A STRUCTURAL EQUATION MODEL OF FACTORS AFFECTING SRT PASSENGER TRAIN SERVICE DECISION MAKING IN THAILAND

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A DISSERTATION SUBMITTED IN FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY IN INDUSTRIAL BUSINESS ADMINISTRATION KING MONGKUT'S INSTITUTE OF TECHNOLOGY LADKRABANG
BUSINESS SCHOOL
KING MONGKUT'S INSTITUTE OF TECHNOLOGY LADKRABANG
2023

KMITL-2023-KBS-D-128-003

Thesis Title	A Structural Equation Model of Factors Affecting SRT Passenger Train Service Decision Making in Thailand
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Student ID	61611094
Degree	Doctor of Philosophy
Program	Industrial Business Administration (International Program)
Year	2023
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Abstract

The objective of this research is to develop a structural equation model that identifies the factors influencing the decision to use train services among passengers in Thailand. The sample group consists of 1,250 train passengers in Thailand, with a sample size determined based on Hair et al.'s (2020) guidelines of at least 10 units per variable, utilizing multi-stage random sampling. The research instrument employed is a questionnaire with a five-point Likert scale, measuring variables related to organizational image, service quality, motivation to use services, and satisfaction with services. The reliability coefficients for these variables range from 0.90 to 0.93. Data analysis encompasses mean, standard deviation, variance, and the use of structural equation modeling (SEM) with path analysis of latent variables.

The research findings indicate the developed structural equation model examining the factors influencing the decision to use train services by passengers in Thailand also exhibits a good fit with empirical data, with statistical values of χ^2=2.23, df=16, χ2/df=0.13, p=0.09, CFI=0.99, GFI=0.99, AGFI=0.99, RMSEA=0.00, and RMR=0.00. When considering the variables that directly influence the decision to use train services among passengers in Thailand is organizational image, service quality, service motivation, service satisfaction. The variables that indirectly influence are the organization image, service quality, and motivation to use the service. The variables that directly and indirectly influence are organizational image, service quality, and service motivation, Collectively, these variables account for 71.00% of the variance in the decision to use train services by passengers in Thailand.

ACKNOWLEDGMENTS

This research has been successful. Due to receiving great kindness from Assoc. Prof. Dr. Nuttawut Rojniruttikul Research Advisor that please give advice as well as improving and fixing various bugs with great care The researcher is aware of the teacher's genuine intention and dedication. And would like to express my deepest gratitude

The researchers hope that This research will be of some benefit. Therefore, I would like to give all the good parts. to the teachers That has been so effective that the research results are beneficial to those involved. And I would like to extend my gratitude to your father, mother and all benefactors.

Chalermsap Lieophairot

TABLE OF CONTENTS

Chapter **Page**

TABLE OF CONTENTS (CONTINUED)

Chapter **Page**

LIST OF TABLES

Table **Page**

LIST OF TABLES (CONTINUED)

LIST OF FIGURES

Figures **Page**

CHAPTER 1

INTRODUCTION

1.1 Background and significance of the problem

The ASEAN Economic Community (AEC) is a regional economic group that was developed from the Association of Southeast Asian Nations (ASEAN). Today, ASEAN consists of ten countries, including Thailand, Myanmar, Malaysia, Indonesia, Philippines, Singapore, Vietnam, Laos, Cambodia and Brunei (Pattanapanchai, 2015). The AEC aims to create a single market and production base for the free flow of goods, services, investment, capital, and skilled labor within ASEAN.

As an ASEAN and AEC member, Thailand sits at the crossroads of many infrastructure initatives and in its own right, has become a production base and hub across multiple economic sectors including automotive manufacturing (Leenutaphong et al., 2021; Puteela et al., 2021), electronics (Surbthammah & Pimolsathean, 2016), agribusiness (Pattanapanchai, 2015), and aviation (Srisook & Panjakajornsak, 2017).

Furthermore, in 2015, the United Nations member states adopted the '*2030 Agenda for Sustainable Development*', which was designed to provide a shared blueprint for peace and prosperity (United Nations, 2015). Comprimising 17 main goals and 169 targets, the Sustainable Development Goals (SDGs) will play an important role in determining the direction of Thailand's future development.

One of the primary reasons for this importance is that the Thai Ministry of Transport and the Ministry of Industry have been given responsibility for implementing Goal 9, which is to build durable infrastructure and to promote inclusive and sustainable industrial development. Additionally, under Goal 9.1 they are tasked to promote innovation and the development of quality, reliable, sustainable and durable infrastructure, which also includes regional and cross-border infrastructure.

Thailand's ministries have also been tasked to support economic development and human well-being, aiming at accessible, affordable and equal access for all. In this regard, the 20-year transport development strategy of Thailand has been carried out in line with the Sustainable Development Goals (SDGs). Therefore, a 20-year strategic plan for the development of Thailand's transportation system (2017 - 2036) has been prepared which consists of the following six national strategies (Strategic Transformation Office, 2018).

(1) Security

(2) Competitiveness Enhancement

(3) Developing and Strengthening Human Capital

(4) Social Cohesion and Equity

(5) Eco-Friendly Development and Growth

(6) Public Sector Rebalancing and Development

As Thailand is part of the ASEAN community at the center of the member countries, it has become suitable for being a center for the transportation of industrial goods in the region and elsewhere around the world. Just withing the automotive sector alone, Thailand is exporting parts and vehicles to over 100 countries and is an established base for 60% of the world's 100 largest global parts manufactures (Leenutaphong et al., 2021; Petcharita et al., 2021).

Numerous studies have also shown that a well-operated logistics system can enhance the competitiveness of both a nation's economy and its commercial enterprises (Mangan et al., 2008; Pongpanit & Sornsaruht, 2019). Implementation of technology systems in business operations, such as setting up management systems. Managing the Company's information in terms of products, personnel, costs, expenses, losses and errors incurred. The use of technology will help to have clear information. It is different from using personnel who may have more mistakes. Having the right information Be up to date This enables entrepreneurs to make the right decisions. It is also possible to plan future operations more efficiently. As such, it has become essential in Thailand that the country prepares for the physical linking of its transport infrastructure and logistics processes and networks (Pongpanit & Sornsaruht, 2019).

However, the critical importance of transportation system and population center linkages is not new to Thailand, as over a century ago in 1890 King Chulalongkorn (Rama 5) established the Royal Railway Department (RRD) as a railway planning and construction department (Kakizaki, 2012; Whyte, 2010) which on March 1, 1896 opened a railway between Bangkok and Nakhon Ratchasima (Sivalai & Rojniruttikul, 2018a; State Railway of Thailand (SRT), 2021).

Therefore, it was believed that passenger and goods transportation by railways in Thailand played an important role in the economic and social prosperity of the country, as can be seen from the early royal initiatives of His Majesty King Chulalongkorn. Moreover, the interconnectivity that railways bring also served to promote Thai citizenship and a higher cultural standard. Education also creates a higher standard of living, with the construction of a railway linking the cities near and far helping to create prosperity for the country.

Therefore, providing a national rail transportation system that provides public transportation and goods transport becomes an efficient, low cost, economical, and safe enterprise that leads to economic and social prosperity. As such, the State Railway of Thailand Act B.E.2494 (1951) established the State Railway of Thailand (SRT) as a state enterprise under the Thai Ministry of Transport.

In an amended version of the *State Railway of Thailand Act B.E.2494* (1951), the importance of the SRT's use as a form of 'social service' was outlined. Thus, the concept of 'free trains' was born which from 2008 until November 1, 2017, the SRT operated an extended network of "free" trains or coaches for 3rd class passengers on a network of 164 public service obligation (PSO) commercial trains (Padeco Co., Ltd., 2014). Although every subsequent Thai government agreed to reimburse the SRT for the ticket price since the program's inception, the process has been anything but smooth, which significantly contributed to the SRT's unprofitability ever since the creation of the SRT (Sornsaruht & Deebhijarn, 2017).

According to the SRT, the PSO system did not adequately cover the losses incurred in running the ordinary, Bangkok commuter, local commuter, and mixed PSO services (Sornsaruht & Deebhijarn, 2017). From the perspective of the Thai MOF, the PSO system also did not achieve their social objective of increasing people's mobility as many of the PSO services were operating with few passengers. Data in 2012 showed that 65 out of 164 PSO trains had less than a 40% load factor, with ridership declining each subsequent year (Padeco Co., Ltd., 2014). This long-running populist program, however, was finally terminated on November 1, 2017. A national welfare-card system replaced the original free ticket mechanism ("Free bus, train services," 2017).

In more recent times, Thailand's Office of Transport and Traffic Policy and Planning in 2017 detailed a three-phase, $81.57 billion, 20-year master plan for rail development (Smith, 2017). The final goal of this ambitious plan is the construction of 2,588 kilometres of double-track ("SRT signs BT69.5 BN double-track contracts," 2017) and 2,457 kilometers of standard-gauge lines for high-speed trains, network electrification, and the development of intermodal rail freight terminals. This plan will add to the existing route length, which is reported to be 4,346 kilometers or 2,700 miles long. These SRT lines are also added to by light rail being run by the very popular *Bangkok Transportation System* (BTS) which by the end of 2019 had 151 kilometers of rail in service in the Bangkok metropolitian area, with another 135 kilometers under construction, and yet another 567.34 kilometers in the planning stages.

However, management and maintenance of the SRT's rail system is no easy task as it entails a huge number of other facilities needed for the SRT's daily operations (Puteela et al., 2021). These include 430 stations and buildings, 1,595 road crossings, 154 telecommunication systems, 163 signaling systems, and signaling equipment and repair shops. There is also the need for maintenance and security of land along the railway routes and the land on which the station is located. Additionally, there are maintenance requirements for bridges, tunnels, as well as other SRT employee housing, recreational and medical facilities.

Moreover, the rationale for these significant investments lie in the $86 billion valuation of Thailand's logistics processes which is growing at a rate of 7.5% per year (pre-Covid-19) (Srimalee, 2017). At the time of the study's reporting in 2017, this equaled 14% of Thailand's

gross domestic product (GDP). Moreover, 7% represented transportation costs, 6% represented inventory/warehousing costs, and finally, 1% represented management costs (Sivalai & Rojniruttikul, 2018a).

Therefore, multiple studies have confirmed that an effective way to reduce logistics costs in Thailand is to develop the Kingdom's transportation infrastructure and rail systems (Pomlaktong & Ongkittikul, 2008; Srimalee, 2017; World Bank, 2019). This becomes even more important when Thailand's logistics costs are compared to its ASEAN neighbors Singapore and Malaysia, which have logistics costs of 8% and 13% percent of their GDPs, respectively (Liu, 2016). Therefore, motivation for rail investment becomes cost reduction, with railway transport benefitting from high carrying capacity, lower energy consumption, and lower weather influences (Changnon, 2006).

Transportation systems and logisitics systems are joined at the hip with new urban areas, growing domestic and interational trade, foreign investments and tourism. As such, communities grow and a new urban middle class is born. Therefore, it is an opportunity for entrepreneurs to expand their business into metropolitian areas with urbanization giving people in outlying provinces the opportunity to upgrade their lifestyles to a modern, comfortable, and urban life style.

In the movement of individuals from rural areas to urban communities, countless opportunities are created for entrepreneurs who wish to provide products and services to this new urban cadre. These can include decoration services, restaurants, cafes, clothing shops, corner and fresh markets, night markets (Bamrongpol et al., 2020), health-food shops (Tangtatswas et al., 2021), and tutoring schools.

Moreover, development in the fields of transportation, infrastructure, telecommunications, and education has resulted in a faster-paced society for both rural and urban dwellers. As a result, the demand in Thailand for cars, trucks and motorbikes has also increased, as well as the requirement for infrastructure to support them (Chuwiruch, 2021).

Connectivity through use of the Internet and social media which then leads to e-commerce spending is also a resultant factor from the urbanization process. From e-commerce, comes the essential need for far ranging quick and efficient logistics services (Pongpanit & Sornsaruht, 2019).

Therefore, every aspect of modern 21st century urban life is affected by the need for logistics services and the supporting transportation infrastructure to support it. As we have seen, in urban Bangkok, the BTS light rail system (Skytrain) has been a very popular success with urban commuters, with an ever growing capacity to carry more and more passengers. Fortunately, rail systems such as the SRT connector systems and BTS also have a secondary mission of off-loading commuters and travelers from the highly congested Thai road systems (Chuwiruch, 2021) which have unfortunately become some of the most congested, slowest and

most dangerous in the world. It has also become stated government policy to make the rail system Thailand's main transport mode, linking the Kingdom with its regional neighbors.

Strategic details and the interconnectivity between projects is outlined by the SRT and can be found in the recent Public Private Partnership Strategic Plan B.E. 2560 - 2564 (2017 - 2021) (State Railway of Thailand. (2017). Moreover, the SRT stated the importance that the SRT provides transportation services for passengers and goods by trains that use international standards of convenience, safety, speed, and cost. Moreover, passenger coaches should have hight standards for beauty and functionality.

SRT facilities should also provide connections to peripeheral road systems, while also providing enough additional inland rail lines to link urban areas and their outlying industrial estates. The SRT also needs to interconnect to bordering ASEAN nation rail systems and develop methods and procedutes for long-haul passenger and freight movements. The SRT must also work on increasing their passenger and market shares, while simultaneously responding to government policies.

As we have also seen and explored, the SRT must also continue to provide services to low-income earners under appropriate government service contracts, state-subsidized businesses and social services. Currently, there are many types of passenger transport services in Thailand for passengers to choose from when travelmg according to their need for service satisfaction, speed, convenience, and cost. These include taxi, mini-buses, buses, train (Sornsaruht & Deebhijarn, 2017), and air (Srisook & Panjakajornsak, 2017, 2018). These services can be considered as an alternative to SRT train passenger transportation services, thus causing a highly competitive sector with each striving to increase their market share and profitability.

Therefore, given the critical importance of the SRT's role in Thailand's economy and future, the researcher is interested in using a structural equation model (SEM) to anakyze which factors and their interrealtionsips affect a potential SRT passenger's decision to use the train service in Thailand. From an extensive pre-SEM review of the literature both domestic and foreign, the author has identified four main variables which appear to have the potential to affect the SRT passenger *use decision* making process. These include the (1) organization image, (2) service quality, (3) service motivation, and (4) service satisfaction.

It is also planned to undertake the SEM analysis using the LISREL 9.1 statistics software program. With LISREL 9.1, the author will undertake a consistency check between the model and the data which is also intended to highlight the benefits and importance of the variables of the decision to use the SRT passenger train services in Thailand.

Structural Equation Modeling (SEM) has its early beginnings in work related to Spearman and Wright (Tarka, 2018). As such, SEM has become a social science tool useful in the process of recognizing particular concepts and events, which are helpful in the process of

predicting and explaining the specific behavior of an individual, group of people or organization. In the statistical sense, SEM refers to a set of equations with accompanying assumptions of the analyzed system, in which the parameters are determined on the basis of statistical observation (Tarka, 2018). Thus, structural equations refer to equations using parameters in the analysis of the observable or latent variables (Jöreskog et al., 2016).

As such, SEM is a useful tool to verify that the developed SEM is consistent with the structural data and the theory and the data collected from the results. Whether the developed SEM analysis is reasonable or not depends on the concepts and theories used as references. Therefore, according to Schumacker and Lomax (2016), the formulation of the research hypotheses and the SEM analysis is used to assure that the research hypothesis model is consistent with the observed data.

Knowing this, the researcher will set out to understand and analyze the factors previously identified and how they interact with each other as well as their final affect on an SRT passenger's decision to use their service.

Finally, the overall information obtained from the study can potentially be used as a basis for various management decisions, as well as increasing the SRT's efficiency. The final SRT passenger study will also have the potential to be used as a management guideline in creating strategies to promote a better SRT image, improve the service quality of employees, which strengthens the passenger motivation to use the SRT's passenger service, which finally causes passenger satisfaction leading to the decision to use the SRT's services more frequently.

1.2 Research Question

1.2.1 What variables have a direct influence Indirect and collective influences on decision to use the SRT passenger train service in Thailand.?

1.2.2 The model of the linear structure equation of the variable affecting decision to use the SRT passenger train service in Thailand Is it consistent with empirical data? How is it explained by statistics.?

1.3 Research Objectives

To develop a SEM of factors affecting SRT passenger train service use decisions in Thailand. This entails several sub-objectives as follows:

1.3.1 To study the level of factors affecting the decision to use the SRT passenger train service in Thailand.

1.3.2 To examine the correctness of the SEM of the factors affecting the decision to use the SRT passenger train service in Thailand.

1.4 Scope of Research

To develop a SEM of factors affecting SRT passenger train service use decision making in Thailand.

1.4.1 Population and sample

1) The population is train passengers in Thailand.

2) The sample group is SRT train passengers. To analyze the SEM of the factors affecting the decision to use the train service of passengers in Thailand, LISREL 9.1 is being used. Although there are many ways to select sample size, one popular method is that suggested by Hair et al. (2016) who suggest using a ratio of 10-20 questionnaires for each observed variable. However, to make the research more robust and reliable, the researcher determined that a sample size of 1,250 passengers was better which are selected by the use of multi-stage random sampling.

1.4.2 The variables studied

1) The exogenous latent variable is the organization image.

2) The endogenous latent variables are service quality, service motivation, service satisfaction and decision to use the SRT

1.5 Significance

1.5.1 The findings from the study will provide a clearer understanding of the SRT passengers' decision to use trains in Thailand as well as to see the factors affecting their decision-making process in a more concrete manner.

1.5.2 Obtain information about the factors affecting each SRT passenger's decision to use the train service in Thailand. This will be beneficial to relevant agencies for use in planning and developing policies for the SRT and supporting, promoting and enhancing the quality of train services that is efficient and effective in the future.

1.5.3 To benefit executives or managers to see the importance of the Organization image. Sservice quality, Service motivation Passenger Service Satisfaction in Thailand to formulate the vision, mission, policy and strategic planning, budget of the organization to create a competitive advantage for business in Thailand's transportation industry.

1.5.4 To suggest ways to improve and develop Thailand's transportation industry to develop efficient services suitable for passengers of all ages or persons with disabilities and to prepare for international competition.

1.5.5 Academic aspects to benefit those who are interested in academic work in the transportation industry. Interested persons can use the information to further study academic and professional development.

1.6 Research terminology definitions

1.6.1 The 'decision to use the service' (SRT Decision Use) means the decision to choose the train service for traveling, which is measured on the questionnaire by the researcher for seven marketing mix (7Ps) areas as follows:

1) Product means the service of diesel and electric locomotive trains with the required quality.

2) Price means the amount of the fare price used in riding a diesel or electric locomotive train service.

3) Place is the location of the train service station.

4) Promotion is the advertising and public relations for the SRT train services.

5) People are the individuals who facilitate providing services at a station or onboard a passenger coach.

6) Process means the process of providing SRT realted services.

7) Physical environment refers to the facilities or equipment within the station.

1.6.2 Organization image refers to the image that occurs in the minds of people who have feelings for the organization. Institutions and mental images may be derived from direct and indirect experience. For this study, three aspects of organization image were used in the questionnaire. They are:

1) Information means Reflections in conveying meanings, opinions, news, facts to rail users

2) Brand image is the perception of the brand in the customer's mind.

3) Goods or services image means the overall image of the goods or each type of service. Every company/organization is responsible for a different brand unique to itself.

1.6.3 Service quality is identified as an assessment and comparison between what is expected and what is provided. Service quality is a conscious and intangible feeling, which cannot be determined by appearances alone (Jao-Hong et al., 2010). Providing services that are in line with the needs of the service recipients or higher than the service recipients expected will result in that service having a high service quality. Therefore, service quality is measured

on the study's questionnaire by five factors commonly referred to as the RATER Model. They are as follows:

1) Responsiveness is the speed at which a service is undertaken in assisting and helping customers or passengers. The speed must come from employees and effective service processes or procedures.

2) Assurance is the confidence customers or passengers have in the product or service being delivered.

3) Tangible or physical evidence means the physical environment which, in addition to cleanliness and beauty, also needs to take into account how it is used as well.

4) Empathy is the how much the staff care about serving an organization's customers. Empathy also involves trying to understand the customer's problem and customer needs in terms of service and problem solving. Finally, communication is necessary to understand customers correctly and resolve their problems.

5) Reliability refers to the ability to provide services that meets the needs of the customers or passengers.

1.6.4 Service motivation refers to the process of inducing or persuading a person to make an effort to successfully meet a certain need. For this study, two aspects were identified and measured in the questionnaire. These included:

1) Emotion – Previous research has shown that public service motivation (PSM) provides a motivational base for effective emotion regulation (Potipiroon et al., 2018).

2) Reasoning is the use of personal feelings in selecting how to respond to a passenger or customer's demands.

1.6.5 Service satisfaction refers to the result of a person's involvement in something that has a positive effect. Negative attitudes show dissatisfaction. Therefore, for this study, five aspects were identified and measured in the questionnaire. These included:

1) Service equality means justice in railway service on an equal basis. All users are treated as individuals using the same standard of service.

2) Timely service means providing train services on time and in a timely manner, leading to satisfaction of service users.

3) Adequate service means providing a service of sufficient quality and number of trains for each route to the SRT's passengers.

4) Continuous service means providing SRT train services on a regular basis.

5) Progressive service means providing quality improvement of SRT train services including performance and efficiency.

CHAPTER 2

LITERATURE REVIEW

For the research topic, ‘ A Structural Equation Model of Factors Affecting SRT Passenger Train Service Decision Making in Thailand,’ the researcher has studied the related documents and research as follows:

2.1 Overview of the State Railway of Thailand (SRT)

2.1.1 History of the State Railway of Thailand

2.1.2 Vision and Mission

2.2 Concept of decision-making

2.2.1 Meaning of decision-making

2.2.2 Decision-making process

2.2.3 Types of decision-making

2.2.4 Effective decision making

2.2.5 Research related to decision making

2.3 The concept of marketing mix factors (7Ps)

2.3.1 Product

2.3.2 Price

2.3.3 Place (channel distribution)

2.2.4 Promotion (marketing).

2.2.5 People

2.2.6 Physical characteristics / physical evidence

2.2.7 Process

2.2.8 Research related to marketing mix factors (7Ps)

2.4 Factors affecting passengers' decision to use SRT services in Thailand

2.4.1 Organization image

2.4.2 Service quality

2.4.3 Service motivation

2.4.4 Service satisfaction

2.5 Relationship of variables affecting passenger decision-making to use SRT services in Thailand

2.6 Research Conceptual Framework

2.7 Variables studied

2.8 Research Hypotheses

2.1 Overview of the State Railway of Thailand (SRT)

2.1.1 History of the State Railway of Thailand

Thailand through many generations and monarchies has been recognized as a civilized and culturally rich nation since the days of the Sukhothai, Ayutthaya, and Thonburi (Siam's capital from 1767-1782) eras. From its relative isolation during the Sukhothai Era through its more contemporary Ayutthaya era, every Thai monarch has realized the importance of communications and transportation as essential needs for the prosperity of the nation's health and well being. Like a human being, these mediums act as life giving blood to the body of the nation state, with railway systems being a main artery in the survival and prosperity of the nation.

From the distant ages of the past up to the time when the city of Bangkok was chosen as the new capital of Siam, with the exception of the water-borne traffic along rivers and canals, the only means of inland communication in the country had been those borne by animals. These 'beasts of burden' included oxen, buffaloes, horses, elephants with howdahs and bullock-carts, which acted as a popular and common means for the people in both the rural and urban areas.

Later in the reign of King Rama V, political turmoil stemming from British and French colonial expansion throughout Southeast Asia became a concern with *His Majesty King Rama V* becoming more aware of the importance of rail transport. It is believed that this was partially due to wagon travel and river transport systems at the time being insufficient to maintain the integrity of the royal territory.

Additional concern was places in northern and eastern rural areas in which the populace was more connected to bordering lands then to the urban lives of people in the Thai capital. Therefore, it seemed reasonable to build railroads into the interior as a form of maintaining internal and border security.

These traditional methods although effective, were slow, limited geographically, and of no use in growing security and border concerns. However, popular myth has attributed the quest for Thai trains begining just after a visit to Europe in 1886 by King Chulalongkorn, from which he got the idea of building a railway in his Kingdom after travelling in trains during his visit to Europe (Danish Embassy Facebook post). Four years later in 1890, His Majesty King Rama V of Rattanakosin (King Chulalongkorn*)* announced the opening a Royal railway initative on March 1, 1890 while simultaneously opeing bids for railway construction. At this point, which lines were first and where they ran between becomes a bit hazy depending on the sources you read in English.

Durng this same period, activity was increasing and in 1887 the Thai King Rama V graciously let *Sir Andrew Clark* and the *Pan* Chard McTaccard Lother Company to conduct a

survey into Thailand's interior with the objective at building railways from Bangkok to Chiang Mai in the far north, with a continuation on to Chiang Rai (Saen Luang) (State Railway of Thailand (SRT), 2021). Another line was also explored which would run from the junction at Saraburi to Nakhon Ratchasima, and yet a fourth line from Mueang Uttaradit District to Riverside Thadeua. Including eight parts, the survey was contracted out at to not exceed 100 pounds per mile which was signed by all parties on 16 March 1887.

After the survey work and exploring various paths, the government decided that a new railine should be established between Bangkok and the northeast city of Nakhon Ratchasima. Therefore, in October 1890, the King graciously established the Railway Department under the Ministry of Public Works.

However, according to the official SRT website, Prince Krom Khun Narisra Nu Wat Wong and Mr. K. Bethge became the directors of the newly established Thai State Railway. Simultaneously, the auction for the new railway line construction contract between Bangkok and Nakhon Ratchasima was undertaken. History also tells us that Mr. G Moorea Campbell of England won the construction contract for this line with the lowest bid of 9,956,164 baht.

His Majesty King Chulalongkorn (King Rama V) during this period gave a royal authorization to the Ministry of Public Works to hire Mr. G. Moure Campbell to build the railway line from Bangkok to Nakhon Ratchasima, which had a line width of 1.435 meters. Mr. Campbell was also able to persuade His Majesty King Chulalongkorn to be present at the auspicious ceremony of the railway's construction start.

In yet another story, it would be a Danish owned and managed enterprise which would win the contract for a railway between Bangkok Station and Samut Prakan and the 20-year concession for Thailand's "first railine". Run by brothers Andreas and Louis de Richelieu and British navigator Alfred John Loftus, the Paknam Railway Co Ltd, began construction on July 16, 1891 (or March 09, 1891?), which began operations on April 11, 1893 ("July 16, 1891: The day rail travel was sparked in Thailand," 2021; Whyte, 2010). This railway hence became know as the 'Paknam Railway' after the Danish company which built it. However, rail travel lost its popularity with the arrival of public buses and private cars after World War II, and by the 1950s, the Paknam Railway was running at a loss and was finally closed in 1959 to make way for Bangkok's Rama IV Road. Recently, the SRT has built a memorial to commemorate the inauguration of the Royal Railway and the important events in the past and to pay tribute to King Chulalongkorn's greatness.

In 1896, the construction of another railway line from Bangkok - Nakhon Ratchasima was completed enough to launch a run of 71 kilometers between Bangkok – Ayutthaya. So on March 26, 1896, King Rama V presided over the ceremonial opening of the railway station between Bangkok – Ayutthaya which has operated ever since.

In the first stage, four train trips each day to a total of nine stations were run. These stations included Bang Sue, Laksi, Bangkok, Khlong 6 Rangsit, Chiang Rak, Chiang Rak Noi and Krung kao. This route was called the March *26* route and has been referred to this name ever sense.

In the second stage opening, the route from Ayutthaya to Kang Khoi, Muak Lek, and Pak Chong commenced. Finally, in 1900, the complete railway line to Nakhon Ratchasima was completed and His Majesty King Chulalongkorn graciously consented to open this route on 21 December 1900. The total distance from Bangkok - Nakhon Ratchasima was 265 kilometers and cost 17,585,000 baht to build.

