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การเปรียบเทียบค่าโดยสารรถเมล์ประจำทางและรายได้ของประชากรในประเทศไทย มาเลเซีย และสิงคโปร์

The Comparison of Bus Fares and Incomes among Thailand, Malaysia, and Singapore

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บทคัดย่อ

งานวิจัยนี้มีจุดประสงค์เพื่อศึกษาเปรียบเทียบค่าโดยสารรถเมล์ประจำทางและรายได้ต่อเดือนของประชากรในประเทศไทย มาเลเซีย และสิงคโปร์ งานวิจัยนี้เป็นงานวิจัยเชิงคุณภาพที่อาศัยแหล่งข้อมูลทุติยภูมิทั้งหมด โดยเอกสารที่ทำการศึกษาได้ถูกค้นคว้า รวบรวม และสังเคราะห์อย่างเป็นระบบ แล้วจึงถูกนำมาวิเคราะห์เพื่อเปรียบเทียบค่าโดยสารรถเมล์ประจำทางและรายได้ต่อเดือนของกลุ่มประเทศเหล่านี้ โดยผลจากการศึกษาพบว่าสิงคโปร์มีค่าโดยสารรถบัสประจำทางสูงที่สุด อยู่ที่ 20.58 – 73.82 บาท ซึ่งถือว่าแพงกว่าไทยและมาเลเซียมาก ในการศึกษานี้ค่าผลิตภัณฑ์มวลรวมในประเทศต่อหัว หรือ GDP ต่อหัว ถูกนำมาใช้ในการคำนวณรายได้เฉลี่ยต่อเดือนต่อหัว ซึ่งปรากฏว่ารายได้เฉลี่ยต่อเดือนต่อหัวของคนสิงคโปร์สูงที่สุด ตามมาด้วยมาเลเซียและไทยตามลำดับ เมื่อทำการเปรียบเทียบสัดส่วนค่าใช้จ่ายรถบัสต่อเดือนกับรายได้ต่อเดือนแล้ว พบว่าประชากรสิงคโปร์ใช้สัดส่วนของเงินเดือนต่ำที่สุดในการจ่ายค่ารถเมล์ในแต่ละเดือน ในขณะที่คนไทยและคนมาเลเซียต้องใช้เงินในสัดส่วนที่สูงกว่าสำหรับค่ารถเมล์ในแต่ละเดือน เพื่อเป็นการปรับปรุงบริการรถเมล์ประจำทางสภาพตัวรถโดยสาร ป้ายรถเมล์ และสถานีขนส่งควรได้รับการปรับปรุงให้มีสภาพน่าใช้ ควรมีการปรับค่าโดยสารให้สมเหตุสมผล ระบบการให้บริการรถเมล์ควรได้รับการพัฒนา และควรมีการใช้ตั๋วร่วมสำหรับขนส่งมวลชน

คำสำคัญ: ค่าโดยสารรถเมล์ประจำทาง รายได้ต่อเดือน GDP ต่อหัว

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Abstract

This study aims to compare bus fares with monthly incomes in Thailand, Malaysia and Singapore. This qualitative study is based completely on secondary data. A systematic search, inclusion and synthesis process was used for all documents during review and analysis in order to compare bus fares with incomes across these countries. The findings show that Singapore has the highest bus fare among the three countries, between 20.58–73.82 baht, which is far higher than the bus fares in Thailand and Malaysia. In this study, GDPs per capita were used to calculate the monthly income per capita, and Singapore shows the highest monthly income per capita, followed by Malaysia and Thailand, respectively. The comparison of monthly cost of bus fares against monthly incomes shows that Singaporeans spend a lower proportion of their incomes on bus fares, while Thais and Malaysians have to spend a higher proportion of incomes on bus fares. In order to improve bus services, the paper recommends that there should be development in the physical appearance of buses, bus stops and bus stations; adjustment of bus fares; improvement of the bus service system; and applying fare integrations.

Keywords: Bus Fares, Monthly Incomes, GDP per Capita

Introduction

Even though modern electrified trains are popular and they provide services to millions of people annually in many cities in ASEAN (Association of Southeast Asian Nations), such as Thailand, Malaysia and Singapore, buses are still overwhelmingly used due to their affordability and accessibility. In 2018, there were 2,227.50 person-trips of stage buses in the Bangkok Metropolitan Region of Thailand (Office of Transport and Traffic Policy and Planning, Ministry of Transport of Thailand, 2018), while bus services in Singapore served on average over 4.0 million rides per day in 2019 (Tan, 2020).

