SOCIO-ECONOMIC IMPACT OF LIGHT RAIL TRANSIT (LRT3) PROJECT TOWARDS PUBLIC USERS IN KLANG VALLEY

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ABSTRACT

Infrastructure projects play an important role in the country's development. To cater to the population growth in a city, the infrastructure was forced to face urban development and expansion. Therefore, the LRT 3 project is undergoing expansion in lines and an additional number of routes. However, LRT 3 project can affect socio-economic development continuously in various aspects such as business operations, market trends, policy on trade and industry and social welfare of society for instance creating negative impacts on social nuisance towards public users. The objective of this research is to identify the socio-economic impacts of the LRT3 project at Shah Alam locality. This research is carried out based on a thorough study of the literature review and the use of a questionnaire survey as the instrument for the quantitative method. A set of questionnaires has been distributed to the public that has been greatly affected by the LRT 3 project in Shah Alam locality. The questionnaire has been distributed to a total of 102 respondents in the area. The average mean is analysed by using the SPSS 23.0 software and is ranked with the average index scale of agreement. Positive results

have been obtained in relation to the objectives of the study. The findings show that the majority of the respondents agree with all the variables set out for the socio-economic impacts of LRT 3 towards the public such as ease of access to other places, increase property value and create business activities. Therefore, based on the findings, the government shall imply more infrastructure development as it can benefit the public's socio-economic development in many ways.

Keywords: *Light Rail Transit (LRT), Socio-economic impact, Infrastructure, Public Users*

INTRODUCTION

Light rail transit system is one of the urban transportation projects that can be stated as the most reliable system to commute in the urban community as it suits the modern image of the city and also has other benefits such as fast, safe and comfortable services as well as can load a medium-high capacity of passengers (Deyas, 2019). Additionally (Baker & Lee, 2019), explained that life of low- and moderate-income can be positively affected by LRT station area development by improving transit access to regional amenities and job opportunities, providing new jobs in the station neighbourhood and encouraging economic activities in the rural areas (Teodorović et al., 2017).

Klang Valley, Malaysia is currently undergoing a massive development of rail transportation system expansion where the current integrated rail transit system will see new extensions of two MRT lines and an LRT line by 2020 (Phooi Wai Ho et al., 2017). According to LRT 3 website, the Light Rail Transit Line 3 (LRT3) was developed in line with the Greater Kuala Lumpur/Klang Valley (GKL/KV) Land Transport Masterplan. Hence, it will be the main feature in extending rail connectivity to the Western Corridor of GKL/KV. This line can connect two million people between Bandar Utama and Klang by 2024.

The LRT3 line route is divided into three main segments. The first segment is from Bandar Utama and ends at the proposed Persada PLUS station. Meanwhile, the second segment will start from Persada PLUS station and end at Bukit Raja. The third segment of this line will start from

Bukit Raja and at Johan Setia.

In addition to this study, The Klang Valley region consists of five administrative units which include the Federal Territory of Kuala Lumpur (the capital and financial as well as commercial centre of Malaysia), and four other districts of the state of Selangor: Klang, Petaling, Hulu Langat and Gombak (Dziauddin et al., 2015). Klang Valley has up to 6.0 million populations which conquers an area of 2,843.42 square kilometres. This area has been rapidly growing and become one of the busiest cities for the past few decades.

The LRT 3 project can affect the public in many ways which can increase the quality of life of the public in Klang Valley. People in Klang, Shah Alam and Petaling Jaya are expected to benefit in terms of a better public transport system as well as enhanced economic activities, especially those located within a certain radius of the stations (ERE group, 2015). By increasing the connectivity and reducing traffic congestion, this project is expected to benefit 74, 000 passengers and 500, 000 residents across the alignment as well as strengthen the communities in Shah Alam, Petaling Jaya and Klang (Railway Technology, 2017). However, it also has its bright side which can benefit people in terms of public transport systems. This project can impact the public in a few scopes such as social, economic and environmental.

PROBLEM STATEMENT

Shah Alam is the capital of State of Selangor and the hub of economic development; this is why the government has implemented the mass transit LRT 3 to cater for the demand of the city population. This project is currently being constructed and developed under the Urban Rail Development Plan by SPAD. This project aims to create a public transport system that is efficient, sustainable and competent by being the main plan of the National Land Public Transport Master Plan (Agensi Pengangkutan Awam Darat, 2016).

