked experience such enduring difficulties? Smith contends that the barriers to commerce make it challenging for remote regions to reap the rewards of specialization and related benefits. His argument is based on the challenges of long-distance land transportation, a problem that has persisted despite enormous technological advancements, and the high cost of transportation, which frequently places landlocked nations at a significant competitive disadvantage compared to their coastal neighbors. Sachs and Warner [7] highlight that landlocked countries often have lower steady-state incomes and, as a result, poorer growth rates from any initial GDP level. Landlocked countries thus typically have lower levels of economic development. Gallup et al. [8] demonstrate that being landlocked reduces growth rates by at least 0.5%. Indeed, the "landlocked country" conundrum is a significant hindrance to Laos's development earnings.

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2. Three Major Challenges for the Laos Domestic Economy

According to the World Bank, being "landlocked" presents three major challenges for the Laos domestic economy: (a) isolation from global markets; (b) the availability of infrastructure and border crossing sites; and (c) the effectiveness of logistics services. [9] Therefore, the purpose of this article is to assess how and to what degree the "landlocked state" has hampered the development of Laos using the three dimensions provided by the World Bank.

2.1. Isolation From Global Markets

First, Michae and John [10] propose that the majority of landlocked countries often experience two issues: underdeveloped neighbors and inaccessible markets. This is due to the fact that whereas wealthy neighbors act as marketplaces for the hinterland and enable the hinterland to benefit from their sophisticated transportation infrastructure for international trade, poorer neighbors have less impact on the hinterland. Because they are farther from marketplaces, inland areas have more expensive transportation. The market is uncompetitive for products from inland locations due to higher transportation expenses. Additionally, it reduces the hinterland's consumers' purchasing power.

Fortunately, the aforementioned nuisance exists in Laos because the country has three strong neighbors: China, Thailand, and Vietnam, and“Laos does not engage in significant transoceanic trade, but rather exports primarily to its immediate neighbors, China, Thailand, and Vietnam”. [11] Because of the short distances between Laos and China, Thailand, and Vietnam, and because it is primarily transported by road, Laos is not adversely affected by its landlocked status. As a result, the first dimension of isolation from global markets is not a significant issue.

2.2. The Availability of Infrastructure and Border Crossing Sites

The second consideration is the availability of infrastructure and transit terminals. Infrastructure facilities are infrastructure bodies or systems that provide services to a country, city, or region, including not only public facilities such as power grids, communication (telephone, internet), water supply, and transportation (roads such as highways, railroads, airports, and ports), which are commonly referred to as infrastructure, but also social undertakings such as education, science and technology, health care, culture, and sports, which are referred to as "social infrastructure." Infrastructure encompasses a vast array of fields that cannot be listed in this article owing to space constraints. Therefore, this essay will focus mostly on transportation infrastructure, which is more closely tied to the country's economic growth.

ລວງຍາວຂອງເສັ້ນທາງທົ່ວປະເທດ ຫົວໜ່ວຍ: ກມ	Length of the Roads for the Whole Country Unit: Km		
ລາຍການ	**Items**	**2018**	**2019**
ທາງເຍຕົ້ງ	Concrete roads	552.05	649.40
ທາງອັດສະຟານ	Asplath conrect roads	1,203.36	1,215.44
ທາງປຸຢາງ	Tarred roads	9,973.22	10,752.40
ທາງປຸແຮ່	Graveled roads	23,179.17	23,848.80
ທາງປຸດິນ	Earthen roads	25,433.11	21,798.00
ລວມລວງຍາວຂອງເສັ້ນທາງ	**Total Length of the roads**	**60,340.91**	**58,264.04**

Figure 1: Length of various types of roads throughout Laos[1]

[1]Sea-Delt. SouthEast Asian Development in the Long Term. https://seadelt.net/Documents/?ID=489

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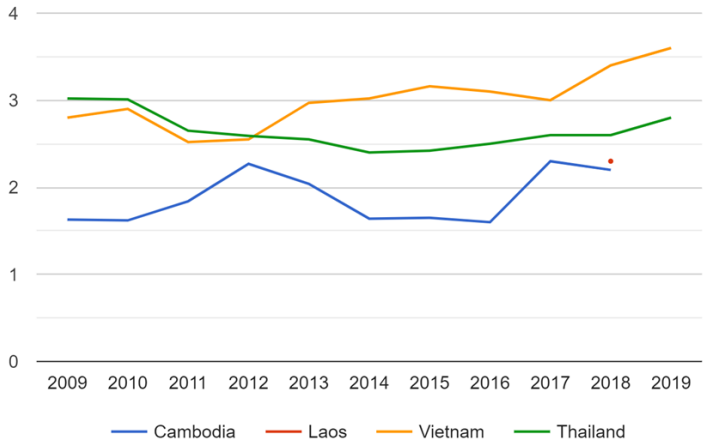

