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## Railway commuter line passengers' perceived service quality: hedonic and utilitarian framework

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### Abstract

This paper aims to propose a new railway passengers' perceived service quality model that can be implemented in Jabodetabek railway commuter line service. We have developed a perceived service quality model that is different from the existing railway passengers' perceived service quality models by integrating utilitarian dimension, hedonic dimension and "filter" variables that can influence perceived service quality. More specifically, our railway passengers' perceived service quality model has four utilitarian dimensions, four hedonic dimensions, and two filter variables. The utilitarian dimensions are tangibles, reliability, safety, and information. The hedonic dimensions are education, aesthetics, entertainment, and identity. The filter variables are customer measurement knowledge and image. The theoretical implications, managerial implications, and future research were discussed.

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*Keywords:* Railway; perceived service quality; hedonic; filter

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### 1. Introduction

In service literature, it is well known that one of the key variables for service industries is customer perceived service quality (Clemes et al., 2008; Yusoff et al., 2010). Many researchers have revealed that perceived service quality influences customer satisfaction (Clemes et al., 2008; Bakti and Sumaedi, 2013), customer perceived value (Zeithaml, 1988), customer trust (Moliner, 2009), and customer loyalty (Boulding et al., 1993; Bloomer et al., 1999). Therefore, many service companies focus on customer perceived service quality.

Customer perceived service quality represents customer overall evaluation of the attributes of a service that he/she consumed (Zeithaml, 1988). Perceived service quality shows the superiority or excellence level of a service that is assessed by the customer (Zeithaml, 1988). It is different from objective service quality (Zeithaml, 1988; Goder et al., 2012). Objective service quality shows the actual performance of a service that is delivered by service

provider while perceived service quality refers to customer perception on the performance (Zetihaml, 1988; Golder et al., 2012). More clearly, objective quality relates to the objective attributes of a service (Zetihaml, 1988; Golder et al., 2012). It can be measured and verified by using a predetermined ideal standard (Zetihaml, 1988; Golder et al., 2012). On the other hand, perceived service quality relates to the subjective responses of a customer to the objective attributes of a service (Zetihaml, 1988; Golder et al., 2012). It may differ between customers. For example, in commuter line service in Indonesia, according to the government's minimum service standard, the maximum deviation from travel schedule (delay) is 5 minutes. However, some customer may perceive it as bad service quality while other customers may have a different perception.

A prominent service quality researcher, Zeithaml (1988), argued that all service quality evaluation is subjective and objective quality does not exist. This is because "all quality is perceived by someone" (Zeithaml, 1988). Many researchers have argued that service quality should be evaluated by using the customer perspective (Zineldin, 2006; Bakti and Sumaedi, 2015; Sumaedi et al., 2016). It can be understood since the objective of a service business transaction is to maximize value for the customer (Bruhn, 2003). On the other hand, the value that is perceived by a customer may be different from the value that is perceived by a company. Therefore, many companies monitor and improve their customer perceived service quality.

In the context of public transport services, many researchers have also identified the important role of public transport passengers' perceived service quality (e.g. Lai and Chen, 2011; Wen et al., 2005; Sumaedi et al., 2015). Some empirical researches have revealed that passengers' perceived service quality influences perceived value, passenger satisfaction, and behavioral intention to use public transport service (e.g. Wen et al., 2005; Lai and Chen, 2011). It is widely recommended that public transport service operators and managers should manage their passengers' perceived quality well (Bakti and Sumaedi, 2015).

In Jabodetabek, Indonesia, one of the public transport service types is railway commuter line. Railway commuter line is one of the government solutions for overcoming the congestion problem in Jabodetabek. It is expected that the railway commuter line can decrease the use of private vehicles. Jabodetabek railway commuter line operator needs to manage its passenger's perceived quality well. Ensuring good passengers' perceived quality will assist railway commuter line to retain existing users and attract new users. Furthermore, good passengers' perceived quality can provide a competitive advantage in the competition with private vehicle. Given this, Jabodetabek railway commuter line passengers' perceived service quality is important to be discussed.