According to Dziauddin, Powe, and Alvanides (2015), the provision of high service quality of public transportation such as rail transit systems has potentially influenced local land use and increased local property

values (indirect benefits), particularly those that are directly perceived by the person who is purchasing or renting a property. The question is how a rail transit system could possibly affect land use and property values. The sustainability of infrastructure transportation development is basically defined through its impacts on the economy, environment and generally social benefits; measured by system efficiency and effectiveness (Bachok et al., 2013; Mihyeon Jeon & Amekudzi, 2005).

Apart from that, even though this project was expected to benefit the country in terms of social and economic, there are still some negative sides that have affected the city and the community there. According to Deyas (2019), the disintegration of the adjacent community living on both sides of the LRT line has impacted the adjacent economic activities around the LRT line. In addition, the barrier to pedestrians has been made due to the LRT structure which reduces their access to economic activity in the opposite direction of LRT.

Noise and vibration impact, according to (ERE group, 2015), piling vibrations and noise represent potential areas of concern to the communities (residential, commercial, schools, and hospitals) located in close proximity to the alignment and stations during the construction stage. Besides, the traffic in the area involved with the LRT 3 project also will be affected. Construction of the elevated viaducts and stations will take place along busy roads and highways and are likely to affect the performance and level of service on these roads despite all the traffic management measures (ERE Consulting Group, 2015).

LITERATURE REVIEW

Socio – Economic Concept

In a theoretical understanding, socio-economic can be defined as a realistic assumption on human action and their capability to make a genuine recognition of the relevancy of other factors that can influence social life such as culture, politics, technology towards the economy and their influence on the economic phenomenon (Hellmich, 2015). Problems related

to macro-economic and micro-economic such as business cycles, growth, individual firms' competitiveness, and market efficiency shall be overcome with socio-economic approach (Hellmich, 2015). Hence, socio-economic is a main feature for supplementation of economic growth with the help of social science and humanity factor and it has been known as the foundation of economics on the social sciences. Along with this, socio-economic also can be known as a branch of economics that associates economic activities with social behaviour and how it is affected by ethics, social norms, and sentiments (Thanawala, 1985).

History, philosophy, sociology, and political science are factors that can be used to explain how social factors can impact economic activity and development in a society. According to Tarver and Sonnenshein (2020), a relationship that focuses on social behaviour and economics can be acknowledged as socio-economics and it is known to be a branch of economics and a social science. Socio-economics also basically emphasizes on the economic activity within a society and its interplay between social processes (Tarver & Sonnenshein, 2020). Therefore, socio-economic status can be understood as a relationship between social factors that can affect the development of the economy in the country and how important it is in ensuring the development of infrastructure reaches its economic target.

In accordance with the above, the transit at rail lines can provide mobility and accessibility to socio-economic developments such as employment, community facilities, recreational activities and medical care (Jaafar Sidek et al., 2020). Hence, in Malaysia, to cater the population's demand for travelling has forced the government to implement new initiatives and multiple efforts. Under the National Key Result Areas (NKRA), the attempt to change the use of private transportation to public transportation has been done by improving the public transportation systems. The ongoing construction of the extension of Light Rail Transit (LRT) in Klang Valley is one of the government's major plans to ensure that the public has adequate support for travelling requirements. Teodorović et al. (2017) said, generally, the area, size and density of the population have influenced the spatial layout of LRT infrastructure networks. The national effort to reduce poverty and increase the speed of city development growth can be achieved by enabling the transport services of the city, integrating the city land-use and transport plan as well as providing coordinated, efficient and

better transport services (Deyas, 2019). Nevertheless, the LRT 3 project can impact the socioeconomic situation in both negative and positive ways. According to Cervero and Landis (1997); Deyas (2019), the positive impact of it is it can increase the economic activities and population growth in the area while the negative impacts caused by LRT project are that it can create nuisances and crimes in the adjacent property value.

Impact on Employment

Referring to Deyas (2019), public transportation projects have shown that an equal employment opportunity can be distributed among the citizen without discrimination towards racial and socio-economic status. This can be turned into a reality as it has been the aim of public transportation to open as many job opportunities as possible without wasting any investment spent on transportation development. Private development will have a tendency to create more job opportunities when there is an increase in the number of ridership at Light Rail Transit stations that attract the private developer to open up businesses around the stations which provide the public with facilities and services related to their needs (Deyas, 2019). An increase in the number of retail establishments and employees can be created if rail stations draw extra riders to the neighbourhood area, either residents who move to the area or commuters who work close to the station will successfully upsurge the buyer density in the neighbourhood.

