Passengers' Satisfaction towards Railway Facilities (RAILQUAL in the Central Region

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Abstract:Rail transportation such as Light Rapid Transit (LRT), Monorail, Mass Rapid Transit (MRT), Keretapi Tanah Melayu (KTM), and Airport Rail link are one of the medium to reduce traffic congestion. However, incompatible railway facilities like lower level of cleanliness, insufficient facilities provided in idle station, inefficiency of vending machine, and inadequacy of parking facilities will discourage people from choosing rail service as their transportation mode. This study identifies the dimensions of service quality that contributes to passenger satisfaction and determines the significant relationship between RAILQUAL and passenger satisfaction in the central region. The most significant relationship with passenger satisfaction is Assurance dimension. Multiple Regression Analysis conducted to test the relationship between RAILQUAL and passenger satisfaction which resulted Assurance, Empathy, Comfort, Convenience, Connections, Responsiveness to be significant significantly related while Tangible and Reliability dimensions show no significant relationship between the variables. As a result, a better facilities management should take into consideration on the service quality provided in the railway station as it plays a vital role in encouraging citizen towards its services which eventually could overcome traffic congestion and contribute towards sustainable transportation in country.

Index Terms: Passenger satisfaction; RAILQUAL; Facilities management.

I. INTRODUCTION

Facilities management (FM) is the most powerful sector, which has gradually developed from the real estate and construction (Elyna Myeda & Pitt, 2014). Tucker & Masuri (2016) affirm that the facilities would stimulate a favourable outcome on the basis of meeting business needs, staff productivity, customers' comfort and being responsive to the needs of the users in the long run. To achieve high-quality facilities which are usable, reliable, and the safety of the asset being managed; maintenance activities have been considered as an essential element in the organization (Fraser, 2014).

In Malaysia, most of the people can afford to purchase a car, thus the number of vehicle has growth dramatically

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(Ong, Ng, Giam, Kasim & Hizza, 2015). This has caused traffic congestion to become a major problem in the city. Public transportation becomes one of the medium to reduce traffic congestion issue, a part of it; public transportation can provide a more convenient travel mode and boost up country's economy. Hence, rail transport is one of the most important transport medium in Malaysia that can rectify this issue (Ministry of Transport [MOT], 2016). Rail transportation usage is encouraged by government as it can reduce environmental pollution and improve the quality of environment (Nordin, Mohd Masirin, Ghazali & Azis, 2016). Therefore, government have provided several rail transportations in Malaysia, which comprises of Light Rapid Transit (LRT), Monorail, Mass Rapid Transit (MRT), Keretapi Tanah Melayu (KTM), and Airport Rail link. However, incompatible public transportation facilities have caused people refused to utilize this mode of transportation.

Masirin et al. (2016) stated that the idle railway stations were equipped with lesser facilities as compared to busy railway station. The general manager of KTM Pantai Dalam had proven that some low ridership station would not be equipped with elevator as the areas have lesser user. Elevator is relatively important for disabled, senior citizens and pregnant) women. Patra, Sala & Ravishankar (2017) mentioned, implication of pedestrian's facilities, such as stairway, passageway, ramps, escalators, elevators, moving walkways etc. is important for changing of platform. According to Malaysian Standard Code of Practice on Access of Disabled Persons (MS), public transport stations required to equip with facilities for disabled people. Elevator allows disabled people, senior citizens and pregnant women to change level easily. Besides that, India also faces major issue with cleanliness and disposal of human waste. People standing on the platform will feel uncomfortable due to the rubbish strewn and foul smell (Kadge, Varute, Patil & Belukhi, 2016).

In Australia, the ticket machines were rated as the most popular sales channel in 2010 due to the advantages generated by the self-service ticket vending machine; such as, reducing waiting times and zero restriction on operation hours (Schreder, Siebenhandl, Mayr & Smuc, 2012). However, the self-service ticket vending machine are considered as less user friendly for disable people with wheelchair, blind person and elderly. Most probably it is due to the height of the machine is suitable for disable people with wheelchair. Similarly, the lack of options to the touchscreen makes it is impossible to be use by blind person. New technology and

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elderly people face challenges to be connected. A more comprehensive view by Orzeszek, Kopec, Wichrowski, Nielek, Balcerzak, Kowalik, & Puchalska-Kaminska (2017) stated that the elderly is not able to define the function of the ticket machine and never make use of the ticket vending machine.