Figure 2: Quality ranking of railroad infrastructure (on a scale of 1-7, from highest to lowest)

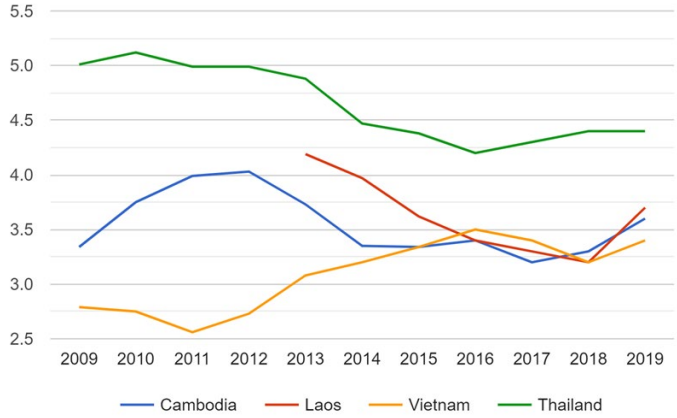

Figure 3: Quality ranking of railroad infrastructure (on a scale of 1-7, from highest to lowest)

According to Figure 1, less than 20% of the roads in Laos are made of concrete, asphalt concrete, or paved surfaces. More than 80% of them are made of dirt and gravel. During the rainy season, several sections become impassable, particularly those that connect urban and rural areas. The railroads in Laos are essentially in their infancy, so there is no data related to this, and the primary mode of transport and basic transport facilities still rely on roads and are not of high quality, as can be seen from Figures 2 and 3, which compare Laos with Thailand, Vietnam, and Cambodia. Laos also has a late start in basic road facilities. And "the road networks are insufficient, the border facilities do not adhere to international requirements, and the roads do not meet the weight norms of the highways in these adjacent countries." [12]

In exploring the development challenges faced by less developed landlocked countries, scholars such as Faye note that while some landlocked countries benefit from relatively high-quality transport infrastructure in their immediate surroundings, they are unable to fully capitalize on the better surrounding infrastructure due to weak domestic networks. For example, Laos' internal transportation network is still limited, a gap that is particularly evident in border areas bordering modern Thai infrastructure. This is because Thailand's roads are four-lane, while traffic within Laos is largely limited to single-lane roads. Transit trade from the Thai rail system into Laos must currently be unloaded and loaded onto trucks because Laos has not yet developed a rail system. A "landlocked" nation lacks access to the sea, but it does have river transportation. However, Laos only offers limited access to river transportation, and the vessels' carrying capacities only range from 20 to 200 tons, which is a modest amount of cargo. Although it can make up for the absence of land transportation during the rainy season when the river level rises, it is still primarily employed for domestic services. Objectively speaking, "establishing reliable and quick land transportation with other nations" [13] continues to be the best option if Laos wants to maintain the finest contact with foreign nations.

Consequently, referring back to Michae and John's statement, most landlocked nations face two issues: poor neighbors and inaccessible markets. Laos does not have a poor collar nation, and while powerful neighbors can give markets, the limits of Laos' basic transportation infrastructure make market access

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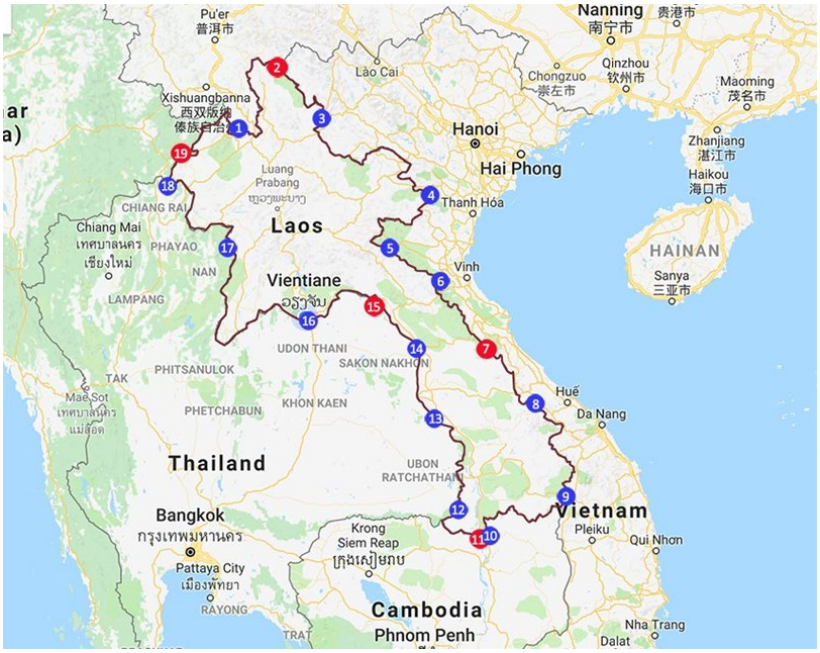
more expensive and do not provide any competitive advantages. Borchert et al [14] contend that despite advancements in transport technology, landlocked developing nations continue to confront structural obstacles in gaining access to global markets, let alone LDCs like Laos.