In another aspect, according to Dalibi et al. (2020), mass employment opportunities can be produced from the railway project which can lead to income and earning generation, wealth distribution and as well as provide more choices of transportation to the public. The employment opportunities were created when the construction of the LRT line was in need for experts, technology and labour sources which open up to cultural diversities when there is cultural mixing between local and foreign workers. However, the hiring of foreign workers can limit the chances of job security among locals.

Additionally, the development of Light Rail Transit lines together with the stations can directly foster economic development in second-tier towns sideways to the train paths which is believed to lead to a positive set-up whereby costs of living and opportunities for jobs with better wages will be more even. Thus, labour markets will turn out to be extra flexible, and

companies will have a better pool of workers to select from (Abd Aziz et al., 2018). A chance for both revitalisation and betterment of society lives to be more improvements, upgrades, and advancement can be turned into reality instead of just clumping around urban areas. In return, opportunities for jobs will increase directly (Abd Aziz et al., 2018).

Impact on Land Use and Property Value

According to Deyas (2019), land use will be affected once a Light Rail Transit (LRT) is constructed. The effect of land use can be recognized through the increasing rent of the lands and there will be a growth in the number of populations which in turn can change the travel patterns and choices of travelling mode within the modern system as years pass.

As explained by Abd Aziz et al. (2018), land that is adjacent and serviced to good transport services, in general, will have a higher value as it is exposed to a lot of activities. With the presence of rail transportation services, consumers or passengers can easily access a broader range of retail goods and services meanwhile the residents there can have a betterment of job opportunities, and services, and expand their social networks with comfort and ease. Hence, there will be an improvement in the property used and demand (JieSheng Mang, 2020). The availability of public transport can relatively impact the real estate prices around the rail stations. A house or building located near the stations will tend to be sold or rented at a higher and premium price compared to the house in other areas (Ag Anuar & Abdul Wahab, 2022).

Moreover, even in the pre-construction phase of the Light Rail Transit line, it was shown that there is a solid relationship between the project development and land values. The closer the station is to a certain area, the higher the value of the land and property. The surrounding community will benefit from the accessibility improvement and infill development that occurred in the surrounding area (Topalovic et al., 2008).

In addition to that, the Light Rail Transit line also can negatively impact the property values caused by its negative effects such as nuisance and crimes, especially during the construction period of the project. For example, according to Deyas (2019), the Light Rail Transit line gives

negative impacts on the adjacent properties' values as the LRT physical structure has created barriers to the adjacent communities that restricted the access of pedestrians to use the way.

Impact on Business Activity and Market Accessibility

According to Deyas (2019), with the presence of transit nodes accessibility, business and commercial activities gain benefits from spiralling access to employees and customers that use the services. Major changes in business activities and performance happened through supplier effect, user, and labour market when the transportation system was being developed in the area. The profit gained from the business activity will directly boost from day to day and will eventually exceed their target revenue caused by the cost advantage and convenience of the transport system. An increase in the business activities established near the newly built Light Rail Transit station can determine whether new store creation, redistribution from other sectors or distance of the store from the train stop have a greater impact on the commercial activities (Deyas, 2019). In addition, the market accessibility of the surrounding area of the rail line can be improved with the presence of retail services in the neighbourhood area of the line such as pharmacies, grocery stores and restaurants. The services provided can directly upgrade the quality of life of the residents for example, by having chances to purchase healthy food at a reasonable price (Fattah et al., 2018).

Moreover, Deyas (2019) described that households with a low income generally faced greater barriers and encounters to get a hold of commercial centres outside their residential area easily as most of them likely do not own private automobiles. Therefore, there is a need for public transportation, and it is vital to have a railway system in the area to help in the market accessibility of unaffordable citizens. It is proved that rail stations can produce and boost business activities near the LRT stations and increase the purchaser density in the neighbourhood which can lead to a growth in the quantity of retail and workers establishments. According to Topalovic et al. (2008), the accessibility of rail transit can give better access to business and commercial interests to get more employees and customers. People near rail stations tend to have a higher income compared to those further away. Light Rail Transit development may attract developers and landowners to invest more as they can predict the potential profit gained from it. Besides, the

social welfare of the surrounding community will be secured and guaranteed when the public and private coordination investment is improved by the LRT plans- there will be an increase in the investment and direct spending on the LRT construction planned.