In Switzerland, small railway stations often use shelter to protect waiting passenger instead of building (Allegrini & Kubilay, 2017). According to Singhal, Kamga, & Yazici (2014), weather will indirectly influence the demand for transit. For instance, strong wind while raining will cause water splash into the waiting area. This would cause passengers reluctant to take railway transport. Weather is unpredictable factors that railway station management team could not control. However, architect should design a good wind shelter that can protect passenger from rain, sun and wind in every railway station. Based on observation, many railway stations in Malaysia, especially KTM, usually come with poor facilities which unable to protect passengers from external environment. Exposure under hot and bright sun will easily causes people to get heatstroke; water splash into the rail station formed slippery floor will causes people to fall. Allegrini & Kubilay (2017) stated guidelines for bus stop shelter could be implemented into railway station shelter. One of the general guidelines that set by UK Roads Service Transportation Unit (2005) is "shelters should be designed to provide maximum weather protection, bearing in mind the prevailing winds and the need for protection against splashes from passing vehicles".

This study identifies the dimension of service quality that contributes to passenger satisfaction towards railway facilities and. to determine the significance of relationship between the dimensions and passenger satisfaction towards railway facilities in the central region of Malaysia. Railway facilities can be divided into in-train facilities and station facilities (Nordin & et al., 2016). However, the scope of this study is limited to station facilities, which enable passengers to feel comfortable and safe during the waiting period at the station. Central region chosen as point to conduct the study as Transit-Oriented Development (TOD) has been promoted focused in the Klang Valley area, which includes 83 LRT stations, 56 KTM commuter stations, 11 monorail stations and 31 MRT stations. TOD is ideal for a high-density population like Klang Valley. The key mission of the Government Transformation Programme (GTP) is the improvement of the urban public transportation system (Yap & Goh, 2017). To achieve the key missions of the Government Transformation Programme (GTP) the design features of the stations and the maintenance of the facilities provided should be take into consideration.

II. LITERATURE REVIEW

SERVQUAL approach is proposed by Parasuraman, Zeithaml, & Berry in the year 1988, as the most common and valuable tool for measuring the service quality by determining the gap in between the customer expectations and customer perceptions towards the services (Celik, Aydin & Gumus, 2014). In the earlier studies in the year 1985, 10-dimensional service quality measures have been identified by Parasuraman et al. (1985), whichcomprised of,

reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding or knowing the customer, and tangibility. Later, to formulate a service quality (SERVQUAL) framework, they reorganized the framework into 5 dimensions in the year 1988, which includes; reliability, assurance, tangibles, empathy, and responsiveness (Parasuraman et al., 1988).

According to De Oliveira & Ferreira (2009), the adaptation of SERVQUAL instrument into the certain services should take into consideration as most of the service processes are different due to their intangible nature. Thus, the determinants used to evaluate service quality need to be investigated based on specific services. As a result, it is necessary to modify some of the determinants which can make the SERVQUAL instrument to be adapted by adding or deleting factors as required in different circumstances such as railway facilities. SERVQUAL is considerably more appropriate to measure the service quality of customer-related service provider, while service quality measures for public transport industry is focused more on mechanistic (Prasad & Shekhar, 2010a). Consequently, Prasad & Shekhar (2010a) developed the RAILQUAL instrument for evaluating the Indian railways by modifying the original five SERVQUAL dimensions and added three new dimensions, namely, convenience, comfort, and connection.

This study is an attempt to give best shot on the passengers' satisfaction towards the railway facilities provided in the central region of Malaysia based on the RAILQUAL approach. This study will be conducted based on 6 criteria, which are hygiene ambiance, vehicle access and circulation, pedestrian facilities, waiting area, ticketing system, and information centre in the railway stations.