The above discussion shows that the transport infrastructure in Laos is not optimistic, but in contrast, Laos has more open border crossing points and transit policies. Laos has a total of 19 border crossings (figure 4) within the country, and China, Vietnam and Thailand as well as ASEAN countries have signed agreements to facilitate cross-border transport and are actively involved in ASEAN and the Greater Mekong Sub-region to enhance connectivity with other countries.

In 2003, Laos, Thailand and Vietnam reached and signed an agreement on cross-border trade: *the Agreement between the Government of the Lao People's Democratic Republic, the Government of the Kingdom of Thailand and the Government of the Socialist Republic of Vietnam on Facilitation of Cross-Border Transportation of Goods and People*. Although there are incompatibilities in the choice of transport modes (e.g. Thai goods transported by rail into the territory of Laos need to be unloaded and transferred to road transport), the bilateral agreement grants private and public trucking companies of both countries the right to transit by road or international ports, and mutually recognizes the licenses of trucking companies, while requiring transporters to comply with national laws and regulations when transiting the country, and to avoid unnecessary customs clearance when providing proper transport This fundamentally reduces the cost and time of cross-border imports and exports by requiring transporters to comply with national laws and regulations while transiting the country and to avoid unnecessary customs inspections with proper documentation. Similar to this, Laos and Vietnam have a bilateral agreement. At least twice a year, representatives from the governments of Lao, Thailand, and Vietnam meet to discuss the implementation of their separate agreements. Along with bilateral talks, Laos has taken part in a number of regional agreements in ASEAN and the Greater Mekong Subregion that are meant to further harmonize and simplify international and intrastate transportation laws. As part of the Greater Mekong Subregion (GMS) Economic Cooperation Program, which attempts to improve economic ties, Cambodia, China, Laos, Myanmar, Thailand, and Vietnam joined in 1992 at the initiative of the Asian Development Bank (ADB). The initiative has promoted regional growth and resource sharing, aided in the improvement of infrastructure, and made it easier for people and commodities to move freely throughout the subregion. Additionally, it has made the subregion a recognized growth area on a global scale. Transportation, energy, telecommunications, environment, human resource development, tourism, trade, private sector investment, and agriculture are among the nine industries covered by the program. In this curriculum, “the transportation industry is significant” [15]. The GMS program's transportation initiatives are designed to assist Laos in solving its transportation issues and accelerating its development. GMS member nations are also subject to the agreement's terms and conditions, with the exception that each nation will have somewhat different national laws.



(Blue dots = Visa on arrival available, red dots = No visa on arrival)

Figure 4: Laos Border Crossing Points

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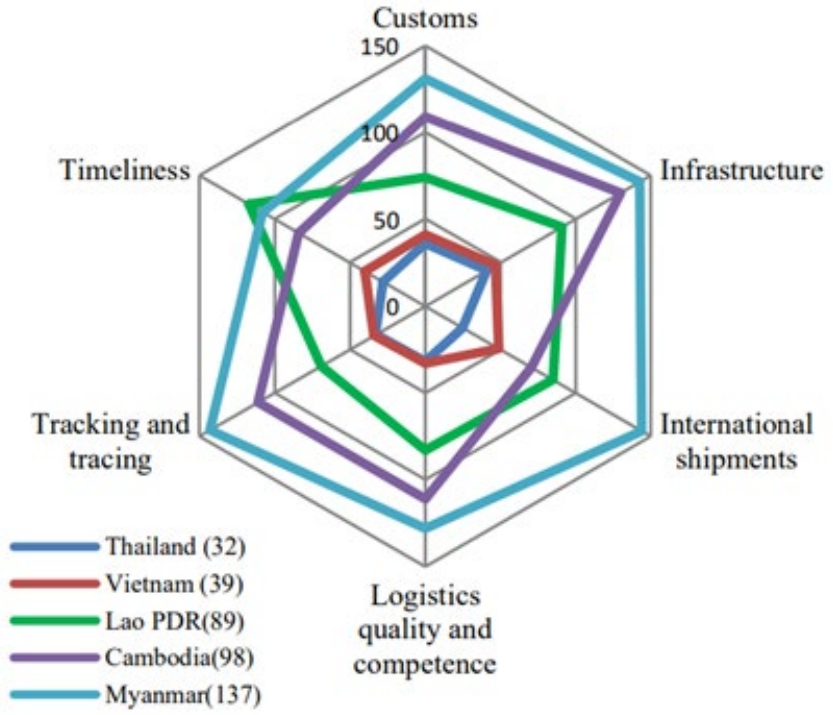
2.3. The Logistics Performance