Transportation system is important to ensure that economic activities can take place as well as in the generation and production of goods and services. Light Rail Transit development may attract developers and landowners to invest more as they can predict the potential profit gained from it.

Impact on the Mobility and Accessibility

The accessibility can be explained as the level of land use accordingly to transportation systems that enable individuals or groups to reach activities or destinations they want by using transport modes (Geurs et al., 2008). Light Rail Transit (LRT) provides accessibility to the public to travel with ease, comfort and faster compared to other systems. The variation of routes offered by the LRT line can increase the level of commute among the public and allow them to actively participate in jobs, leisure time and health services. Passengers also can easily travel at different times of the day. Supported by Abd Aziz et al., (2018), Light Rail Transit (LRT) implementation can give advantages to residents and businesses by offering access and mobility to travel with an economic cost compared to other systems. Rail transport permits people to travel to their desired location and destination such as for food, health, social services, jobs and visiting their relatives and peers (Geurs et al., 2009). Deyas (2019), explained that with the use of LRT, the mobility of the public is much more comfortable and safer as there will be no issues regarding traffic congestion that needs to be faced by the passengers.

Impact on Social Nuisance

The construction phase of the Light Rail Transit project can eventually cause negative impacts towards citizens (Geurs et al., 2009). For instance, there will be noise nuisance during the construction works that will cause discomfort to the public. Besides, some temporary diversions and barriers can cause congestion and detours as well as impact the economic activities to the sideways of the rail lines. People from the other side will be having

difficulties accessing the other side of the rail line which can decrease the interaction among the public, lowering the retail events. Moreover, the relocation of the public around the rail lines can lead to uncertainty to the public and indirectly affect their psychological, fear, aggression, discomfort, and annoyance (Geurs et al., 2009).

In addition, Geurs et al. (2009), also stated that the presence of rail lines can affect the physical appearance and quality of the environment of the city. The appearance of the city will be less aesthetic and there will be a decrease in the air quality as the construction process ongoing will create dust and particles floating in the air.

METHODOLOGY

This research used a quantitative method where the respondents were selected based on simple random sampling. The questionnaire was distributed to respondents who live around Shah Alam, Selangor. Shah Alam is chosen as an area of study because there will be six (6) out of twenty (20) LRT 3 stations which consist of Glenmarie 2, Kerjaya, Stadium Shah Alam, Dato' Menteri, UiTM Shah Alam and Sekyen 7, Shah Alam. Moreover, Shah Alam is the administrative city for the state of Selangor. This city is known as a city that has a good mix of developments which covered from industrial development to the educational purpose of development (Rafee & E Jacqui Chan, 2019). The administration took place in the central sector of Shah Alam. The commercial activities are divided into 56 sections which are available in all three sectors- central, north, and south sectors. Shah Alam is also occupied with academic institutions such as Management and Science University (MSU), Universiti Teknologi Mara (UiTM) and Politeknik Sultan Abdul Aziz Shah which help to boost the economic activities in Shah Alam. There are numerous numbers of shopping malls and hypermarkets run their business in Shah Alam such as SACC Mall, Plaza Shah Alam, Kompleks PKNS, AEON Mall, Anggerik Mall, I City- Central and hypermarkets such as Lotus and Giant.

On the other hand, the other areas were not chosen as areas of study because of time and budget constraints. For this research, 120 questionnaires were distributed. However, only 102 questionnaires were returned which equal

to 85 percent response rate. Fincham (2008) stated that 60% response rate is acceptable. Data gathered is analysed using descriptive analysis and average index via SPSS version 23.

Table 1. Summary of Respondent Rate

Description	Sample
Quantity of distributed questionnaires	120
Quantity of returned questionnaires	102
Percentage	85

Source: Author

Descriptive statistics are specific methods basically used to calculate, describe, and summarize collected research data in a logical, meaningful, and efficient way. Descriptive statistics are reported numerically in the manuscript text and/or in its tables, or graphically in its figures (Vetter, 2017). The mean, median, and mode are three (3) measures of the center or central tendency of a set of data. In addition to a measure of its central tendency (mean, median, or mode), another important characteristic of a research data set is its variability or dispersion (ie, spread). In simplest terms, variability is how much the individual recorded scores or observed values differ from one another. This research uses mean for the data analysis. The mean is likely the most widely known descriptive statistic. All of these average values were an arithmetic mean, which is defined as the total sum of the values divided by the number of observations (sample size) (Vetter, 2017). For this research too, average index analysis is used and the data will be extracted by using the average index scale (Min Index $= (\sum a_i x_i)/(\sum x_i)$) as suggested by (Abdul Rahim Abdul Hamid et al., 2011). Table 2 shows the classification of average index range. The results from the analysis are shown in a diagram such as a table for a clear visualization.