A. Reliability

According to Naik et al. (2010), 'promises' and 'doing it right' are the second order factors of the reliability dimension. Consequently, higher service reliability in the railway facilities context is crucial to enhance the passengers' satisfaction level (Brons, Givoni & Rietveld, 2009). The real-time information systems could increase the passengers' satisfaction (Sweeney, 2012). This is because the information provided at the railway station which represents a part of service in a journey can lead to delays and reliability issues (Pettersson, 2011). The reliability of information system at the railway station can be evaluated through the accuracy of train schedule, train departures and route map(s) that are display through the screen in the station as well as the announcements in stations during and after breakdowns (Brons et.al, 2009). Prasad & Shekhar (2010) also suggested that reliability of railway service can be measure by providing on-time train services as promised (on-screen displays). Hence, the high level of information accuracies such as train departure and arrival time as scheduled in timetables or screen displays will make the passenger feel more reliable.

The railway operators monitor the safety of passengers through installation of CCTVs in danger and security areas which can also make the users to feel safer (Oh, Yoon, Baek & Jo, 2012). In other words,

the reliability of the facilities provided at the waiting area in the station could affect by how the passenger feel safe and secure against security system itself and the users (Nathanail, 2008). As mentioned earlier, complaint handling system is also one of the attributes that determined the quality of service. Cavana, Corbett & Lo (2007) and Prasad & Shekhar (2010) suggested that the reliability of the railway services can be evaluated based on the dependability in handling the passenger's service problems where the railway operators show sincere interest in solving the problems. For instance, complaints could be received from different aspects, which include low level of cleanliness of the public toilet and waiting area in the railway station, elevator breakdowns problems, ticketing system malfunctions as well as illegal parking problems.

According to Kadge et al. (2016), every passenger expected to have a healthy and hygienic surrounding while using train as travel mode. Therefore, the cleaning services on the platform at the waiting area in railway station can influence the reliability of the service provider. Lower level of cleanliness can cause problem such as environment pollution, creates bad image on tourist from overseas and viral disease spreads (Kadge et al., 2016)

Passengers will refuse to travel by using train transportation when they are facing health risks. Thus, it is essential for the service provider to maintain a good sanitation habit in order to make the riders feel more reliable to take train as their transport mode. Proper service provided in the railway station is vital for the passengers as railways are selling services instead of products. Better functioning ticketing vending machines is important for the passengers without electronic ticket like "Touch n Go" (Aydin et al., 2015). Thus, it is the role of service provider to perform services correctly in order to maintain or increase the reliability level from the user perspective (Prasad & Shekhar, 2010).

B. Assurance

According to the Celik et.al (2014), assurance represents the knowledge and politeness of the service providers which can be evaluated based on how they inspire trust and confident. In other words, assurance dimension is a combination of competence in which the staff having the required knowledge to deliver the services; courtesy in which the services can be performed in a polite, respect and friendly manner; credibility which can be evaluated on the basis of trustworthiness, believability and integrity of the staff; as well as security where the passenger can be free from danger, risk and doubt (Hirmukhe, 2012). In accordance to the research conducted by Cavana et al. (2007) and Prasad & Shekhar (2010), the following attributes have been used as the criteria to measure the assurance of the railway services, which comprise of personal safety at stations, adequate information provided about any changes in itinerary, provision of information of train delays, availability of staff and enquiry handling at ticket counter/office.

Public safety is considered one of the most important factors that is essential for the passenger to feel comfortable at the station while waiting for train (Cavana et al., 2007 & Van Hagen 2011). Brons et al. (2009) have suggested to include personal safety at railway station in the Dutch Railways customer satisfaction survey. If the passengers do not feel safe in the environment, they may refuse to travel by public transport (Hof, 2008). According to Goel et al. (2016), they believed that the availability of the police assistance booths at the waiting area has been used as one of the attributes to evaluate the safety of passenger in the railway station.

Besides, "information" is the most effective element that influences the customer satisfaction (Nathanail, 2008). This is because passengers expect to obtain relevant information in a timely manner from the railway operator in which the provision of information has become an important indicator of passenger satisfaction (Cavana et al., 2007; Geetika & Nandan, 2010; Swami & Parida, 2015). Thus, the relevant information needs to display on the screen and announce by using information and announcement system respectively for the sake of assurance level of railway service. On the other hand, passengers can also obtain information from the staff available at the ticket counter/office. In order to get on the train on time, ticketing has an essential meaning for the passengers in terms of ticketing service and vending machines system (Aydin et al., 2015). Therefore, it is crucial to allocate staff at the ticket counter for inquiry handling and maintain the ticketing system to function in the proper manner at all time to assure that the ticketing system will be performed without error.