In general, the fare structure is the system set up to define the income of the public transport system. It represents the relationships between distance of a journey and fares and is the significant index used to determine fare setting. The top three popular fare structures applied to many transport systems worldwide are (1) flat fare, (2) distance-based fare, and (3) zonal fare. A flat fare is the simplest fare structure with a fixed price applying to a provided service. This fare structure is a user-friendly method for the passengers and providers as it allows the use of simpler fare collection technologies, such as coin-based machines. Moreover, a flat fee method can reduce the level of complexity in fare collection. In contrast, a distance-based

fee charges fees based on the distance travelled. This fare reflects actual operating costs as a longer distance means that more fuel and labour is required. This fee might be beneficial to providers in term of optimizing profitability. A zone-based fare sets a transport price based on the number of geographically defined fare zones (The World Bank Group and PPIAF, 2020).

GDP per capita is used to determine the prosperity of a country and economists commonly used GDP per capita together with GDP to analyse a country's wealth and prosperity based on its economic growth. GDP is the most common measure to gauge the prosperity of a nation due to ease of calculation and usage and tracking on a global scale, while per capita GDP indicates how much economic production value can be attributed to a citizen. Furthermore, per capita GD can indicate a country's wealth as GDP market value per person properly serves as a prosperity measure (Investopedia, 2020).

In this study, the bus fares of Thailand, Malaysia and Singapore were compared, with GDP per capita of these three countries used for the calculation of monthly income per capita. The proportion of bus fares and monthly income was then estimated and compared with that of the three selected countries. This study will be useful for the development of the public transport system in Thailand, particularly the mass transit bus system, as the findings are expected to indicate how much income is spent on bus fares in the selected countries as well as the reasonability of the bus fares.

Objectives

1. To compare bus fares in Thailand, Malaysia and Singapore.
2. To compare incomes per capita of Thailand, Malaysia and Singapore.
3. To compare bus fares with income across Thailand, Malaysia and Singapore.

Conceptual framework

The summary of the conceptual framework of this study is shown in Figure 1. First, the bus fares and incomes per capita of the three selected countries in ASEAN, namely Thailand, Malaysia and Singapore, were explored and then compared within a group (bus fares or incomes, respectively). This examination led to the comparison of bus fares with income across Thailand, Malaysia and Singapore.

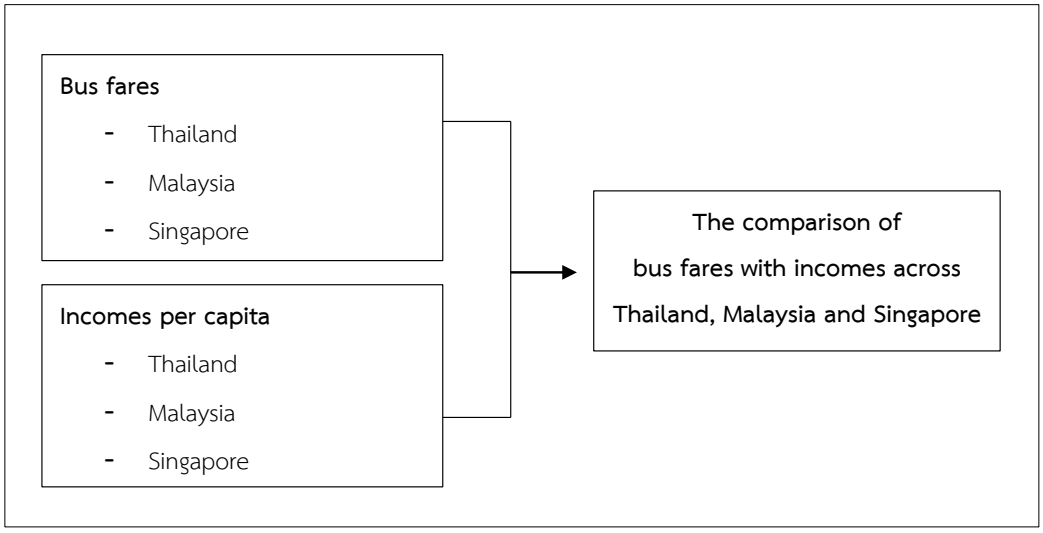

Figure 1 Conceptual framework

Methodology

This qualitative study is based completely on secondary data, such as journals, academic journals, reports, reliable public sector websites and other academic publications. A systematic search, inclusion and synthesis process was then used for all documents during review and analysis in order to compare bus fares against incomes across Thailand, Malaysia and Singapore.