### *1.1. Gaps in existing literature*

Perceived service quality is an abstract construct (Zeithaml, 1988). It has "higher level abstraction than an attribute" (Zeithaml, 1988). Thus, many researchers have proposed some models for measuring and understanding service quality. They agreed that perceived service quality has more than one dimension (Sumaedi et al., 2016). However, there is no consensus on the number and the type of dimension (Sumaedi et al., 2016).

In the context of railway passengers' perceived service quality, some researchers have also proposed some railway passengers' perceived service quality models. For example, Prasad and Shekhar (2010) measured service quality of South-Central Railways, India, by using five dimensions of service quality proposed by Parasuraman et al. (1988), namely tangibles, reliability, responsiveness, assurance, and empathy. Nathanail (2008) used itinerary accuracy, system safety, cleanness, passenger comfort, servicing, and passenger information to evaluate Hellenic Railways in Greece. More completely, table 1 shows railway passengers' perceived service quality models that are available in the existing literature.

Referring to the previous explanation, it can be viewed that there is no agreement on the number and type of railway passengers' perceived service quality dimensions. Furthermore, however, we identified two main limitations in existing railway passengers' perceived service quality model.

First, the existing railway passengers' perceived service quality models involved only utilitarian dimension. On the other hand, consumer behavior literature has identified that human consumption behavior involves not only utilitarian motivation but also hedonic motivation (Solomon, 2013). More specifically, some researchers have argued that hedonic motivation exists in transportation consumption (e.g. Sumaedi et al., 2014). In the context of public transport, several researchers have also revealed that there are public transport service attributes that can provide hedonic benefits for passengers (Carreira et al., 2013; Sumaedi et al., 2014). Furthermore, in the context of the

railway commuter line services in Indonesia, the operator introduces automatic electronic ticket system. This means that the operator provides human-computer interaction-based services /self-service technology. It is well known that human-computer interaction-based services /self-service technology can provide not only utilitarian benefits but also hedonic benefits (Hassenzahl et al., 2000). In human-computer interaction-based services /self-service technology quality studies, it is well known that the dimensions of quality can be categorized as utilitarian/pragmatic quality and hedonic quality (Hassenzahl et al., 2000).

Table 1. Dimensions of Railway Service Quality in Previous Researches

No.	Author(s)	Context	Dimensions
1	Prasad and Shekhar (2010)	South Central Railways, India	Tangibles, reliability, responsiveness, assurance, empathy
	Liou and Tsao (2010)	Taiwan railways vs. Taiwan high speed rail corporation	Tangibles, reliability, responsiveness, assurance, empathy
3	Hundal and Kumar (2015)	Northern Railway, India	Tangibles, reliability, responsiveness, assurance, empathy
4	Feiz, Maleki and Zargar (2010)	Iran Railway	Assurance, empathy, reliability, responsiveness, tangibles, comfort, convenience
5	Shainesh and Mathur (2000)	Railway Freight Services, India	Ability to provide safe and fast delivery, cost of transportation, attitude of officers and staff, providing and sharing information, convenient allotment procedure, terminal facilities, encouraging flexibility and bilateralism
6	Eboli, Fu and Mazzulla (2016)	Railway services offered in the North of Italy	Safety, cleanliness, comfort, service, other, information, personnel
7	Nathanail (2008)	Hellenic Railways, Greece	Itinerary accuracy, system safety, cleanness, passenger comfort, servicing, passenger information
8	Maruvada and Bellamkonda (2010)	Indian Railways, India	Tangibles, reliability, responsiveness, assurance, empathy
9	Jun and He (2007)	Railway Transport Service in China	Tangibility, credibility, communication, convenience, relationship
10	De Oña et al. (2015)	Rail service in northern Italy	Safety, cleanliness, comfort, service, other, information, personnel

Second, the existing railway passengers' perceived service quality models didn't include the role of "filter" variables. In other words, the existing models only focus on the intrinsic aspects of services. Zeithaml (1988) have argued that perceived quality is influenced not only by the intrinsic aspects of services, which are represented by quality dimensions, but also the extrinsic aspects that are not part of a service. Furthermore, Golder et al. (2012) have explained that there are some "filter" variables that can influence perceive quality even though the variables are not a part of service.