The facilities in the railway station should be assuring to perform well and designed to ensure that it is usable for passengers with mobility impairments. According to the Metropolitan Transportation Authority (MTA), pedestrian facilities such as elevators and ramps, as well as handrails on ramps and stairs should be available in railway station. The elevator should be well maintained to assure that the services will be performed without error while the disabled people changing level in railway station.

C. Tangibles

According to Rao (2011), services are intangible as they cannot be seen, tasted, felt heard and smelt; therefore, customers are uncertain of the outcome. However, tangibles are heroic factors in appraisal of service quality (Ali & Fazili, 2016). Thus, expectation of customer (Beamish & Ashford, 2007). Parasuraman et al. (1988) defined tangibles as the physical facilities, equipment, personnel and the way of communication associated with the services. According to Ogle (2009), the vital factors that led to customer satisfaction and a prime consideration for repeat purchase are the physical aspects and tangible dimensions of the environment. As passenger of rail transport could not determine the outcome of the services, they will take the surrounding environment of the railway station as first impressions to determine the quality of services they received. service provider should include tangible elements in the service delivered process as it could help to meet expectation of customer (Beamish & Ashford, 2007).

According to tangibles research conducted by Prasad & Shekhar (2010), hygienic ambiance of the station, overall appearance of staffs, and clarity of information provided are essential elements to be

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tested. In another research conducted by Maruvada & Bellamkonda (2010) examined on the applicability of RAILQUAL had listed that the surrounded facilities like lighting, seating and toilets also a vital factor that contributed towards a tangible research. According to Ghosh, Ojha & Geetika (2017), the three out of top five amenities that required an upgrade or improvement are regarded to cleanliness and hygiene. Cleanliness possesses highest positive impact towards service quality of railway station (Aydin et al., 2015). According to Dell'Olio, Ibeas & Cecin (2011), cleanliness is defined as the vital factors that contribute good service quality. Findings from the past research had showed that cleanliness and hygiene of the surrounding environment will contribute to the first impression of services quality.

According to Dimanoski, Stojic, & Vrtanoski (2016), tangibles is the most important dimension of SERVQUAL which can be determined in terms of the appearance of the physical buildings, equipment and staff. Maruvada & Bellamkonda (2010) also emphasize that a visually appealing timetable and display boards can empower the quality of station. Clear and precise timetable, signage, map, and announcement boards allow customer to read and understand easily can improve the customer experiences throughout the travel experience. Hence, it is important for the service provider to ensure the tangibles elements of the railway station are well maintained and provided.

D. *Empathy*

Empathy is defined as the degree of caring and individualized attention provided to the customers and it will strongly influenced customers' perception (Parasuraman et al., 1988). According to Vanniarajan & Stephen (2008), the level of satisfaction is found significantly influenced by empathy. In others word, empathy service provider can affect customers emotional idea by showing empathy in the form of listening, understanding and show enthusiasm in helping customers' needs. Emotions can classify into negative and positive feelings (Chebat & Slusarczyk, 2005). Positive feelings towards service quality of railway station can contribute to customer satisfaction; whereas, negative feelings towards service quality of railway station may dissatisfy customers.

According to Kilibarda et al. (2016), empathy can be shown by giving attention to every user either by company or staff, understand the specific needs of customers, and suitable business hours for all users. Ghosh et al. (2017) recommended that staff should be well trained in terms of soft skills to deliver services in a more empathy manners especially when responding to passenger queries. All in all, operating system either vending machine or service counter, the services provided there should be courteous, user-friendly and helpful to the customer.

Furthermore, Prasad & Shekhar (2010) emphasizes that dealing with customer in a caring way can improvise service quality. For instance, provision of ramp walks and staff to assist aged and physically challenged passengers, and willingness of staff to address passenger queries can contribute to customer satisfaction (Ghosh et al., 2017). Service provider provided these facilities are perceived as empathy towards customer. Besides that, provision of safety guards to guide customer to appropriate parking area (Phan & Nham, 2015) also showed empathy towards customer. Hence, empathy by being honest, caring and courteous towards customer is vital to improve customer satisfaction.