The scope of the study can be divided into three main points: (1) bus fares in Thailand, Malaysia and Singapore; (2) monthly incomes per capita of Thailand, Malaysia and Singapore; and 3) the comparison of bus fares with incomes across Thailand, Malaysia and Singapore.

Bus fares in this study are the fares of city buses which provide services across the capitals of these three countries, which are Bangkok Metropolitan Region of Thailand, Kuala Lumpur of Malaysia and Singapore of Republic of Singapore because these capitals have the biggest mass transit systems in ASEAN. The fares in this study are full-fare or adult fares for a single trip as these are the fares paid by the majority of the people.

Results

Bus fares in Thailand, Malaysia and Singapore

Thailand

Buses in the Bangkok Metropolitan Region have been operated under the Bangkok Mass Transit Authority (BMTA) since 2017. The BMTA offers 410 bus service routes to people who travel across Bangkok and other five nearby cities, those of Nakhon Pathom, Nonthaburi, Pathum Thani, Samut Prakan and Samut Sakhon. Bangkok bus services can be divided into two operations, BMTA operated buses and private joint buses. The report of the BMTA on 31 October 2017 shows that there were a total of 14,104 buses provided for the public, including 2,554 BMTA buses (including 117 PBC buses) and 11,433 private joint buses. BMTA buses were divided into two categories: 1,543 regular buses and 1,011 air-conditioned buses. Private joint buses included 3,444 big buses and 7,989 small buses. The big buses were divided into two types: 2,061 regular buses and 1,383 air-conditioned buses, while the small buses were divided into four types: 931 minibuses, 2,119 shuttle buses for travelling in alleys, 4,810 microbuses and 129 microbuses CNG connecting Suvarnabhumi airport (Bangkok Mass Transit Authority, 2020a).

Table 1 Adult bus fares in Bangkok Metropolitan Region, Thailand (Thai baht)

Bus categories	Fare rate (THB)
Regular bus (beige–red colour)	8
Regular express bus (beige–red colour)	10
Regular overnight (beige–red colour)	9.5
Air-conditioned bus* (white–blue colour)	12, 14, 16, 18, 20
Air-conditioned bus or Euro 2* (yellow–orange colour)	13, 15, 17, 19, 21, 23, 25
Air-conditioned bus or PCB* (white colour)	13, 15, 17, 19, 21, 23, 25
Air-conditioned bus or NGV* (blue colour)	15, 20, 25

Note: *The bus fares are based on distance of a journey, adding on 2 baht for express services.

Source: Adapted from *Services – Vehicle Categories and Service Rate* by Bangkok Mass Transit Authority (2020b).

Table 1 shows the bus fares in the Bangkok Metropolitan Region. Regular buses, regular express buses, and regular overnight buses charge only one price throughout a trip, which is 8, 10, and 9.5 baht, respectively, whereas all air-conditioned buses charge the passengers based on the distance of a trip with an additional two baht for express services. The express services

are the services in which the bus do not stop at every single station of the route. Since the express buses skip some stops, the number of stations is reduced; therefore, the traveling time of a trip is decreased and bus fares on express services are two-baht greater than normal parallel services. For example, the bus fares of express services on Euro 2 bus will be 15, 17, 19, 21, 23, 25 and 27 baht (normal fares start from 13 baht), and the bus fares of express services on NGV bus are 17, 22 and 27 baht (normal fares start from 15 baht). To sum up, the fares of regular buses, regular express buses and regular overnight buses are flat fares, while all the rest are distance-based fares.