After King Rama VI ascended to the throne and was crowned by his father, he determined that the separate affairs of the Northern Railway Department and the Southern Railway Department were hard to superivise, manage, and not cost effective. As such, he issued a royal decree on June 5, 1917 that they should be combined, from which the Royal Railway Department (RRD) was established. Additionally, the King's brother, His Royal Highness Krom Phra Kamphaeng Phet Akharayothin was given the task of being the new Royal Railway Department's first commander.

As it turned out, the royal railway prince commander was a visionary and realized the potential for steam locomotives to tow rail cars. Ordering two diesel locomotives from Switzerland, the first one arrived which was given the number 21-22 which started operations in 1928. Today, this engine and its cars are housed at the SRT's Railway Headquarters Building as a museum for future generations who wish to learn about Thai transportation history. Because His Royal Highness Krom Phra Kamphaeng Phet Akharayothin gave birth to diesel locomotive use in the Kingdom, all trains today still use his Purachatra *Sign* on the side of every locomotive to commemorate and honor him forever.

From the seedling that was planted in 1896 during the reign of King Chulalongkorn (Rama V) until the end of his reign in 1910, a total of 932 kilometers of railway were operational with another 690 kilometers under construction. During the reign of King Rama VI these totals increased to 2,581 kilometers of open railways and another 497 kilometers under construction.

Under the reign of King Prajadhipok (King Rama VII - born Nov. 8, 1893, died May 30, 1941), public transportation policy continued to operate as in the previous reigns, but due to the turbulent economic conditions in Thailand, the construction of the railways during this period was delayed with only an additional 418 kilometers of new railways.

The Thai railway under the reign of King Ananda Mahidol (Rama VIII – born Sep. 20, 1925, died June 9, 1946) operated with little change from the previous era as the Great Depression was still a factor and World War II was making it difficult to build new railways. During King Rama VIII's reign only 259 kilometers of railway construction was undertaken.

Under the reign of King Bhumibol Adulyadej the Great (King Rama IX – born Dec. 5, 1927, died Oct. 13, 2016) during World War II, the Thai railway system experienced heavy damage and losses. These included financial losses, property, buildings, equipment, and wheeled locomotives. Restoration requirements were heavy and cost high with the government unable to finance what was needed.

Therefore, Thailand made a request to the World Bank to provide finds for the rail systems restoration and maintenance. During the negotiations, the World Bank proposed that the government improve the organization of the Royal Railway Department (RRD) to be more independent and provide greater management flexibility.

In 1951, the government was being lead by Prime Minister Field Marshal Chom Phon Por Pibulsonggram, who decided to establish an independent railway organization. Thus, the State Railway of Thailand Act B.E.1951 came into law and the Royal Railway Department changed its status to a state-owned enterprise under the new name of 'State Railway of Thailand' on June 30, 1951. General Jaroon Rattanakul Sereeruengrit served as the first Director-General of the SRT (The Train Operation of Thailand) July 1, 1951 to September, 10 1959. The Cabinet thus appointed the State Railway of Thailand (SRT) to be responsible for managing the organization's affairs. In the new organization, a chairman of the board and six additional SRT railway governors were appointed.

Today, the World Bank (2019) is still involved with SRT restructuring and in 2019 indicated that rail transport in Thailand caters to 7% of the total land inter-city passenger transport demand but only 2% in tonnage of the domestic freight market. However, as SRT is currently strapped with $5.5 billion in dept and liabilities, a path out of the tunnel debt trap has been hard to find (World Bank, 2019).

Initally, the state gave 30 million baht as an initial contribution to the newly formed SRT, with General Jaroon Rattanakul Sereeruengrit selected as the first controlling governor of the SRT. Since July 1, 1951, in principle, the state controls the appointment and dismissal of executives, as well as employee salaries, passenger fares and freight rates. Additionally, although the state controls the opening and closing of routes and services, as well total investment control, if the SRT enters an operating loss, the state is supposed to compensate for the amount of the deficient. However, this last point has become a continuous issue and the topic of multiple studies and reports (Sivalai & Rojniruttikul, 2018a; Sivalai & Rojniruttikul, 2018b) as SRT ridership has dropped from its 1994 peak of 88 million riders per year to 35 million in 2018 (Ganjanakhundee, 2016; Jotikasthira, 2018).

Finally, the SRT today supports 4,346 kilometers of railline. Included in this total is a double section of track between Bangkok - Rangsit, a distance of 31 kilometers, and a three-section route, Rangsit - Ban Phachi Junction, a distance of 59 kilometers. Additionally, there are the following routes.

The Northern Line to Chiang Mai has a track distance of 751 kilometers. The Southern Line to Narathiwat Province (Sulai Kolok) has a track distance of 1,143 kilometers and to Padang Besar Station, has a track distance of 974 kilometers. The Eastern Line to Sa Kaeo Province (Aranyaprathet) has a track distance of 255 kilometers, with a branch to the Map Ta Phut Industrial Estate, having a total track distance of 200 kilometers. The Northeastern Line to Ubon Ratchathani Province has a track distance of 575 kilometers, with another branch to Nong Khai Province, having a track distance of 624 kilometers. The Western Line to Nam Tok Station in Kanchanaburi Province on Thailand's border with Myanmar (Burma) has a track distance of 194 kilometers. There is also a section of track known as the Mae Klong Line between Wong Wian Yai - Mahachai section with a track distance of 31 kilometers, and another section between Ban Laem - Mae Klong with a track distance of 34 kilometers. In addition, there are also many interconnection road projects to support the movement of freight to the SRT rail facilities. These include the Khlong Sib Kao - Ban Phachi - Kaeng Khoi - Si Racha - Laem Chabang - Khao Chi Chan - Map Ta Phut projects which come under the classification of the East Coast Development Project.

2.1.2 SRT Vision and Mission

SRT Vision

"Aim for excellence in providing convenient, punctual and safe rail systems"

SRT Mission

1. The State Railway of Thailand (SRT) focuses on providing services that respond to the needs of users in order to create revenue and profits for the organization. The SRT is also tasked to provide continuous service efficiency improvement so that the SRT is an efficient transportation alternative.

2. The SRT is also tasked to operate as a social-welfare transport service for the common good of the people and the country ("Free bus, train services," 2017). This is in response to every government's requirement that the SRT provide a low cost and efficient transportation service.

3. The SRT in response to multiple governments' development policies has been tasked to expand and connect existing passenger and cargo transport networks (Smith, 2017).

SRT Objectives

1. To create excellent SRT service in a changing and highly dynamic environment.

2. To improve SRT operations and performance both in the main business and the related secondary businesses.

Manage Costs Effectively

3. To achieve the development of the organization and personnel in accordance with the investment plan for rail infrastructure. This will lead to sustainable competitiveness of the SRT in the long term.

4. To create a collaborative and integrated operation in which the various departments of the SRT have a common vision for increasing the SRT's efficiency and effectiveness.

SRT Strategy

The SRT's strategy can be divided into two groups. They are:

1. Excellence – Strategic vision includes the development of an improved management system, which aims for rail service excellence at an international standard (Sivalai & Rojniruttikul, 2018a; Sivalai & Rojniruttikul, 2018b; World Bank, 2019). As such, there are five 5 strategies involved. They are:

a) Asset management strategy.

b) Financial and accounting strategy.

c) Strategies for developing and managing the organization.

d) Strategies for human resource development and management.

e) Strategies for information and communication technology (ICT).

2. Efficiency – The strategic group for improving and increasing service efficiency (convenient, punctual and safe service) consists of three strategies. They are:

a) Strategies for providing passenger and cargo transportation services.

b) Locomotive and wheeled strategies.

c) Infrastructure strategies.

2.2 Concept of Decision Making

2.2.1 Meaning of decision-making

Numerous researchers have discussed the meaning, process and critical importance of 'decision-making.' This is particulary so when a company's executive officer makes a decision that has significant impact on the organization's performance of the organization. Decision-making is also one of the most important recurring responsibilities facing managers in organizations, as high-quality decisions assist in an organization accomplishing its strategic vision and meeting the needs of the organization's employees, executives, stackholders, consumers, and suppliers. Therefore, here are a selected few of decision-making thinkers:

Druker (2006) details five elements of the *decision-making* process. These include, (1) the clear realization that the problem is generic and can be solved only through a decision that establishes a rule, (2) the definition of the solution specifications or limitations, (3) the 'right; solution is one that fully satisfies the specifications before attention is given to the concessions needed to make the decision acceptable, (4) the ability to carry out the decision, 5) the feedback that tests the validity and effectiveness of the decision against the actual course of events. Druker also felt that decisions are neither right nor wrong, as a decision is judgement choice.

Simon (1997: 40-41) stated that *decision-making* is a process of intellectual activity, from which the correct choice is made in designing activities. It is also the process of choosing the right option for dealing with an issue or problem.

Harrison (2003) describes *decision-making* as a process of evaluating alternatives or options that helps achieve the stated goals. It is also a process in which predicting the consequences of the alternatives are further achieved.

Snowden and Boone (2007) pointed out that wise leaders modify their approaches to fit the complexities of the organization's circumstances they face. Decision-making involves leaders being able to sense, categorize, and respond. That is, they assess the facts of the situation, categorize them, and then base their response on established practice.

Moody (1983) defined the decision-making process as an action that must be taken when there is no more time to find out the facts. The Problem is how to decide when to stop gathering facts. The solution varies with each problem we attempt to solve, for gathering facts costs time and money.

Pedretti (1999) defines decision-making as a complex process that must be undertaken to select possible alternatives from a wide range of options for solving a problem.

In conclusion, decision-making means choosing to do something from various options and it has to be carefully considered, as it is the best method in order to achieve the objectives or goals set.

2.2.2 Decision making process

The consumer decision-making process is a sequence of steps in the consumer's purchasing decision, which goes through a five-step process (Kotler & Keller 2006).

1. Problem recognition is when customers encounter problems that need to be solved by using products or services to help eliminate them.

2. Information search is the study of what the customer wants. This can help eliminate customer problems and improve revisit intention. This process can also make use of socal media and Internet sites which evaluate serives or products. Finally, customer service staff and managers can also be a good resource in the information serach process.

3. Evaluation of alternatives is the process after the customer searches for information that tells the customer that there are several options that can help solve the problem. Each option has its own pros and cons, with the best choice left uo to the customer.

4. Purchase decision is the customer thought process that leads to the identification of a need, options, and choosing a specific product, brand or service.

5. Post purchase behavior occurs after a customer purchases a product or service and their satisfaction with it. If the customer is satisfied with the choice, they will return to buy the product or use the service again.

In Thailand, Chompukum (2011) has also commented that the decision-making process involves four steps. These are:

Step 1: Identify the problem or opportunity.

The first step of decision-making is identifying the problem or opportunity, which is an important step because it affects subsequent steps. If a problem or opportunity is identified incorrectly, the end result will be the wrong decision.

Step 2: Identifying alternatives

This step involves further research to identify all available alternatives and anticipate the potential consequences of each. One way to see more options is to get multiple people to share their opinions and offer alternative opinions.

Step 3: Evaluating options and choosing the best option

At this stage, a score is given to assess the best option (maximizing). In general, the criteria for determining the potential consequences of each option are benefits, costs, time, acceptance, and ethics.

Step 4: Implementation and evaluation of the alternatives implemented

The final process of decision-making is taking action on the chosen option. The decision maker may be the operator himself or entrust others to act according to the decision.

2.2.3 Types of decisions

According to Hawkins et al. (2004), decision types can be categorized as follows:

1. Nominal decision making is habitual decision making.

2. Limited decision making is a decision where consumers are limited in searching for information, giving them few options to make decisions, making decisions simple, uncomplicated and resulting in assessment at the same time

3. Extended decision making is a decision that requires searching for both internal and external information to make a decision, making the evaluation of options more complex and the evaluation of purchases clearly assessed.

2.2.4 Effective decision making

Effective decision making has been discussed in numerous ways. The following are a selected few:

Jumpartes (2009) describes how effective decision-making should take into account the following topics:

1. Have a clear goal or objective.
2. Have a minimum criteria or standards in mind.
3. Have reliable and sufficient information.
4. Compare the options.
5. Have enough time to make a decision.
6. If there is an error, it must be corrected and not to the point of suffering.
7. Is it worth the time or investment?
8. Stick to the principles of decision-making by comparing the risks with the consequences.

Wongput (2007: 75-76) has commented that effective decision making is a matter of factors related to performance. These include:

1. To be effective, one must search, collect information and statistics that have already occurred and use this information to get an accurate and up-to-date assessment of the information.

2. Effectively analyze and evaluate the data to make the best decision.

3. Do not look at anything from one side. Leaders need to be far-sighted, broad-minded, and deep-sighted. Think of the future as a location.

4. Effective decision-making requires the ability to have courage and the willingness to take risk and losses based on the assessment of what the opportunity or situation for gain is.

5. Decisions can change over time when obstacles are encountered. Therefore, flexibility in decision-making is advantageous.

6. There must be coordination with all parties involved to make a maximum efficienct decision.

7. Decisions must be monitored and evaluated for use as information in next decision.

Jarurot (2007: 285-286) said that effective decision-making involves two processes: These include:

1. Creative thinking in decision making consists of reasons, results and diversity, which can consist of two types of ideas:

1.1 Team thinking is the process in which members analyze together to bring different ideas together into more focused ideas in order to analyze in detail and make the idea more perfect This will create a way to solve the problem.

1.2 Diverse ideas is a creative idea that can cause ideas in many aspects which can be used to solve problems.

2. In the assessment and analysis of decision alternatives from the branch analysis of decision making, methods that are useful for decision-making must be prioritized as follows (Jitjang. 2010):

2.1 Assess the cause of the operation.

2.2 Organize the sequence of events that occur.

2.3 Estimate the likelihood of events being linked with choice.

2.4 Assess the results of the implementation of each option.

2.2.5 Research related to decision making

Jitjang (2010) studied the decision to use the Metropolitian Rapid Transport (MRT) subway service in Bangkok. The objectives of the research were to study and compare the decision to use the MRT service classified by personal factors such as sex, age, educational level, occupation, monthly income, and service usage behaviors. These were the frequency of use of the service, the time period used for the purpose, and average cost. Data was gathered using a questionnaire from a sample group of 400 passengers. The statistics used to analyze the data were mean and standard deviation. The statistics used to compare the data were t-test and One-Way ANOVA.

The results showed that most of the respondents were female aged 15-24 years old, who were students studying for a bachelor's degree, who had a monthly income of not more than 10,000 baht. It was found that the respondents gave a high level of importance to service, personnel, and price, respectively. Concerning the medium’s importance, marketing promotion had an average value was 3.38. When comparing the relationship between personal factors and marketing mix, it was found that different ages and occupations had different levels of service decision making at statistical significance at 0.05. When comparing the behavioral aspect, it

was found that only the frequency of service use had a statistically significant difference in the level of service decision-making at 0.05.

The results of the research revealed that the service users will pay the least attention to the service marketing mix in the aspect of marketing promotion, therefore, there must be a special improvement in this aspect by using more public relations, focusing on the use of public media that can reach the most people. This can include television and frequent advertising that allows users to recognize and remember more, including organizing activities to promote additional marketing. The researcher hopes that the results of this research will be useful to those who are interested and serve as a guideline for improving the service of the Metro to be more efficient in many aspects and can be applied to agencies with similar service models, such as the service of the BTS sky train or the service of the BMTA.

Suebnuson (2013) examined the level of customer decision making, the level of service quality, and the relationship of customer decision making on using services of the Siam Commercial Bank. The sample used in this survey was drawn by the use of accidental sampling and a questionnaire, and comprised 400 service users of the Siam Commercial Bank in Khon Kaen Province. The statistics used for data analysis consisted of percentage, mean, standard deviation, independent samples t-test, and One-way ANOVA.

The results of the study demonstrated that the majority of the respondents chose to use the services of the Siam Commercial Bank branches outside Amphur Muang Khon Kaen on workdays from Monday to Friday, made withdrawals-deposits transactions, and performed banking transactions between 8.30-11.30 hours. Also, it was found that the opinion toward the overall customer decision making factors on using services that affected the service quality of the Siam Commercial Bank in Khon Kaen Province was at a high level.

The results of hypothesis testing showed that the level of opinion concerning customer decision making on using services that had effects on the quality of service of the Siam Commercial Bank branches in the department stores was higher than that of the branches in Amphur Muang Khon Kaen and outside Amphur Muang Khon Kaen. The days of service using had relationships with the service quality of the Siam Commercial Bank, and the customers using banking services on Saturday and Sunday showed the level of opinion affecting the customer decision making on using services toward the quality of service higher than the customers using banking services on Monday to Friday. There were more backing customers who used banking services between 8.30-11.30 than those between 11.30-13.00 hours and 13.00-16.00 hours. The study revealed that the types of transactions had no relationship with the service quality of the Siam Commercial Bank at a 0.05 level of significance.

Kamolpiyapat (2013) examined the decision to use a private hospital in Bangkok. The purpose of this research was to study the indepdent factors of marketing mix, service quality and health insurance and the dependent variable decision-making on private hospital users in

Bangkok. A questionnaire was used to collect data from a sample of 400 private hospital service users in Bangkok. Statistical analysis methods included frequency distribution, percentage, mean, standard deviation and analysis of multiple regression analysis (MRA). The results of the study found that respondents were mostly female and in the age range between 20 – 30 yars old, were single, had a bachelor's degree, worked as a private company employee, and had an average monthly income from 15,000 – 30,000 baht. Also, most respondents exercised their right to receive services in private hospitals by using group insurance/employee benefits. When asked who influenced them the most in selecting the service, the majority indicated they alone made that decision. The number of service visits was also indicated to range between 2-5 times per year. The overall of mean for the marketing mix, service quality, health insurance and decision making to use the service were at a high level. As a result of hypothesis testing, it was found that the service quality factor and health insurance influence on the decision to use private hospitals in Bangkok had a statistical significance level of 0.05.

Tamwong (2014) studied and compared the decision-making process in choosing financial services through an application on smartphones for customers of the Government Savings Bank in Lampang District 1 according to their personal characteristics. Data were collected by using a questionnaire with 400 customers who used smart phones to use the service with the Government Savings Bank in Lampang District 1. Statistics used in data analysis were frequency, percent, mean, standard deviation, and Chi-Square.

The study found that bank customers had a high level of decision-making process in choosing financial services via smartphone applications. Also, the evaluation stage after purchase, followed by the decision to use the service and alternative assessment steps were deemed most important, respectively. In addition, the most important decision-making factor was the post-purchase evaluation, then the decision to use, and lastly alternative evaluation. When comparing the decision process to choose financial services via an application by GSB customers on personal characteristics, it was found that they differed according to their age, education and occuptation at a 0.05 level of significance.

Khurukitwanit (2015) researched the factors affecting the decision to use the Government Savings Bank's telephone banking service in the Government Savings Bank Region 3 by using seven marketing mix factors and six aspects of service decision making which included user age, information resource, time of use, place of use, service type, and reason for use. The sample group in this research comprised 400 customers who used mobile banking services of the Government Savings Bank in the Government Savings Bank Region 3. The research instrument was a statistical questionnaire used in the research, which was the Chi Square statistic and correlation coefficient test statistics.

The results of the research were as follows:

1) Most of the sample were female, aged 25-30 years of age, single, civil servants/state enterprise employees, with a monthly income between 10,001 - 30,000 baht.

2) Ppersonal factors such as gender, age, education level, occupation, monthly income and status, affected the decision to use banking by phone.

3) Marketing mix factors of *product* and *physical environment* are influenced by user age, information resource, time of use, place of use, and service type. Price, place, promotion, process and people are influenced by user age, information resource, time of use, place of use, service type, and reason for use.

2.3 The concept of marketing mix factors (7Ps)

Kotler and Keller (2006) said that marketing mix entails variables or marketing tools that can be controlled, which when companies use together can create better customer satisfaction for the needs of their target customers. Originally, the marketing mix had only 4 variables (4Ps), namely the product, price, place or location or product distribution channel, and marketing promotion. Three additional variables were added, namely people, physical evidence, and process, in order to be consistent with important modern marketing concepts, especially with service business (Srisook & Panjakajornsak, 2018). Therefore, it is collectively known as the 7Ps marketing mix.

Wongmontha (1999) said that the marketing mix entails the company products and/or services that meet the needs of the target customers to satisfy them. However, the price of the product and/or service has to be at a level the consumer accepts and agrees to pay (willing to pay). There must also be an appropriate distribution channel that customers can easily access. There must also be efforts to motivate customers in making the right purchases and/or services.

Ruangrugira (2000) said that the marketing mix is an important element or factor in marketing operations because it is something the organization can control. Fundamentally, the marketing mix consists of four factors: product, price, distribution channel (place), and marketing promotion (promotion), collectively referred to as 4Ps. There will be three additional marketing mix factors, namely people, physical evidence and presentation, and process, collectively known as the 7Ps.

Sereerat et al. (2017) said that the *marketing mix* refers to the controllable marketing variables which the company uses together to satisfy the target group. Therefore the *marketing mix* consists of the following tools:

2.3.1 Product

Product entails something that the company offers to sell to generate interest and a profit. The consumption or use of the product or service can lead to customer satisfaction (Kotler & Armstrong, 2010), which can include a odor, color, price, brand, or product quality reputation of the manufacturer or distributor. It is necessary to have utility and value in the eyes of customers who are consumers of those products.

However, product strategy formulation should consider and pay attention to the following factors:

1) Product/service differentiation or competitive differentiation in order to make the products and/or services of the business distinctively different.

2) Features of the product component, such as basic benefits, quality, appearance, or brand packaging.

3) Product positioning is the design of a product to show the position of the product in the market which has differentiation and value in the minds of the target customers.

4) Product development involved making a product new (new and improved) regularly. However, it must take into account the ability of the company to better meet the needs of customers.

5) Product mix and product line strategies (product line).

2.3.2 Price

Price refers to the amount of money that must be paid in order to obtain a product, goods and/or services of the business. It can also be the customer's perceived value for the product or service which the perceive benefits them and makes the money worth the value paid (Kotler & Keller. 2006). It may also refer to the value of the product in terms of money which the customer uses to compare the price that must be paid out and the value that the customer will receive back from that product. If the value is higher than the price, the customer will make a buying decision which defines the pricing strategy as follows:

1) Situation, condition and form of competition in the market.

2) Direct costs and indirect costs in order to obtain goods and/or services.

3) Perceived value in the eyes of the target customer.

4) Other factors that may be involved.

2.3.3 Place/Channel Distribution

Distribution channel means a channel for distribution of goods and/or services, including methods for bringing such products and/or services to consumers to keep up with demand. Criteria that must be considered are:

Who is the target audience?

How should the vendor distribute products and/or services to their customers (Thai Hotel Business, 2017).

1) Distributing products direct to consumers.

2) Distributing products through wholesalers.

3) Distributing products through retailers.

4) Selling products through wholesalers and retailers.

5) Selling products through dealers.

Sereerat et al. (2017) said that choosing a location of the business is very important, especially service businesses, and that the location will determine the group of customers who will come to use the service. Therefore, the property should cover the area to serve the target audience as much as possible. However, the importance of location will be more or less important depending on the nature of each type of business. In determining the distribution channel, the three factors must be taken into account are as follows:

1) Nature and style of business operations.

2) The need for middlemen (intermediary) to distribute products and/or business services.

3) Customers who are the target group of the business.

2.2.4 Marketing Promotion

Marketing promotion is a marketing communication tool which creates motivation, thinking, feeling, need and satisfaction for products and/or services. This is used to motivate the target customer to create a need or remind them of the product with the expectation that the promotion will influence feelings, beliefs and behavior, purchase of goods and/or services (Etzel et al., 2007). Promotion can also happen as a form of communication to exchange information between sellers and buyers.

When multiple forms of marketing promotion occur simultaneously, a form of Integrated Marketing Communication (IMC) happens (Sereerat et al., 2017). The tools used in IMC consist of five main tools as follows:

1) Advertising means information dissemination activities which use news to create incentives and demand for goods and/or services to those who receive the information from the advertisement. Advertising can be done in a variety of communication channels including social media, the Internet, YouTube, television, radio, billboards, and newspapers. The medium used can depend on factors such as age, gender, targeted location, digital literacy, or income status.

2) Publicity and public relations (PR) concerns presence in the media. It creates public awareness for a brand, which uses promotion to attract attention. Public relations involve a

whole host of strategies to accomplish an organisation's goals by sending messages to appropriate audiences. PR can entail press releases which present am organization's idea or vision for a new product and/or service. Paid advertising can also be presented in newspaper as paid fatures or infomericials.

3) Personal Selling means selling products through *two-way communication* or face-to-face sales. *Face-to-face* is where sellers and buyers meet face to face, such as a night market, where they can ask questions, exchange information, negotitate price, and offer products and/or services directly.

4) Sales promotion refers to marketing activities that will help increase the volume of sales of goods and/or services by using various methods such as discounting, coupons, or redemption of gift items. Distribution of sample products and free giveaways can also be used to stimulate consumer demand for products and/or services, which can ultimately lead to purchasing behavior.

5) Direct marketing means a marketing channel that can reach the target consumers directly in order to present products and/or services without the need for a middleman. The various forms of direct marketing include telemarketing, e-mail, and social media.

2.2.5 People

Personnel are defined as employees who work for the benefit of various organizations. This includes the owner of the business, senior management, middle management, low-level executives, general employees, and housewives. Personnel can also be considered as an important marketing ingredient because they think, plan and perform tasks to drive the organization in a strategic direction. In addition, another important role of personnel is interaction and building good relationsips with customers. It is important to make customers satisfied and create a long-term relationship with the organization

2.2.6 Physical evidence

Physical evidence refers to what customers can experience from choosing the products and/or services of the organization. It creates a distinctive and quality difference, such as the decoration of the shop, style of dish arrangement, the attire of the staff in the store talking to customers, or the speed of the service. All the qualities are essential for successful business operations.

The service should be built on the overall quality, which is part of the physical condition that the customer can see, which physical characteristics that customers are satisfied with and the novelty of the physical condition that is different from other providers. Likewise, Pongsataporn (2003: 106) stated that physical characteristics are things that customers can

touch while using an organization's products and/or services. It can also be a symbol or logo that the customer can connect to the brand, product or service.

2.2.7 Process

Process means an activity that is related to the methodology and practice of the services offered to the users in order to provide the services accurately and quickly. Each process can have multiple activities according to the form and method of the organization's operations. This will make the overall process efficient, resulting in customer satisfaction. However, the service work process requires a clear work process design for all employees within the organization to enable a clear understanding on how to operate in the same direction correctly and smoothly (Sukrith, 2014).

2.2.8 Research related to marketing mix factors (7Ps)

Voraphan losiri (2010) researched Marketing mix factors affecting the decision to air cargo services of the international freight cargo sales agent Weiss-Rohlig (Thailand) LTD. This research aims to 1) study marketing mix factors affecting the decision to use air cargo services of the international freight cargo sales agent, Weiss-Rohlig (Thailand) Ltd., 2) study consumer buying behavior of the international freight cargo sales agent, Weiss-Rohlig (Thailand) Ltd. and 3) study problems on air cargo services of the international freight cargo sales agent Weiss-Rohlig (Thailand) Ltd. In this research, the samples were 200 customers using air cargo services of the international freight cargo sales agent, Weiss- Rohlig (Thailand) Ltd. The research toot was the questionnaire on marketing mix or 7P's. The statistics for data analysis included frequency percentage, mean and standard deviation It was found from the research as follows 1. All aspects of the marketing mix factors affecting the decision to use air cargo services were at the higher level. 2. All aspects of problems on air cargo services were at the low level.

Kusuwan (2011) researched market factors, marketing strategies and strategic management to increase the operating results of the rail transportation business in Bangkok. In the paper concerning "A case study of BTS Group Holdings Public Company Limited," the author collected samples from in-depth interviews with 56 users and found that the marketing promotion factor that affects the satisfaction of using the BTS SkyTrain service the most are *sales discounts* from companies that are *business alliances*, especially in the food business.

Luengsarid et al. (2013) conducted a study on rider satisfaction of 400 passengers using the Airport Rail Link (ARL) service to Bangkok's Suvarnabhumi Airport. Results revealed that distribution channel factors affected passenger satisfaction the most with coin-operated, ticket-dispensing machines being specifically mentioned. There should also be a more detailed and clearer explanation of the procedure for purchasing tickets, as well as more conveniences for

elderly consumers, foreign tourists, and those who are purchasing a ticket and using the ARL service for the first time.