The inclusion of "filter" variables in a perceived service quality model is important. It is because one of the functions of perceived service quality model is a diagnostic tool for identifying deficiencies that cause poor perceived service quality. Thus, the exclusion of "filter" variables may mislead railway operators in identifying the cause of poor perceived service quality.

## 1.2. Research Objectives

In order to fulfill the gaps in the literature, this paper aims to propose a new railway passengers' perceived service quality model that can be implemented in Jabodetabek railway commuter line service. We developed a model that is different from existing railway passengers' perceived service quality model by involving not only the utilitarian dimension but also the hedonic dimension and “filter” variables that can influence perceived service quality.

## 2. Understanding railway commuter line service in Jabodetabek, Indonesia

Commuter Line is an electric rail-based train service. Commuter line, which is currently managed by PT. Indonesian Commuter Train (PT. KCI), operates daily by connecting eight cities around Jakarta, namely Jakarta, Bogor, Depok, Tangerang City, Serpong, Rangkas Bitung, Bekasi and Cikarang. The number of stations that serve the commuter line is 79 stations and the total range of the routes reaches 418.5 km. Based on PT. KCI's data, the average number of KRL users on weekdays reached 1,154,080 people a day.

The commuter line always tries to improve its service continuously. Besides improvement in services and infrastructure facilities, another improvement made is the implementation of electronic ticketing system (e-ticketing system, see Figure 1). The e-ticketing system allows commuter line user doesn't need to queue for tickets at the counter. The role of the ticket counter has been replaced by the commuter vending machine. Several transactions that can be done using a commuter vending machine include purchasing one-way routes ticket, refilling one-way routes ticket, refunding one-way routes ticket, and top-uping Multi Trip Cards (subscription cards). In addition to the cards issued by PT KCI (one-way routes ticket and Multi Trip Cards), commuter line users can also use electronic money cards (e-money) as a ticket. It makes the commuter line ticketing system more flexible.



Figure 1. Commuter Vending Machine (Commuter Line E-ticketing System)

The flow process of using commuter line services is as follows. First, a commuter line user purchases or refills one-way route tickets using the Commuter Vending Machine. In this process, the commuter line user must ensure that the destination station inputted is appropriate. This is because the ticket cannot be used if the inputted route is different from the actual. Second, the commuter line user taps the card in card reader or ticketing gate. If the commuter line user uses Multi Trip Card or e-money, he/she can ignore the first process and immediately taps the card after arriving at the station (see Figure 2). Third, the commuter line user enters the station and waits in the waiting room (see Figure 3). Fourth, after the train arrives, the commuter line user enters the train and travels to the destination station. The route of the commuter line can be seen in Figure 4. Fifth, after the train arrives in the destination station, the commuter line user gets off the train and goes to the ticketing gate to tap the card in card reader. After exiting the ticketing gate, a one-way route ticket holder can refund the ticket to get back the deposit paid at the time of ticket purchasing.