Malaysia

Currently, bus services in Malaysia are provided by 13 main operators, including RapidKL, Metrobus, Triton, LenSeng, Selangor Omnibus, SJ Bus and some smaller providers operating on the periphery of the urban areas. RapidKL is the largest public transportation operator in Kuala Lumpur and the Klang Valley, providing bus, light rail and train services. RapidKL provides 179 routes of stage buses for commuters. The bus service pattern of bus providers usually focuses on the areas in the Kuala Lumpur city centre and generally emphasises radial routes distributing from the city where those providers are likely to serve a number of commuters, leading to high revenues. However, there are limitations due to the physical structure of the highway network and the operation of services, including accessibility, availability and integration. For example, oversupply often occurs due to the lack of coordination or regulation, and competition between providers is often duplicative rather than providing any new services to the network (Mo, Kwon and Park, 2014).

Table 2 Adult bus fares in Kuala Lumpur/Klang Valley region, Malaysia (Malaysian Ringgit)

Zones	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7	Zone 8
Zone 1	1.00	1.90	2.50	3.00	3.50	4.00	4.50	5.00
Zone 2	1.90	1.00	1.90	2.50	3.00	3.50	4.00	4.50
Zone 3	2.50	1.90	1.00	1.90	2.50	3.00	3.50	4.00
Zone 4	3.00	2.50	1.90	1.00	1.90	2.50	3.00	3.50
Zone 5	3.50	3.00	2.50	1.90	1.00	1.90	2.50	3.00
Zone 6	4.00	3.50	3.00	2.50	1.90	1.00	1.90	2.50
Zone 7	4.50	4.00	3.50	3.00	2.50	1.90	1.00	1.90
Zone 8	5.00	4.50	4.00	3.50	3.00	2.50	1.90	1.00

Source: Adapted from *Fares* by Myrapid (2020).

The buses fares shown in Table 2 are a zone fare structure within the Greater Kuala Lumpur/Klang Valley region. The lowest fare is 1.00 ringgit (7.33 baht) within a single zone, while the highest fare is 5.00 ringgit (36.63 baht) when a passenger travels through eight zones. The fare paid is charged by the number of zone boundaries crossed. For example, all single zone fees are applied when travelling within a given single zone, such as travelling within Zone 1, and this applies regardless of which zone the journey is in. Two zone charges are applied when travelling from one zone to the next zone, such as from zone 1 to 2 and vice versa. Other zone charges and fees are calculated by the same method.

Singapore

SBS Transit Ltd (SBST) and SMRT Buses Ltd (SMRTB) are the two main bus operators providing public bus services in Singapore. SBS Transit is the major public bus service provider operating convenient bus services across Singapore, and also providing services to destinations that are less accessible, for example, areas beyond the city centre and the heartlands. Most of the buses provided by SBS Transit are equipped with air conditioning and the offer trunk, feeder, express, Townlink and Premium services. SMRT provides bus services in northern Singapore and it offers feeder, express and premium services similar to SBS Transit. Moreover, SMRT provides the NightRider service, offering a safe and reasonable alternative transport option for passengers who need buses in the city during late hours on the weekends (Mo, Kwon and Park, 2014).

Table 3 Adult bus fares in Singapore (Singapore dollar)

Distance (km)	Card Fare (SGD)		Cash Fare Per Ride (SGD)	
	Basic Bus	Express services	Basic Bus	Express services
Up to 3.2	0.92	1.52	1.70	2.50
3.3 - 4.2	1.02	1.62	1.90	2.50
4.3 - 5.2	1.12	1.72	1.90	2.50
5.3 - 6.2	1.22	1.82	1.90	2.50
6.3 - 7.2	1.31	1.91	2.10	2.50
7.3 - 8.2	1.38	1.98	2.10	2.50
8.3 - 9.2	1.44	2.04	2.10	2.65
9.3 - 10.2	1.48	2.08	2.30	2.65
10.3 - 11.2	1.52	2.12	2.30	2.65
11.3 - 12.2	1.56	2.16	2.50	2.80