Sahunil and Kongawas (2013) studied user satisfaction with riders using the BTS SkyTrain service in Bangkok. From the sample of 400 passengers aged 20 years and over, the authors found that satisfaction was a result of distribution channel factors. The highest level of satisfaction for the study was related to the number and frequency of the BTS stations within the Bangkok Metropolitian area.

Rattanasomchoke (2015) examined the marketing mix (7Ps) factors that influenced user satisfaction with the Bangkok BTS light-rail service (Skytrain). The results of the research revealed that the factors influencing the satisfaction of using the BTS service were personnel factors and physical characteristics within the train station, the price factor, marketing promotion factor, problem management, and connections from the metro station area. It was found that a user's occupations had no affect on their satisfaction with using the BTS service.

Kulampa (2015) studied the level of opinions on the marketing mix of 400 Thai tourists visiting the Train Night Market at Srinakarin. The objective of the research was to study the level of opinions of Thai tourists to compare the opinion levels classified by the marketing mix, the visitor's demographics and their behavior. The instrument used in the research was a questionnaire. The opinions of Thai tourists traveling to Train Night Market Srinakarin were analyzed by using a software program. The descriptive statistics used in the data analysis were frequency, percentage, mean, standard division, one-way analysis of variance (ANOVA), and if the difference is found by pairs, the pair test was performed using the formula (LSD) by setting a statistically significant level at 0.05.

The results showed that Thai tourists who traveled most frequently to the Train Night Market at Srinakarin were female, aged between 20-30 years old, had a bachelor's degree, and were single. Most of them worked as employees of private companies and had an average monthly income of 15,001 - 20,000 baht.

In terms of tourist behavior, it was found that most Thai tourists have traveled to Train Night Market at Srinakarin more than 2 times with friends or colleagues. The average cost for purchasing goods and services is 500-1,000 baht per time. Most of the information that affects travel decisions comes from a group of friends or close people. Thai tourists traveling to the Train Night Market at Srinakarin had opinions on various factors of the marketing mix, which influenced travel trips to the Train Night Market at Srinakarin as follows:

1) Product aspect average = 4.16

2) Distribution channel average = 4.04

3) Personnel average = 4.04

4) Average price = 3.97

5) Marketing promotion average = 3.94

6) Process average = 3.89 and the last

7) Physical characteristics average = 3.81

The research can be applied to the night market tourism business.

Naksin (2016) studied the 7Ps marketing mix factors that are important towards choosing the service of Krung Thai Bank Public Company Limited, Laem Chabang Port Branch in Chonburi Province. The objectives of the research were:

1) To study the behavior of users of Krung Thai Bank Public Company Limited, Laem Chabang Port Branch, Chonburi Province;

2) To study the 7Ps marketing mix factors that are important to the selection of banking services at the Krung Thai Public Company Limited, Laem Chabang Port Branch in Chonburi Province.

The results showed that the users of the Krung Thai Bank Public Company Limited, Laem Chabang Port Branch in Chonburi Province were mostly female, aged 26-35 years old, single, civil service/state enterprise employees, had an income 10,001-20,000 baht, and had a bachelor's degree.

Moreover, most used the bank's service due to a friend or acquaintances' recommendation. Service behavior factors included being near home / near work, deposit / withdrawal / money transfer / check deposit. The average length of time for being a customer was 5-9 years, with the frequency of using the bank's service 5-9 times. Most also used the service from 06.00-09.00, with the average transaction time while using a service was 11-20 minutes.

Wanpichit, Akkadee & Saksinee Saksinee (2017) the study Important Factors Toward Selection Transportation Service of Yusen Logistics (Thailand) Company Limited The purpose of this research is firstly to examine the important factors toward selection transportation service of Yusen Logistics (Thailand) Company Limited. Secondly, to compare the important factors toward selection transportation service of Yusen Logistics (Thailand) Company Limited. Seperating by organization factors. The respondents of Yusen Logistics (Thailand) Company Limited has sample size of 132.Questionnaire is tool that applies to collect data which has IOC between 0.67 to 1.00 and reliability test result is 0.89. Statistical analysis consists of percentage, mean, standard deviation. The hypothesis testing of One-Way ANOVA is at 0.05 level of significance. This research found that the factors of selection transportation service of Yusen Logistics (Thailand) Company Limited in overall is in high level. The highest factor is reliability. And other factors; security, transit time, convenience, capacity and transportation cost respectively. Summary of findings in Hypotheses showed that the respondents of different organization factors select the important factors toward transportation service of Yusen Logistics (Thailand) Company Limited in overall has no statistical difference.

Krisada Khruachalee (2020) studied the Analysis of Principal Component and Clustering of Decision-Making Behavior to Use Service of Kerry Express Company Limited in Bangkok. The objectives of this research are to analyze the common factors and cluster consumer behavior towards the decision to use the service of Kerry Express Company Limited. The 400 consumers who have used or are deciding to use the service of the Kerry Express Company Limited in Ratburana district, a diverse area of residents that can be well represented, were purposively selected. The frequency distribution and percentage of answers will be used to study consumer behavior. For factor analysis of all 8 aspects of service quality, the principal component analysis with orthogonal rotation by Varimax method is used to extract the common components with the eigenvalues greater than 1. The extracted components are then clustered using the K-Means technique. The results showed that most customers will use the service once a month where Wednesday and Thursday are the days when the parcel is delivered the most. The general use products will be very popular in using the service. The customers tend to consider the courteous dress code of the parcel delivery staff and the ability to solve problems accurately, quickly, and in accordance with their needs. They also consider having knowledge of service and providing clear and accurate information including equality in servicing. However, surveying the fees of each company and listening to suggestions from people around are always considered before deciding to use the service. The common components to use services can be divided into 5 aspects, which are credibility (Eigenvalues = 12.292, Variance = 34.144%), price awareness (Eigenvalues = 2.587, Variance = 7.185%), responding to customer's needs (Eigenvalues = 2.414, Variance = 6.707%), understanding and perception (Eigenvalues = 1.195, Variance = 3.320%), and reassurance (Eigenvalues = 1.138, Variance = 3.160%). The clustering of customers based on the extracted common components can be divided into 2 groups which are those who focus more on accuracy and timeliness (56.00%) and those who focus more on the value of money (44.00%). Therefore, the parcel delivery company needs to focus on accurate and on-time transportation management strategies, as well as determining the appropriate price for the delivery service

The 7Ps marketing mix that were considered important for choosing the service of Krung Thai Bank Public Company Limited, Laem Chabang Port Branch in Chonburi Province consists of seven factors. These included banking products and services, pricing, location/distribution, and official promotion, followed by people, price, physical image, marketing promotion, and location/distribution. Banking products and services had the lowest averages.

From the above studies related to decision making and the marketing mix and related research, Table 2.1 presents a summary of the components of the decision to use the SRT passenger train service in Thailand.

Table 2.1 Synthesis of SRT passenger train service decision-making results in Thailand

Researcher(s)	Decision elements to use SRT train services						
	Product	**Price**	**Place-distribution channels**	**Promotion - Marketing promotion**	**People - Staff service**	**Process - Service process**	**Physical environment**
1. Jitjang (2010)	✓	✓	✓	✓	✓	✓	✓
2. Voraphan losiri (2010)	✓	✓	✓	✓	✓	✓	✓
2. Kusuwan (2011)	✓	✓	✓	✓	✓	✓	✓
3. Luengsarid (2012)	✓	✓	✓	✓	✓	✓	✓
4. Sahunil and Kongawas (2013)	✓	✓	✓	✓	✓	✓	✓
5. Rattanasomchok (2015)	✓	✓	✓	✓	✓	✓	✓
6. Naksin (2016)	✓	✓	✓	✓	✓	✓	✓
7. Sereerat et al. (2017)	✓	✓	✓	✓	✓	✓	✓
8. Wanpichit, Akkadee & Saksinee Saksinee (2017)	✓	✓		✓		✓	✓
9.Krisada Khruachalee (2020)	✓	✓			✓	✓	✓
10. Kotler and Keller (2006)	✓	✓	✓	✓	✓	✓	✓

The results of the synthesis resulted in the composition of the passenger train service decision-making in Thailand as shown in Figure 2.1.

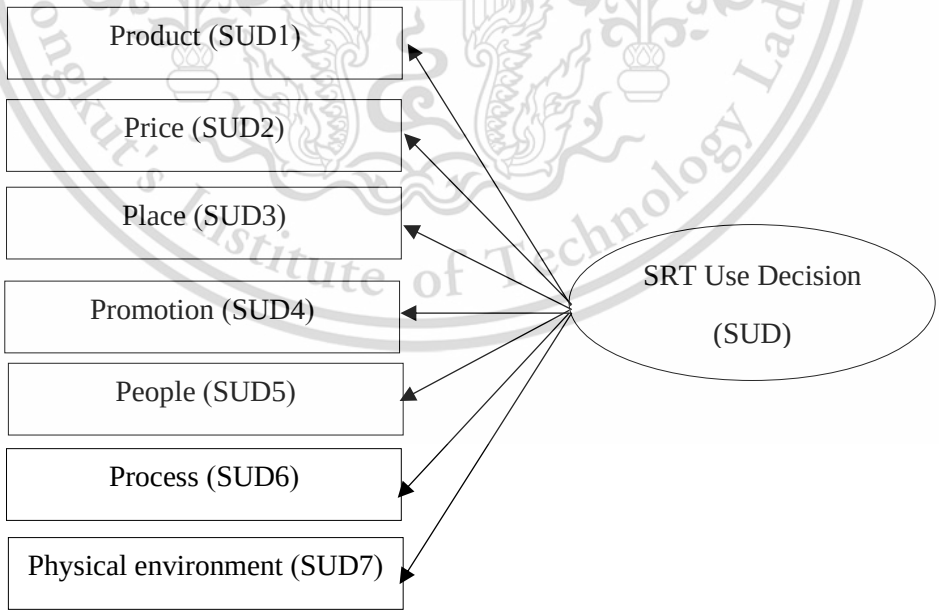


Figure 2.1 Factors which play a role in the decision to use Thailand's SRT services

Sources: Kotler and Keller (2006)

2.4 Factors affecting passengers' decision to use SRT passenger train services in Thailand

From the study of documents, articles and research both domestically and internationally on the decision to use SRT passenger train services in Thailand, 10 papers were selected to review which factors the authors deemed important to their research. From the analysis, 13 aspects were identified as well as four latent variables for use in the SEM analysis. These included the organization image, service quality, service motivation, and service satisfaction. The details of each study are as follows:

Chankoson (2014) studied the causal relationship model of factors affecting service quality management for the Suvarnabhumi Airport Rail Transport System Project connecting Suvarnabhumi Airport and pick-up stations passenger in Thailand's communities. The service quality management analysis of the railway transportation system project linking Suvarnabhumi Airport and the airport passenger terminal in Thailand found that the personal factors of service users were age, service usage, and the passenger's behavior related to important reasons for choosing the service.

The stations that started using the service trip planning and service marketing strategies showed that there was a causal relationship to the service quality management of the Suvarnabhumi Airport Rail Transport System Project and a station that receives and sends passengers in the city at a statistically significant level of 0.05. In order to develop a causal relationship model of factors affecting service quality management, the project has referenced statistical analysis by examining the harmony of the empirical data model as a whole and evaluating the harmony of outcomes in key components of the model with the ability to forecast the project service quality management at a good and acceptable level accounted of 57%, who passed the criteria of 40%.

Suangka (2015) studied factors affecting the selection of public transport travel among the elderly by the use of application of a structural equation model. The results showed that factors affecting the quality of public transport are vehicle condition, staff service, bus schedule and physical characteristics of the bus station. The causal relationship was then analyzed for the quality variables of public transport and the health of the elderly that influenced the frequency of using public transport among the elderly. It was found that if the elderly were healthy and the quality of the transportation system is good, the elderly will use public transportation more frequently. The consistency of the model and the empirical data was good, with the chi-square statistic = 131.269 at 75 degrees of freedom, the *p*-value was 0.0001, the CFI was 0.970, the TLI was 0.958, the RMSEA was 0.048, and the SRMR was 0.046.

Takochin (2015) investigated the influence of service quality expectations, service motivation, service motivation and the SRT *image* on a passenger's intention to use first class SRT passenger train service. On the other hand, passengers were emotionally motivated to take the first class train as compared to a cost saving rational decision. The hypothesis testing results showed that the service quality expectation of the first class passenger train in terms of responsiveness affects the intention to use the first class passenger train the most. This was followed by the SRT's image, service quality expectation and service quality of first class passenger trains, responsiveness and the motivation for using the first class passenger train in terms of emotion and reason with a statistically significant level of .05, respectively.

Rattanasomchok (2015) sudied the marketing mix factor (7Ps) that influenced Bangkok commuter satisfaction when using the Bangkok Transportation System (BTS) 'Skytrain' service. The results revealed that that the facors most influencing rider satisfaction was personnel factors and physical characteristics within the train station. Other factors included price, marketing promotion, problem management, transportation connections to other systems from the train station area. It was found that a rider's occupation did not affect their satisfaction with the BTS service.

Chanwetchay (2016) studied the quality of service affecting BTS passengers in Bangkok. The results showed that service quality affects satisfaction of BTS Passengers in Bangkok with a statistically significant level of .05.

Prungranu (2016) studied how Bangkok's Hua Lamphong Railway Station's image was affected by the perception of service quality by the station's users. The results showed that:

1) Personal factors, monthly income level, frequency of use per month, types of trains that use the train route and different travel destinations affect the perceptions of service quality at Hua Lamphong Railway Station;

2) Personal factors, age, monthly income levels, frequency of use per month, and the types of trains that use the train route affect the perceptions of the image of Hua Lamphong Railway Station.

3) The perception of the image was associated with a high level of perception of service quality in one direction.

Charoensri (2017) studied the factors influencing the decision to use the BTS SkyTrain. The results showed that factors influencing the decision to use the BTS SkyTrain are *product* in regards to the safety of the electric train system, the appropriate price for the distance used; the price is suitable for the convenience of traveling, and marketing promotion. Also, users are interested in whether the benefits received from the Rabbit Card are appropriate or not, including stores that participate in promotions are appropriate, interesting and have a variety of products. Service users also pay attention to the issue of security personnel who can provide

good service. Users were also interested in appropriate coach temperature and use of the airconditioning systems.

Pancharoen and Pisitkasem (2018) studied the factors affecting the satisfaction of BTS service users. There were five aspects in the relationship between service quality level and satisfaction of BTS service users, all of which were in the same direction and at a moderate level in all aspects at a significance level of 0.5, in order of correlation as follows: customer response, knowing and understanding customers, and reliability.

Ikani and Ikani (2013) studied the factors affecting people's decision to use rail transport. The results showed that service quality, service incentives and service satisfaction affect the decision to use rail transport service of the people by 71.90% (R^2 = .719) with a statistical significance at the .01 level.

Harrington and Parolin (2015) examined the factors affecting the use of buses and trains in unsafe environments. The results showed that the image of the organization and the motivation for using the service and service quality affect the use of buses and trains in unsafe environments by 72.50% (R^2 = .725), with a statistically significant level of .01. Table 2.2 shows the factors affecting the decision to use the train service of Thai passengers.

Table 2.2 Factors affecting the decision to use the SRT passenger train service in Thailand.

Factors	**Authors**									
	Charoensri (2017)	Suangka (2015)	Takojeen (2015)	Rattanasomchok (2015)	Chanwetchay (2016)	Prungranu (2016)	Charoensri (2017)	Pancharoen and Pisitkasem (2018)	Ikani and Ikani (2013)	Harrington and Parolin (2015)
Gender	✓					✓				
Age	✓					✓				
Monthly income						✓				
Price							✓			
Marketing promotion							✓			
Safety							✓			
Service behavior	✓									
Management	✓			✓						
Service quality		✓	✓		✓	✓	✓	✓	✓	✓
Service motivation			✓						✓	✓
Organization image			✓			✓				✓
Intention to use the service			✓							
Service satisfaction				✓	✓			✓	✓	

From the results of the synthesis of documents and research related to the factors affecting the decision to use the SRT passenger train service in Thailand in Table 2.2 and the ten issues explored, there were four variables consistent with the decision to use the SRT passenger train service according to the context in Thailand. Therefore, the researcher selected four variables including service quality, service motivation, and customer satisfaction with the service as detailed below:

2.4.1 Organization image

Meaning of organization image

There are various scholars who have discussed the meaning of an organization's image. They include the following:

Suwansang (2000) has written that a mental image arises in the mind of a person who works within an organization or an institution which is derived from both direct and indirect experiences.

Rapeepaisan (2005) has reported that brand image refers to the perception of consumers about the organization as a whole. The organization is like a person who has a different personality and image.

Suthikerd (2002) has stated that an image gets formed from past impressions or perceptions. These vary depending on past experiences and knowledge. It can also be said that an image is an underlying force in how one achieves their goals. This could be the case with any individual or institution.

Wongmontha (1999) said that "image" is the sum of facts and subjective assessments. This is a result of a person's perception of one thing, such as the image that a university has. It depends on facts about the university such as location, faculty teaching, students, its reputation, personal assessment, etc. For example, people living near universities will most probably respond in a positive manner if asked where they live.

Wanichdamrongsak (2012) wrote that image occurs in the mind or the perception of service users towards the organization. The resulting image may be a result of the experience that the user has come to experience or perceive. This can be a positive or a negative view.

Naksakul (2004) says that an image of a person, organization, or institution arises in the minds of people, which often occurs due to the behavior of an individual, organization, or institution. An example of such an image is the one used often for justice and law and the scales of justice being held by the figure.

Kamnoonwat and Jansawang (1999) has indicated that an image can be of anythin, both animate and inanimate, such as a person, entity, product or organization, which arises from direct or indirect information that is combined with the inner thoughts and feelings of the mind.

Phimonsin (2002) has added that people see an organization as an image in a way that is influenced by one or more things related to that entity, both manifest and unseen. Appearance means an image that occurs in the mind or imagination, which can be any image that depends on the individual being able to create an image arising from the perception of listening to see the behavior or behavior of the institutional person or organization. Therefore, this enables each person to remember and develop a particular image, concept and theory of the image.

Phimonsin (1997) has stated that 'image' is an essential component within the business, marketing and advertising industries and that image can be divided into 10 types as follows:

1. Multiple images are images that arise from the assumption that people in society make. Coming from "hundreds of fathers, thousand mothers", images come from different sources, beliefs, economic status, different knowledge, social housing and education backgrounds. Therefore, members of society have different corporate images and in one person there may be both a positive image and a negative image on a subject as well.

2. Current image is the image according to the present reality which is a negative or a positive image. It can also be a natural or intentional image and it is management's duty to find the current organization's image, and when is is not beneficial, create or change to a new one (Barich & Kotler, 1991).

3. Mirror image is comparable to when a person looks in a mirror; he will see his own image in the mirror. In this case, too, the administrators may see that the organization has done a very good job. Therefore, the image of the organization should therefore have a good image. However, the targeted customers, users or employees might look at things differently from the executives.

4. Wish image is the image that executives and employees want to give to the organization, or its products or services. This is useful for organizations that practice social responsibility or an organization that is prosperous. An exampleof a good 'wish image' is an organization that gives fair compensation or health benefits to its employees. Therefore, the organization will try to do everything to create a desirable and clean image of their 'goodness'.

5. Optimum image refers to the image arising from the realization and understanding of the perception of the audience, and the barriers to dissemination of the news and the environment that is difficult to control. It can hinder the creation of a desirable image. Therefore, this kind of image is the image that the concerned person knows about and does not exaggerate the definition of the desirable image.

6. Correct and incorrect image is another image. Characteristics of these can be that the image does not correspond to the reality and were created by a rumor or accident or the process of communication and or perception of the audience. Once an image is inaccurate, it is imperative to correct the image immeditely. This correct image is similar to the incorrect image but is different in that the correct image has been modified from its incorrect image.

7. Product/service image - A product or service has its own image as well as the organization. Some goods or services may have a bad image (e.g., cigarettes or massage parlors), but some goods or services have the opposite image (e.g., toothpaste, hospitas). Negative or positive or neutral? There is also a need to enhance a unique image that is more acceptable by society. What will the image of the organization be? The image of the product will have a lot to do with it.

8. Brand image is an image that is similar to product image. Brand image can represent an idea such as strength (Ford), reliability (FedEx), taste (Three Cooks), and quality (Rolex). Brand images or 'logos' take many forms and often depend on the culture in which the image is being used (Chuenban et al., 2021; Sitabutr & Pimdee, 2017). A good example of this is color, as color means different things to different cultures, with 'yellow' and 'pink' being excellent examples of this.

9. Corporate image is the overall image of any organization including products, brands, company management systems, stability, qualified personnel, or social responsibility.

10. Institutional iImage is similar to corporate image, but only looks at the company itself or the institution. An *organization's image* is not a clear, concise concept but rather a set of an individual's perceptions about the institution. An educational institution has a multifaceted image that includes academic, social, political, and perhaps stylistic dimensions.

Barich and Kotler (1991) in early writings concerning the term "image", stated that image is used to represent the sum of beliefs, attitudes, and impressions that a person or group has of an object. The object may be a company, product, brand, place, person, nation or even a military unit. Therefore, organizations can use their image as a management component. It may be necessary to limit the scope of the type of image. Images can be classified into three types as follows:

1. Corporate image is an image that occurs in the minds of people towards an organization or an institution. It does not include products or services that are sold, so this type of image is a reflection of the management and operations of the organization, both in terms of personnel management system of executives and employees and social responsibility benefiting the public

2. Brand image is an image that occurs in the minds of people towards a particular brand or a trademark. A trademark is often based on advertising and promotion methods to indicate the personality of the product by emphasizing specific features or selling points, even if many brands are from the same company. But it doesn't have to be the same image, because the image of the brand is considered unique. Therefore, many organizations want their brand image to be different (differentiation) from other brands.

3. Product or service image is an image that occurs in people's minds about the company's products or services only. It does not include the organization or business or the multiple types

of brands or products in the market.This is therefore an overview of each product or service, each brand varies under the responsibility of a particular company.

Pattarawan kumpa (2017) have studied the elements of the corporate image together with 1) Information 2) product or service 3) brand and 4) Institutional Image

Nukool Chinfuk (2018) have studied the elements of the Information together with corporate Image 2) product or service and 3) brand

Table 2.3 Organization image components

Components	Authors			
	Phimonsin (1997)	Barich and Kotler (1991)	Pattarawan kumpa (2017)	Nukool Chinfuk (2018)
Brand	✓	✓	✓	✓
Good of service	✓	✓	✓	✓
Product or service	✓			
Information	✓		✓	✓
Multiple images	✓			
Current image	✓			
Wish image	✓			
Optimum image	✓			
Correct and incorrect image	✓			

From the results of the synthesis of documents and research related to the factors affecting the organization image in Table 2.3 and the ten issues explored, there were four variables consistent with the organization image. Therefore, the researcher selected four variables including Information, and *brand, good of service* with the service as detailed below:

From the study of the concept of organization image, it was found that there are three aspects as shown in Figure 2.2.

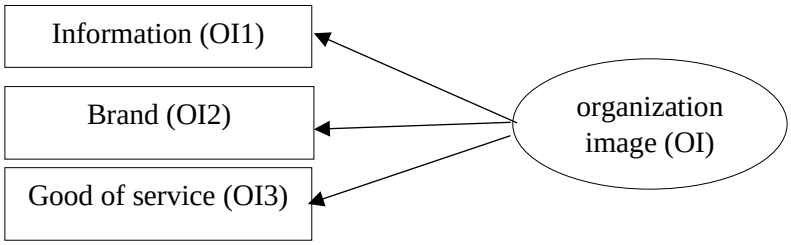


Figure 2.2 organization image components
Sources: Barich and Kotler (1991)

2.4.2 Service quality

The first service quality models emerged in the 1980s from the Nordic (Grönroos, 1984) and American (Parasuraman et al., 1985, 1988) schools of thought (Polyakova & Mirza, 2015). Ever since, definitions of service quality have evolved from many additional scholars. Additionally, according to Chongsanguan et al. (2016), success of public transport service providers is dependent on how they satisfy their customers by delivering quality services. Therefore, the following are an overview of some of the most prominent:

According to Grönroos (1984), the perceived service quality is "*the outcome of an evaluation process where the customers compare their expectations with service they have received*". Parasuraman et al. (1988) supported the same view, defining the concept of service quality as "*a form of attitude related but not equivalent to satisfaction that results from a comparison of expectations with perceptions and performance*".

Grönroos (1988, 1990) also suggested that customers' perceptions of *service quality* can be divided into two dimensions: technical quality (TQ) and functional quality (FQ). Technical quality is what the consumers receive as a result of interaction with a service organisation, while functional quality is concerned with how consumers receive services. Furthermore, TQ and FQ are antecedents of corporate image - the third dimension of the model (Grönroos, 1988). Six sub-dimensions of service quality were identified (Grönroos, 1988): (1) professionalism and skills, (2) attitudes and behaviour, (3) accessibility and flexibility, (4) reliability and trustworthiness, (5) recovery, and (6) reputation and credibility (Polyakova & Mirza, 2015).

Zeithaml, Parasuraman & Berry (2013) stated that the quality of service is a concept of the client's assessment by comparing what is expected with what has been known from the service provider. If the service provider can provide services that are in line with the needs of the service recipients or higher than the service recipients expected, this will result in the quality of the service which will make the recipient satisfied with the service received.

Buzzell & Gale (1987) states that the quality of service is very complex and it depends on the point of view of the consumer or "customer". The authors also suggest that service quality is known to contribute to market share and customer satisfaction.

Bitner (1995) defined service quality as the the impression of the service from the customers who come to receive the service.

Hu et al. (2009) added that the global market place, competing organizations are constantly seeking to project their firms' superior service quality, customer-perceived value, and image in order to gain customer loyalty.

Schmenner (1995) said that service quality is caused by service expectations minus the acknowledgment of receiving the service. If the perceived service received is less than expected, then it will cause a negative attitude towards that service. But if the perception of the service is greater than the expectation, it will cause a positive attitude.

Lovelock (1991, 1996, 2002) views service quality in a broader definition, and states that when capturing the concept of a service, most often the focus is on activities, deeds, processes and interactions. Lovelock (1991: 13) also believed that service is a process and defined it as "*a process or performance rather than a thing*". A similar view was also taken by Grönroos (2001), who argued that a service is a process with an outcome of partly simultaneous production and consumption processes.

Zineldin (2007) proposed a 5Qs model for service quality in which he states perceptions about service quality can reflect the overall level of satisfaction. He focused his proposal on the perceptions measurement of five quality dimensions named: atmosphere quality, infrastructure quality, interaction and communication quality, object quality, and process quality (5Qs model).

Wisher and Corney (2001) have also stated that said that nn important theoretical approach for investigating service quality is the SERVQUAL model. Moeover, the authors see service quality as a 'global judgment or attitude, relating to the superiority of the service', and explained it as involving evaluations of the outcome and process of service act.

Concepts and theories related to service quality

Quality is based on the expectations of customers or service recipients for a particular service. That is to say, quality means the best product or service that is valuable and appropriate to meet the needs of service users. This is often due to the comparison between expectations and perceptions of the service/product that consumers experience (Juran & Gryna, 1998; Zeithaml, Parasuraman & Berry, 2013).

Therefore, quality is a comparison between customer expectations with real perceptions. If consumers see that those products or services are the best and meet their expectations, it can be said that the products or services are of high quality.

Bitner (1995) explains from research that has been done in the study that service quality can be measured through the satisfaction of the service recipient.

Wanichdamrongsak (2012) has also added characteristics that should be included in evaluation of service quality. These include meeting appropriate standards with error free products which provide good results and able to meet the needs of the service users. This also depends on the services provided to consumers that can respond to the needs or expectations of the service recipients.

Zeithaml, VA, Parasuraman, A., & Berry, LL (2013) argues that service quality is more or less dependent on the perceived assessment of the service that the recipient actually receives.