Figure 2. Card Tapping System



Figure 3. One of the facilities provided at station

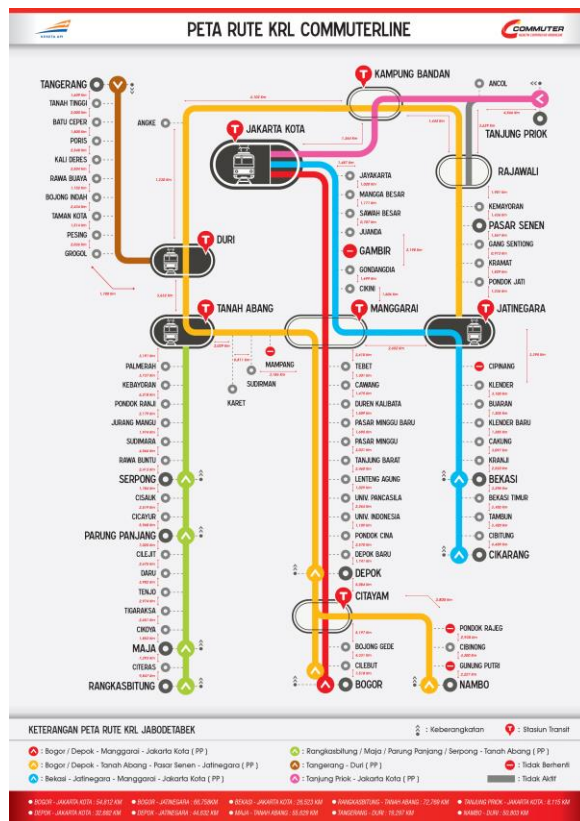


Figure 4. Commuter line route

Source: <http://www.krl.co.id/>

### 3. The proposed railway commuter line service passengers’ perceived service quality model

Railway commuter line service passengers’ perceived service quality is passengers’ overall evaluation on the superiority or excellence of railway commuter line service (Bakti and Sumaedi, 2015). The overall evaluation is the aggregate evaluation of some service aspects that are important for the passengers (Bakti and Sumaedi, 2015). In service quality literature, the service aspect that is important for a customer is called perceived service quality dimension (Zineldin, 2006; Bakti and Sumaedi, 2015).

According to Brady and Cronin (2001), a customer evaluates service quality by breaking the service quality dimension into various sub-dimensions. More clearly, service quality consists of dimension and sub-dimension. The view of Brady and Cronin (2001) is supported by some researchers, such as Dabholkar et al. (1996), Caro and Garcia (2008), and Sumaedi et al. (2016). In the context of public transport service, Jen et al. (2011) have also shown a multilevel perceived service quality model, which consists of dimension and sub-dimension. Therefore, our proposed railway commuter line passengers' perceived service quality model adopted the multilevel approach of perceived service quality model.

Our proposed railway commuter line service passengers' perceived service quality model was developed based on hedonic consumption theory and perceived service quality – filter theory. According to hedonic consumption theory, human consumption aimed to fulfill utilitarian motivation and hedonic motivation (Hirschman and Holbrook, 1982). Utilitarian motivation relates to the functional, practical, effectiveness or efficiency benefits of a product or service (Hirschman and Holbrook, 1982). On the other hand, hedonic motivation relates to the emotional, enjoyment, and fun benefits of a product or service (Hirschman and Holbrook, 1982). Many researchers have revealed the existence of hedonic consumption including in the automotive sector and public transport service (Sumaedi et al., 2014). Therefore, it is well known that a service provider needs to provide not only the utilitarian benefit of its service but also the hedonic benefit of its service.

In existing literature, in order to respond the existence of hedonic consumption, some authors have proposed that quality dimension consists of two main dimensions that represent the aspect of a product that can provide utilitarian benefit – utilitarian quality- and the aspect of a product that can provide hedonic benefit – hedonic quality- (e.g. Hassenzahl et al., 2000). Thus, our proposed model consists of two dimensions, namely hedonic quality and utilitarian quality. Both dimensions have several sub-dimensions.

Perceived service quality – filter theory shows that perceived service quality is influenced not only by the intrinsic aspects of a service, which are represented by perceived service quality dimensions. The variables other than service quality dimensions that influence perceived service quality can be called as filter variables. The filter variables can cause a deviation between perceived quality and objective quality (Golder et al., 2012). Golder et al. (2012) explain that perceived service quality may be influenced by customer measurement knowledge. Furthermore, Zeithaml (1988) also explains that perceived service quality may be influenced by extrinsic cues. One of the extrinsic cues that may influence perceived service quality is image. Many researchers have shown the significant impact of image on perceived service quality. Thus, our proposed model involves two filter variables, namely customer measurement knowledge and image. Visually, figure 5 shows our proposed railway commuter line service passengers' perceived service quality model.