E. *Responsiveness*

Parasuraman et al. (1988) defined that responsiveness in terms of SERVQUAL is willingness to help customers and provide quick service. Railway transport in India has loss of market share due to lack of customer responsiveness (Goel et al., 2016). Besides that, Taskin & Durmaz (2010) explained that responsiveness has greater impact on cost reduction. Prasad & Shekhar (2010) stated that responsiveness is needed to be taken care of as this have directly influenced to service quality. It can be observed that good customer responsiveness level can gain customer satisfaction.

According to Schweikhart, Strasser & Kennedy (1993), quality management should emphasize on the process of handling complaints. Effective complaint handling process can encourage customer retention who had faced service problems (Hart, Heskett, & Sasser, 1990). In the context of rail transport, Ghosh et al. (2017) identified that staff service for customer requests, adequate response to passenger queries and on time availability of staff is relatively important. Furthermore, willingness to help and prompt service should be available all the time throughout the journey of rail transport (Prasad & Shekhar, 2010).

According to Kilibarda et al (2016), company should provide precise and accurate answer to the user, time for service recovery, also have sufficient staff that readily to help users at any time and always feel free to answer the request of the users. According to Goel et al. (2016), customer wants a service to be done fast and expect not to wait too long for services delivery. For instance, when complaints received for malfunction of facilities, management team should fix and resolve the problem immediately and provide a reasonable solution to the customer. In the context of Auto-Teller Machine in banking services, service quality in the dimension of responsiveness are satisfied through having sufficient cash to be withdraw by the customer (Phan & Nham, 2015). In the context of hotel, a proper operating equipment without causing breakdown are said to be responsiveness (Akbaba, 2006). In railway services perspective, the vending machine should always have sufficient money for changes. Besides that, the pedestrian facilities like elevator and escalator should be always ready for use and regular upgrades and maintain to avoid breakdown.

F. *Comfort*

Johnston (1995) defined comfort as the physical comfort of the service ambiance and amenities. According to Dhinakaran & Rajarajan (2014), comfort of passenger is one of the important factors in determining service quality. Dell' Olio et al. (2011) stated that the highest valued of public transport is cleanliness and comfort. The perceived value of comfort includes customer feelings about brightness of the environment, temperature and cleanliness of the station (Shen, Xiao, & Wang, 2016). The level of comfort will affect customer satisfaction

towards railway station. Shen et al. (2016) had enlisted that environment cleanliness of the station is important as it could alter the judgement of consumer towards the service quality. According to Godish (1994), factors that contribute to comfort level are lighting, sound, vibration and air ions.

The level of comfort of waiting area can be influenced by amount of seating space, temperature and lighting (Geetika et al., 2010). In order to satisfied customer, railway station should provide sufficient brightness of light, maintain a great indoor air quality, and minimize noise. Prasad & Shekhar (2010) stated that comfort of materials of waiting seats also will deter the customer experiences. The design of the waiting seats also contributes to comfort level of customer. Proper design and material use for waiting seats can give customers a better service experiences. In terms of pedestrian facilities, appropriate level changing facilities like ramp, elevator, escalator and staircase should be provided. Patra et al. (2017) stated that comfortable railway transport journey can be completed by effective design of level changing facilities. Pedestrian facilities should be designed in a way so that its user friendly and comfort to be use by normal adult, disabled people and elderly. Thus, the design of the level changing facilities should be comfort.

G. *Convenience*

In accordance with Noorzain (2013), convenience relates to the level of passenger-friendly of the facilities and features available in railway station. The level of convenience perceive by the passenger will affect the customer satisfaction. This is because convenience dimension has been rated as the highest perceived value-added service quality dimension (Ali & Fazili, 2016). In the previous research that conducted by Cavana et al. (2007), ease of access to travel information, ease of buying tickets and convenient office hours at ticket office have been used as the items to evaluate the convenience level of the railway services. In addition, Vishnuvarthani & Selvaraj (2012) have mentioned that the level of convenience can be improved by providing adequate basic facilities in railway station.

Travel information can be delivered to the passenger in two ways, which includes audio and visual information systems. As a result of ease of access to travel information, the visual information needs to be displayed within a 2 meters range (Gallup, Hale, Sumpter, Garnier, Kacelnik, Krebs & Couzin, 2012). Thus, passengers will feel much more convenient as the information are available not far away from them. Besides, an audio information system that makes clarity announcement when the train has arrived can also bring attention to the passengers easily. The level of convenience of the ticketing system from the passenger point of view can be influenced by increasing the variety of ticket services in the railway station such as self- service ticket vending machine. The easy-to-use automatic ticket machines with touch screens bring essential benefits to the passenger especially time-poor passengers as it offers detailed travel information (Gebauer, Johnson & Enguist, 2010). Therefore, the passengers can purchase the train ticket without entering to the ticketing counter.