Lovelock (2002) said that quality of service is abstract, inexplicable or difficult to explain. This usually differs in that service users usually have to receive the service before they are able to tell its quality.

However, numerous organizations have come to respect and use the RATER framework which evolved from the SERVQUAL study designed by psychologists Parasurman, Zeithaml, and Berry in 1988. Therefore, this study also presents these five RATER items:

1. Tangible/Physical Evidence within the food service business can include seating, counters, decorations, restrooms, computers, car parks, pots and plants, singage as well as staff uniforms. All theses things make up the physical evidence, which in addition to being beautiful and clean, must be appropriate in design and physical chacterisitcs that customers are comfortable in their use. Entrances need to be easy to find from parking facilities and public transportation systems. Outside gardens should be clean of trash and healthy, with no reptiles, clean and ad

2. Reliability is an organization's ability to deliver services that meets the timely needs of its customers as promised or advertised. equate restrooms.

3. Responsiveness is the speed in which a service is provided. It should be provided in a manner in which long queue are not created. Staff must quickly and efficiently deal with the customer's inquiries in a manner which does not take excessive time. The speed must come from the staff and efficient service processes or procedures.

4. Assurance is the capability of having employees who can provide services to customers in a knowledgeable, competent, courteous, friendly, and ethical manner which ensures that customers receive the services that are compliant and safe. In addition, it may be necessary to reassure customers with corporate standards such as ISO 9001:2000 or safety and service awards from various institutions.

5. Empathy is the manner is which an organization shows how it cares and serves its customers. Staff should listen to what customer say and want and offer products, services or solutions to their needs.

From the study of the concept of service quality, it was found that there were five components of service quality as shown in Figure 2.3.

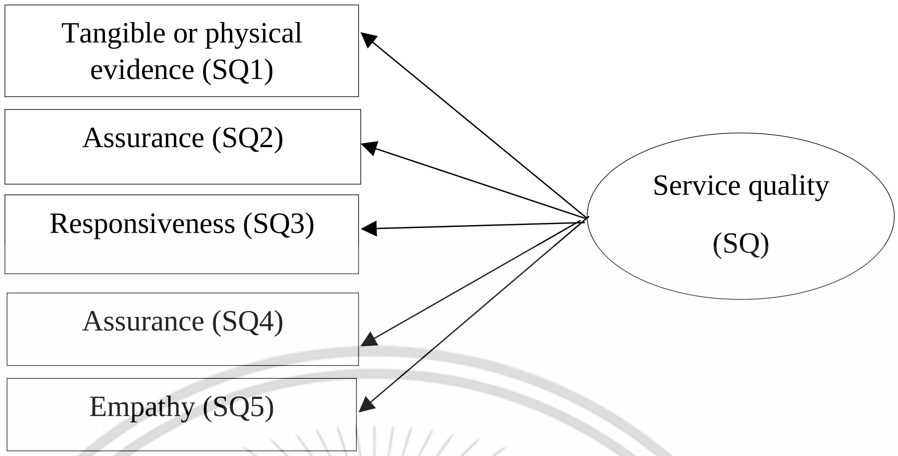


Figure 2.3 Composition of service quality

Sources: Zeithaml, VA, Parasuraman, A., & Berry, LL (2013)

2.4.3 Service motivation

Multiple authors have discussed the factors involved in service motivation. These include:

Lovell (1980) defined service motivation as the process of inducing or influencing a person to make an effort to meet a certain need.

Domjan (1996) describes motivation as the ability to enhance a person's behavior or activity in order to achieve his or her goals.

Walter (1978) defined service motivation as something within a person that influences that person to act, move or behave in a purposeful manner. In other words, service motivation is the reason for the action or behavior.

Numerous studies have also highlighted the failures and challenges of traditional incentives in motivating public sector employees (Moyniha et al., 2015).

Zubair et al. (2021) that public service motivation is one of the greatest challenges faced by a public service organization (PSO). However, only when managers in PSOs feel they can have an influence on society as a whole, does PSO service motivation increase. This is consistent with London's (1983) model of career motivation in which career motivation was defined in terms of insight, identity, and resilience.

Loudon & Bitta (1988) states motives, needs, wants and drives ... merge into "motive" directed towards goals usually located in the external environment'. Complex behaviour patterns, attitudes and personal responses are learned from stimulus–response situations and personality is created and changed by positive or negative reinforcement.

In other words, service motivation is the act of giving birth to customers. Motivation is like an internal drive that makes a person behave according to what the organization expects (Rintamaki Kanto Kuusela and Spence, 2006)

Therefore, each consumer has a different purchasing decision process, which depends on the influence of psychology. This includes incentives in the purchase incentives (buying motives). These include:

1. Basic incentives are the incentives that influence the decision to purchase a particular type of product, such as a house, refrigerator, or smartphone.

2. Purchase incentives are incentives for purchasing products in terms of brands and types of products and services such as the purchase of Samsung, Apple, or LG mobile phones and choosing a shape, screen size, material, or color.

3. Rational motives are incentives or intentions that arise based on rational and economic principles. Because according to economic theory, consumers have to make decisions on what provides the most utility or creates the highest satisfaction. This also includes product satisfaction from public relations activities. For rational decision-making, this means that the objectives chosen by consumers are based on aggregate objective criteria such as size, weight, price, and quality (Sereerat, 1995: Sereerat et al., 2017).

4. Emotional motives refer to the use of personal feelings to select things that satisfy needs, such as fear of lonliness. Researchers have suggested that impulse purchasers use emotional incentives in making purchasing decision (Sereerat, 1995: Sereerat et al., 2017).

5. Fostering incentives are those that cause consumers to buy goods and services from a particular place, such as the shop's convenience, variety of products, low prices, the service provider's reputation or sales promotions.

6. Mixed incentives refer to the combination of emotional and rational incentives (Teepapal, 2007).

Further morivations are as follows:

1. Product buying motives are reasons generated by consumers who purchase goods or services to meet their needs to be satisfied. However, in spite of the fact that there are a large number of products and services to select from, funds to buy these goods are limited. Therefore, it is imperative to make a purchasing decision based on the consumer's purchasing power.

2. Rational buying motives are motivations that arise from the buyer's rational consideration before purchasing, in which the consumers ask, "Why did I purchase this product or service?"

Therefore, these types of motives can be further divided into the following:

2.1 Economy refers to the savings in purchasing and use. A good example of this might be a consumer's decision to purchase a smaller car because it cost less and as better fuel economy.

2.2 Efficiency and capacity can also be thought of in automotive use. In this example efficiency and capacity are used in choosing radial tires over normal tires due to their better safety, road grip, and performance. Another example might be the selction of an Omega brand watch because the individual perceives it to be excellent at keeping accurate time.

2.3 Reliability (Dependability) is a buying motivation that is very important in trading. Generally, the manufacturer or seller has a warranty, such as a 1 year warranty or free repair when damaged.

2.4 Durability is the idea that products manufactured in one country are superior to products made in another country. Vehicles are a good example of this with the brand Mercedes-Benz often cited as a well made care because it is made in Germany. A Swiss made watch is often thought of as far superior to a watch made in Hong Kong. Many prefer Honda motorbikes over one made in China.

2.5 Convenience – A good example of convenience is the popularity of automatic transmission cars over standard transmission because they are easier to learn and drive.

3. Emotional buying motives can be divided as follows:

3.1 Emulation is expressed in American slang by the expression, "Keeping up with the Joneses", with the slang representing the need to emulate what a neighbor or friend does or buys. If they get a new TV, you must have a new TV.

3.2 Individuality is expressed in many ways depending on culture, age, and gender. It can be as simple as wanting to wear your hair long or wearing non-traditional clothes or shoes or the music you listen too.

3.3 Conformity is the opposite of those who want to stand out individually. In this group, individuals will wait until others have bought a product and then use it based on their success or enjoyment from it. Conformity also involves accepting a school's hair length standard and use of uniforms. Conformity and uniformity are very close in meanng.

3.4 Comfort is the motivation that occurs when the buyer wants comfort in life, work, or relaxation.

3.5 Entertainment and Pleasure is the motivation caused by buyers wanting to have fun, such as buying a radio to listen to or taking a scenic boat tour.

3.6 Ambition can be connected to arrogance and the desire to be better than those around you. It involves prestige, reputation, and looks. Buying an expensive luxury car or Rolex might be a good example of the outcome of ambition.

4. Service motivation is caused by the following:

4.1 Providing satisfactory services.

4.2 Reasonable prices.

4.3 Good access to location, such as near a train station.

4.4 There is an abundance of products and shops such as in a department store, market or mall.

4.5 Reputation of the shop (goodwill or image) is good and reliable.

4.6 Buying habits such as revisit intention to purchase again.

To study the service motivation concept as discussed by Freund and Baltes (2011) who outlined two aspects for service motivation as shown in Figure 2.4.

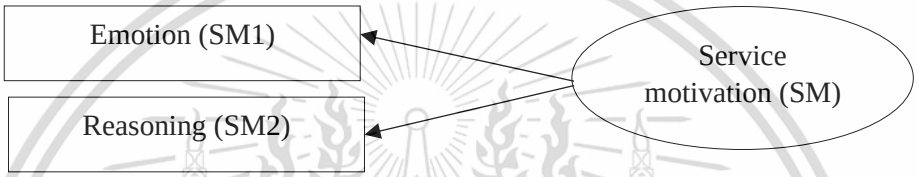


Figure 2.4 Service motivation elements for using the SRT service

Sources: Rintamaki Kanto Kuusela and Spence (2006)

2.4.4 Service satisfaction

Numerous authors have dicussed the meaning of service satisfaction. The following are some selected excerpts from these writings:

Vroom (1964) - *Expectancy theory* suggests that individuals are motivated to perform if they know that their additional performance is recognized and rewarded. Therefore, organizations which use performance-based pay can expect improvements (Rowley & Harry, 2011).

Oliver (1980) proposed that customer satisfaction is a function of expectation and expectancy disconfirmation. Satisfaction, in turn, is believed to influence attitude change and purchase intention.

Spector (2000) said that satisfaction is the results obtained from the evaluation process, contrast, and comparison between what the individual expected and the actual results.

Kotler and Keller (2006) stated that satisfaction is the level of a person's positive feelings towards a product or service.

Service satisfaction

Grönroos (1988, 1990) suggested that customers' perceptions of *service quality* can be divided into two dimensions: *technical quality* (TQ) and *functional quality* (FQ).

(1) The perceived quality of the product or service is dependent on the service recipient expectations concerning product or the service received. Therefore, it will create satisfaction for customers if it meets or exceeds their expectation.

(2) The perceived quality of the product of service offerings is dependent on the customer being aware of the delivery method's level of appropriateness used by the delivering the service or the service process by the service provider. In order to deliver services to customers, all of these things are truly relevant to customer satisfaction.

Rust & Oliver (1994) stated that satisfaction can only be reflected to a certain extent, believing that experience is what makes you feel good. Therefore, satisfaction is the response of the overall mood caused by the use of a product or service.

Patrick (2002) said that satisfaction is an excellent indicator of repeat purchase decisions and returning to use the service again.

Service satisfaction measurement

Millet (2012) said that *satisfactory service* or the ability to create satisfaction for the service recipient is affected by five elements. They are:

1. *Service Equality* means fair service, which can also be expressed as all people are equal. Therefore, all service users must be treated equally, with no discrimination in service. All users are treated as individuals using the same standard of service.

2. *Timely service* means that public services must be conducted on time. If there is no punctuality, it will lead to the dissatisfaction of the service users.

3. *Adequate service* means that the public service must have the proper number of services and the right quantity in the correct location. Moreover, Millet (2012) considers that equality or being on time is meaningless if the number of services is insufficient and the location of the service creates injustice to occur to the users.

4. *Continuous service* means constant and uninterrupted service be provided to public on a regular basis. In other words, service providers must always be on the job, always ready and prepared to serve customers.

5. *Progressive service* is achieved by continually striving to improve service performance and quality in order to meet (or ideally exceed) customer expectations.

From the above definitions of service satisfaction, it can be concluded that service satisfaction means any activity or action taken for the convenience of another person which meets the needs of the recipient and can make a positive impression or satisfaction with the ervice user. Therefore, the principle of service satisfaction consists of the five elements depicted in Figure 2.5

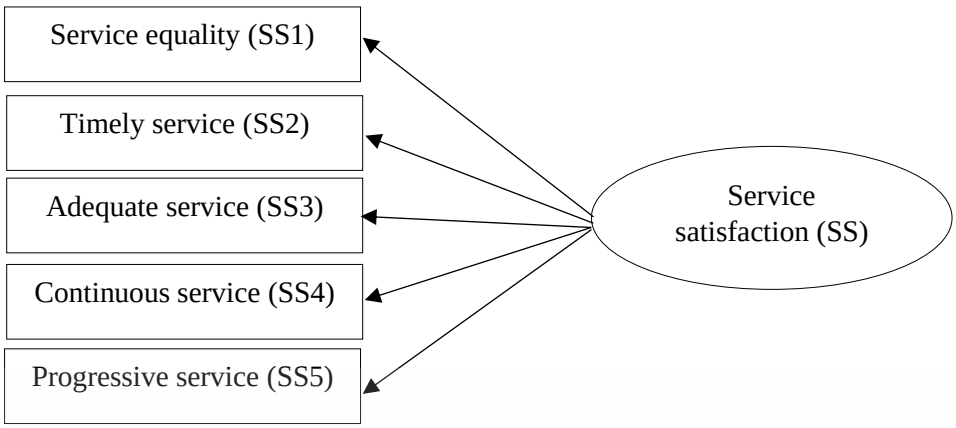


Figure 2.5 Service satisfaction components

Sources: Millet (2012)

2.5 Relationship of variables affecting passenger decision-making to use train services in Thailand

Organization image

Kotler (2001) defined image as "the set of beliefs, ideas, and impression that a person holds regarding an object". Kotler and Armstrong (2010) stated that *image* in the context of marketing is the way people perceive of a company or its products. However, image is something that is achieved through a variety of factors, both positive and negative, Therefore, it the the orgnaization's management and staff responsibility to conduct operations in which the best possible image is created by the organization's customers (Snowden & Boone, 2007). Therefore, image can have a direct impact on SRT passenger train users and their decision to use the SRT services in Thailand.

From a study of documents and research related to the decision to use SRT passenger trains in Thailand, it was found that organization image influenced passengers' decision to use train services in Thailand as shown in Table 2.3 (Harrington & Parolin, 2015; Prungranu, 2016; Takochin, 2015). It was also also determined that there is an indirect influence on SRT passengers' decision to use train services in Thailand through service quality.

Similiarily, a study by de Oña, J., Machado, J. L., & de Oña, J. (2015) ; Prungranu (2016) found that image quality was highly correlated with perceived quality of service in the same direction, while Ikani and Ikani (2013) found that service quality affects railway transportation with railway quality increasing safety and reducing accidents. Finally, Harrington and Parolin (2015) found that the image of the organization and the quality of service affects the use of buses and trains in an unsafe environment, as shown in Figure 2.6.

Table 2.4 Summary of research studies on organization image affecting SRT passenger train service use decision-making in Thailand

Authors	Independent Variable	Dependent Variable	Sample Group	Research Methods/Data Analysis	Study Results
Takochin (2015)	Organization image according to the concept of Kotler (2001)	Using the 1st class passenger train service.	First class train passengers	Explore relationships /Correlation analysis	The image of the organization has a positive correlation with the use of the first class passenger train service.
de Oña, J., Machado, J. L., & de Oña, J. (2015)	Organization image according to the concept of Kotler (2001)	Behavioral intentions of passenger train service.Sevil le, Spain	people who use trains	Explore relationships /Correlation analysis	Organizational image was positively correlated with Behavioral intentions of passenger train service.Seville, Spain
Prungranu (2016)	Organization image according to the concept of Kotler (2001)	The passenger's perceived quality of SRT railway service.	people who use trains	Explore relationships /Correlation analysis	Organizational image was positively correlated with public perception of train service quality.
Nawit Amage and Parichat Thudam (2018)	Organization image according to the concept of Kotler (2001	Behavioral Intention of Passengers in the Southern Rail Line Services	people who use trains	Explore relationships /Correlation analysis	Organizational image was positively correlated with behavioral Intention of Passengers in the Southern Rail Line Services
Harrington and Parolin (2015)	Organization image according to the concept of Kotler (2001)	Using buses and trains in unsafe environment s.	People who use buses and trains	SEM and LISREL program	The organization's image was positively correlated with the use of buses and trains in unsafe environments.

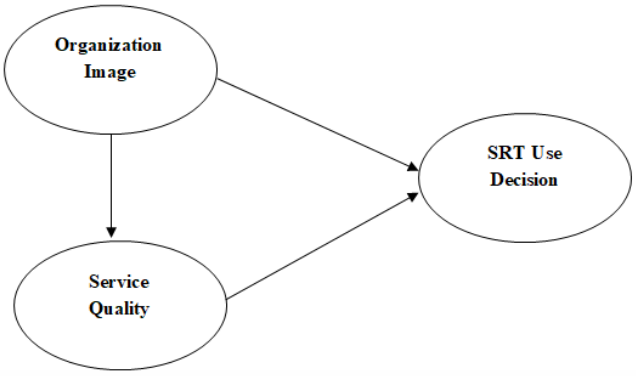


Figure 2.6 The organization image has direct and indirect influences on the decision to use the SRT passenger train service in Thailand through the quality of service

Service quality

Zeithaml, Berry & Parasuraman (1996) argued that service quality is more or less dependent on the perceived assessment of the service that the client actually receives. Lovelock (1991, 1996, 2002) views service quality in a broader definition, and states that when capturing the concept of a service, most often the focus is on activities, deeds, processes and interactions. Lovelock (1991: 13) also believed that service is a process and defined it as "a process or performance rather than a thing". Therefore, SRT's service quality is expected to a direct influence on a potential passenger's decision to use their passenger train service. This is also consistent with studies by de Oña, J., Machado, J. L., & de Oña, J. (2015); Nawit Amage and Parichat Thudam (2018) and Ikani and Ikani (2013) and Harrington and Parolin (2015) that stated that the quality of train service has a direct influence on passenger decision-making in Thailand as shown in Table 2.4 and Figure 2.7.

Table 2.5 Summary of research studies on service quality affecting SRT passenger train service decision-making in Thailand

Authors	Independent Variable	Dependent Variable	Sample Group	Research Methods/Data Analysis	Study Results
Ikani and Ikani (2013)	The quality of service is based on the concept of Lovelock (2002)	Decision to use public rail transport services.	People who use railroads.	SEM and LISREL software program	Service quality was positively correlated with people's decision to use rail transport.
Harrington and Parolin (2015)	The quality of service is based on the concept of Lovelock (2002)	Using buses and trains in unsafe environments.	People who use buses and trains.	SEM and LISREL software program	The quality of service was positively correlated with bus and train use in unsafe environments.
de Oña, J., Machado, J. L., & de Oña, J. (2015)	The quality of service is based on the concept of Lovelock (2002)	Behavioral intentions of passenger train service.Seville, Spain	people who use trains	Explore relationships /Correlation analysis	The quality of service was positively correlated with Behavioral intentions of passenger train service.Seville, Spain
Nawit Amage and Parichat Thudam (2018)	The quality of service is based on the concept of Lovelock (2002)	Behavioral Intention of Passengers in the Southern Rail Line Services	people who use trains	Explore relationships /Correlation analysis	The quality of service was positively correlated with behavioral Intention of Passengers in the Southern Rail Line Services
Sivalai T., Rojniruttikul N. (2018)				SEM and LISREL software program	Service quality was positively correlated with people's decision to use rail transport.

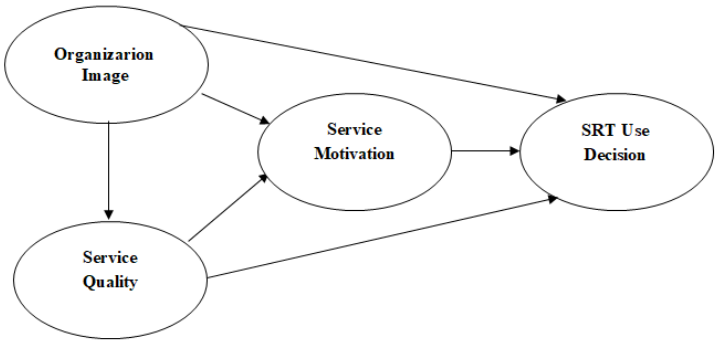


Figure 2.7 The SRT organizational image and the SRT service quality have both a direct and indirect influence on the decision to use the SRT passenger service in Thailand through SRT service use motivation

Service Motivation

Yamniyom (1994) explained that each consumer has a different purchasing decision process. It also depends on the influence of psychology, which includes incentives or *buying motives* comprising basic incentives, purchase incentives, rational incentives, emotional incentives, sponsorship incentives, and mixed incentives. Therefore, if the SRT has created various incentives, it will give train passengers more incentives to use the train service.

This is consistent with studies by Ikani and Ikani (2013), Harrington and Parolin (2015), and Takochin (2015) whose research found that service motivation influences passenger decision-making to use trains in Thailand through the satisfaction of service as shown in Figure 2.8.

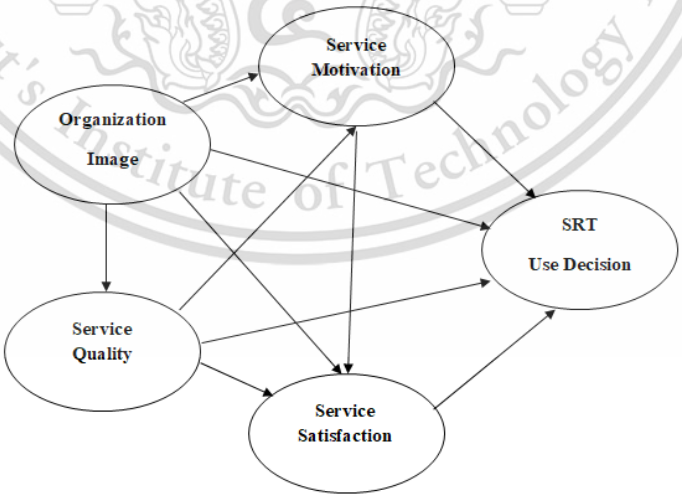


Figure 2.8 Organization image, service quality, and service motivation has a direct influence and indirect influence on the decision to use the SRT passenger train service in Thailand through service satisfaction

2.6 Research Conceptual Framework

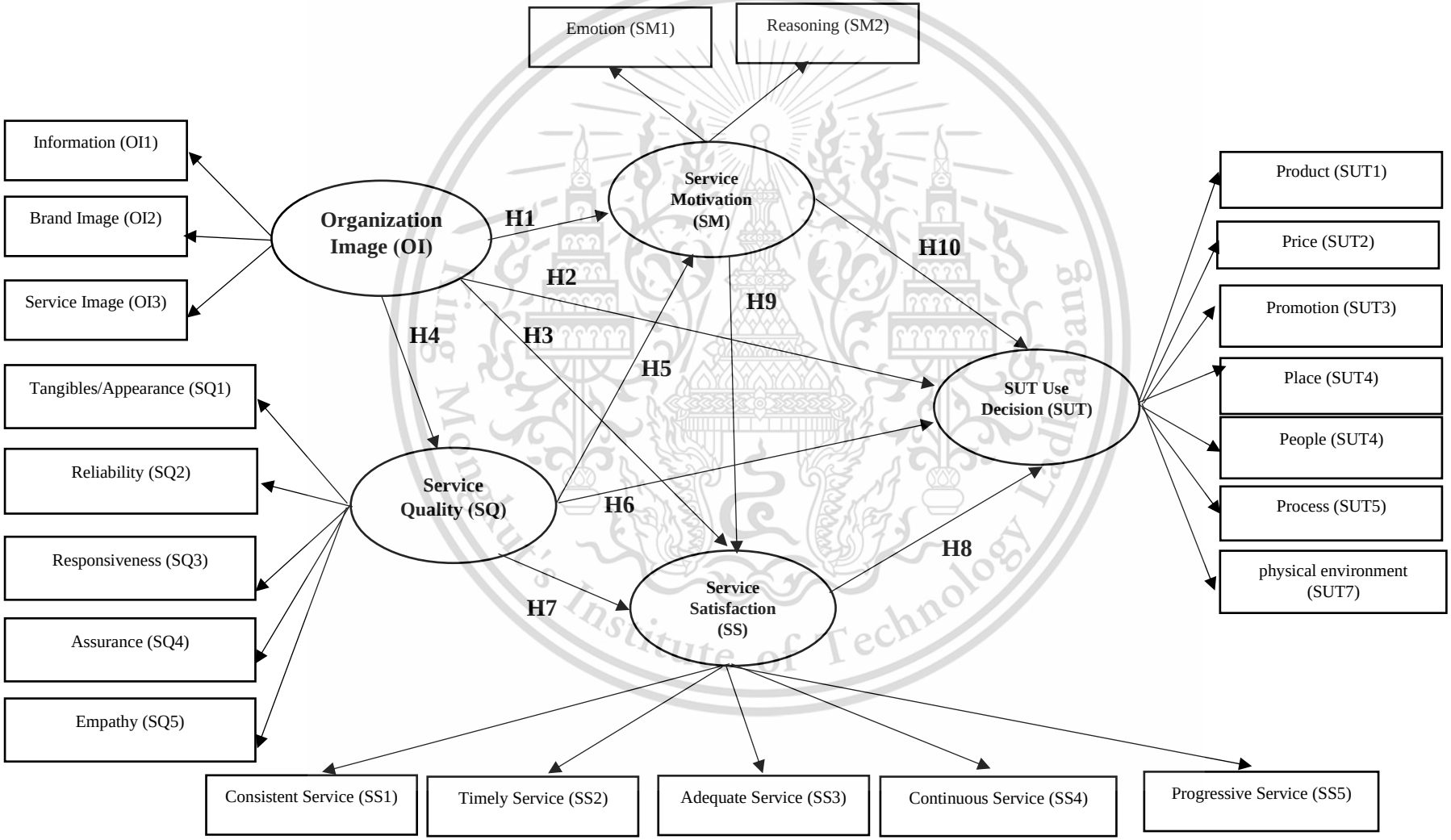


Figure 2.9 Research Conceptual Framework

2.7 Variables studied

1. Decision-Making to Use Services: Including product, price, distribution channels, marketing promotions, personnel, service processes, and physical environment.

2. Organizational Image: information, brand image, and Service Image.

3. Service Quality: Tangibles/Appearance, Reliability, Responsiveness, Assurance, and Empathy.

4. Service Motivation: Emotion and Reasoning

5. Service Satisfaction: Consistent Service, Timely service, Adequate service, Continuous service and Progressive service

2.8 Research Hypotheses

This research is to develop a structural equation model (SEM) of factors affecting SRT passenger train service decision-making in Thailand. The hypotheses of the research are as follows:

Hypotheses 1 : The image of SRT will directly and positively affect the SRT passenger train's service motivation

Hypotheses 2 : The image of SRT Thailand will directly and positively affect the passenger train's service decision to use the SRT

Hypotheses 3 : The image of SRT will directly and positively affect the SRT passenger train's service satisfaction

Hypotheses 4 : The image of SRT will directly and positively affect the service quality of SRT

Hypotheses 5 : The service quality of SRT will directly and positively affect the SRT passenger train's service motivation

Hypotheses 6 : The service quality of SRT will directly and positively affect the passenger train's service decision to use the SRT

Hypotheses 7 : The service quality of SRT will directly and positively affect the SRT passenger train's service satisfaction

Hypotheses 8 : The SRT passenger train's service satisfaction will directly and positively affect the passenger train's service decision to use the SRT

Hypotheses 9 : The SRT passenger train's service motivation will directly and positively affect the SRT passenger train's service satisfaction

Hypotheses 10 : The SRT passenger train's service motivation will directly and positively affect the passenger train's service decision to use the SRT

CHAPTER 3

RESEARCH METHODOLOGY

This research uses a descriptive research methodology to develop a structural equation model of factors affecting SRT passenger train service decision-making in Thailand. This research is Causal Relationship Research and Quantitative Method. The study methodology is as follows:

3.1 Research Study Guidelines
3.2 Population and sample determination
3.3 Creating research instruments
3.4 Instrument Quality Inspection
3.5 Data Collection
3.6 Data analysis
3.7 Use of statistics to analyze data

3.1 Research Study Guidelines

In this research, the researcher has planned to conduct research according to the research methodology which is quantitative research (Quantitative Method) with a plan to conduct research such as Figure 3.1 with the following explanation.