The third area: The logistics performance (LPI), which is judged on six dimensions: customs, timeliness, tracking and tracing, logistics quality and competence, international shipment and infrastructures. [16] The logistics performance of Laos can be seen directly in Figure 5. Under the comparison with Thailand, Vietnam, Myanmar and Cambodia, it can be seen that Laos is less timely, but performs better compared to Myanmar and Cambodia; however, the gap is still large compared to Thailand and Vietnam.



(Note: Figures indicate the rank among 160 countries.)

Figure 5: The logistics performance (2018)

As described above, the basic transportation facilities in Laos are mainly road-based. In Banomyong's [17] analysis of the cost model for multimodal transport (e.g., Figure 6), it was found that the cost of cross-border transport, for the volume of transport, should be cheapest per tons-kilometer for maritime transport, road transport should usually be the most expensive (at least for a certain distance), and waterway and rail costs should be in the middle. And it is necessary to change the means of transportation during transportation, reloading and reloading cargoes from railroads in Thailand to roads in Laos, all of which increase the transportation costs. The table shows that the cost of switching from rail to road transport is the highest, while the cost of switching from road to rail transport is much lower than the former. As mentioned in the previous section, Laos is unable to take full advantage of the better infrastructure of the surrounding countries due to its own fragile transportation system. The development of logistics hubs is a key factor in land connectivity, reducing the cost of transit and speeding up transit times. However, to date, there is only one operational logistics hub in Laos, in the Savan Park area of the Savan-Seno Special Economic Zone, which has only been fully operational since 2017. [18] The topography of Laos is long and narrow from north to south, and although it is narrow from east to west, it is difficult for a single logistics hub to radiate to the whole country.

Roads are the main mode of transportation in Laos, which greatly reduces the logistics performance of Laos and raises the cost of transportation. Under the trend of regional integration in Southeast Asia, Laos' logistics performance still has much room for improvement due to its imperfect domestic basic transportation system and "one-and-only" logistics hub, despite its cross-border transport facilitation policy under its territorial agreement.

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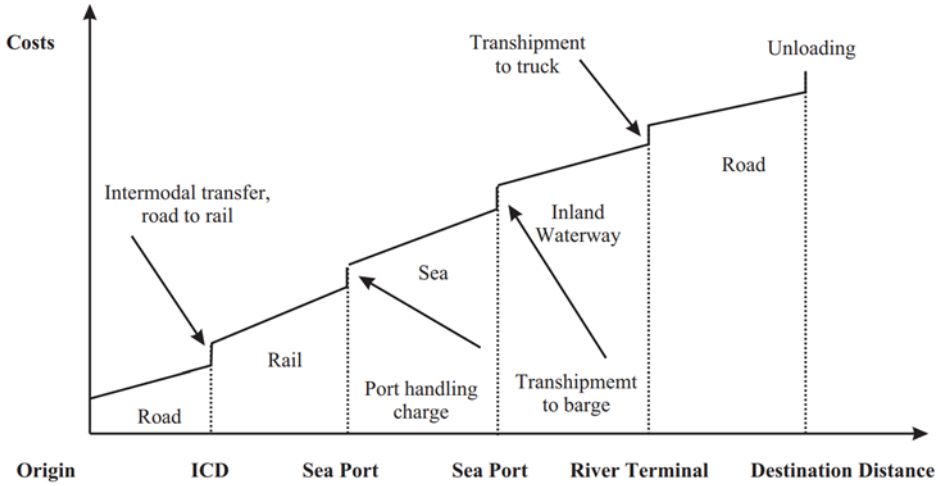

(Note: ICD is Inland Container Depot, an inland container yard site far from the port.)