Distance (km)	Card Fare (SGD)		Cash Fare Per Ride (SGD)	
	Basic Bus	Express services	Basic Bus	Express services
12.3 - 13.2	1.60	2.20	2.50	2.80
13.3 - 14.2	1.64	2.24	2.50	2.80
14.3 - 15.2	1.68	2.28	2.50	2.80
15.3 - 16.2	1.72	2.32	2.60	2.95
16.3 - 17.2	1.76	2.36	2.60	2.95
17.3 - 18.2	1.80	2.40	2.60	2.95
18.3 - 19.2	1.84	2.44	2.60	2.95
19.3 - 20.2	1.87	2.47	2.70	3.10
20.3 - 21.2	1.90	2.50	2.70	3.10
21.3 - 22.2	1.93	2.53	2.70	3.10
22.3 - 23.2	1.96	2.56	2.70	3.10
23.3 - 24.2	1.98	2.58	2.80	3.30
24.3 - 25.2	2.00	2.60	2.80	3.30
25.3 - 26.2	2.02	2.62	2.80	3.30
26.3 - 27.2	2.03	2.63	2.80	3.30
27.3 - 28.2	2.04	2.64	2.80	3.30
28.3 - 29.2	2.05	2.65	2.80	3.30
29.3 - 30.2	2.06	2.66	2.80	3.30
30.3 - 31.2	2.07	2.67	2.80	3.30
31.3 - 32.2	2.08	2.68	2.80	3.30
32.3 - 33.2	2.09	2.69	2.80	3.30
33.3 - 34.2	2.10	2.70	2.80	3.30
34.3 - 35.2	2.11	2.71	2.80	3.30
35.3 - 36.2	2.12	2.72	2.80	3.30
36.3 - 37.2	2.13	2.73	2.80	3.30
37.3 - 38.2	2.14	2.74	2.80	3.30
38.3 - 39.2	2.15	2.75	2.80	3.30
39.3 - 40.2	2.16	2.76	2.80	3.30
Over 40.2	2.17	2.77	2.80	3.30

Source: Adapted from *Fare Structure* by Public Transport Council of Singapore (2020).

Table 3 shows the public bus fares operating in Singapore that were announced on December 28, 2019. The bus fares in Singapore are distance-based fares and they are divided into two categories, card fare per ride and cash fare per ride, and each category is further divided into two subcategories, basic bus and express service. The minimum rate of basic bus card fare is 0.92 Singapore dollar (20.58 baht) for a trip not over 3.2 kilometres, while the maximum fare is 2.17 Singapore dollar (48.54 baht) for a trip over 40.2 kilometres. The express service fares of the card fare are 0.60 Singapore dollar (13.42 baht), more expensive than the regular rate. For cash fares, the minimum rate of basic bus service costs 1.70 Singapore dollar (38.03 baht) and the maximum fare is 2.80 Singapore dollar (62.63 baht). The express services of this fare are charged from 2.50 to 3.30 Singapore dollar (55.92 to 73.82 baht). Although the maximum rate of card fare will be charged when a passenger travels over 40.2 kilometres, the maximum rate of cash fare will be charged when a passenger travels over 23.2 kilometres.

Table 4 The comparison of minimum and maximum adult bus fares in Thailand, Malaysia and Singapore in Thai baht

Countries	Bus fares (THB)	
	Minimum rate	Maximum rate
Thailand	8 (Regular bus)	25 (Euro 2, PCB, NGV)
Malaysia	7.33 (single zone travelling)	36.63 (eight zone travelling)
Singapore	20.58 (card fare of basic bus with a trip not over 3.2 kilometres)	73.82 (cash fare of express bus with a trip over 23.2 kilometres)

Source: Summarised by authors.

The minimum fares of Malaysian buses are the lowest, amounting to 7.33 baht, applied when travelling within a single zone, while the minimum rate of bus fees in Thailand are slightly higher, amounting to 8 baht for a regular bus. Singapore shows the highest minimum rate of bus fares, equalling 20.58 baht, applied when using a card travelling not over 3.2 kilometres on a basic bus. The maximum rate of Thai buses is the lowest, amounting to 25 baht when travelling

on Euro 2, PCB or NGV buses, while the maximum rate of Malaysian bus fares is somewhat higher, amounting to 36.63 baht when travelling through eight zones. The highest maximum bus fares belong to Singapore when travelling over 23.2 kilometres on express services and purchasing a ticket by cash, amounting to 73.82 baht.

Monthly incomes per capita of Thailand, Malaysia, and Singapore

Table 5 Average monthly incomes per capita in 2019 of Thailand, Malaysia and Singapore, collected from public sector documents of these three countries

Countries	Average monthly income	
	Local currencies	Thai baht
Thailand	9,589 (THB) [a]	9,589
Malaysia	3,224 (RM)	23,618.01
Singapore	4,115 (SGD) [b]	92,050.79

Note: a. This amount is the monthly income of a Thai citizen or permanent resident, including income from work, income from current transfer and property income.

b. This amount is the monthly household income from work per household member (including employer CPF contributions) of a Singapore citizen or permanent resident.