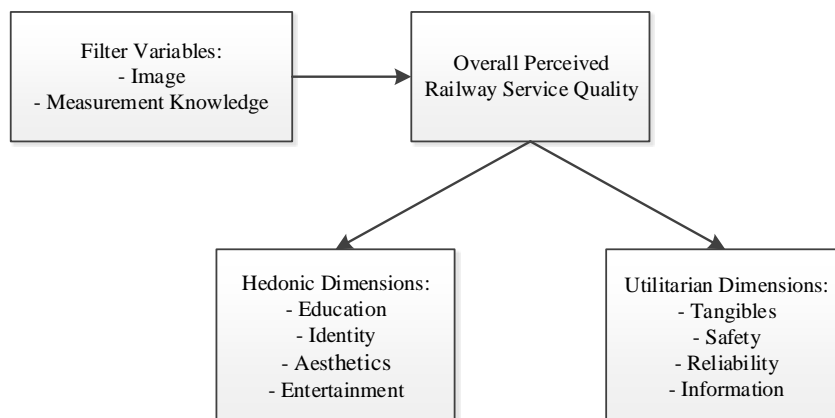


Figure 5. Railway Passengers' Perceived Service Quality

### 3.1. *Utilitarian Quality*

Utilitarian quality dimension represents the performance level of the service aspect that aimed to fulfill consumer's utilitarian motivation. Utilitarian quality is also known as pragmatic quality or practical quality (Hassenzahl et al., 2000). It includes the technical aspect of service and the functional aspect of a service (Hassenzahl et al., 2000).

In service quality literature, utilitarian quality becomes the research focus for many researchers. Therefore, many existing perceived service quality models have only the perceived service quality dimensions that can be categorized as utilitarian quality. In the context railway passengers' perceived service quality, a similar condition also happened. Table 1 showed that most of the railway passengers' perceived service quality dimension can be categorized as utilitarian quality.

Table 1 showed that there is no consensus on the dimension of railway passengers' perceived service quality. This is because the dimension of perceived service quality depends on the service type and the context in which the service is provided. Therefore, the development of utilitarian quality sub-dimensions should consider the context in which the railway commuter line service is provided.

This paper proposed four utilitarian quality sub-dimensions, namely tangibles, reliability, safety, and information. Tangibles describes the quality of railway services as seen from the presence of physical facilities, such as special seats for passengers with special needs, handles for standing, female passenger carriages, toilets at stations, and prayer room at the station. Several studies have shown that tangibles dimension is a dimension of perceived service quality of the railway (e.g. Prasad and Shekhar, 2010; Liou and Tsao, 2010; Hundal and Kumar, 2015, Feiz et al. 2010). Reliability shows the ability of the railway to provide services as promised, such as arriving at the destination on time. Reliability in several studies has also been proven as a dimension of perceived service quality from the railway (such as Prasad and Shekhar, 2010; Liou and Tsao, 2010; Hundal and Kumar, 2015, Feiz et al. 2010). Safety represents the railway's ability to provide safe transportation services. Eboli et al. (2016), Shainesh and Mathur (2000), Nathanail (2008), and De Oña et al. (2015) used safety as one of the dimensions of service quality of the railway. Information shows the quality of railway services in terms of information, such as guidelines for buying ticket, routes, departure and arrival time, etc. Several researches have used information as a measure of railway service quality, such as Shainesh and Mathur (2000), Eboli et al. (2016), Nathanail (2008), and De Oña et al. (2015).

### 3.2. *Hedonic Quality*

Hedonic quality dimension represents the performance level of a service aspect that aimed to fulfill consumer's hedonic motivation. Hedonic quality relates to the service aspect that can provide emotional, enjoyment, and fun benefits for railway commuter line passengers (Solomon, 2013; Hosany and Witham, 2009; Hirschman and Hoolbrock, 1982).

Most of the perceived service quality studies focus on utilitarian quality. However, in the context of human-computer interaction studies, there are many researchers have proposed hedonic quality model (Hassenzahl et al., 2000). In the context of railway commuter line service, there are also some human-computer interaction-based services, such as ticketing system and information website. Thus, we may borrow the concept of hedonic quality sub-dimension in human-computer interaction studies in order to develop hedonic quality sub-dimension in the context of railway commuter line services.