On the other extreme, parking facilities are required when the passenger used car as transportation mode to get to the railway station (Givoni & Rietveld, 2007). Also, in the later research by Debrezion, Pels & Rietveld (2009) have concluded that the availability of parking space and bicycle stands has a positive impact on choosing rail transport for traveling mode for the passenger accessed by car and bicycle respectively. Consequently, the presence of parking spaces, the possibility of park-and-ride as well as the bike stands and storage facilities for lock-ups purpose can increase the level of convenience from the passenger perspective. Vishnuvarthani & Selvaraj (2012) stated that the level of convenience in railways can be enhance by providing sufficient number of necessary basic facilities to the passengers, for instance, the basic facilities include pure drinking water, hygienic food, good sanitation, seating arrangement, electronic charging facility and proper enquiry facilities at all stations (Vishnuvarthani & Selvaraj, 2012).

In accordance with Machado-Leon, Ona, Baouni & Ona (2017), the second order factor for accessibility of railway station was ease of access to stations and platforms from the street. The level of convenience of railway services can be enhanced with pedestrian-friendly concepts. A more comprehensive research published by Ghoseiri, Szidarovszk, & Asgharpour (2004) describes that the infrastructure consists of node such as stations, junctions, bridges and crossing can decrease the total passenger-time they consumed in a journey.

H. *Connection*

Connection refers to how efficient the railway station is connected to various transportation mode (Noorzain, 2013). Findings correspond to the study of Cavana et al. (2007) stated that connectivity has emerged as a vital factor that influencing the perceived quality of service from the passenger point of view. The evaluation of service quality under the investigation of connection dimension is based on the adequacy of parking facilities and accessibility of the railway station (Cavana et al., 2007). In addition, Maruvada & Bellamkonda (2012) have chosen connections with other train services and connections with bus transportation as the attributes to evaluate the service quality.

In accordance with the study conducted by Deka (2012) who analysed the impacts of railway stations to non-residents through parking restriction; stated that implementation of non-residents parking restrictions at railway stations will bring negative impact to the some of the passengers as they need to travel to further station with parking facility and some of the passengers refuse to use train as transportation mode. Therefore, adequacy of parking facilities in the railway station can improve the connections to the railway station with especially for the passenger who used car as transportation mode to get to the railway station. Passengers expect appropriate method to access to the railway station. Likewise, Brons et al. (2009) concludes that "access to the trains" has a significant effect on the rate of the train usage. Also, in many other studies such as Nathanail (2008) and Eboli & Mazzulla (2012) has stated that accessibility consider as a very effective factor for customer satisfaction evaluation.

Buses service for railway interchange can also use as one of the attributes to measure the connectivity of the railway station. A more

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comprehensive study published by Maruvada & Bellamkonda (2012) have stated that connections with bus transportation was used to evaluate the railway service quality. The railway interchange with bus service can improve the integration for passenger between public transport modes (Wall & McDonald, 2007). Based on the research titled as "The effect of individual dimensions of railway service quality: Findings from Indian railway passenger services through developing RAILQUAL" published by Maruvada & Bellamkonda (2012), connections with other train services was chosen as one of the attribute for the service quality evaluation. For instance, other train services were included LRT, KTM commuter, and monorail as well as MRT services.

Table 1: Summary of RAILQUAL dimensions and facilities attributes in railway stations,