Source: Adapted from the *Survey of Socio-economic Status of Thai Households in the first half of 2019* (p. 23) by the National Statistical Office of Thailand (2019), Bangkok, Thailand; *Malaysia Wages* by Trading Economics (2020b); *Key Household Income Trends 2019* (p. 32) by Singapore Department of Statistics (2019), Singapore.

Table 5 shows average monthly incomes per capita in 2019 for Thailand, Malaysia and Singapore. The data was collected from public sector documents in each of these three countries. The summary shows that Singaporeans earn 92,050.79 baht per month, which is almost four times what Malaysians earn and nearly ten times Thai monthly income.

According to the National Statistical Office of Thailand (2019), Trading Economics (2020b) and the Singapore Department of Statistics (2019), different methods were used to calculate income per capita of the three countries, for example, differences in data collection and formula. Therefore, in order to apply the same formula for the calculation of income per capita, GDP per capita of each individual country was used. Since the GDP per capita represents annual income, it was divided by 12 to convert it to monthly income. Hence, the calculation of monthly income per capita can be calculated following Equation 1, and the outcomes are presented in Table 6.

Monthly income per capita = GDPs per capita (THB) / 12 (month) ----------(1)

Table 6 GDP per capita in 2019 of Thailand, Malaysia and Singapore and monthly income per capita of the three countries calculated from Equation 1

Countries	GDP per capita (THB)	Monthly income per capita (THB/month)
Thailand	196,118.42	16,343.20
Malaysia	376,342.51	31,361.88
Singapore	1,774,300.74	147,858.40

Source: Adapted from the *Thailand GDP per Capita* by Trading Economics (2020d); *Malaysia GDP per Capita* by Trading Economics, (2020a); *Singapore GDP per Capita* by Trading Economics (2020c) and authors' own calculation.

Overall, the trends of monthly income per capita in Table 6 are similar to those in Table 5, indicating that Singaporeans earn the highest monthly income and Thais obtain the lowest monthly income; however, the monthly incomes in Table 6 are significantly higher than those in Table 5. Therefore, in section 3, the results of monthly income per capita from Table 6 are used to compare bus fares against incomes across the three countries.

The comparison of bus fares with incomes across Thailand, Malaysia and Singapore

If it is assumed that a passenger takes two trips per day and travels by bus 30 days in a month, then the estimations of the monthly cost of bus fares in Thai baht can be calculated following Equation 2. The results are shown in Table 7.

Estimated monthly cost of bus fares (THB) = Bus fares (THB) × 2 (trips) × 30 (days) (Values in Table 4) ----------(2)

After obtaining estimated monthly costs of bus fares, these values were used to calculate the proportion of costs of bus fares and monthly income, following Equation 3. The results are presented in Table 7.

$$\text{The proportion of costs of bus fares per month and monthly income (\%)} = \frac{\text{Estimated monthly costs of bus fares (THB)}}{\text{Monthly income per capita (THB/month)}} \times 100 \text{ ------(3)}$$

Table 7 The proportion of the cost of bus fares and monthly income across Thailand, Malaysia and Singapore

Countries	Estimated monthly cost of bus fares (THB)		Monthly income per capita (THB/month)	The proportion of costs of bus fares per month and monthly income (%)	
	Minimum	Maximum		Minimum	Maximum
Thailand	480	1,500	16,343.20	2.94	9.18
Malaysia	439.8	2,197.8	31,361.88	1.40	7.01
Singapore	1,234.8	4,429.2	147,858.40	0.84	3.00

Source: Authors' own calculation.

Table 7 shows that the percentage of bus fares spent in a month compared with monthly income is lowest in Singapore, accounting for 0.84–3.00 %, despite the highest monthly cost of bus fares. The proportion of the cost of bus fares and monthly income in Malaysia amounts to 1.40–7.07 %, and these values in Thailand are between 2.94–9.18%.

