Elm və İnnovativ Texnologiyalar Jurnalı Nömrə 14, 2020. 89-96 DOI: 10.30546/2616-4418.14.2020.89

MANAGEMENT OF PUBLIC TRANSPORTATION TO OVERCOME TRAFFIC JAMS

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Introduction

Although public transportation has an important role in connecting people and distribute the goods, but it creates a new problem. Modern cities now face traffic congestion. Traffic jams make the vehicles are stuck many hours on the streets. It may be due to the roads capacity (Rahane & Saharkar, 2014) too small for hundred cars. The busy roads to be incapable of handling the amount of traffics in peak hours (Lomendra et al., 2018). Shepherd and Wilson (2008) argued in Southeast Asia the goods and services need better public transportation. Further, government needs the investment to provide the financial for the transportation projects. The role of transportation to hub people and exchanges of products. With the transportation system helps the goods transported faster from one city to another one (Morlok, 1995), but the high volume of vehicles on roads make the congestion problems.

The demands for products and services make the vehicle sales high and it results in the traffic jams in cities. For lifting people and goods growth, the cities have too many vehicles. It tends to be higher and higher. The increasing of travellers (Khisty and Lall, 2002) results in the roads are jams.The geographical and topographical distance obstacles (Farida, 2018) can be overcome with modes of transportation. Better transportation system reduces the costs of transportation. It supports the growth of the business and economic rates. Better transport makes the costs of logistic low. Prapti, et al (2015) argued that public transportation infrastructure assists the businesses. Therefore, it help commuters to travel, although it makes traffic congestion (Kumarage, 2004; Ali & Faraj, 2013).

Based on the management of transportation problems, this research was aimed at to seek the alternative solution for traffic congestion problems in urban areas of big cities. Due to role of transportation to support the public activities for national development and economic growth, but the traffic jams make contra-productive condition. In short, public need the transportation system which is continually improved to help the movement of the people and goods. So the government is required to build not only land roads for vehicles, but it needs to facilitate commuters with modern transportation such as Mass Rapid Transportation (MRT). Non -automobile vehicles are need to be constructed to provide the alternative solutions.

Research Design

This study used a qualitaive research design; it was to ob¬tain data about public transportation problems. This survey research focused on public policy (Kohler, 2020 and Dolnicar, 2020) which manage the transportation system. It collecte data of the charac¬teristics of subjects (Ponto, 2015) from the transportation problems. Data collection was made to seek a traffic jam problems and alternative solutions from the transportation system, new facilities, and operational changes to improve public transportation system performance. Those data sources were used to give the alternative ways to solve congestion problems (Rahane & Saharkar, 2014).

Finding

Overcome traffic jam

Many alternative solutions have been put forward to overcome the traffic jams. Traffic congestion could be minimized with the traffic flow management and make the road capacity bigger (Remi et al., 2009). Controlling the number of cars in rush hours has a positive effect.

The controlling of congestion problems (Ali & Faraj, 2013) also needs the strict regulation of imported cars. Government could also makes a policy to the intensity, timing, and spatial distribution of transportation demands which reduce the traffic flow (Toulni et al., 2019). The government should attempt to make more attention to long-term solutions for traffic problems. An indirect travel demand management is necessary.

A policy to reduce vehicle miles travelled (VMT) with the encouraging alternative transport means. It notes that walking and cycling are two traditional alternatives because restraint of private vehicles is not enough to solve the traffic problems (Li & Wang, 2017). Therefore, it is essential for government to gather the public opinions of transporation policy. Transportation commuters could have ideas of the traffic jams and their reaction towards traffic jam. It can help the decision-maker to understand well in finding the solution to make more efficient and useful policies (International Conference on Rebuilding Place, 2019).

In 2013, the Jakarta Government initiated the construction of a Mass Rapid Transit (MRT) system to reduce traffic jams. MRT serves on the busy routes across the capital city since the bus tracks overlapped with existing roads. It has reduced the rapid growth of private vehicles (Anwar et al. 2017). Other alternative solution is the Flexible Work Hours. This method makes the workers are allowed to work over some time rather than at an exact time (VTPI, 2010). Transportation Demand Management (TDM) policy solves the traffic congestion problem (Zong, 2013). A public policy to regulate the carpooling culture is needed. It is an effective solution to the problem of traffic congestion in the short term. It is known that the carpooling technique helps in reducing the number of vehicles on the roads (Tilak & Reddy, 2016).

Discussion

Many offered solutions to overcome the congestion problems in the public transportation management. If cars or private transportation increase it would make the traffic jams. It tends to increase the mobility of population. The growth of travellers has a direct relationship to public transportation. The increase of the humans and goods movement leads the sales of motorbikes and cars grow. Those make the land transportation have a congestion. Although the public transportation plays an important role in economic and business of urban and rural connections, it needs the alternative vehicles. Government should invest in trams and trains or MRT infrastructures. Various modes of transportation are needed in urban areas, but it needs the best management to reduce the congestion. Not only the highway transportation (Schumer, 1968), but it also needs a transportation management to overcome traffic jams.