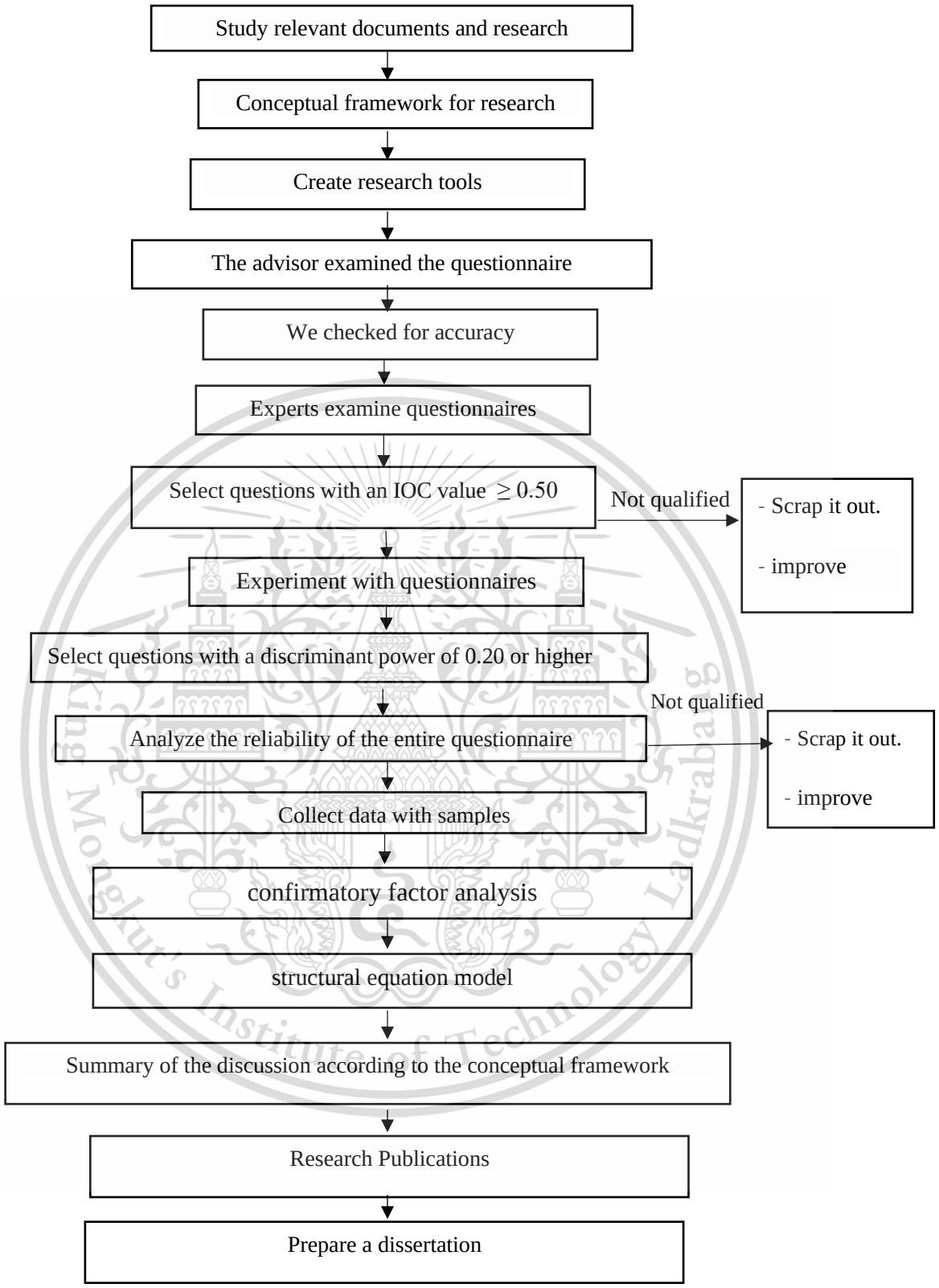


Figure 3.1 Research Action Plan

3.1.1 Study and review relevant documents and research in order to gather elements and variables to be used in the research. The researcher has started by studying preliminary data that is secondary data, such as thesis database, Thai Digital Collection (TDC), Thai Library Integrated System (ThaiLIS), Thai-Journal Citation Index Centre (TCI), SCImago Journal Rank (SJR), Science Citation Index (SCI), Journal Citation Reports (JCR), Scopus, WOS (ISI). News & Documentation Electronic Media Distilling the concept theory and apply the knowledge gained. It is an element of factors that influence factors affecting SRT passenger train service decision-making in Thailand.

3.1.2 Combine the elements of factors affecting SRT passenger train service decision-making in Thailand. and create a questionnaire with an estimation scale, then submit it to the thesis advisor for verification and send a qualified person to check the content validity to check the consistency of the question with the terminology definition by calculating the IOC value which must be 0.50 or higher. The questionnaire was then tested by 30 non-sample online business customers who used parcel delivery services to verify the quality of the questionnaire by finding the discriminant power which must be 0.20 or higher and finding the reliability in the quality of the entire questionnaire with the Cronbach α- Coefficient.

3.1.3 Publish a complete questionnaire and collect data from samples for confirmatory factor analysis and structural equation model.

3.1.4 Summarize and discuss research results and publish research results

3.2 Population and sample determination

1. Population and sample

1.1 The population under consideration for this study comprises individuals who use train services in Thailand.

1.2 Sample size

For the purposes of structural equation modeling (SEM) analysis investigating factors influencing the decision to use the SRT passenger train service in Thailand, a specific sample group was selected. To determine the appropriate sample size, the study followed the recommendation of Hair et al. (2016), which suggests a minimum of 10 units for each variable included in the analysis. Given that the SEM involved 22 observed variables, the minimum required sample size was established as 220 train passengers.

However, to enhance the research's robustness and reliability, the researcher opted to increase the sample size to 1,250 train passengers. The selection of this expanded sample was facilitated through a multi-stage random sampling process outlined as follows:

Step 1 used cluster random sampling, with five random sampling units per station, along five railway lines, namely the Northern, Northeast, Southern, Eastern and Maeklong lines, totaling 25 stations.

Step 2 used systematic random sampling to select 50 train passengers from each of the randomly selected stations along five routes. In order to facilitate data collection, the researcher used five time periods, which were 06:00 - 08:00, 09.01 - 11:00, 11.01-13.00, 13.01-15.00, and 15.01 – 17.00. From each of these time slots, ten passengers were selected for a total of 1,250 passengers. Details of the samples used in the research are presented in Table 3.1.

Table 3.1 The samples used in the structural equation model analysis of factors affecting the decision to use SRT passenger train services in Thailand

SRT Train Route	Station	Time Slot	Targeted Number
Northern Line	Bang Sue Junction	06.00-08.00	10
		09.01-.11.00	10
		11.01-13.00	10
		13.01-15.00	10
		15.01 – 17.00	10
	Lop Buri	06.00-08.00	10
		09.01-.11.00	10
		11.01-13.00	10
		13.01-15.00	10
		15.01 – 17.00	10
	Nakan Sawan	06.00-08.00	10
		09.01-.11.00	10
		11.01-13.00	10
		13.01-15.00	10
		15.01 – 17.00	10
	Taphan Hin	06.00-08.00	10
		09.01-.11.00	10
		11.01-13.00	10
		13.01-15.00	10
		15.01 – 17.00	10
	Chiang Mai	06.00-08.00	10
		09.01-.11.00	10
		11.01-13.00	10
		13.01-15.00	10
		15.01 – 17.00	10
Northeast Line	Kaeng Khoi Junction	06.00-08.00	10
		09.01-.11.00	10
		11.01-13.00	10
		13.01-15.00	10
		15.01 – 17.00	10

Table 3.1 (continued)

SRT Train Route	Station	Time Slot	Targeted Number
Northeast Line (continued)	Lam Plai Mat	06.00-08.00	10
		09.01-.11.00	10
		11.01-13.00	10
		13.01-15.00	10
		15.01 – 17.00	10
	Surin	06.00-08.00	10
		09.01-.11.00	10
		11.01-13.00	10
		13.01-15.00	10
		15.01 – 17.00	10
	Ubon Ratchathani	06.00-08.00	10
		09.01-.11.00	10
		11.01-13.00	10
		13.01-15.00	10
		15.01 – 17.00	10
Southern Line	Kanchanaburi	06.00-08.00	10
		09.01-.11.00	10
		11.01-13.00	10
		13.01-15.00	10
		15.01 – 17.00	10
	Pranburi	06.00-08.00	10
		09.01-.11.00	10
		11.01-13.00	10
		13.01-15.00	10
		15.01 – 17.00	10
	Langsuan	06.00-08.00	10
		09.01-.11.00	10
		11.01-13.00	10
		13.01-15.00	10
		15.01 – 17.00	10
	Trang	06.00-08.00	10
		09.01-.11.00	10
		11.01-13.00	10
		13.01-15.00	10
		15.01 – 17.00	10
	Yala	06.00-08.00	10
		09.01-.11.00	10
		11.01-13.00	10
		13.01-15.00	10
		15.01 – 17.00	10
Eastern Line	Makkasan	06.00-08.00	10
		09.01-.11.00	10
		11.01-13.00	10
		13.01-15.00	10
		15.01 – 17.00	10
	Lat Krabang	06.00-08.00	10
		09.01-.11.00	10
		11.01-13.00	10
		13.01-15.00	10
		15.01 – 17.00	10

Table 3.1 (continued)

SRT Train Route	Station	Time Slot	Targeted Number
Eastern Line (continued)	Preng	06.00-08.00	10
		09.01-.11.00	10
		11.01-13.00	10
		13.01-15.00	10
		15.01 – 17.00	10
	Kabin Buri	06.00-08.00	10
		09.01-.11.00	10
		11.01-13.00	10
		13.01-15.00	10
		15.01 – 17.00	10
Eastern Line (continued)	Pattaya	06.00-08.00	10
		09.01-.11.00	10
		11.01-13.00	10
		13.01-15.00	10
		15.01 – 17.00	10
Mae Klong Line	Wat Singh	06.00-08.00	10
		09.01-.11.00	10
		11.01-13.00	10
		13.01-15.00	10
		15.01 – 17.00	10
	Sam Yaek	06.00-08.00	10
		09.01-.11.00	10
		11.01-13.00	10
		13.01-15.00	10
		15.01 – 17.00	10
	Ban Bo	06.00-08.00	10
		09.01-.11.00	10
		11.01-13.00	10
		13.01-15.00	10
		15.01 – 17.00	10
	Bangkok metropolitan area	06.00-08.00	10
		09.01-.11.00	10
		11.01-13.00	10
		13.01-15.00	10
		15.01 – 17.00	10
	Bang Krabun	06.00-08.00	10
		09.01-.11.00	10
		11.01-13.00	10
		13.01-15.00	10
		15.01 – 17.00	10
Total			**1,250**

Variables studied

The external latent variable is organization image. The internal variables are the service quality, service motivation, and passenger satisfaction.

3.3 Creating research instruments

Data for this study were gathered through the distribution of questionnaires exclusively to Thai Railway passengers. A total of 1,250 questionnaires were distributed, a sample size that

had been determined through prior calculation. These questionnaires were distributed to individuals who had utilized the services of the Thai Railway on at least one occasion.

3.3.1 Tool and finding tool quality

Tool Development

1) Data collection from academic research reports, books, academic articles, and previous studies aligned with the research objectives.

2) Study and define the research framework and concepts.

3) Study questionnaire development methods from textbooks, documents, and journals.

4) Create a questionnaire that comprehensively covers the research objectives, comprising two sections:

4.1) Multiple Choice Questions: To gather basic respondent information, such as gender, age, relationship status, highest level of education, profession, monthly income, and the average frequency of using an SRT passenger train per week.

4.2) Likert Rating Scales: To explore the relationships between various variable topics on a 5-point scale, including: 1) Organizational Image 2) Service Quality 3) Motivation to Use Services 4) Satisfaction with Services and 5) Decision-Making to Use Services. The Likert Rating Scales will be assessed based on the level of importance in influencing purchase intentions. The scale consists of 5 levels, indicating the level of significance for each variable. The research will use the Likert scale measurement method, with scores ranging from 1 to 5, to evaluate the impact on purchase intentions. The weights will be assigned as follows:

score		Level
5	defination	Highest
4	defination	High
3	defination	Medium
2	defination	Low
1	defination	Lowest

Use the mean to interpret the influence data of factors affecting SRT passenger train service decision-making in Thailand. The priority score is calculated in each area. as follows

average score between 4.21 – 5.00 indicates the highest level.

average score between 3.41 – 4.20 means a high level.

average score between 2.61 – 3.40 indicates moderate.

average score between 1.81 – 2.60 means a low level.

average score between 1.00 – 1.80 means the lowest level.

3.3.2 Variables used in the research:

1) Decision-Making to Use Services: Including product, price, distribution channels, marketing promotions, personnel, service processes, and physical environment.

2) Organizational Image: information, brand image, and Service Image.

3) Service Quality: Tangibles/Appearance, Reliability and Trustworthiness, Responsiveness, Assurance, and Empathy.

4) Service Motivation : Emotion and Reasoning

5) Service Satisfaction : Consistent Service, Timely service, Adequate service, Continous service and Progressive service

3.4 Instrument Quality Inspection

The researcher will verify the quality of the research tool to ensure that it is a reliable and valid measure. This verification process involves three steps:

1) Expert Validation: The research tool will be reviewed by five domain experts to assess its content validity and language usage.

2) Take the results of each expert's opinions to judge the questionnaire's development content validity. The index of item-objective congruence (IOC) is used as the basis for screening the item quality (Rovinelli & Hambleton, 1977). Therefore, the researcher took the questionnaire to five Thai experts to assess the content validity of the questionnaire using the suggested IOC value ≥ 0.50 (Turner & Carlson, 2009).

3) Try out questionnaires on non-research samples. The data obtained from the questionnaire was then analyzed to determine the reliability of the questionnaire by means of Cronbach's Alpha Coefficient. Find the whole confidence value ≥ 0.7 using the following formula

$$\alpha = \frac{k}{k\text{-}1}\left\{1\text{-}\frac{\sum S_i^2}{S_X^2}\right\}$$

α	mean	Coefficient of confidence of the query
k	mean	Number of questions in the questionnaire
S_i^2	mean	Variance of individual points
S_t^2	mean	The variance of the score obtained on the questionnaire

In summary, the questionnaires used in this research have Conformity Index (IOC), Reliability (α), and Corrected Item-Total Correlation, which can be classified into 5 aspects:

1) organizational image
2) service quality
3) service motivation
4) service satisfaction
5) service decision

3.5 Data Collection

The researcher proceeded to collect the data in the following steps:

1. Request letters for cooperation in collecting information from the graduate studies Ph.D. program in the Industrial Business Administration at the King Mongkut's Institute of Technology Ladkrabang (KMITL) to request assistance from the Director of the State Railway of Thailand to inform the passengers who are in the sample group and ask for cooperation in answering the questionnaire.

2. Prepare a questionnaire sufficient for the target sample size used for this study in the collection of the SRT passenger opinions.

3. The data collection process is scheduled for two times as follows:

2.1 Try-out

The first trial sample of users will consist of 30 SRT passenger train users to examine the questionnaire's quality of discriminant power (r) and reliability (α). None of these individuals who participated in the 'try-out' participated in the subsequent final survey.

2.2 The second trial was conducted by 2,500 train passengers in Thailand to examine the structural validity of organization image, service quality, service motivation and service satisfaction factor by using a CFA and examine the causal model of factors affecting the decision to use train services of passengers in Thailand with empirical data.

3.6 Data analysis

The researcher proceeded to collect the data in the following steps:

1. Request letters for cooperation in collecting information from the graduate studies Ph.D. program in the Industrial Business Administration at the King Mongkut's Institute of Technology Ladkrabang (KMITL) to request assistance from the Director of the State Railway of Thailand to inform the passengers who are in the sample group and ask for cooperation in answering the questionnaire.

2 .Prepare a questionnaire sufficient for the target sample size used for this study in the collection of the SRT passenger opinions.

3. The data collection process is scheduled for two times as follows:

3.1 Try-out

The first trial sample of users will consist of 30 SRT passenger train users to examine the questionnaire's quality of discriminant power (r) and reliability (α). None of these individuals who participated in the 'try-out' participated in the subsequent final survey.

3.2 The second sample trial of SRT passengers

A sample of 750 people was selected to examine the structural validity of the SRT passenger train decision-making questionnaire in Thailand through a confirmatory factor analysis (CFA).

3.7 Use of statistics to analyze data

The researcher conducted the data analysis as follows:

1. Descriptive statistics are analyzed using frequency, percentage, mean, standard deviation (SD) and correlation coefficient.

2. Preliminary review of the agreement

2.1 The sample was randomly drawn from a normal distribution population, which will use skewness and kurtosis for testing. West et al. (1995) has suggested that analysis results for the skewness and kurtosis values should be ≥ |2| for skewness and ≥ |7| for kurtosis values.

2.2 Verifying the relationship of variables

The KMO (Kaiser-Meyer-Olkin) and Bartlett's test of sphericity statistics are examined to determine the suitability of the data and the relationship of variables to be analyzed for composition.

2.3 The Kaiser-Meyer-Olkin (KMO) index analysis is used to indicate that whether the correlation matrix of the indicators has a unique matrix or not, which therefore shows that there are enough correlations between variables for analyzing the CV indicators (Ruenphongphun et al., 2021). This is done using the KMO Measure of Sampling Adequacy. A KMO value greater than .50 indicates that the data is suitable for composition analysis.

2.4 Bartlett' s test of sphericity must be statistically significant and show that the variables are related enough to be analyzed for the composition (Hair et al., 2020).

3. Verification of the harmonization of the SRT passenger use decision model developed using the empirical data from the LISEL program, which uses statistical indices such as the chi-square, GFI (Goodness of Fit), AGFI (Adjust Goodness of Fit Index) and RMSEA (Root Mean Square Error of Approximation) (Table 3.2).

4. Goodness of fit (GOF) measures the overall model and how consistent the model is with the empirical data. Therefore, the researcher will use the following LISREL software statistical analysis values (Jöreskog and Sörbom, 2016).

4.1 Chi-square (χ^2) statistics are statistical values used to test the statistical hypothesis and the differences between categorical variables from a random sample in order to judge goodness of fit between expected and observed results. It is recommended that the Chi-square (χ^2) value of $p \geq 0.05$ be met and the relative Chi-square (χ^2/df) of ≤ 2.00 is achieved (Chuenban et al., 2021).

4.2 The goodness of fit index (GFI) is a measure of fit between the hypothesized model and the observed covariance matrix. A GFI value approaching 1.00 indicates that the model is consistent with the empirical data (Jöreskog et al., 2016).

4.3 An adjusted goodness of fit index (AGFI) is used to adjust the GFI and take into account the size of the variables and the sample. Values approaching 1.00 in both GFI and AGFI indicate that the model iss consistent with the empirical data (Hooper et al., 2008).

4.4 The RMSEA (root mean square error of approximation) value is a value indicating the inconsistency of the model generated with the population covariance text matrix. Values approaching '0' indicate a good fit (Hooper et al., 2008).

The researcher therefore uses the criteria to check the harmony between the hypothesis model developed by the researcher and the empirical data as shown in Table 3.2.

Table 3.2 Summary of the criteria and values used to verify goodness-of-fit / conformity

Criteria Index	Criteria	Theory
Chi-square: χ^2	$p \geq 0.05$	(Sahoo, 2019)
Relative Chi-square: $\chi 2$/df	≤ 2.00	(Sahoo, 2019)
RMSEA	≤ 0.05	(Hu & Bentler, 1999)
GFI	≥ 0.90	(Jöreskog et al., 2016)
AGFI	≥ 0.90	(Harlow, (2002)
RMR	≤ 0.05	(Hu & Bentler, 1999)
SRMR	≤ 0.05	(Hu & Bentler, 1999)
Cronbach's α	≥ 0.70	(Tavakol & Dennick, 2011)

5. Model adjustment

The researcher adjusted the model based on theory and research. The action is to check whether the parameter estimation results are reasonable or not and whether there are any values that are unacceptable. Also, to evaluate if the squared multiple correlation coefficient is appropriate as well as considering the overall fit of the model to see how well the model overall corresponds to the empirical data.

CHAPTER 4

ANALYSIS RESULTS

The objectives of this research were to develop a structural equation model (SEM) of factors influencing the decision to use SRT railway passenger services. In this chapter, the researcher developed tools

The researcher tested the tools used in this study using various statistical measures to support and validate the quality of the research tools according to international research standards. The researcher presents the results of the data analysis in the following order, providing detailed information as follows:

4.1 Confidence and validity of the data,

4.2 Results of the structural equation model (SEM) analysis of factors influencing passenger decision to use SRT services.

4.3 Summary

This study presents the quantitative data analysis results, including the data's confidence and validity, descriptive data analysis, hypotheses testing results, confirmatory factor analysis results, structural equation model testing results, and the summary. Additionally, the study discusses the consistency of each variable within the conceptual framework, highlighting the critical findings.

4.1 Confidence and Validity of the Data

In this study, the quality of the questionnaire was examined by determining the content validity using the calculation of the index of Item Objective Congruence (IOC). Five experts were invited to assess the congruence between the developed set of questions and the theoretical content. Questions with an IOC value higher than 0.50 were selected. Consequently, the questionnaire consisted of a total of 100 questions.

The researcher administered the questionnaire, which had passed the IOC process, to a pre-test sample group of 30 participants who had similar characteristics to the actual sample group. This was done to examine the discriminant power and reliability of the questionnaire measurement tool. The results obtained were considered satisfactory quality, data consistency, and reliability when collecting data from the sample group. The researcher will present the values indicating each variable's discriminant power and reliability in the next section.

The researcher calculated the reliability of the questionnaire as a measure for each variable group. This was done by presenting the corrected item-total correlation (CITC) (Zijlmans et al., 2019) and Cronbach's alpha to indicate the extent to which the data collected from the sample group in this study can be trusted. This study collected data from a sample group of 30 participants. The researcher presents the details in Tables 4.1 to 4.4.

In Table 4.1, the researcher presents the values indicating the discriminant power and reliability of the service innovation (SI) observed variables. The details are as follows:

Table 4.1 Discriminant power and reliability of the SRT passenger train service usage decision variables (SRT Use Decision-SUD)

Service Innovation (SI) Observed Variables	Items	Corrected Item-Total Correlation	Cronbach's Alpha
Product (SUD1)	SUD11	0.259	0.902
	SUD12	0.228	
	SUD13	0.203	
	SUD14	0.279	
	SUD15	0.273	
	SUD16	0.227	
	SUD17	0.209	
	SUD18	0.376	
	SUD19	0.375	
	SUD110	0.498	
	SUD111	0.443	
Price (SUD2)	SUD21	0.552	0.912
	SUD22	0.402	
	SUD23	0.246	
	SUD24	0.200	
	SUD25	0.275	
Place (SUD3)	SUD31	0.219	0.895
	SUD32	0.438	
	SUD33	0.502	
	SUD34	0.700	
Promotion (SUD4)	SUD41	0.638	0.904
	SUD42	0.648	
	SUD43	0.648	
Personnel (SUD5)	SUD51	0.523	0.920
	SUD52	0.527	
	SUD53	0.442	
	SUD54	0.215	
	SUD55	0.408	
	SUD56	0.485	
	SUD57	0.507	
	SUD58	0.259	
Process (SUD6)	SUD61	0.228	0.887
	SUD62	0.203	
	SUD63	0.279	
	SUD64	0.233	

Table 4.1 (continued)

Service Innovation (SI) Observed Variables	Items	Corrected Item-Total Correlation	Cronbach's Alpha
Physical Environment (SUD7)	SUD71	0.451	0.923
	SUD72	0.409	
	SUD73	0.437	
	SUD74	0.274	
	SUD75	0.489	
	SUD76	0.443	
	SUD77	0.452	
	SUD78	0.502	
	SUD79	0.246	
	SUD710	0.500	
	SUD711	0.434	
	SUD712	0.538	
SRT Use Decision (SUD)			**0.934**

The data analysis from Table 4.1 reveals that the values indicating the discriminant power of each item in the Railway Service Usage Decision variables range from 0.200 to 0.700. The Cronbach's alpha value for the service innovation variables is 0.934. The researcher found that the data obtained from the questionnaire analysis, which serves as a measurement tool in this study, has high discriminant power and reliability of the variables.

In Table 4.2, the researcher presents the values indicating the discriminant power and reliability of the organization image (OI) observed variables. The details are as follows:

Table 4.2 the values indicating the discriminant power and reliability of the organizational image (OI) observed variables

Organizational Image (OI) Observed Variables	**Items**	**Corrected Item-Total Correlation**	**Cronbach's Alpha**
Information (OI1)	OI11	0.440	0.875
	OI12	0.622	
	OI13	0.781	
	OI14	0.839	
	OI15	0.802	
Brand Image (OI2)	OI21	0.802	0.864
	OI22	0.603	
	OI23	0.693	
	OI24	0.560	
	OI25	0.632	
Service Image (OI3)	OI31	0.632	0.901
	OI32	0.797	
	OI33	0.744	
	OI34	0.673	
	OI35	0.523	
Organizational Image (OI)			**0.906**

The data analysis from Table 4.2 reveals that the values indicating the discriminant power of each item in the Organization Image variables range from 0.440 to 0.839. The Cronbach's alpha value for the service innovation variables is 0.906. The researcher found that the data obtained from the questionnaire analysis, which serves as a measurement tool in this study, has high discriminant power and reliability of the variables.

In Table 4.3, the researcher presents the values indicating the discriminant power and reliability of the service quality (SQ) observed variables. The details are as follows:

Table 4.3 the values indicating the discriminant power and reliability of the service quality (SQ) observed variables

Service Quality (SQ) Observed Variables	Items	Corrected Item-Total Correlation	Cronbach's Alpha
Tangibles/Appearance (SQ1)	SQ11	0.563	0.912
	SQ12	0.483	
	SQ13	0.561	
	SQ14	0.427	
Reliability (SQ2)	SQ21	0.425	0.896
	SQ22	0.511	
	SQ23	0.655	
	SQ24	0.487	
Responsiveness (SQ3)	SQ31	0.586	0.884
	SQ32	0.407	
	SQ33	0.552	
	SQ34	0.515	
Assurance (SQ4)	SQ41	0.436	0.892
	SQ42	0.597	
	SQ43	0.519	
	SQ44	0.335	
	SQ45	0.214	
Empathy (SQ5)	SQ51	0.466	0.911
	SQ52	0.231	
	SQ53	0.451	
	SQ54	0.322	
Service Quality (SQ)			**0.934**

The data analysis from Table 4.3 reveals that the values indicating the discriminant power of each item in the Service Quality variables range from 0.214 to 0.655. The Cronbach's alpha value for the service innovation variables is 0.934. The researcher found that the data obtained from the questionnaire analysis, which serves as a measurement tool in this study, has high discriminant power and reliability of the variables.

In Table 4.4, the researcher presents the values indicating the discriminant power and reliability of the service motivation (SM) observed variables. The details are as follows:

Table 4.4 the values indicating the discriminant power and reliability of the service motivation (SM) observed variables

Service Motivation (SM) Observed Variables	Items	Corrected Item-Total Correlation	Cronbach's Alpha
Emotion (SM1)	SM11	0.473	0.845
	SM12	0.325	
	SM13	0.529	
	SM14	0.635	
Reasoning (SM2)	SM21	0.728	0.856
	SM22	0.875	
	SM23	0.874	
Service Motivation (SM)			**0.860**

The analysis of the data from Table 4.4 reveals that the values indicating the discriminant power of each item for the SM variables ranged from 0.325 to 0.875. The Cronbach's alpha value for the service innovation variables is 0.860. The researcher found that the data obtained from the questionnaire analysis, which serves as a measurement tool in this study, has high discriminant power and reliability of the variables.