Discussion and Conclusion

There are a variety of bus fare structures across Thailand, Malaysia and Singapore. Bus fares in Thailand contain two fare structures: flat fare and a distance-based fare, while there is only one bus fare structure in Malaysia and Singapore, zone fare and distance-based fare, respectively. When comparing the bus fares of these three cities, it can be concluded that the range of bus fares in Thailand is between 8–25 baht, while there is a slight difference in the range of bus fares in Malaysia, which is between 7.33–36.63 baht. Singapore shows the highest bus fare among the three countries, between 20.58–73.82 baht, which is far higher than the bus fares in Thailand and Malaysia. Even though the bus fares in Singapore are extremely high compares with other countries in ASEAN, they are reasonable as public transport in Singapore is extensive with effective and premium services. The report of McKinsey's Urban Transportation

ranks the transport system of Singapore as the world's best overall system based on five criteria: 1) availability, 2) affordability, 3) efficiency, 4) convenience and 5) sustainability (Wong, 2018). Moreover, Singapore also provides one of the most cost-efficient public transport networks in the world (Sim, 2014).

In this study, GDPs per capita of individual countries were used to calculate the monthly income per capita of the three countries, and Singapore shows the highest monthly income per capita, followed by Malaysia and Thailand, respectively. The comparison of the monthly cost of bus fares against monthly incomes shows that Singaporeans spend a lower proportion of their income on bus fares, while Thais and Malaysians have to spend a higher proportion of incomes on bus fares. The bus fares in Singapore are likely to be cheap when compared to Singaporeans' income because there are integration of fare and ticketing. Every mode of transportation in Singapore, bus and train, charge the same fare based on total distance travelled and this is called fare integration. The ticketing integration can be seen from the use of EZ-Link which is a smart ticket that can pay for a trip travelled through all transport modes with no any extra charges for transferring to other modes of public transport (Lee, Sun and Erath, 2012). Nevertheless, in Thailand and Malaysia, there are no fare integration of public transport at all and the ticketing integration has not completed yet. The common tickets in Malaysia, such as Touch 'n Go and MyRapid Card, can be used for only the services provided by the same company. For example, the common tickets are integrated with light rail transit (LRT), feeder buses and monorail, but they cannot be used for any services to Kuala Lumpur's international airports, including KTM Komuter and KLIA networks (Dut, 2017). In Thailand, the passengers are able to pay for the Bangkok Mass Transit Authority (BMTA) buses via three methods: cash, bank card and Rabbit card. The Rabbit card is a common card that can pay for the mass transit services in Bangkok Metropolitan Region, including BMTA buses, BTS Skytrain and river boats and ferries; however, Rabbit cards cannot be used for Bangkok MRT and Airport Rail Link (Office of Transport and Traffic Policy and Planning, Ministry of Transport of Thailand, 2020). Since the mass transit tickets in Malaysia and Thailand are not integrated completely yet; therefore, the initial entrance fees are applied when transiting to the new mode of transportation or changing to a service owned by different company, so that the prices of bus services in these two countries are likely to be expensive.

Recommendations

The findings of this study can lead to the improvement of the public transport system in Thailand, especially buses, as it might attract more people to use public transport.

First, the bus fare needs to be adjusted based on economic changes because the current bus fares might not reflect the economic situation in the future; therefore, the fares need to be adjusted in order to reflect the actual economic situation at a point in time. This mechanism offers benefits to every sector, including providers, customers and other related staff. Second, there should have fare and ticketing integrations for public transport in Thailand. According to the findings in this study Singapore and Malaysia have the lower proportion of income on bus fares, comparing with the bus fares in Thailand. When take a consideration on the ticket system of the two former countries, it can be seen that there are integrations of ticket system and fare of mass transit system; therefore, the ticket fees of public transport of these countries are somewhat low since the entrance fees when changing the transport mode are eliminated. Nowadays, there are some ticket integrations of BTS Skytrain and MRT underground in Bangkok; however, these integrations are available just for the services provided by same company and they are not applied to other transport modes. Hence, if ticketing system integration and fare integration cover all transport modes, the bus fares in Thailand might be cheaper, leading to an increase of accessibility of public transport across Thailand. However, completed fare and ticketing integrations might take long period of time to be accomplished since the mass transit services in Bangkok are signed with different agreements and partnerships. Hence, it is somewhat complicated for the government and Bangkok to push all partnerships accepting the same agreements. The possible suggestion to decrease the bus fares in Thailand quickly could be providing daily, weekly, monthly and yearly tickets for the commuters as the prices of these tickets are cheaper than the prices of a single trip ticket.

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