This paper proposed four hedonic quality sub-dimensions, namely education, identity, entertainment, and aesthetics. The definitions of the four sub-dimensions were adopted from the definition of the previous studies in existing literature. Education represents railway service capabilities in meeting passenger needs related to self-development (such as improving skills and knowledge) (e.g. Schrepp et al., 2006; Hosany and Witham, 2009). Identity emphasizes the railway service's ability to meet the needs of passengers to show their identity (such as showing their personalities) (e.g. Schrepp et al., 2006). Entertainment is defined as the railway service's ability to provide pleasure and entertainment for passengers (e.g. Hosany and Witham, 2009; Vosset al., 2003; Hassenzahl et al., 2000; Hirschman and Holbrook, 1982). Finally, aesthetics is a passenger perception of the quality of the physical environment, such as ambient conditions and spatial layout (e.g. Hosany and Witham, 2009).

### 3.3. Filter Variables

Filter variables are defined as the variables that influence perceived service quality other than service quality dimension. In other words, filter variables are not the intrinsic aspect of a service. Zeithaml (1988) argued that perceived service quality may be influenced by the extrinsic aspect of service. Furthermore, Golder et al. (2012) also explained that the deviation between perceived quality and objective quality is caused by several filter variables. In other words, filter variables can be used to explain why a similar performance on the objective quality attribute of the two products is perceived differently.

We proposed two filter variables, namely customer measurement knowledge and image. Customer measurement knowledge is defined as “the customer’s ability to assess [quality] attribute performance with minimal bias and variance relative to more objective measures”. In other words, customer measurement knowledge shows the knowledge of customer relates to certain quality attribute standard that can be objectively verified and measured. Therefore, the customer with high measurement knowledge assesses certain quality attribute more objectively.

The important role of customer measurement knowledge in influencing perceived quality is highlighted by Golder et al. (2012). According to Golder et al. (2012), “higher measurement knowledge leads to a more direct translation from delivered attributes to perceived attributes”. Therefore, a customer with high measurement knowledge will have a perceived quality level that is similar or closer with an objective quality level.

Consumer behavior literature has identified the important role of customer knowledge (Golder et al., 2012). Customer prior knowledge of a product or service may serve as a reference point in a service evaluation process (Solomon, 2012). In credence services, a customer may evaluate the quality of service using wrong parameters since he/she doesn’t have enough prior knowledge on the service (Solomon, 2012). Therefore, their perceived quality level may be different from the objective quality level (Zeithaml, 1988). In the context of public transport service, there is also a credence services element, such as safety or vehicle condition. Thus, passengers’ measurement knowledge may affect railway commuter line perceived service quality.

Image is a concept that is widely discussed in marketing and consumer behavior literature. Many researchers have tried to define image. Generally, image can be viewed as an impression that consumer has about a brand (Aaker, 1996). It represents consumer belief, feeling, and knowledge on a brand (Aaker, 1996). Furthermore, Keller (1993) argued that image is “perceptions about a brand as reflected by the brand association held in consumer memory”. Image can be created by using an integrated marketing communication program (Shimp, 2008). Therefore, image of a brand may be different from the actual condition of the brand.

The important role of image has been well discussed in the literature. Gronroos (1988) argued that image is a filter variable. Image can influence perceived quality because consumer tends to evaluate something positively if he/she has a positive belief on the thing in order to prevent cognitive dissonance (Solomon, 2012). Empirically, researchers have revealed that image affects perceived quality positively, including in the public transport sector (Sumaedi et al., 2014).

## 4. Discussion

### 4.1. Theoretical Implication

We have developed a new model of railway commuter line service passengers’ perceived service quality. We have contributed to the existing literature by developing a public transport passengers’ perceived service quality model that involves hedonic quality dimension and filter dimension.

Nowadays the inclusion of hedonic quality dimension in a public transport passengers’ perceived service quality model is an important issue. This is because passengers’ motivation on using public transport may relate to hedonic needs. For example, someone may use a certain public transport mode for obtaining a new experience or a recreational purpose (Hosany and Witham, 2009). Therefore, the hedonic aspect of public transport service may become important for public transport passengers.