In Table 4.5, the researcher presents the values indicating the discriminant power and reliability of the service satisfaction (SS) observed variables. The details are as follows:

Table 4.5 the values indicating the discriminant power and reliability of the service satisfaction (SS) observed variables

Service Satisfaction (SS) Observed Variables	Items	Corrected Item-Total Correlation	Cronbach's Alpha
Consistent Service (SS1)	SS11	0.506	0.854
	SS12	0.580	
Timely Service (SS2)	SS21	0.434	0.821
	SS22	0.536	
Adequate Service (SS3)	SS31	0.531	0.836
	SS32	0.230	
Continuous Service (SS4)	SS41	0.488	0.851
	SS42	0.574	
Progressive Service (SS5)	SS51	0.337	0.866
	SS52	0.544	
Service Satisfaction (SS)			**0.868**

The analysis of the data from Table 4.5 revealed that the discriminant power values of the items of the service satisfaction variable ranged from 0.230 to 0.580. The Cronbach's alpha coefficient for the service innovation variable was 0.868. The researcher found that the data

obtained from the analysis of the questionnaire items, which served as measures for this study, exhibited high discriminant power and reliability for the variables.

4.2 Structural Equation Model (SEM) Results of Factors Affecting the Decision to Use SRT Passenger Train Services in Thailand

4.2.1 Basic Statistics Reflecting the General Characteristics of the Sample Group of SRT Passenger Train Service Users in Thailand.

The researcher collected data from a sample group to analyze the structural fit of the decision-making model for using SRT passenger train services in Thailand. Questionnaires were distributed to 25 railway stations across five lines. Sample size determination was made using the guidelines of Jöreskog and Sörbom (2006) and Sarstedt et al. (2022). It was deemed appropriate to have a minimum sample size of 20 times the number of observed variables within the conceptual framework. This ensured accurate estimation and represented the research population well when analyzed using the LISREL program.

Therefore, a sample group 1,250 was targeted to achieve precise and reliable analysis results. Additionally, this sample group effectively represented the research population. Subsequently, 1,250 completed questionnaires were returned, representing 100% of the targeted sample group. Table 4.10 presents the general characteristics of this sample group (*n*= 1,250).

Table 4.6 General Characteristics of the Sample Group (*n*= 1,250)

Passenger Characteristics	**Individuals**	**%**
1. Gender		
male	595	47.60
female	655	52.40
2. Age		
less than or equal to 20 years	257	20.56
21–30 years	362	29.36
31-40 years old	198	15.84
41-50 years	175	14.00
51-60 years old	152	12.16
60 years or older	106	8.08
3. Marital Status		
single	515	41.20
married	436	34.88
divorced/widowed/separated	299	23.92
4. Highest level of education		
Lower Bachelor's degree	808	64.64
Bachelor's degree	316	25.28
Master's degree	94	7.52
Ph.D.	32	2.56
5. Monthly Income in Thai Baht		
less than or equal to 10,000 baht	420	33.60
10,001-20,000 baht	645	51.60
20,001-30,000 baht	62	4.96
30,001-40,000 baht	59	4.72
40,001-50,000 baht	48	3.84
more than 50,000 baht	16	1.28
6. The average number of times each passenger used SRT passenger services each week		
less than three times a week	52	4.16
3 - 5 times a week	272	21.76
6 - 8 times a week	230	18.40
8 - 10 times a week	254	20.32
more than ten times a week	442	35.36

Table 4.6 shows that the general characteristics of the sample group of passenger service users in Thailand are predominantly female (52.40%). The largest segment of the riders was within the age range of 21-30 years (29.36%) and was single (41.20%). Regarding education, (64.64%) had graduated from lower bachelor's degree. The average monthly income of the largest passenger segment surveyed indicated a monthly income between 10,001-20,000 baht (51.60%). Interestingly, 35.36% indicated they used SRT passenger train services more than ten times per week.

4.2.2 Basic Statistics of Variables

The researcher wants to present the basic statistics of the variables included in this study. They are as follows:

Decision to use SRT passenger services: This latent variable consisted of seven observed variables commonly called the ‘Seven Ps of Marketing .' These were product (SUD1), price (SUD2), place (SUD3), marketing promotion (SUD4), personnel (SUD5), service process (SUD6), and physical environment (SUD7) (Chuenyindee et al., 2022; Do & Vu, 2020).

Organizational image (OI): This latent variable consisted of three observable variables, including public relations/information (O11), brand image (O12), and service image (O13).

Service quality (SQ): This latent variable consists of five observable variables, including tangibles/appearance (SQ1), reliability and trustworthiness (SQ2), responsiveness (SQ3), assurance (SQ4), and empathy (SQ5) (Dubey & Srivastava, 2016).

Service motivation (SM): This latent variable consists of two observable variables, including emotion (SM1) and reasoning (SM2).

Service satisfaction (SS): This latent variable consists of five observable variables, including consistent service (SS1), timely service (SS1), adequate service (SS1), continuous service (SS1), and progressive service (SS1). (Table 4.5 did not use these terms-please verify my corrections).

These variables and their statistics are shown in Tables 4.7-4.11, respectively.

Table 4.7 Basic Statistics for the Decision to Use SRT Passenger Train Services

Latent Variables	Observed Variables	Items	$\bar{x}$	SD	Skewness	Kurtosis	Meaning / interpretation
SRT Use Decision (SUD)	Product SUD1	SUD11	4.32	0.87	-1.86	0.69	highest
		SUD12	4.36	0.88	-2.06	0.88	highest
		SUD13	4.35	0.87	-2.11	0.02	highest
		SUD14	4.38	0.90	-2.57	0.88	highest
		SUD15	4.37	0.89	-2.39	0.34	highest
		SUD16	4.41	0.88	-2.69	1.28	highest
		SUD17	4.40	0.87	-2.52	0.71	highest
		SUD18	4.37	0.84	-2.04	0.48	highest
		SUD19	4.40	0.80	-1.99	0.74	highest
		SUD110	4.38	0.84	-2.19	0.18	highest
		SUD111	4.35	0.88	-2.19	0.06	highest
	Price SUD2	SUD21	4.33	0.90	-2.22	0.03	highest
		SUD22	4.34	0.91	-2.38	0.33	highest
		SUD23	4.27	0.94	-1.97	0.69	highest
		SUD24	4.24	0.97	-1.90	1.00	highest
		SUD25	4.26	0.97	-2.13	0.26	highest
	Place SUD3	SUD31	4.29	0.87	-1.66	1.44	highest
		SUD32	4.25	0.92	-1.60	1.68	highest
		SUD33	4.29	0.91	-1.89	1.04	highest
		SUD34	4.31	0.91	-2.08	0.43	highest
	Promotion SUD4	SUD41	4.26	0.93	-1.77	1.30	highest
		SUD42	4.28	0.92	-1.82	1.23	highest
		SUD43	4.29	0.93	-2.08	0.49	highest
	People SUD5	SUD51	4.31	0.94	-2.17	0.37	highest
		SUD52	4.34	0.91	-2.24	0.01	highest
		SUD53	4.35	0.93	-2.44	0.59	highest
		SUD54	4.30	0.89	-1.76	1.17	highest
		SUD55	4.26	0.95	-1.52	2.24	highest
		SUD56	4.24	0.93	-1.55	1.64	highest
		SUD57	4.28	0.96	-1.93	1.09	highest
		SUD58	4.26	0.95	-1.70	1.64	highest
	Process SUD6	SUD61	4.30	0.95	-2.00	0.94	highest
		SUD62	4.28	0.95	-1.78	1.50	highest
		SUD63	4.25	0.90	-1.40	2.16	highest
		SUD64	4.28	0.87	-1.37	2.34	highest

Table 4.7 (continued)

Latent Variables	Observed Variables	Items	$\bar{x}$	SD	Skewness	Kurtosis	Meaning / interpretation
	Physical environment SUD7	SUD71	4.23	0.90	-1.37	2.13	highest
		SUD72	4.19	0.94	-1.39	1.93	high
		SUD73	4.22	0.93	-1.66	1.38	highest
		SUD74	4.26	0.95	-1.86	1.05	highest
		SUD75	4.21	0.96	-1.63	1.48	highest
		SUD76	4.22	0.98	-1.78	1.33	highest
		SUD77	4.22	0.98	-1.90	0.91	highest
		SUD78	4.27	0.89	-1.55	1.85	highest
		SUD79	4.24	0.93	-1.49	1.95	highest
		SUD710	4.35	0.90	-2.15	0.50	highest
		SUD711	4.36	0.90	-2.33	0.12	highest
		SUD712	4.32	0.92	-2.06	0.70	highest

Table 4.7 shows that the components for the decision to use SRT passenger train services had average values ranging from 4.19 to 4.41, with standard deviations ranging from 0.80 to 0.98. The variable with the highest average value was SUD16 ($\bar{x}$ = 4.41), followed by SUD17 and SUD19 ($\bar{x}$ = 4.40). The variable with the lowest average value is SUD72 ($\bar{x}$ = 4.19). When considering skewness, it was observed that all variables in this component had negative skewness, which was determined from the negative skewness values of all the data and the high scores for all the variables.

Furthermore, when considering kurtosis, it was found to be positive, indicating a normal distribution of data with a certain degree of dispersion. This is consistent with the criteria Kallner (2017) suggested that kurtosis values should not exceed -3 to +3. Further research has identified univariate values approaching 2.0 for skewness is suspect (Curran et al., 1996). The *p*-values of the skewness and kurtosis are thus used to assess data normality (Kim, 2015). Therefore, analyzing these components using a confirmatory factor analysis (CFA) before the SEM is appropriate.

Table 4.8 Basic statistics for organizational image variables

Latent Variables	Observed Variables	Items	$\bar{x}$	SD	Skewness	Kurtosis	Meaning / interpretation
organizational image (OI)	Information OI1	OI11	4.69	0.53	-2.04	2.48	highest
		OI12	4.68	0.52	-2.94	2.40	highest
		OI13	4.68	0.52	-2.82	1.82	highest
		OI14	4.68	0.53	-2.12	2.47	highest
		OI15	4.67	0.55	-2.99	2.51	highest
	Brand image OI2	OI21	4.70	0.51	-2.96	2.35	highest
		OI22	4.70	0.50	-2.87	1.90	highest
		OI23	4.67	0.53	-2.92	2.53	highest
		OI24	4.59	0.57	-2.17	0.43	highest
		OI25	4.60	0.54	-1.90	0.60	highest
	Goods or services OI3	OI31	4.61	0.54	-2.17	0.98	highest
		OI32	4.56	0.58	-1.94	0.07	highest
		OI33	4.55	0.60	-2.33	1.62	highest
		OI34	4.59	0.55	-1.85	0.82	highest
		OI35	4.59	0.56	-2.17	0.69	highest
		OI35	4.59	0.56	-2.17	0.69	highest

From Table 4.8, it was found that the components of organizational image (OI) have an average value ranging from 4.55 to 4.70, and they have a standard deviation ranging from 0.50 to 0.60. The variables with the highest average value were OI21 and OI22 ($\bar{x}$ = 4.70), followed by OI11 ($\bar{x}$ = 4.69), and the variable with the lowest average value was OI33 ($\bar{x}$ = 4.55).

Furthermore, when considering kurtosis, it was found to be positive, indicating a normal distribution of data with a certain degree of dispersion. This is consistent with the criteria Kallner (2017) suggested that kurtosis values should not exceed -3 to +3. Further research has identified univariate values approaching 2.0 for skewness is suspect (Curran et al., 1996). The *p*-values of the skewness and kurtosis are thus used to assess data normality (Kim, 2015). Therefore, analyzing these components using a confirmatory factor analysis (CFA) before the SEM is appropriate.

Table 4.9 Basic statistics of the variables related to service quality

Latent Variables	Observed Variables	Items	$\bar{x}$	SD	Skewness	Kurtosis	Meaning / interpretation
Service quality (SQ)	Tangible or physical evidence SQ1	SQ11	4.59	0.64	-2.68	2.59	highest
		SQ12	4.62	0.57	-2.97	2.36	highest
		SQ13	4.63	0.54	-2.37	0.71	highest
		SQ14	4.63	0.54	-2.19	0.17	highest
	Reliability SQ2	SQ21	4.58	0.64	-3.42	2.61	highest
		SQ22	4.60	0.57	-2.42	1.34	highest
		SQ23	4.61	0.53	-1.96	0.62	highest
		SQ24	4.55	0.56	-1.67	0.81	highest
	Responsiveness SQ3	SQ31	4.53	0.57	-1.65	0.81	highest
		SQ32	4.52	0.63	-2.66	2.31	highest
		SQ33	4.56	0.55	-1.54	1.33	highest
		SQ34	4.56	0.55	-1.69	0.71	highest
	Assurance SQ4	SQ41	4.54	0.58	-1.80	0.46	highest
		SQ42	4.55	0.56	-1.60	1.16	highest
		SQ43	4.56	0.55	-1.62	1.04	highest
		SQ44	4.56	0.56	-1.62	1.08	highest
		SQ45	4.55	0.56	-1.69	0.92	highest
	Empathy SQ5	SQ51	4.56	0.55	-1.55	1.39	highest
		SQ52	4.56	0.55	-1.57	1.27	highest
		SQ53	4.55	0.55	-1.54	1.38	highest
		SQ54	4.55	0.57	-1.65	1.04	highest

From Table 4.9, it was found that the components of service quality had an average value ranging from 4.54 to 4.63, and they had a standard deviation ranging from 0.55 to 0.64. The observed variables with the highest average value are SQ13 and SQ14 ($\bar{x}$ = 4.63), followed by SQ12 ($\bar{x}$ = 4.62), and the variable with the lowest average value was SQ41 ($\bar{x}$ = 4.54).

Furthermore, when considering kurtosis, it was found to be positive, indicating a normal distribution of data with a certain degree of dispersion. This is consistent with the criteria Kallner (2017) suggested that kurtosis values should not exceed -3 to +3. Further research has identified univariate values approaching 2.0 for skewness is suspect (Curran et al., 1996). The *p*-values of the skewness and kurtosis are thus used to assess data normality (Kim, 2015). Therefore, analyzing these components using a confirmatory factor analysis (CFA) before the SEM is appropriate.

Table 4.10 Basic statistics of the variables related to SRT staff service motivation

Latent Variables	Observed Variables	Items	$\bar{x}$	SD	Skewness	Kurtosis	Meaning / interpretation
Service motivation (SM)	Emotion SM1	SM11	4.53	0.61	-2.18	1.04	highest
		SM12	4.57	0.56	-1.66	0.98	highest
		SM13	4.55	0.57	-1.89	0.14	highest
		SM14	4.54	0.55	-1.55	1.31	highest
	Reasoning SM2	SM21	4.55	0.57	-1.74	0.60	highest
		SM22	4.56	0.56	-1.55	1.37	highest
		SM23	4.54	0.57	-1.68	0.96	highest

From Table 4.10, it was found that the components of service motivation (SM) had an average value ranging from 4.53 to 4.57, and they had a standard deviation ranging from 0.55 to 0.61. The observed variable with the highest average value was SM12 ($\bar{x}$ = 4.57), followed by SM22 ($\bar{x}$ = 4.56), and the variable with the lowest average value was SM11 ($\bar{x}$ = 4.53).

Furthermore, when considering kurtosis, it was found to be positive, indicating a normal distribution of data with a certain degree of dispersion. This is consistent with the criteria Kallner (2017) suggested that kurtosis values should not exceed -3 to +3. Further research has identified univariate values approaching 2.0 for skewness is suspect (Curran et al., 1996). The *p*-values of the skewness and kurtosis are thus used to assess data normality (Kim, 2015). Therefore, analyzing these components using a confirmatory factor analysis (CFA) before the SEM is appropriate.

Table 4.11 Basic statistics of the variables related to service satisfaction in service delivery

Latent Variables	Observed Variables	Items	$\bar{x}$	SD	Skewness	Kurtosis	Meaning / interpretation
Service satisfaction (SS)	Service equality SS1	SS11	4.54	0.60	-2.10	0.88	highest
		SS12	4.55	0.57	-1.71	0.76	highest
	Timely service SS2	SS21	4.52	0.65	2.00	2.29	highest
		SS22	4.55	0.56	-1.65	0.88	highest
	Adequate service SS3	SS31	4.55	0.57	-1.74	0.71	highest
		SS32	4.54	0.58	-1.75	0.73	highest
	Continuous service SS4	SS41	4.61	0.52	-1.72	1.11	highest
		SS42	4.60	0.53	-1.87	0.59	highest
	Progressive service SS5	SS51	4.61	0.51	-1.77	0.96	highest
		SS52	4.62	0.51	-1.80	0.95	highest

From Table 4.11, it was found that the components of satisfaction image in service delivery had an average value ranging from 4.52 to 4.62 and a standard deviation ranging from 0.51 to 0.65. The observed variable with the highest average value was SS52 ($\bar{x}$ = 4.62),

followed by SS41 and SS51 ($\bar{x}$ = 4.61), and the observed variable with the lowest average value was SS21 ($\bar{x}$ = 4.52).

Furthermore, when considering kurtosis, it was found to be positive, indicating a normal distribution of data with a certain degree of dispersion. This is consistent with the criteria Kallner (2017) suggested that kurtosis values should not exceed -3 to +3. Further research has identified univariate values approaching 2.0 for skewness is suspect (Curran et al., 1996). The *p*-values of the skewness and kurtosis are thus used to assess data normality (Kim, 2015). Therefore, analyzing these components using a confirmatory factor analysis (CFA) before the SEM is appropriate.

The researcher presents the results of the CFA for the variables within the conceptual framework of the research. Results of the goodness-of-fit test for the compatibility with the SRT passenger use decision-making model are shown in Tables 4.12-4.13.

Table 4.12 Correlation coefficient (*r*) values of the observed variables in the SRT passenger train use decision-making latent variable (SUD) model.

Observed Variables	**Correlation coefficient (*r*) values (below the bold diagonal)**						
	SUD1	**SUD2**	**SUD3**	**SUD4**	**SUD5**	**SUD6**	**SUD7**
SUD1	**1**						
SUD2	0.52**	**1**					
SUD3	0.56**	0.51**	**1**				
SUD4	0.42**	0.47**	0.46**	**1**			
SUD5	0.68**	0.52**	0.42**	0.57**	**1**		
SUD6	0.49**	0.51**	0.55**	0.42**	0.52**	**1**	
SUD7	0.33**	0.48**	0.54**	0.40**	0.51**	0.59**	**1**
KMO: Measure of Sampling Adequacy = 0.877							
Bartlett's Test of Sphericity: Chi-Square= 3621.421, df = 21, *p* = 0.00							

Note. OV= observed variable, **=p ≤ .01

From Table 4.12, it was found that the Pearson's product-moment correlation (PPMC) coefficient consisted of seven observed variables. The results showed that the correlation values **(*r*)** between the observed variables amounted to 21 pairs, significantly differing from zero at a statistically significant level of 0.01.

All pairs showed positive correlations, and the correlation coefficients ranged from 0.33 to 0.68. Furthermore, when conducting a PPMC, a value of 0.80 is often used as a guideline or threshold for the strength of the correlation. Values exceeding 0.80 indicate a strong positive or negative correlation between the variables being analyzed.

Therefore, the reason for setting this threshold is that high correlation coefficients can lead to issues such as multicollinearity in regression analysis. Multicollinearity can occur when there is a high correlation between predictor variables, making it difficult to separate and

interpret the individual effects of each variable on the outcome. This can affect the stability and reliability of the regression model's estimates.

Setting a threshold of 0.80 helps ensure that the analyzed variables have reasonably independent and distinguishable effects on each other while also allowing a clearer interpretation of the relationship between the variables and reducing the potential for problems associated with multicollinearity. Therefore, the results indicate that all the observed variables in the model had relationships within the specified range and in the same direction.

Also, Bartlett's test of sphericity was used to test the desirability of proceeding to factor extraction (Kerdtip & Angkulwattanakit, 2023). It is a hypothesis test that the correlation matrix is an identity matrix. Determination was made that the Chi-Square = 3621.421, df = 21, p = 0.00, at a significance level of 0.01, with 21 degrees of freedom (df) indicating that the correlation matrix obtained is not a unity matrix. This confirmed that the 21 core value variables are correlated and are suitable for factor analysis.

These findings are consistent with the Kaiser-Meyer-Olkin (KMO) measure analysis, which yielded a value of 0.877. As the KMO value is greater than 0.05, it indicates that the correlation matrix of the observed variables is not an identity matrix, and there are sufficient relationships between the variables to conduct further analysis to examine the structural fit (Changwong et al., 2018).

Moreover, based on recommendations from Pearson's *r* of 0.10 to 0.29 as weak, 0.30 to 0.49 as moderate, and values from 0.50 to 1 as strong, the resultant values of 0.34 to 0.63 (Table 4.8) were classified as moderate to strong (Hauke & Kossowski, 2011). The results also indicate that all the observed variables in the model were interrelated within the specified range and in the same direction.

Table 4.13 Statistics for confirming the structural fit of the SRT services passenger use decision-making latent variable (SUD) model.

Observed Variables	**Decision-making elements for using the SRT passenger train services**			
	b_{sc}	**Standard Error**	**t-statistics**	**Coefficient of Determination (R^2)**
SUD1	0.52**	0.03	17.22	0.54
SUD2	0.58**	0.03	17.01	0.56
SUD3	0.50**	0.03	15.32	0.50
SUD4	0.64**	0.03	18.10	0.58
SUD5	0.52**	0.03	18.45	0.60
SUD6	0.55**	0.03	15.75	0.52
SUD7	0.53**	0.03	15.62	0.46
Chi-Square= 0.94, df = 7, p = 0.97, χ^2/df = 0.13, RMSEA = 0.00, RMR = 0.00, GFI = 1.00, AGFI = 1.00				

Note. **=p ≤ .01, b_{sc} = standardized component weights, R^2=coefficient of determination

Table 4.13 provides the results of a CFA (confirmatory factor analysis) for the SRT passenger services use decision-making factors (observed variables are in column one) and their specific statistical values.

In column two are the standardized component weights for each observed variable. These factor loadings indicate the strength of the relationship between the latent variable (decision-making use) and the observed variables. Higher values indicate a stronger association, while Mustofa and Mulyono (2020) have suggested that loading factors should be ≥ 0.5 for the variables to be reliable and valid. However, other authors have stated that an item with a factor loading above 0.40 can be retained if the average variance explained (AVE) is 0.50 or above (Ertz et al., 2016; Hair et al., 2019). Also, Guadagnoli and Velicer (1988) have stated that values ≥ are considered stable.

Column three is the standard error (SE), a statistical technique used to analyze complex relationships between observed and latent (unobserved) variables and the precision of estimated parameters. This column represents the standard errors associated with the estimated factor loadings. It provides information about the precision or uncertainty in estimating the factor loadings.

Column four is the t-statistics associated with the factor loadings. The t-statistic indicates the significance of the factor loading, indicating whether it is significantly different from zero.

Column five shows each observed variable's coefficient of determination (R-squared). R^2 represents the variance in each observed variable explained by the latent variable, with higher values indicating a higher proportion of variance explained.

The bottom part of Table 4.17 presents additional model fit statistics:

Chi-Square: The chi-square statistic tests the model's overall fit to the observed data. In this case, the chi-square value is 0.97 with 7 degrees of freedom (df), and the associated p-value is 0.94. A higher *p*-value suggests that the model fits the data well.

$\chi 2$/df: This is the ratio of the chi-square statistic to the degrees of freedom. In this case, the value is 0.13, which indicates a good model fit when it is close to or below 1.

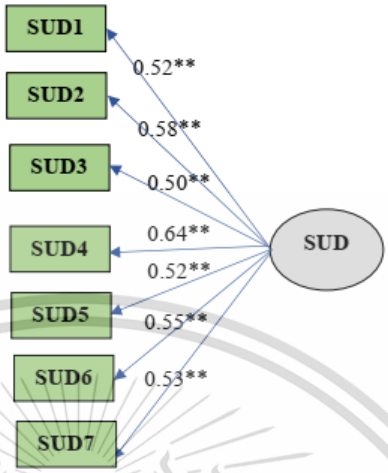
RMSEA: This stands for Root Mean Square Error of Approximation, which measures the discrepancy between the model and the observed data, taking into account the complexity of the model. A value of 0.00 suggests a perfect fit.

RMR: This stands for Root Mean Square Residual, another discrepancy measure between the model and the observed data. A value of 0.00 indicates a perfect fit.

GFI: This represents the goodness-of-fit index and indicates the proportion of the covariance between the observed and predicted data. A value of 1.00 suggests a perfect fit.

AGFI: This stands for the Adjusted Goodness-of-Fit Index, which adjusts the GFI for the degrees of freedom. A value of 1.00 suggests a perfect fit.

The table provides information about the factor loadings, standard errors, significance, explained variance, and accuracy of the observed variables in the CFA model. Additionally, it presents various model fit statistics which confirm that the model fits the observed data.



Chi-Square= 0.94, df = 7, p = 0.98, χ^2/df = 0.13,

RMSEA = 0.00, RMR = 0.00, GFI = 1.00, AGFI = 1.00, **=p ≤ .01

Figure 4.1 SRT Passenger Services Use Decision (SUD) CFA Model

Table 4.13 and Figure 4.1 shows that the decision-making model's CFA for using SRT passenger services was consistent with the empirical data. This can be concluded from the following values of Chi-Square = 0.94, df = 7, *p* = 0.98, with the Chi-Square value χ^2 not significantly differing from zero statistically. Additionally, the following values were lower than the suggested value of ≤ 0.05 (Hu & Bentler, 1999); RMSEA = 0.00 and RMR = 0.00. Schumacker and Lomax (2016) have also advised that GFI, AGFI, NFI, and CFI values should all be ≥ 0.90. Therefore, the values met the established criteria with the study's GFI = 1.00 and AGFI = 1.00. Additionally, the χ2/df value was less than 2 (χ2/df = 0.13)), indicating that the decision-making model for using SRT passenger services fit the data well (Tabachnick & Fidell, 2007).

Furthermore, the standardized loadings of the observed variables were significantly different from zero at a statistical level of 0.01. The observed variables with the highest standardized factor loadings were marketing promotion (SUD4) (b_{sc} = 0.64), followed by price (SUD2) (bsc = 0.58), service process (SUD6) (bsc = 0.55), physical environment (SUD7) (bsc = 0.53), personnel (SUD5) (bsc = 0.52), product (SUD1) (bsc = 0.52), and place (SUD3) (bsc = 0.50). These values indicate the relative importance of each observed variable in the decision-making model.

Moreover, the coefficient of determination (R^2), representing the shared variance of the observed variables with the decision-making model for SRT passenger service use, ranged from 0.43 to 0.58. This suggests a moderate level of variance explained by the model.

Overall, the results indicate that the decision-making model for using railway services demonstrated a good fit with the data, and the observed variables had significant relationships with the model's components.

Furthermore, the standardized factor loadings of the observed variables are significantly different from zero at the 0.01 level of statistical significance. The observed variables with the highest standardized factor loadings are These values indicate the strength of the relationships between the observed variables and the decision-making component.

Moreover, the coefficients of determination (R^2) for all observed variables, which measure the shared variance of the observed variables with the decision-making component, ranged from 0.43 to 0.58. This indicates moderate variability in the observed variables explained by the SRT passenger service usage decision-making component.

The results of checking the validity of the structure of the service quality (SQ) model are shown in Tables 4.14-4.15.

Table 4.14 Correlation coefficient (*r*) values of the observed variables in the organizational image (OI) latent variable model

Observed Variables	**Correlation coefficient (*r*) values (below the bold diagonal)**		
	OI1	OI2	OI3
OI1	**1**		
OI2	0.63**	**1**	
OI3	0.70**	0.67**	**1**
KMO: Measure of Sampling Adequacy = 0.644			
Bartlett's Test of Sphericity: Chi-Square= 3464.411, df = 3, *p* = 0.00			

Note. **p ≤ .01

Table 4.14 details the results of Pearson's product-moment correlation coefficient analysis on the three pairs of observed variables. The results showed that all three pairs of observed variables had correlation values significantly different from zero at the 0.01 level of statistical significance. The correlations were also positive and had coefficients ranging from 0.63 to 0.70.