RAILQUAL Dimensions	Railway station facilities involved	Attributes
Reliability	R1. Information system and information centre	a. Railways are accurate in timing of trains (departure and arrival) b. Route map(s) display in the station is correct c. Announcements in station during and after breakdowns
	R2. Waiting area, vehicle access and circulation	a. Security at station
	R3. Waiting area, Information centre and information system, Ticketing system, Hygiene ambience, Pedestrian facilities, Vehicle access and circulation	a. Dependability in handling the passenger's service problems b. Railways performs service correctly c. Railways shows sincere in solving problem
Assurance	A1. Waiting area, vehicle access and circulation	a. Personal safety at station b. Availability of the police assistance booths
	A2. Information system	a. Availability of relevant information on train schedule b. Availability of on-time information if there are delays or service breakdowns
	A3. Ticketing system and ticketing counter	a. Railway employees are courteous b. Railway employees are knowledgeable c. Railway operator maintain ticketing system to function in proper manner at all time
	A4. Pedestrian facilities	a. Elevator or escalator performed without error
Tangibles	T1. Hygiene Ambience	a. Hygienic ambiance of the station
	T2. Waiting area	a. Provision of facilities like lights, seats and toilets
	T3. Ticketing counter	a. Overall appearance of staffs
	T4. Information system	a. Clarity of information provided b. Visually appealing timetable and display boards
Empathy	E1. Ticketing counter and Information counter	a. Understand the specific needs of customers b. Suitable business hours for all users c. Responding to passenger queries courteously d. Service counter are helpful e. Willingness of staff to address passenger queries
	E2. Pedestrian facilities	a. Provision of ramp walk b. Staff to assist aged and physically challenged passengers
	E3. Vending machine	a. Vending machines and overall facilities are user-friendly
	E4. Vehicle access and circulation	a. Safety guards to guide customer to proper parking area
Responsiveness	S1. Service counter	a. Process of handling complaints is fast and prompt service b. Staff are willing to help c. Feel free to answer the request of the users d. Precise and accurate answer to the user e. Time for service recovery
	S2. Vending machine	a. Always have sufficient money for changes

	S3. Pedestrian Facilities	a. Ready use without breakdown
Comfort	F1. Station ambience	a. Cleanliness of the station
		b. Comfort temperature in the station
		c. Sufficient lighting provided
		d. Brightness of the surrounding environment are comfort
		e. Music is provided
		f. Good indoor air quality
	F2. Waiting area	a. Amount of seating space
		b. Materials of waiting seats
		c. Design of waiting seats
	F3. Pedestrian facilities	a. Provision of level changing facilities
Convenience	V1. Information system	a. Ease of access to travel information (Audio and visual)
	V2. Ticketing system	a. Ease of buying ticket
	V3. Service counter	a. Convenient office hours at ticket office
	V4. Vehicle access and circulation	a. Adequacy of convenient car parking and bicycle stands
		b. Ease of access to stations and platforms from the street
	V5. Waiting area	a. Adequacy of necessary basic facilities
		b. Railway station is accessible by bus transportation
		c. Connections with other train services
	N2. Pedestrian facilities	a. Railway station is equipped with elevator and escalators
Connection	N1. Vehicle access and circulation	a. Adequacy of parking facilities

III. METHODOLOGY

Quantitative research method occupied for this study whereby 600 sets of questionnaires distributed to the target respondent which are the railways passengers. It comprises of section A for demographic data collection and section B contains questions on the dependent and independent variables which are the RAILQUAL dimensions. Data analyzed and described by using SPSS software generated result to ensure that the result achieve the research objectives.

IV. RESULTS AND FINDINGS

R+ Results obtained through coefficient correlation and multiple regression analysis using SPSS. According to Table 2, the significant value of reliability is 0.089 which is more than 0.05. It indicates that there is no relationship between reliability and passenger satisfaction towards railway facilities. As stated by Cavana, Corbett, & Lo (2007), reliability is one of the key factors that can influence the passengers' service quality perception. In a more comprehensive research conducted by Prasad & Shekhar (2010) to examine the satisfaction level of India railway facilities stated that reliability dimension had obtained the lowest score due to the dissatisfaction of railway punctuality and behavior of staff in the station. In parallel with this dimension, the researchers found out that reliability is categorized as the factor that is not affecting the overall passenger satisfaction.

The discrepancy is most probably due to the "culture" gaps in between the different generations of passengers towards the service quality expectation (Kueh & Ho Voon, 2007). In this research, the age group of the respondents from 18 - 25 years old has occupied the highest frequency which is 53% which may be make a lesser concerned on the reliability of the railway transport services in terms of punctuality and staff behavior. In contrast, the categories of 26 – 35 contribute to 39%, while there are 7% and 1% of the respondents are from the categories of 36 – 45 and 46 – 55 respectively in which they would prefer a higher reliability rail transport services.