Table 2. Average Index Classification

Level of Important of Evaluation	Average Index
Strongly Disagree	1.00 ≤ Average Index < 1.50
Disagree	1.50 ≤ Average Index < 2.50
Neutral	2.50 ≤ Average Index < 3.50
Agree	3.50 ≤ Average Index < 4.50
Strongly Agree	4.50 ≤ Average Index ≤ 5.00

This research also used analysis of ranking data. Ranking data are frequently collected when judges (or individuals) are asked to rank a set of t items according to a certain preference criterion. Such data may be observed directly or come from ranking a set of scores or ratings assigned to the items (Yu et al., 2019). Examples of ranking data are abounded and can be found in a wide range of areas including market research, sports and so on. The main objectives of analysing ranking data are to identify the relationship among several sets of rankings and to explore the possible factors that influence individuals' choice decisions. For this research, higher mean and number one (1) ranking indicates that specific variables or criteria are getting highest 'strongly agree' or 'agree' judgement. The results for descriptive analysis which consist of frequency, average mean and analysis of ranking data are being calculated by using SPSS version 23.

ANALYSIS AND FINDING

The data was analysed using descriptive analysis and average index for the Likert scale questions respectively. The data was ranked accordingly based on percentage and mean by using SPSS version 23. The results of the data are shown in Table 3 below.

Table 3. Socio Economic Impact of LRT3

Socio-economic Impact	Strongly Disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly Agree (%)	Mean	Average Index Scale	Rank
Ease of access to another place	2.00	2.90	3.90	30.40	60.80	4.45	Agree	1
Increase property value (sell or rent)	-	-	16.70	46.00	37.30	4.21	Agree	2
Create business opportunity i.e. (commercial and retail)	1.00	1.00	14.70	47.00	36.30	4.17	Agree	3
Increase employment rate/ job opportunities	1.00	4.90	19.60	41.20	33.30	4.01	Agree	4

Improved market accessibility	2.00	2.90	3.90	30.40	60.80	3.98	Agree	5
Increase in land use	2.00	1.90	26.50	43.10	26.50	3.90	Agree	6
Increase congestion in the construction area	6.90	7.80	17.70	33.30	34.30	3.80	Agree	7
Noise pollution	4.90	9.80	25.50	31.40	28.40	3.69	Agree	8
Decrease indoor air quality	2.90	10.80	31.40	32.40	22.50	3.61	Agree	9

Source: Author

From Table 3, nine (9) variables have been identified as the socio-economic impacts of the LRT 3 project. Table 3 shows the ranking of the impacts based on the average index range. The first in the rank is the impact of the LRT 3 project on the ease of access to another place, followed by the increased property value either for sale or rent, and the creation of business opportunities such as in the commercial and retail sector with the means 4.45, 4.21, and 4.17 respectively. The impact of the LRT 3 project in increasing the employment rate or job opportunities with the mean 4.01 fall to the fourth rank and the fifth rank is improved market accessibility with the mean 3.98. Increase in land use comes right after that with the mean 3.90. The last three ranks of the impact are increased congestion in construction areas with the mean average 3.80, noise pollution with the mean 3.69 and lastly is decreased indoor air quality with the mean 3.61. However, all of these impacts are categorized in the 'agree' level of agreement based on the average index scale.

DISCUSSION

The results displayed that 60.80% of the respondents strongly agreed that the LRT 3 project can benefit them in moving from one place to another place. This socioeconomic impact has given the respondents great mobility to travel. This is in line with the previous research done by Geurs et al. (2009), which explains that the LRT line offers accessibility to the public to travel and makes the travel experience of the public easier, more comfortable and

faster compared to other systems. In addition, the public also can enjoy more of the commuting level with the increase in the LRT route and allow the public to go to work, leisure time and healthcare centres actively. With the railway system, passengers are offered mobility at various times of the day.