Figure 6: Cost-model for Multimodal Transport

3. Conclusion

In fact, on balance, the biggest problem that the "landlocked country" imposes on Laos is its poor transportation infrastructure. The three problems of Lao development mentioned in the previous section - isolation from foreign markets, availability of infrastructure and border crossings, and efficiency of logistics services - can be attributed to a large extent to underdeveloped transportation. Laos' main markets are its neighbors, and both have convenient cross-border transport policies with them and far better and more advanced transport systems within their borders. However, the transport infrastructure gap between Laos and its neighbors is so large that it does not benefit from it, but rather raises transport costs, leaving Laos to transport by road, which has higher transport costs, and to a certain extent is isolated from foreign markets and raises the cost of access to international markets for Laos. The logistics performance index of Laos is not the worst in Southeast Asia, but there is still a lot of room for improvement due to the limitation of basic transportation facilities and the lack of logistics hubs.

References

[1] Stuart-Fox. Historical dictionary of Laos [M]. Scarecrow Press, 2008.
[2] Shuhong Ma, and Yun Fang. (2004). List of Countries Laos. Social Science Literature Press
[3] Rigg, J. (2005). Living with transition in Laos: Market integration in Southeast Asia. Routledge.
[4] Yamaguchi, T., Shibasaki, R., Samizo, H., & Ushirooka, H. (2021). Impact on Myanmar's Logistics Flow of the East–West and Southern Corridor Development of the Greater Mekong Subregion—A Global Logistics Intermodal Network Simulation. Sustainability, 13(2), 668.
[5] Jonathan Rigg (1997) Land-locked Laos: Dilemmas of development at the edge of the world, Geopolitics, 2:1, 153-174, DOI: 10.1080/13629379708407582
[6] Smith, A. (1887). An Inquiry Into the Nature and Causes of the Wealth of Nations... T. Nelson and Sons.
[7] Sachs, J. and Warner, A. (1997) Fundamental sources of long-run growth, American Economic Review, Vol. 87, No. 2, pp.184–188.
[8] Gallup, J. L., Sachs, J. D., and Mellinger, A. D. (1999) Geography and economic development, International Regional Science Review, Vol. 22, No.2, pp.179–232.
[9] See World Bank, East Asia PREM, Building Export Competitiveness in Laos: Background Report 51, available at http://www.integratedframework.org/files/Lao_PDR_DTIS.pdf (last visited on 7 September 2007).
[10] Michael L. Faye , John W. McArthur , Jeffrey D. Sachs & Thomas Snow (2004) The Challenges Facing Landlocked Developing Countries, Journal of Human Development, 5:1, 31-68, DOI: 10.1080/1464988031000166020 1
[11] Faye, M. L., McArthur, J. W., Sachs, J. D., & Snow, T. (2004). The challenges facing landlocked developing countries. Journal of Human Development, 5(1), 31-68.

ISSN 2706-6827 Vol. 4, Issue 11: 45-51, DOI: 10.25236/IJFS.2022.041109

[12] MPWT, 2015, Five-Year (2016-2020) Public Works and Transportation Development Plan, Vientiane
[13] Oraboune, S. (2008). Infrastructure development in Lao PDR. Institute of Developing Economies Netro, Japan.
[14] Borchert, I., Gootiiz, B., Goswami, A. G., & Mattoo, A. (2012). Landlocked or policy locked? How services trade protection deepens economic isolation. How Services Trade Protection Deepens Economic Isolation (January 1, 2012). World Bank Policy Research Working Paper, (5942).
[15] Krongkaew, M., Klong-Chan, K., & Bangkapi, K. (2007). The development of the Greater Mekong Subregion (GMS): real promise or false hope?. In Economic Dynamism of Asia in the New Millennium: From the Asian Crisis to a New Stage of Growth (pp. 225-255).
[16] Arvis J F , Saslavsky D, Ojala L, et al. Trade Logistics in the Global Economy: The Logistics Performance Index and Its Indicators[J]. World Bank Other Operational Studies, 2016, 88(5):400-400.
[17] Banomyong, R. (2001) "Modelling Freight Logistics: The Vientiane-Singapore Corridor," Proceedings of the First International Conference on Integrated Logistics (ICIL), Singapore, 21-24 August, 2001, pp.441-446.
[18] Hiratsuka, D. (2019). Transit-oriented development: The stations' renaissance and integrated development. EEC development and transport facilitation measures in Thailand, and the development strategies by the neighboring countries (9-30). Bangkok: JETRO, Bangkok Research Center.