Table 2: Result from Multiple Regression Analysis (MRA)

RAILQUAL Dimension	Significant Value
Reliability	0.089
Assurance	0.029
Tangible	0.116
Empathy	0.001
Responsiveness	0.000
Comfort	0.001
Convenient	0.004
Connection	0.008

The significant value of assurance is 0.029, which is less than 0.05, which shows that there is a relationship between assurance and passenger satisfaction towards railway facilities. While, significant value of tangible is 0.116 which is more than 0.05. This indicates that there has no relationship between tangible and passenger satisfaction towards railway facilities. Although services are intangibles, but Ali & Fazili (2016) stated that tangibles are heroic factors in appraisal of service quality. Hence, railway operators should consider tangible elements that can associate with railway facilities in the service delivered process as it could help to meet expectation of customer (Beamish & Ashford, 2007). Irfan, Kee, & Shahbaz (2012) further elaborated that tangible have significant relationship with passenger satisfaction as cleanliness of platform, and comfort at station helps in improvising the level of service in individual cares at transport operations. However, the research

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conducted by Randheer & Al-Motawa (2011) found out that the tangibles dimension is tested to be not relevant to the rail services in India. The most probable causes of this dimension being excluded in contributing to passenger satisfaction is due to the customer support services on the platform is much significant as compare to the tangibility facilities provided (Agarwal, 2008). The tangibility of facilities might take as the basic necessities that essential to provide in the station by passenger, hence it is not contributing to passenger satisfaction.

The significant value of empathy is 0.001 which is less than 0.05, which means that there is a relationship between empathy and passenger satisfaction towards railway facilities. Furthermore, the significant value of responsiveness is 0.000 which is less than 0.05. Therefore, it can be concluded that there is a relationship between responsiveness and passenger satisfaction towards railway facilities. Next, the significant value of comfort is 0.001 which is less than 0.05, and proved that there is a relationship between comfort and passenger satisfaction towards railway facilities. Besides that, the significant value of convenience is 0.004 which is less than 0.05, therefore the relationship between convenience and passenger satisfaction exist and shown through the test conducted. The relationship between connection and passenger satisfaction towards railway facilities shows significant value at 0.008 which is more than 0.05.

V. CONCLUSION

Railway operator such as the operator of MRT, KTM, LRT, Monorail can have a better understanding regards to the customer requirement on railway facilities after reviewing the results obtained. The ideal railway operator should have a clear image on the specific requirement of the passengers which is able to provide the required facilities in the railway station. By referring the result of this study, the railway operators can determine the most important and critical railway facilities that can affect passenger satisfaction towards the railway facilities. Besides, by assessing the satisfaction level of the passenger, railway operators could construct a service guideline in accordance to the passenger's concern in term of politeness and assistance provided by the railway staff. This can effectively generate a standardised service performance level which brings a positive impact to the railway organization. Consequently, railway station with better and adequate facilities can generate more revenue as this would increase and encourage people from taking rail transport as their transportation mode.

As mentioned earlier, Transit-Oriented Development (TOD) has been promoted in Klang Valley, Malaysia with the number of rail stations which includes 83 LRT stations, 56 KTM commuter stations, 11 monorail stations and 31 MRT stations. The TOD is promoting by DBKL to improve the public transportation system in urban area. Therefore, with the result of this study, DBKL can achieve the key mission of the Government Transformation Programme (GTP). Hence, traffic congestion problem can be reduced in which enhance the image of the country indirectly.

Therefore, both of the railway operator and relevant government body should provide adequate railway facilities in order to meet the expectation of the passengers thereby increase the usage of rail transport and reduced the traffic congestion problem. Simultaneously, a better facilities management and adequacy of railway facilities in the railway station beneficial not only to the passenger or commuter but also the economy of the country as well. From the tourisms perspective, an adequate and appropriate railway facilities provided in the station is essential as it can affect the impression of the rail transportation from the tourist point of view. Consequently, the railway service provided by the railway staff to the foreigner will also bring negative impacts to the country in terms of social, economic and reputation of the country. The available findings from this result enable related government bodies to understand the current satisfaction level of the passengers on facilities provided in the railway station. Hence, improvement of the standard of services and adequacy of facilities can be achieved in a way that meets the expectation of railway passengers.

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