Furthermore, when conducting a PPMC, a value of 0.80 is often used as a guideline or threshold for the strength of the correlation. Values exceeding 0.80 indicate a strong positive or negative correlation between the variables being analyzed.

Therefore, the reason for setting this threshold is that high correlation coefficients can lead to issues such as multicollinearity in regression analysis. Multicollinearity can occur when there is a high correlation between predictor variables, making it difficult to separate and

interpret the individual effects of each variable on the outcome. This can affect the stability and reliability of the regression model's estimates.

Setting a threshold of 0.80 helps ensure that the variables being analyzed have reasonably independent and distinguishable effects on each other. It allows for a better interpretation of the relationship between the variables and reduces the potential for problems associated with multicollinearity.

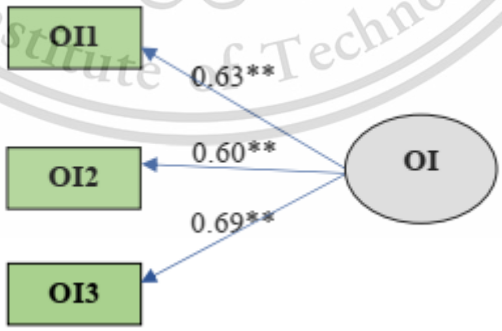
Additionally, the researcher conducted Bartlett's Test of Sphericity to examine whether the correlation matrix of the observed variables is an identity matrix. The results showed that Chi-Square = 3464.411, df = 3, and p = 0.00, significantly different from zero at the 0.01 level of statistical significance.

This result is consistent with the analysis of the Kaiser-Meyer-Olkin (KMO) measure, which has a value of 0.644, greater than 0.05. This indicates that the correlation matrix of the observed variables is not an identity matrix, and the variables have a sufficient correlation to be analyzed as components to examine the structural fit.

Table 4.15 Statistics for confirming the structural fit of the organizational image model

Observed Variables	Organizational image elements			
	b_{sc}	Standard Error	t-statistics	Coefficient of Determination (R^2)
OI1	0.63**	0.01	32.46	0.66
OI2	0.60**	0.01	30.46	0.60
OI3	0.69**	0.01	35.07	0.75
Chi-Square= 0, df = 1, p = 0.00, χ^2/df = 1.00, RMSEA = 0.00, RMR = 0.00, GFI = 1.00, AGFI = 0.99				

Note. **p ≤ .01, b_{sc} = standardized component weights,



Chi-Square= 0.00, df = 0 ,p = 0.99, χ^2/df = 1.00, RMSEA = 0.00, RMR = 0.00, GIF = 1.00, AGIF = 1.00, **p ≤ .01

Figure 4.2 Organizational Image CFA Model

Table 4.15 and Figure 4.2 shows that the organizational image's (OI) CFA was consistent with the empirical data. This can be concluded from the following values of Chi-Square = 0.00, df = 0, p = 0.99, with the Chi-Square value χ^2 not significantly differing from zero statistically. Additionally, the following values were lower than the suggested value of ≤ 0.05 (Hu & Bentler, 1999); RMSEA = 0.00 and RMR = 0.00. Schumacker and Lomax (2016) have also advised that GFI, AGFI, NFI, and CFI values should all be ≥ 0.90. Therefore, the values met the established criteria with the study's GFI = 1.00 and AGFI = 1.00. The $\chi 2$/df value was less than 2 ($\chi 2$/df = 1.00), indicating that the organizational image model fits well with the data (Tabachnick & Fidell, 2007).

The variable with the highest standardized factor loading is service image (OI3) (bsc = 0.69), followed by information (OI1) (bsc = 0.63) and brand image (OI2) (bsc = 0.60). As for the coefficient of determination (R^2), all values were within the moderate to high range (0.60-0.75).

Moreover, the coefficient of determination (R^2), representing the shared variance of the observed variables with the decision-making model for SRT passenger service use, ranged from 0.43 to 0.58. This suggests a moderate level of variance explained by the model.

Overall, the results indicate that the decision-making model for using railway services demonstrated a good fit with the data, and the observed variables had significant relationships with the model's components.

Furthermore, the standardized factor loadings of the observed variables are significantly different from zero at the 0.01 level of statistical significance. The observed variables with the highest standardized factor loadings are These values indicate the strength of the relationships between the observed variables and the decision-making component.

Moreover, the coefficients of determination (R^2) for all observed variables, which measure the shared variance of the observed variables with the decision-making component, ranged from 0.43 to 0.58. This indicates moderate variability in the observed variables explained by the SRT passenger service usage decision-making component.

The service quality model's SEM fit analysis results are also presented in Tables 4.16 and 4.17.

Table 4.16 Correlation coefficient (*r*) values of the observed variables in the service quality (SQ) latent variable model

Observed Variables	Correlation coefficient (*r*) values (below the bold diagonal)				
	SQ1	**SQ2**	**SQ3**	**SQ4**	**SQ5**
SQ1	**1**				
SQ2	0.49**	**1**			
SQ3	0.36**	0.57**	**1**		
SQ4	0.25**	0.27**	0.53**	**1**	
SQ5	0.45**	0.48**	0.49**	0.43**	**1**
KMO: Measure of Sampling Adequacy = 0.615					
Bartlett's Test of Sphericity: Chi-Square= 430.231, df = 10, *p* = 0.00					

Note. **p ≤ .01

Table 4.16 details the results of Pearson's product-moment correlation coefficient analysis on the ten pairs of observed variables. The results showed that all ten pairs of observed variables had correlation values significantly different from zero at the 0.01 level of statistical significance. The correlations were also positive, with coefficients ranging from 0.25 to 0.53.

Furthermore, when conducting a PPMC, a value of 0.80 is often used as a guideline or threshold for the strength of the correlation. Values exceeding 0.80 indicate a strong positive or negative correlation between the variables being analyzed.

Therefore, the reason for setting this threshold is that high correlation coefficients can lead to issues such as multicollinearity in regression analysis. Multicollinearity can occur when there is a high correlation between predictor variables, making it difficult to separate and interpret the individual effects of each variable on the outcome. This can affect the stability and reliability of the regression model's estimates.

Setting a threshold of 0.80 helps ensure that the analyzed variables have reasonably independent and distinguishable effects on each other, allowing for a better interpretation of the relationship between the variables and reducing the potential for problems associated with multicollinearity.

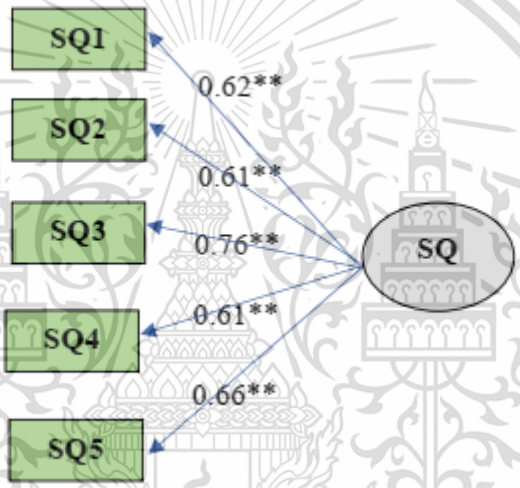
Additionally, the researcher conducted Bartlett's Test of Sphericity to examine whether the correlation matrix of the observed variables is an identity matrix. The results showed that Chi-Square = 430.231, df = 10, *p* = 0.00, significantly different from zero at the 0.01 level of statistical significance.

This result is consistent with the analysis of the Kaiser-Meyer-Olkin (KMO) measure, which has a value of 0.615, greater than 0.05. This indicates that the correlation matrix of the observed variables is not an identity matrix, and the variables have a sufficient correlation to be analyzed as components to examine the structural fit.

Table 4.17 Statistics for confirming the structural fit of the service quality model

Observed Variables	Service quality elements			
	b_{sc}	Standard Error	t-statistics	Coefficient of Determination (R^2)
SQ1	0.62**	0.05	6.82	0.38
SQ2	0.61**	0.05	9.21	0.37
SQ3	0.76**	0.06	10.31	0.58
SQ4	0.61**	0.04	8.60	0.38
SQ5	0.66**	0.05	9.31	0.54
Chi-Square= 1.08, df = 3, *p* = 0.78, χ^2/df = 0.36, RMSEA = 0.00, RMR = 0.00, GIF = 0.99, AGIF = 0.97				

Note. **p ≤ .01, b_{sc} = standardized component weights,



Chi-Square= 1.08, df = 3, p = 0.78, χ^2/df = 0.36,
RMSEA = 0.00, RMR = 0.00, GIF = 0.99, AGIF = 0.97, **=p ≤ .01

Figure 4.3 Service Quality (SQ) CFA Model

Table 4.17 and Figure 4.3 shows that the CFA for service quality (SQ) was consistent with the empirical data. This can be concluded from the following values of Chi-Square = 1.08, df = 3, p = 0.78, with the Chi-Square value χ^2 not significantly differing from zero statistically. Additionally, the following values were lower than the suggested value of ≤ 0.05 (Hu & Bentler, 1999); RMSEA = 0.00 and RMR = 0.00. Schumacker and Lomax (2016) have also advised that GFI, AGFI, NFI, and CFI values should all be ≥ 0.90. Therefore, the values met the established criteria with the study's GFI = 0.99 and AGFI = 0.97. The χ2/df value was less than 2 (χ2/df = 0.36), indicating that the service quality model fits well with the data (Tabachnick & Fidell, 2007).

Furthermore, the standardized factor loadings of the observed variables for service quality (SQ) significantly differ from zero at the 0.01 significance level. The variables with the highest standardized factor loadings are responsiveness (SQ3) (bsc = 0.76), empathy (SQ5) (bsc = 0.66), tangibles/appearance (SQ1) (bsc = 0.62), reliability and trustworthiness (SQ2) (bsc = 0.61) and assurance (SQ4) (bsc = 0.61).

As for the coefficients of determination (R^2), which indicate the shared variance between the observed variables and the quality of service, all values are in the low to moderate range (0.37 - 0.58).

The results of examining the structural fit for the service motivation (SM) model are presented in Tables 4.18-4.19.

Table 4.18 Correlation coefficient (*r*) values of the observed variables in the service motivation (SM) latent variable model

Observed Variables	**Correlation coefficient (*r*) values (below the diagonal)**	
	SM1	**SM2**
SM1	**1**	
SM2	0.49**	**1**
KMO: Measure of Sampling Adequacy = 0.500		
Bartlett's Test of Sphericity: Chi-Square= 3218.980, df = 1, *p* = 0.00		

Note. **=p ≤ .01

Table 4.18 details the results of Pearson's product-moment correlation coefficient analysis on the two observed variables. The results showed that all pairs of observed variables had correlation values significantly different from zero at the 0.01 level of statistical significance. The correlation coefficient was 0.49, which was not considered strong since it was at most 0.80. This indicates that all observed variables in this model have correlations within the specified range and in the same direction.

Furthermore, when conducting a PPMC, a value of 0.80 is often used as a guideline or threshold for the strength of the correlation. Values exceeding 0.80 indicate a strong positive or negative correlation between the variables being analyzed.

Therefore, the reason for setting this threshold is that high correlation coefficients can lead to issues such as multicollinearity in regression analysis. Multicollinearity occurs when there is a high correlation between predictor variables, making it difficult to separate and interpret the individual effects of each variable on the outcome. This can affect the stability and reliability of the regression model's estimates.

Setting a threshold of 0.80 helps ensure that the variables being analyzed have reasonably independent and distinguishable effects on each other. It allows for a clearer

interpretation of the relationship between the variables and reduces the potential for problems associated with multicollinearity.

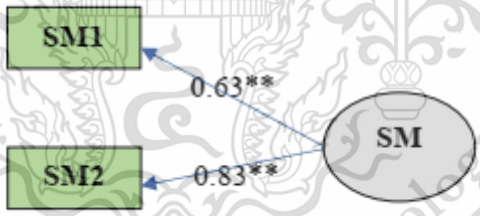
Additionally, the researcher conducted Bartlett's Test of Sphericity to examine whether the correlation matrix of the observed variables is an identity matrix. The results showed that 3218.980, df = 1, p = 0.00, significantly different from zero at the 0.01 level of statistical significance.

This result is consistent with the Kaiser-Meyer-Olkin (KMO) measure analysis, which has a value of 0.500, greater than 0.05. This indicates that the correlation matrix of the observed variables is not an identity matrix, and the variables have a sufficient correlation to be analyzed as components to examine the structural fit.

Table 4.19 Statistics for confirming the structural fit of the service motivation (SM) model

Observed Variables	**Service motivation elements**			
	b_{sc}	**Standard Error**	**t-statistics**	**Coefficient of Determination (R^2)**
SM1	0.63**	0.04	9.37	0.52
SM2	0.83**	0.05	10.83	0.70
Chi-Square= 0.00, df = 0.00, p = 0.42, χ^2/df = 1.00, RMSEA = 0.00, RMR = 0.00, GFI = 1.00, AGFI = 1.00				

Note. **p ≤ .01, b_{sc} = standardized component weights



Chi-Square= 0.00, df = 0.00, p = 0.42, χ2/df = 1.00,

RMSEA = 0.00, RMR = 0.00, GIF = 1.00, AGIF = 1.00, **=p ≤ .01

Figure 4.4 Service Motivation (SM) CFA Model

Table 4.19 and Figure 4.4 present statistics related to confirming the structural fit of the service motivation (SM) model. The table includes observed variables representing different elements of service motivation.

For the observed variable emotion (SM1), the standardized regression coefficient (b_{sc}) is 0.63**, with a standard error of 0.04. The t-statistic value is 9.37, indicating a statistically significant relationship. The R^2 value, which represents the proportion of variance explained by the model, is 0.52.

Similarly, for the observed variable reason (SM2), the b_{sc} is 0.83**, with a standard error of 0.05. The t-statistic value is 10.83, indicating a statistically significant relationship. The R^2 value for SM2 is 0.70, suggesting the model explains a substantial variance in this variable.

The goodness-of-fit statistics for the model are also provided in the table. The chi-square test yielded a value of 0.00, indicating a perfect fit. The degree of freedom (df) is 0.00, and the *p*-value is 0.42, suggesting that the model is not significantly different from the observed data. The chi-square divided by the degrees of freedom ($\chi 2$/pdf) ratio is 1.00, within an acceptable range. Additionally, the Root Mean Square Error of Approximation (RMSEA) and Root Mean Square Residual (RMR) values are both 0.00, indicating a close fit between the model and the observed data (Hu & Bentler, 1999). The Goodness of Fit Index (GFI) and Adjusted Goodness of Fit Index (AGFI) are both 1.00, indicating a perfect fit (Schumacker & Lomax, 2016).

Overall, the statistics in Table 4.23 suggest that the SM model demonstrates a good fit to the observed data, as indicated by the significant relationships between the observed variables and the high proportion of explained variance, as well as the goodness-of-fit statistics indicating a close fit between the model and the data (Tabachnick & Fidell, 2007).

As for the coefficients of determination (R^2), which indicate the shared variance between the observed variables and the quality of service, all values are in the low to moderate range (0.52-0.70).

Finally, the results of the structural validity testing of the service satisfaction (SS) model are presented in Tables 4.20-4.21.

Table 4.20 Correlation coefficient (*r*) values of the observed variables in the service satisfaction (SS) latent variable model

Observed Variables	Correlation coefficient (*r*) values (below the diagonal)				
	SS1	**SS2**	**SS3**	**SS4**	**SS5**
SS1	**1**				
SS2	0.31**	**1**			
SS3	0.51**	0.43**	**1**		
SS4	0.58**	0.50**	0.42**	**1**	
SS5	0.23**	0.59**	0.53**	0.42**	**1**
KMO: Measure of Sampling Adequacy = 0.317					
Bartlett's Test of Sphericity: Chi-Square= 369.622, df = 10, p = 0.00					

Note. **=p ≤ .01

Table 4.20 details the results of Pearson's product-moment correlation coefficient analysis on the five observable variables. The results indicate that all ten pairs of observable variables have statistically significant correlations at the 0.01 level, with positive correlation values ranging from 0.23 to 0.59. Since the correlation coefficients do not exceed 0.80, all observable variables in this model have correlations that do not exceed the specified threshold and are in the same direction.

Furthermore, when conducting a PPMC, a value of 0.80 is often used as a guideline or threshold for the strength of the correlation. Values exceeding 0.80 indicate a strong positive or negative correlation between the variables being analyzed.

Therefore, the reason for setting this threshold is that high correlation coefficients can lead to issues such as multicollinearity in regression analysis. Multicollinearity occurs when there is a high correlation between predictor variables, making it difficult to separate and interpret the individual effects of each variable on the outcome. This can affect the stability and reliability of the regression model's estimates.

Setting a threshold of 0.80 helps ensure that the variables being analyzed have reasonably independent and distinguishable effects on each other. It allows for a clearer interpretation of the relationship between the variables and reduces the potential for problems associated with multicollinearity. The coefficient of correlation was 0.49, which indicated that all observed variables in the SS model had correlations within the specified range and in the same direction.

Additionally, the researcher conducted Bartlett's Test of Sphericity to examine whether the correlation matrix of the observed variables is an identity matrix. The results showed that 369.622, df = 10, p = 0.00, significantly different from zero at the 0.01 level of statistical significance.

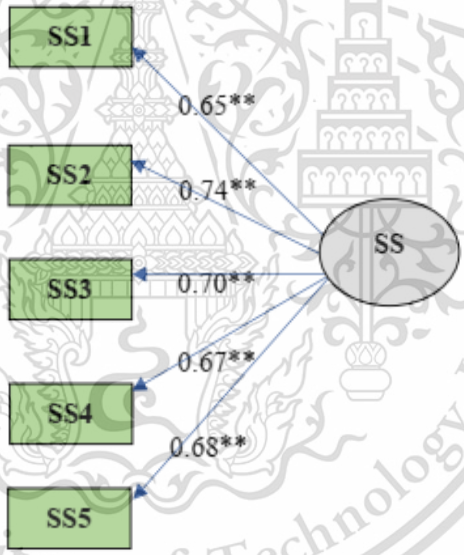
This result is consistent with the Kaiser-Meyer-Olkin (KMO) measure analysis, which has a value of 0.317, greater than 0.05. This indicates that the correlation matrix of the observed

variables is not an identity matrix, and the variables have a sufficient correlation to be analyzed as components to examine the structural fit.

Table 4.21 Statistics for confirming the structural fit of the service satisfaction (SS) model

Observed Variables	Service Satisfaction Elements			
	b_{sc}	Standard Error	t-statistics	Coefficient of Determination (R^2)
SS1	0.65**	0.04	14.57	0.43
SS2	0.74**	0.04	15.13	0.55
SS3	0.70**	0.03	14.62	0.49
SS4	0.67**	0.02	14.88	0.44
SS5	0.68**	0.04	14.92	0.46
Chi-Square= 1.66, df = 3, *p* = 0.64, χ^2/df = 0.55, RMSEA = 0.00, RMR = 0.00, GFI = 0.99, AGFI = 0.98				

Note. **p ≤ .01, b_{sc} = standardized component weights, R^2=coefficient of determination



Chi-Square= 1.66, df = 3, p = 0.64, χ2/df = 0.55,

RMSEA = 0.00, RMR = 0.00, GFI = 0.99, AGFI = 0.98, **=p ≤ .01

Figure 4.5 Service Satisfaction (SS) CFA Model

Table 4.21 and Figure 4.6 shows that the CFA for service satisfaction (SS) was consistent with the empirical data. This can be concluded from the following values of Chi-Square = 1.66, df = 3, p = 0.64, with the Chi-Square value χ^2 not significantly differing from zero statistically. Additionally, the following values were lower than the suggested value of ≤ 0.05 (Hu & Bentler, 1999); RMSEA = 0.00 and RMR = 0.00. Schumacker and Lomax (2016)

have also advised that GFI, AGFI, NFI, and CFI values should all be ≥ 0.90. Therefore, the values met the established criteria with the study's GFI = 0.99 and AGFI = 0.98. The $\chi 2/df$ value was less than 2 ($\chi 2/df = 0.55$), indicating that the service quality model fits well with the data (Tabachnick & Fidell, 2007).

Moreover, the standardized component weights of the observed variables were significantly different from zero at a statistical significance level of 0.01. The variable with the highest standardized component weight was timely service (SS2) (BSc = 0.74), adequate service (SS3) (BSc = 0.70), progressive service (SS5) (BSc = 0.68), continuous service (SS4) (BSc = 0.67), and consistent service (SS1) (BSc = 0.65). These values indicate the relative importance of each variable in contributing to service satisfaction.

Regarding the coefficient of determination (R^2), which indicates the shared variance between the observed variables and service satisfaction, all values were within a moderate range (0.43 - 0.55).

4.2.4 Analysis of the Model's Goodness of Fit

The analysis of the model's goodness of fit for the structural equation model examined 22 factors influencing the decision to use SRT passenger train services in Thailand are presented in Tables 4.26-4.27. The results show that out of all 231 pairs of variables, the correlation coefficients are significantly different from zero at a statistical significance level of .01. This indicates that the interrelationships between all variables are positively correlated and in the same direction, with correlation coefficients ranging from 0.21 to 0.69.

Bartlett's Test of Sphericity yielded a chi-square value of 37704.909 with 231 degrees of freedom and a p-value of 0.00. This indicates a statistically significant difference at the 0.01 significance level. Additionally, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was 0.918, greater than 0.50. This suggests that the intercorrelation matrix of the observed variables used in the analysis is not an identity matrix and has sufficient interrelationships among variables to analyze the structural components further and test the structural congruence or analyze the structural equation model. Refer to Table 4.22 for details.

Table 4.22 The correlation of the observed variables in the structural equation model of factors affecting the decision to use SRT passenger train services in Thailand

Observed Variables	Correlation coefficient (r) values (below the diagonal)																					
	SUD1	**SUD2**	**SUD3**	**SUD4**	**SUD5**	**SUD6**	**SUD7**	**OI1**	**OI2**	**OI3**	**SQ1**	**SQ2**	**SQ3**	**SQ4**	**SQ5**	**SM1**	**SM2**	**SS1**	**SS2**	**SS3**	**SS4**	**SS5**
SUD1	1																					
SUD2	0.44**	1	.																			
SUD3	0.30**	0.67**	1																			
SUD4	0.54**	0.31**	0.48**	1																		
SUD5	0.49**	0.55**	0.54**	0.55**	1																	
SUD6	0.35**	0.52*	0.58**	0.53**	0.49**	1																
SUD7	0.54**	0.55**	0.43**	0.47**	0.36**	0.57**	1															
OI1	0.50**	0.53**	0.56**	0.55**	0.45**	0.27**	0.53**	1														
OI2	0.53**	0.54**	0.51**	0.52**	0.44**	0.58**	0.44**	0.43**	1													
OI3	0.52**	0.51**	0.34**	0.50**	0.46**	0.40**	0.57**	0.52**	0.26**	1												
SQ1	0.38**	0.25**	0.24**	0.48**	0.55**	0.46**	0.23**	0.52**	0.48**	0.31**	1											
SQ2	0.57**	0.58**	0.22**	0.47**	0.55**	0.58**	0.54**	0.59	0.43**	0.51**	0.43**	1										
SQ3	0.46**	0.54**	0.52**	0.55**	0.59**	0.59**	0.59**	0.54**	0.51**	0.58**	0.50**	0.42**	1									
SQ4	0.50**	0.43**	0.53**	0.55**	0.55**	0.58**	0.52**	0.57**	0.59**	0.43**	0.59**	0.43**	0.42**	1								
SQ5	0.47**	0.53**	0.48**	0.50**	0.55**	0.31**	0.28**	0.24**	0.54**	0.34**	0.29**	0.42**	0.50**	0.42**	1							
SM1	0.21**	0.53**	0.48**	0.52**	0.36**	0.50**	0.30**	0.37**	0.55**	0.45**	0.32**	0.46**	0.45**	0.41**	0.43**	1						
SM2	0.23**	0.54**	0.54**	0.56**	0.28**	0.35**	0.23**	0.24**	0.52**	0.40**	0.58**	0.52**	0.40**	0.42**	0.41**	0.55**	1					
SS1	0.43**	0.45**	0.55**	0.46**	0.32**	0.58**	0.52**	0.52**	0.60**	0.52**	0.49**	0.45**	0.52**	0.53**	0.52**	0.50**		1				
SS2	0.44**	0.65**	0.55**	0.33**	0.34**	0.56**	0.57**	0.50**	0.69**	0.35**	0.59**	0.43**	0.36**	0.38**	0.63**	0.48**	0.45**	0.62**	1			
SS3	0.32**	0.43**	0.54**	0.36**	0.35**	0.42**	0.55**	0.48**	0.57**	0.38**	0.69**	0.44**	0.38**	0.46**	0.43**	0.43**	0.57**	0.54**	0.45**	1		
SS4	0.23**	0.58**	0.50**	0.35**	0.36**	0.44**	0.63**	0.43**	0.53**	0.33**	0.46**	0.52**	0.47**	0.55**	0.58**	0.53**	0.54**	0.56**	0.50**	0.53**	1	
SS5	0.48**	0.57**	0.56**	0.36**	0.54**	0.42**	0.47**	0.42**	0.46**	0.49**	0.48**	0.57**	0.36**	0.43**	0.50**	0.46**	0.53**	0.57**	0.52**	0.52**	0.55**	1

KMO : Measure of Sampling Adequacy = 0.918 Bartlett's Test of Sphericity : Chi-Square = 37704.909, df = 231, p = .000

Note. **$p \leq .01$, OV = Observed Variable

Table 4.23 The results of the analysis of the validity and the importance of the structural equation model of factors affecting an SRT passenger's decision to use passenger train service in Thailand according to the hypotheses

Latent Variable	Observed Variable	Component Weight Values			
		b_{sc}	Standard Error	t-statistics	Coefficient of Determination (R^2)
OI	OI1	0.61**	0.04	22.91	0.58
	OI2	0.66**	0.05	24.01	0.59
	OI3	0.60**	0.05	20.64	0.58
SQ	SQ1	0.74**	<-->	<-->	0.64
	SQ2	0.69**	0.06	20.49	0.62
	SQ3	0.66**	0.06	20.49	0.59
	SQ4	0.68**	0.06	20.71	0.57
	SQ5	0.60**	0.06	20.64	0.58
SM	SM1	0.67**	<-->	<-->	0.64
	SM2	0.65**	0.06	19.53	0.57
SS	SS1	0.72**	<-->	<-->	0.53
	SS2	0.68**	0.06	22.52	0.54
	SS3	0.70**	0.06	21.76	0.68
	SS4	0.71**	0.06	22.92	0.70
	SS5	0.67**	0.06	20.62	0.54
SUD	SUD1	0.73**	<-->	<-->	0.68
	SUD2	0.71**	0.06	10.31	0.65
	SUD3	0.70**	0.07	22.24	0.62
	SUD4	0.73**	0.05	21.56	0.67
	SUD5	0.68**	0.07	19.52	0.66
	SUD6	0.69**	0.06	19.47	0.58
	SUD7	0.72**	0.07	22.53	0.67
Chi-Square = 2.23, df = 16, p = 0.99, χ^2/ df = 0.13, RMSEA = 0.00, RMR = 0.00, GFI = 0.99, AGFI = 0.99					

Note. **p ≤ .01, b_{sc} refers to standardized component weights. The symbol "<-->" indicates that it is a bidirectional relationship. Standard errors (SE) and t-values are absent because they are not reported for the specified parameter estimates.

Table 4.23 details the goodness-of-fit test for the SEM factors influencing an SRT passenger's decision to use passenger train services in Thailand. Results revealed that the Chi-Square value = 2.23, df = 16, and the *p*-value = 0.00, with the Chi-Square value χ^2 not significantly differing from zero statistically.