The demand for highways (Kesuma et al., 2019) higher and higher but it also necessary to handle daily flow of vehicles. It tends to grow due to the increasing number of motorized vehicles. The government should have fulfilled the transportation infrastructure for better public usage (ITDP Indonesia, 2019). The transportation system has some functions for people or goods movements.

Government agency for public transportation needs to evaluate the system for facing the increasing growth of commuters. Public transportation management is intended to influence the intensity, timing, and spatial distribution of transportation demand to reduce the impact of traffic flow. Government should make three models of transportation subsystem to overcome the traffic jams in rush hours.

- *First, the feeder system from settlements of outskirt of cities to downtown with buses and commuter lines. Government could make a collaborative work with bus providers to lift up the settlers from outskirt to urban areas with buses in peak hours. The private companies are encouraged to provide the transportation vehicles to their workers.*

- *Second, the construction of Mass Rapid Transportation in downtown. Business hours make the streets in downtown are fully used. The government should regulate the people transportation with the MRT. The usage of land roads are only for trucks to deliver the goods in peak hours.*

- *Third, the regulation of roads in the peak hours (7.3-9.00 am and 16.30 – 17.30 PM). It enforces the government to make more attention to long-term solutions for traffic problems, so related to indirect travel demand management is necessary in rush hours.*

Conclusions

This research gives some solutions of facing traffic jams in urban areas.

(1) Government should make three models of transportation subsystem to overcome the traffic jams in rush hours. First, the feeder system from settlements of outskirt of cities to downtown with buses and commuter lines. Second, the construction of Mass Rapid Transportation in downtown. Third, the regulation of roads in the peak hours (7.3-9.00 am and 16.30 – 17.30 PM).

(2). A policy to reduce the vehicle miles travelled (VMT) covers the management of rush hours, alternative transportation such as trams and trains. Policy also encourages the active transport, such as walking and cycling, because the restraint of private vehicles is not enough to solve the traffic problems.

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XÜLASƏ

Tıxac probleminin həllində İctimai nəqliyyatın idarə edilməsi

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Hər zaman böyük şəhərlərdə ictimai nəqliyyat tıxac problemi ilə qarşılaşır. Bu tədqiqat işi tıxacların alternativ həll yollarını araşdırdı. Nəqliyyatda, ümumilikdə yüksək qəza dərəcəsi və inkişaf etməkdə olan ölkələrdə yollar üçün lazımi infrastrukturun olmaması səbəbindən daha çox nisbət kimi bir çox problemlə qarşılaşır ki, bu da tıxacı yaradan əsas təsir səbəblərindən biridir.Məqalədə mütəxəssislərdən və nəqliyyat agentliklərindən məlumatların toplanması üçün keyfiyyətli bir tədqiqat formatı tətbiq edilmişdir. Əldə edilən məlumatlar nəqliyyat sistemi rəhbərliyinin yeni imkanlara sahib olması və əməliyyat dəyişiklikləri etməsinin lazım olduğunu ortaya qoydu.Regional və ya əyalət miqyaslı nəqliyyat sisteminin idarə olunması və istismarı da bir çox qurum və yurisdiksiya arasında koordinasiya və əməkdaşlıq tələb edir.Nəqliyyatın təşkili xalq üçün fasiləsiz səyahət təcrübəsi, əməliyyat qurumlarının hərtərəfli yol məlumatları, koordinasiya edilmiş trafik siqnalları və iş zonalarının səmərəli idarə olunması üçün birlikdə işləmələrini tələb edir.

Məqalədə nəqliyyat infrastrukturun yaxşılaşdırılması və yolların istifadəsinin yenidən planlaşdırılması, tramvay və qatar əlaqələrinin genişləndirilməsi tıxacların aradan qaldırılması üçün alternativ həll yolları olduğu qənaətinə gəlinir.

***Açar sözlər**:* Tıxac, ictimai nəqliyyat, alternativ həll, idarəetmə,nəqliyyat sistemləri

РЕЗЮМЕ

Управление общественным транспортом в решении проблемы пробок

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В крупных городах общественный транспорт всегда сталкивается с пробками. В этом исследовании изучались альтернативные решения проблемы пробок. На транспорте существует множество проблем, таких как высокий уровень аварийности и отсутствие надлежащей дорожной инфраструктуры в развивающихся странах, что является одной из основных причин пробок. В статье используется формат качественного исследования для сбора данных от экспертов и транспортных агентств. Результаты показывают, что управление транспортной системой должно иметь новые возможности и оперативные изменения. Управление и эксплуатация региональной или провинциальной транспортной системы также требует координации и сотрудничества между многими агентствами и юрисдикциями. Организация транспорта требует совместную работу для приобретения непрерывного опыта поездок народа, всесторонней дорожной информации оперативных агентств, согласованные сигналы светофоров и эффективного управления рабочими зонами. В статье делается вывод, что улучшение транспортной инфраструктуры и перепланировка использования дорог, расширение трамвайных и железнодорожных путей являются альтернативными решениями для устранения пробок.

Ключевые слова: Пробки, общественный транспорт, альтернативные решения, управление, транспортные системы