The involvement of “filter variables” in public transport passengers’ perceived service quality model is also an important issue. This is because there are several researches that proved perceived quality is influenced not only by the quality level of the service elements but also other factors (e.g. Golder et al., 2012; Solomon, 2013; Zeithaml,



1988). In the previous section (section 3), for example, we have shown that public transport passengers' perceived service quality is influenced by image. Given this, the involvement of "filter variables" in a public transport passengers' perceived service quality will provide more meaningful insight on public transport passengers' perceived service quality.

Our railway commuter line passengers' perceived service quality model has several theoretical implications. First, according to our model, overall public transport passengers' perceived service quality level may be different from public transport passengers' perceived service quality level on service utilitarian aspect. For example, a passenger may perceive that a railway service has reliable service, good safety, good information service, and good facility. However, he/she may have a negative overall perceived service quality. This may happen due to the negative perceived quality level of hedonic aspect. This view is supported by Hirschman & Hoolbrok (1982)'s hedonic consumption theory. According to the theory, "goods and services have both utilitarian and hedonic functions" (Hosany and Witham, 2009).

Second, according to our model, public transport passengers' perceived service quality level may be different from the objective/actual quality level. For example, a railway service may fulfill the government minimum service standard. However, the passengers may perceive that the quality level is below the standard. This may happen due to the role of "filter variables". This view is supported by Golder et al. (2012).

Third, based on our model, future research that investigates or involves public transport passengers' perceived service quality should involve not only service utilitarian dimension but also service hedonic dimension. Furthermore, it is also important to involve "filter variables". In other words, past researches who measure public transport passengers' perceived service quality using summated scales of service quality dimension need to be re-tested in order to examine the stability of the findings using this new model (e.g. Lai and Chen, 2011, Wen et al., 2005). Furthermore, this indicated we need to investigate the most appropriate summated scale formula of passengers perceived service quality variable.

#### *4.2. Managerial Implication*

Perceived service quality model provides meaningful information regarding the service aspects that are important for the customer. In the context of public transport studies, perceived service quality model researchers also proposed that the public transport managers and operators should monitor and improve the service quality dimension. Therefore, one of the potential applications of the perceived service quality model is the model can be used as the base of perceived service quality measurement and improvement system.

Our railway service passengers' perceived service quality model has two managerial implications. First, according to our model, when designing railway service quality measurement system, the operator and managers should involve not only service utilitarian dimension but also hedonic dimension and "filter variables". More clearly, it is suggested that the measurement system consists of four variable types, namely "overall perceived service quality", "hedonic dimension", "utilitarian dimension", and "filter variables". The "overall perceived service quality" variable becomes the lagging variable while the other variables become the leading variable.

Second, according to our model, improvement program should be directed to not only the utilitarian aspect of railway service but also the hedonic aspect of railway service and "filter variables". When the railway service operator and managers found a negative overall perceived service quality level, they should first check the condition of the "filter variables". They should overcome the "filter variables" if the variables have an unfavorable condition. On the other hand, if the "filter variables" have a favorable condition, they may continue to check both "the utilitarian dimension" and "the hedonic dimension" condition. The railway service operator and managers should improve the variables with an unfavorable condition.

### **5. Conclusion and Future Research**

This paper aims to propose a new railway passengers' perceived service quality model that can be implemented in Jabodetabek railway commuter line service. We have developed a model that is different from existing railway passengers' perceived service quality model by involving not only utilitarian dimension but also hedonic dimension and "filter" variables that can influence perceived service quality. More specifically, our railway passengers'

perceived service quality model has four utilitarian dimensions, four hedonic dimensions, and two filter variables. The utilitarian dimensions are tangibles, reliability, safety, and information. The hedonic dimensions are education, aesthetics, entertainment, and identity. The filter variables are customer measurement knowledge and image.

Although we have developed a new model of railway service passengers' perceived service quality, the model is not yet validated empirically. Therefore, future research will be performed to examine the validity of the model empirically. Perceived service quality and its dimensions and filter variables are a latent variable that should be measured using the observed variable or indicator. Therefore, the first step of future research is the variables' indicators identification. Researchers have to ensure that the indicators have good content validity as well as construct validity and reliability for measuring the model's variables.

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