Moreover, most of the respondents also agreed that LRT 3 will increase property value whether it is for sale or rent. Both of these impacts of the LRT 3 project have been agreed by the respondents with 43.10% and 46.00% respectively from the total respondents and this criterion did not get any 'disagree' and 'strongly disagree' According to Deyas (2019), land use will be affected positively when the LRT project is constructed as there will be an increase in the number of populations to reside in the conjunction area of the project to enjoy the facility provided. In correspondence to that, the value of the property adjacent will gradually increase because it is exposed to a lot of activities due to the ease of travel of the public, especially areas near the stations (Abd Aziz et al., 2018; Ag Anuar & Abdul Wahab, 2022). Therefore, the demand for the property will increase.

In addition, about 47.00% of the respondents agree that the socioeconomic impact of the LRT 3 project is that it can create business opportunities in the affected area such as in the commercial and retail sectors. Moreover, half of the respondents agree that it can improve market accessibility. The output from the survey can be supported by Deyas (2019), business activities in the nearby area are increasing because customers and employees can easily access the area with the presence of transit nodes. The purchaser density in the neighbourhood area can effectively boost the economic activities there. Besides, the presence of railway lines also increases the number of retail services along the line which can directly improve the market accessibility (Fattah et al., 2018). The transportation system offers a link between producers and customers within the linked cities, towns, and regions (Sahrir Abd Aziz et al., 2018).

It is expected that the respondents agree with the socioeconomic impacts of the LRT 3 project towards the increase in the employment rate or job opportunities which is 41.20%. It is supported by Dalibi et al. (2020), that employment and job opportunities can be created from the rail project. This is because the construction of a railway will need many experts, technology and even labour sources which also will lead to the

cultural diversity between local and foreign workers. Moreover, according to the LRT 3 website, this project involved 164 numbers of small-scale Bumiputera contractors (G1, G2, G3 and G4) which will create a lot of job opportunities and increase employment rate.

CONCLUSION AND RECOMMENDATIONS

In conclusion, all the important elements used to identify the socioeconomic impact of the LRT 3 project on the public in Shah Alam locality have been explored in this research. From the discussion, the respondents strongly believed that the major impact of the LRT 3 project on the public is the mobility and accessibility of travelling. This is because the light rail transit system offers a wide range of routes that cover a lot of areas and can help people commute easily to the desired locations. This positive impact of the system benefits the public to travel with comfort, safely and easily.

In terms of contribution to land value, the majority of respondents agreed that the construction of LRT 3 or any infrastructure project will increase the land value located near to LRT 3 alignment. For example, the land value at Glenmarie, Seksyen 13 and Seksyen 7 will increase because of its potential capital gain for developers or property investors. Moreover, all of these locations are located alongside the LRT 3 alignment and may be transformed into Transit Oriented Development (TOD) like KL Sentral. As Malaysian cities prosper and grow, Transit Oriented Development (TOD) has become a stepping stone in optimising land use and increasing land value. Transit Oriented Development is a universal land-use solution that encourages mixed-use developments around public transit systems. Specifically, clustering housing, jobs, schools, commercial spaces, health services, and amenities within close distance of a transit station. Developers are beginning to tailor new launches towards TOD because it serves as an effective model for delivering affordable housing. As a result, it frees up options for middle- and low-income households looking to live and work near the city centre, especially newlyweds and first-time home buyers. Moreover, housing developers can bolster and capitalise on property values with the appeal of rail infrastructure. Thus, Transit Oriented Development (TOD) is vital for urban growth as it gives various benefits such as accommodation for future growth, promotes new land use activities,

increases public transport ridership, establishes a safe and comfortable circulation network and builds low-carbon cities.

In a nutshell, based on the data analysis, results and findings, it can be deduced that most of the respondents agree that the LRT 3 project can have positive impacts on the socioeconomics of the public except during the ongoing construction works of the project.

As recommendations, the study can be conducted for the whole strand of the LRT3 project to identify the public's perception towards the socioeconomic impact of the LRT 3 project in Klang Valley and a qualitative survey involving experts in the infrastructure development also can be done to get feedback on the impact of Light Rail Transit (LRT) 3 construction. Next, a similar concept of research also can be implemented but conducted in different regions such as Penang Island and Kuching, Sarawak as there are rumours regarding the construction of LRT in these areas.

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AUTHOR CONTRIBUTIONS

All authors contributed to the design of the research, the questionnaire, and the write-up. The data extraction, data cleaning and tabulation were undertaken by Universiti Teknologi MARA. All authors have read and approved the final manuscript.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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