Additionally, the following values were lower than the suggested value of ≤ 0.05 (Hu & Bentler, 1999); RMSEA = 0.00 and RMR = 0.00. Schumacker and Lomax (2016) have also advised that GFI, AGFI, NFI, and CFI values should all be ≥ 0.90. Therefore, the values met the established criteria with the study's GFI = 0.99 and AGFI = 0.98. The χ2/df value was less than 2 (χ2/df = 0.13), indicating that the SEM fits well with the data (Tabachnick & Fidell,

2007). The standardized weights of all latent variables are also positive and significantly different from zero at the 0.01 significance level.

In addition, the coefficient of determination (R^2) that explains the shared variance of the observed variables ranges from 0.58 to 0.59 for external latent variables and from 0.53 to 0.68 for internal latent variables.

Table 4.28 presents the statistics analyzing the influence within the SEM of factors influencing an SRT passenger's decision to use passenger train services in Thailand.

Table 4.24 Statistics for analyzing the internal influence within the structural equation model of factors affecting an SRT passenger's decision to use passenger train services in Thailand according to the research assumptions

Effect variables	R^2	Effect	Cause variables			
			SQ	SM	SS	OI
SQ	0.42	DE	-	-	-	0.59**
		IE	-	-	-	-
		TE	-	-	-	0.59**
SM	0.50	DE	0.28**	-	-	0.53**
		IE	-	-	-	0.25**
		TE	0.28**	-	-	0.78**
SS	0.64	DE	0.56**	0.35**	-	0.42**
		IE	0.26**	-	-	0.26**
		TE	0.82**	0.35**	-	0.68**
SUD	0.71	DE	0.54**	0.27**	0.67**	0.36**
		IE	0.35**	0.26**	-	0.28**
		TE	0.89**	0.53**	0.67**	0.64**

Note. **p ≤ .01, DE stands for Direct Effect, IE stands for Indirect Effect, TE stands for Total Effect, "-" symbol denotes the absence of a parameter according to the research assumptions.

Table 4.24 presents the statistical analysis of the internal influences within the structural equation model (SEM) regarding factors influencing passengers' decision to use railway services in Thailand based on the assumptions.

The table shows the coefficients of determination (R^2) and the effects of variables on each other. The variables are as follows: SQ (service quality), SM (service motivation), SS (service satisfaction), and SUD (service use decision). The table presents the relationships between these variables and their direct effects (DE), indirect effects (IE), and total effects (TE).

The coefficients of determination (R^2) indicate the proportion of variance explained by the predictor variables, with the R^2 for SUD being 0.71, meaning that the other variables in the model can explain 71% of the variance in SUD.

The table also includes statistical significance denoted by **p ≤ .01. This indicates that the reported coefficients are statistically significant at the 0.01 significance level. The absence of a parameter indicates that it is not included in the research assumptions.

When considering the total effects on the decision to use railway services, it is found that the variable service quality (SQ) has the highest overall influence with a magnitude of 0.89. It is followed by service satisfaction (SS) with a total effect of 0.67, organizational image (OI) with a total effect of 0.64, and service motivation (SM) with a total effect of 0.53.

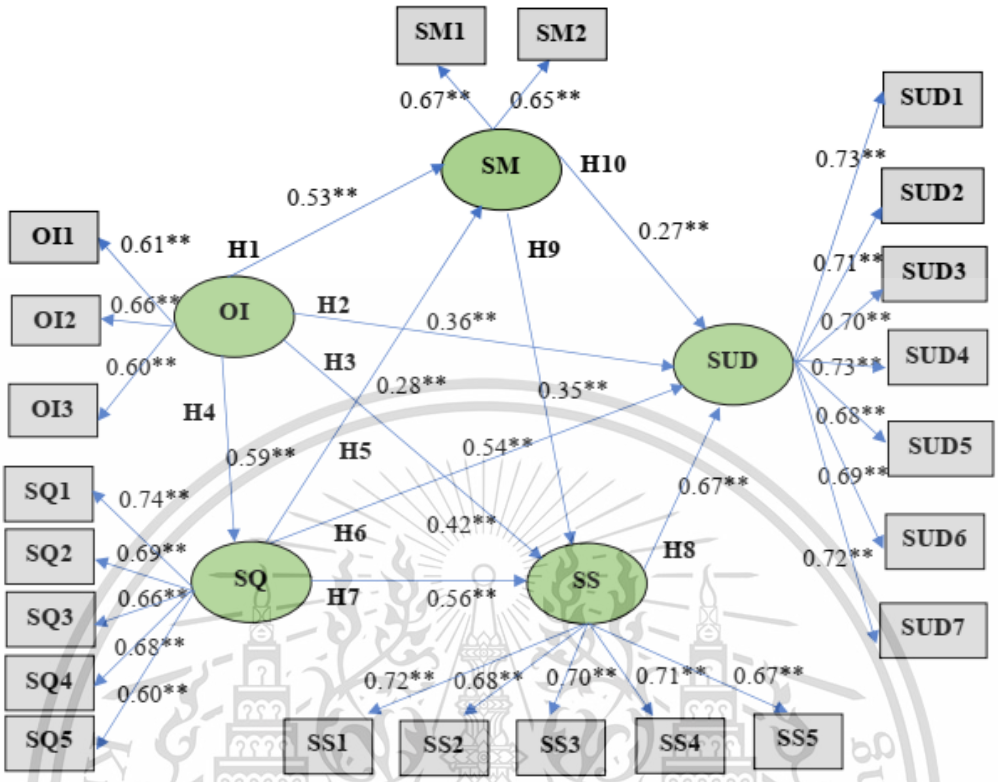
Furthermore, when examining the direct and indirect effects on the decision to use passenger train services (SUD), it was observed that the variables mentioned above are influenced by the variables of service satisfaction (SS), service quality (SQ), organizational image (OI), and service motivation (SM) with indirect effects of 0.67, 0.54, 0.36, and 0.27, respectively. These effects are statistically significant at the 0.01 level.

Additionally, the decision to use passenger train services (SUD) is also influenced indirectly by service quality (SQ), organizational image (OI), and service motivation (SM), with indirect effects of 0.35, 0.28, and 0.26, respectively. These effects are statistically significant at the 0.01 level.

Apart from the direct and indirect effects on the decision to use the SRT passenger train in Thailand (SUD), other variables receive direct and indirect influences. The variable service quality (SQ) directly influences the organizational image (OI) variable with a magnitude of 0.59. Additionally, the service satisfaction (SS) variable receives a direct influence from both the organizational image (OI) and service quality (SQ) variables, with magnitudes of 0.53 and 0.28, respectively. These effects are statistically significant at the 0.01 level. and the variable service quality (SQ) indirectly influences the organizational image (OI) variable with a magnitude of 0.25. These effects are statistically significant at the 0.01 level.

Furthermore, the service satisfaction (SS) variable is indirectly influenced by the service quality (SQ), organizational image (OI), and service motivation (SM) variables, with magnitudes of 0.56, 0.42, and 0.35, respectively. These effects are statistically significant at the 0.01 level. Additionally, the service satisfaction variable is indirectly influenced by the service quality (SQ) and organizational image (OI) variables, with an effect size of 0.26, statistically significant at the 0.01 level.

Based on the developed structural equation model of factors influencing the decision to use SRT passenger train services in Thailand, it was found that the service quality (SQ) variable had the highest impact on the decision to use passenger train services. It is followed by the variables service satisfaction (SS), organizational image (OI), and service motivation (SM), respectively (Figure 4.6).



Chi-Square = 2.23, df = 16, p = 0.99, $\chi 2$/ df = 0.13,

RMSEA = 0.00, RMR = 0.00, GFI = 0.99, AGFI = 0.99, **=p ≤ .01

Figure 4.6 Model Fit Assessment for Decision-Making Factors Affecting the Use of SRT Passenger Train Services in Thailand

From the analysis of the structural equation model (SEM) for the decision-making factors affecting the use of passenger train services in Thailand, the researchers present the statistical significance level for each variable within the conceptual framework in Table 4.24 and Figure 4.6. Therefore, the researchers summarize the statistically significant results of each variable and its latent components, as shown in Table 4.24, following the conceptual framework of the research.

Table 4.25 Statistical significance levels of latent and observed variables in the study

Latent Variables	Observable Variables	Statistical Significance Level
Organizational Image (OI)	Information/Public Relations (OI1)	$p \leq .01$
	Brand Image (OI1)	$p \leq .01$
	Service Image (OI1)	$p \leq .01$
Service Quality (SQ)	Tangibles/Appearance (SQ1)	$p \leq .01$
	Reliability and Trustworthiness (SQ2)	$p \leq .01$
	Responsiveness (SQ3)	$p \leq .01$
	Assurance (SQ4)	$p \leq .01$
	Empathy (SQ5)	$p \leq .01$
Service Motivation (SM)	Emotion (SM1)	$p \leq .01$
	Reasoning (SM2)	$p \leq .01$
Service Satisfaction (SS)	Consistent Service (SS1)	$p \leq .01$
	Timely Service (SS2)	$p \leq .01$
	Adequate Service (SS3)	$p \leq .01$
	Continuous Service (SS4)	$p \leq .01$
	Progressive Service (SS5)	$p \leq .01$
Service Use Decision (SUD)	Product (SUD1)	$p \leq .01$
	Price (SUD2)	$p \leq .01$
	Place (SUD3)	$p \leq .01$
	Marketing Promotion (SUD4)	$p \leq .01$
	Personnel (SUD5)	$p \leq .01$
	Process (SUD6)	$p \leq .01$
	Physical Environment (SUD7)	$p \leq .01$

Based on Table 4.25 and the analysis of the Structural Equation Model (SEM) in this study, the researchers determined that the flowing latent variables and their observed variables reached statistical significance:

Organizational Image (OI):

Observable variables: public relations/information (O11), brand image (O12), and service image (O13). Statistically significant at $p \leq .01$.

Service Quality (SQ):

Observable variables: tangibles/appearance (SQ1), reliability and trustworthiness (SQ2), responsiveness (SQ3), assurance (SQ4), and empathy (SQ5) Statistically significant at $p \leq .01$.

Service Motivation (SM):

Observable variables: emotion (SM1) and reasoning (SM2). Statistically significant at $p \leq .01$.

Service Satisfaction (SS):

Observable variables: consistent service (SS1), timely service (SS1), adequate service (SS1), continuous service (SS1), and progressive service (SS1).

Statistically significant at $p \leq .01$.

Service Use Decision (SUD):

Observable variables: product (SUD1), price (SUD2), place (SUD3), marketing promotion (SUD4), personnel (SUD5), service process (SUD6), and physical environment (SUD7) Statistically significant at $p \leq .01$.

From Chapter 1's review of the literature and associated theory, the researchers defined ten hypotheses as depicted in the study's final SEM in Figure 4.7 and as detailed in Table 4.26. The researcher found that the study results were consistent with the hypotheses. The details are as follows:

Table 4.26 The research hypotheses, their testing results, and consistency

Number	Research Hypotheses	Hypotheses Test Results	Consistency
H1	Organizational image (OI) directly influences service motivation (SM).	direct influence statistically significant at the .01 level	consistent with the research hypothesis
H2	Organizational image (OI) directly influences SRT passenger train service use decision (SUD).	direct influence statistically significant at the .01 level	consistent with the research hypothesis
H3	Organizational image (OI) directly influences service satisfaction (SS).	direct influence statistically significant at the .01 level	consistent with the research hypothesis
H4	Organizational image (OI) directly influences service quality (SQ).	direct influence statistically significant at the .01 level	consistent with the research hypothesis
H5	Service quality (SQ) directly influences service motivation (SM).	direct influence statistically significant at the .01 level	consistent with the research hypothesis
H6	Service quality (SQ) directly influences SRT passenger train user decision (SUD).	direct influence statistically significant at the .01 level	consistent with the research hypothesis
H7	Service quality (SQ) directly influences service satisfaction (SS).	direct influence statistically significant at the .01 level	consistent with the research hypothesis
H8	Service satisfaction (SS) directly influences SRT passenger train user decision (SUD).	direct influence statistically significant at the .01 level	consistent with the research hypothesis

Table 4.26 (continued)

Number	Research Hypotheses	Hypotheses Test Results	Consistency
H9	Service motivation (SM) directly influences service satisfaction (SS).	direct influence statistically significant at the .01 level	consistent with the research hypothesis
H10	Service motivation (SM) directly influences SRT passenger train user decision (SUD).	direct influence statistically significant at the .01 level	consistent with the research hypothesis

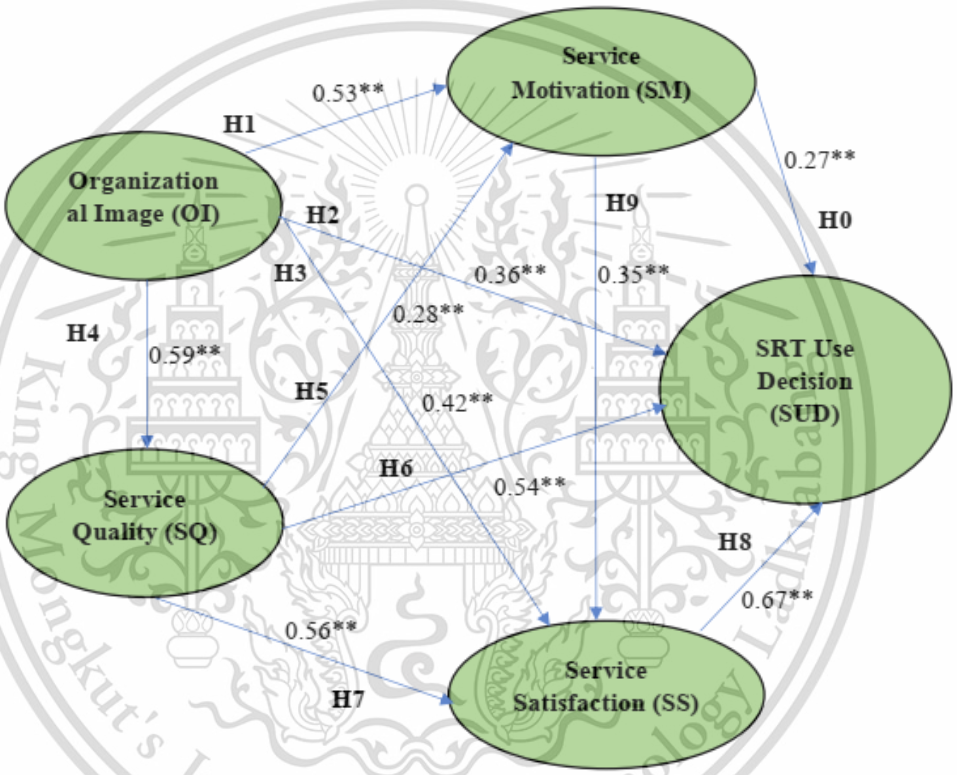


Figure 4.7 Structural Equation Model of Factors Affecting SRT Passengers to Use Passenger Train Services in Thailand

4.3 Summary

In analyzing the data of this study, the researchers received a total of 1,250 completed questionnaires, which accounts for 100% of the sample size. This sample size is deemed appropriate for conducting the structural equation model analysis and verifying the accuracy and validity of the data. The details presented are as follows:

1. Discriminant power values and the reliability of each variable group using Cronbach's Alpha.

2. Descriptive statistics demonstrating the general characteristics of railway service users.

3. Descriptive statistics of variables, including mean, standard deviation, skewness, and kurtosis for each variable.

4. Correlation analysis among observable variables.

5. Confirmatory factor analysis (CFA) and the assessment of measurement tools using factor analysis. Variables with factor loading greater than 0.5 are included in the factor model, and the results are presented with statistical values indicating their validity. The presented values include regression weights (factor loadings), squared multiple correlations (R^2), chi-square, degrees of freedom, χ^2/df, GFI, AGFI, RMR, and RMSEA.

6. The hypotheses were tested.

The researchers explain the first-order confirmatory factor (CFA) analysis using the LISREL program in this study. After the data was input into the first-order CFA analysis, the researchers needed to adjust the variables in the model to achieve a good model fit using the following methods:

1. The researchers examine the Modification Indices (MI) in the LISREL program. If there are large MI values between two observed variables, it indicates a significant relationship between the observed variables. The researchers should then establish the arrow indicating the relationship based on the highest MI value first (Jöreskog and Sörbom, 2010) and continue to modify the model until the LISREL program does not indicate any further issues.

2. The researchers consider the Standardized Residual Covariances in the LISREL program. If the values of these residuals fall outside the range of -2 to 2, it is considered advisable to exclude the variable associated with that residual from the analysis (Jöreskog and Sörbom, 2010). This is because the problematic observed variable or indicator may have a negative impact on the overall fit of the structural equation model.

3. The researchers evaluate the Regression Weights in conjunction with the MI and Standardized Residual Covariances in the LISREL program (Jöreskog and Sörbom, 2010). These values help assess the strength and significance of the relationships between the latent variables and their observed indicators.

4. By applying these procedures and considering the MI, Standardized Residual Covariances, and Regression Weights, the researchers refined and adjusted the model until a satisfactory model fit was achieved in the LISREL program.

5. Next, the researcher entered all variables into the Confirmatory Factor Analysis (CFA) measurement model, as described in Figures 4.1-4.5, using the LISREL program. This step aimed to obtain a correctly validated research instrument internationally accepted for further analysis using Structural Equation Modeling (SEM) called the Structural Model, as shown in Figure 4.6.

The results of the study indicated that:

1. The perception of organizational image, service quality, and service motivation to use SRT passenger train services were rated at the highest level in all aspects, while the decision-making of railway service users in Thailand was at a high level.

2. The measurement model of the variables was consistent with the theory. The observed variables had factor loadings ranging from 0.60 to 0.74, and the hidden variables had factor loadings ranging from 0.58 to 0.70.

3. The structural equation model analysis showed the following statistical values: Chi-square = 2.23, df = 16, χ^2/df = 0.13, GFI = 0.99, AGFI = 0.99, RMR = 0.00, and RMSEA = 0.00.

From the conclusion of the research, the following findings were made:

1. The findings from the study have led to a clearer understanding of passengers' decision to use the train service in Thailand. It also makes it possible to see the factors that affect passengers' decision to use the train service in Thailand in a more concrete way.

2. The findings obtained from the study provide an understanding of the study of structural equation models of organizational images. Service quality, service motivation, service satisfaction that affect passengers' decision to use the train service in Thailand. It can be used as a guideline for marketing studies for the railway, mass media or other types of transportation services, as well as develop research for the benefit of the nation as a whole.

3. To enable the top management of railways in Thailand to proactively and reactively adapt to the impacts and upgrade passenger train services in Thailand, to strengthen the capacity of transportation services to be more competitive, and to guide other relevant research, and to create new ideas. New and innovative knowledge that will be applied to various factors that will affect passenger satisfaction and loyalty to the train services of passengers in the targeted areas.

4. Ministry of Tourism and Sports, Ministry of Industry the Ministry of Transport can use the variables to develop policies, strategies, or measures to promote the quality of transportation services in all aspects of Thailand to be of higher quality.

CHAPTER 5

CONCLUSION AND DISCUSSION

In Chapter 4, the researcher presented the results of the quantitative data analysis and the analysis of the measurement model and structural equation model (SEM). The research hypotheses were tested, and the consistency of each variable within the theoretical framework was discussed. In Chapter 5, the researcher will summarize the findings and provide a comprehensive discussion. Additionally, practical implications and recommendations derived from the study will be presented. The key points include:

5.1 Summary of research results and research objectives

For this study, the researcher set the following research objectives:

to develop a structural equation model of factors influencing the decision to use SRT passenger train services in Thailand. The findings revealed that the causal variables positively influenced the decision to use passenger train services among passengers in Thailand, which is a novel academic discovery.

Moreover, the organizational image (OI) variable and service quality (SQ) variable, directly and indirectly, influenced an SRT's train passengers' decision to use their train services in Thailand at a statistically significant level of 0.01. Similarly, the service motivation (SM) and service satisfaction (SS) variables directly influenced the decision to use SRT passenger train services in Thailand at a statistically significant level of 0.01.

Furthermore, the model successfully explains 71.00% of the variance in the decision to use passenger train services among Thailand passengers at a statistically significant level of 0.01. When examining the structural equation model of the factors influencing the decision to use passenger train services among passengers in Thailand with the empirical data, it was found that the measurement model of the variables is consistent with the theoretical framework. The observed variables had factor loadings ranging from 0.60 to 0.74, indicating the weights of the latent constructs. The indicators' reliability, measured by the composite reliability values, ranged from 0.58 to 0.70.

The structural equation modeling analysis resulted in the following statistics: Chi-square = 2.23, df = 16, $\chi 2/df = 0.13$, GFI = 0.99, AGFI = 0.99, RMR = 0.00, RMSEA = 0.00. These statistics were evaluated based on the model fit criteria in Table 3.2 in Chapter 3.

Based on assessing these statistical values, the research findings indicate that the structural equation model of factors influencing the decision to use railway services among passengers in Thailand fits the data well and aligns with the theoretical model

5.2 Consistency with hypotheses between variables

The consistency testing of the ten research hypotheses and their latent variables was determined to be consistent in all ten hypotheses. The results are as follows:

5.2.1 Hypothesis 1: Organizational image (OI) directly influences service motivation (SM).

The study found that the SRT'S organizational image (OI) had a significant and direct impact on SM ($p \leq .01$), which supports Hypothesis 1. This outcome can potentially be attributed to the perception of the National Railways' image in the minds of individuals who harbor sentiments towards the organization. Such mental images may be derived from both direct and indirect experiences with the entity. This phenomenon is not unique to the National Railways but is applicable to any individual or institution, where expectations and beliefs must align with their emotional disposition. Personal motivation also plays a role, as it reflects an individual's cognitive appraisal of the organization, person, or institution.

According to Vanitdamrongsak (2012), the organizational image pertains to the perception of service users towards an organization and can encompass positive or negative viewpoints. These findings are in line with prior research by Prungranu (2016), who observed a positive correlation between organizational image and service quality among passengers utilizing the Southern railway line. Additionally, Amage and Thudam (2018) also reported a positive relationship between organizational image and service quality concerning rail and bus service passengers.

Therefore, the study's results support the hypothesis that organizational image (OI) directly influences service motivation (SM) to use passenger train services.

5.2.2 Hypothesis 2 Organizational image (OI) directly influences SRT passenger train user decision (SUD).

Organizational image (OI) directly influences SRT passenger train user decisions (SUD). ($p \leq .01$),This relationship can be attributed to the strategic planning and policy formulation implemented by the National Railways to shape public perceptions. Kotler (2010) emphasizes that a passenger's decision to utilize train services is closely tied to the company's image. In the marketing context, image refers to the perception people have of a company or its products, influenced by various controllable factors.

When considering the organizational image as a managerial element, it becomes imperative to clarify the image's categorization within marketing promotion, which comprises three distinct categories:

1. Product or Service Image: This represents the overall perception people have towards the company's products or services. Given that a company may offer a diverse range of products, types, and brands in the market, each product or service possesses its unique image under the auspices of a particular company.

2. Brand Image: This denotes the perception that individuals hold towards a specific brand or trademark. Typically, brand image is established through advertising and promotional endeavors, emphasizing the product's distinct features or selling points. Notably, even if multiple brands emanate from the same company, they need not share identical images, as brand image is intended to differentiate and define each brand's uniqueness.

3. Institutional Image: This pertains solely to the perception people have towards an organization or institution, focusing solely on the entity itself and excluding consideration of the products or services it offers. This type of image encompasses the management and operation of the organization, encompassing aspects such as personnel management systems (executives and employees), social responsibility, and public interests.

4. These findings align with the research conducted by Amage and Thudam (2018), who observed a positive correlation between OI and the decision-making process of 300 Thai passengers opting for Southern Railway services in Thailand. The authors also noted that customer satisfaction exerted the most substantial total effect (TE) on behavioral intentions. Likewise, Prungranu (2016) established that OI significantly influenced Thai passenger train users' decisions regarding train services.

5.2.3 Hypothesis 3: Organizational image (OI) directly influences service satisfaction (SS)

The study's results demonstrate a significant and direct impact of organizational image on service satisfaction ($p \leq .01$). This outcome can be attributed to the deliberate consideration of the Electric Authority of Thailand regarding the image's influence on service users' satisfaction. Service satisfaction stands as a pivotal variable in assessing an organization's work quality. As asserted by Millet (2012), satisfactory service involves the ability to fulfill service recipients' needs through the incorporation of five essential elements:

1. Equitable Service: This entails ensuring the fairness of service delivery, grounded in the principle of treating all individuals equally, devoid of discrimination. The provision of services adheres to uniform standards for all users.

2. Timely Service: It mandates that public services adhere to punctuality. Any failure to meet timely expectations is likely to result in dissatisfaction among service users.

3. Ample Service: This refers to the appropriate provision of public services in the respective geographical areas. Equitable and timely service becomes meaningful only when a sufficient number of services are available, ensuring fairness for all service users.

4. Continuous Service: This entails the consistent delivery of public services without interruption or inconsistency.

5. Progressive Service: It involves enhancing the quality and performance of public services, signifying increased efficiency or the capacity to undertake additional functions using the same resources.

These findings are congruent with the research conducted by Amage and Thudam (2018), who corroborated a positive relationship between organizational image and the delivery of service satisfaction to passengers utilizing Thailand's southern railway system

5.2.4 Hypothesis 4 Organizational image (OI) directly influences service quality (SQ).

The study reveals a significant and direct influence of organizational image on service quality ($p \leq .01$). This outcome can be attributed to the deliberate planning of the State Railway of Thailand in shaping its corporate image, alongside its emphasis on providing high-quality customer service. Lovelock (1996) characterizes service quality as a comprehensive concept encompassing both goods and services that prospective customers may avail. Furthermore, Zineldin (1996) highlights the linkage between service quality and customers' expectations after they become aware of the service and express a desire to avail it. The customer's evaluation and decision to utilize the service are closely intertwined with the perception of service quality.

Additionally, Schmenner (1995) posits that service quality is contingent upon the comparison between customers' expectations and their perceptions of the actual service received. If the perceived service falls short of expectations, it may lead to dissatisfaction. Conversely, if the perceived service exceeds expectations, it can foster a positive attitude.

These findings are in alignment with prior research conducted by Prungranu (2016), which demonstrated a relationship between organizational image and service quality among train service passengers. Moreover, Amage and Thudam (2018) found a positive correlation between organizational image and service quality for passengers utilizing the southern railway services in Thailand.

5.2.5 Hypothesis 5 Service quality (SQ) directly influences service motivation (SM).

The study's findings revealed a noteworthy correlation between service quality (SQ) and service motivation (SM) ($p \leq .01$). This direct influence can be attributed to the State Railway of Thailand's effective incorporation of quality elements into their management practices, aimed at inspiring and engaging service users. According to Lovelock's (2002) five service quality elements, the State Railway of Thailand ensures:

1. Tangible: The physical evidence and facilities of the hospitality business, including service counters, decorations, bathrooms, computers, parking facilities, and other tangible aspects, are meticulously maintained. Emphasis is placed on cleanliness, aesthetics, and functionality. For instance, stairways are designed with appropriate step heights, entrance doors are easily identifiable from the parking lot, and amenities like gardens and restrooms are well-equipped and well-kept.

2. Reliability: It refers to the organization's ability to deliver services that meet customer needs as promised, accurately, and in a timely manner, aligning with the intended objectives of those services.

3. Responsiveness: Swift assistance is prioritized to minimize customer waiting times. Service providers promptly attend to customer inquiries and needs, ensuring efficiency in service processes and employee responsiveness.

4. Assurance: Ensuring that service providers are knowledgeable, competent, friendly, and ethical in their service delivery to maintain high standards and safety for customers. Building customer confidence can involve adhering to corporate standards such as ISO 9001:2000 or securing awards from reputable institutions.

5. Empathy: This entails attentive care and service towards customers, understanding their problems and needs, and meeting them accordingly. Tailoring services and solutions to cater to individual needs and ensuring clear communication and understanding are essential.

5.2.6 Hypothesis 6 Service quality (SQ) directly influences SRT passenger train user decision (SUD).

The study's findings reveal a significant and direct influence of service quality (SQ) on passengers' decision to use train services in Thailand ($p \leq .01$). This relationship can be attributed to the State Railway of Thailand's recognition of the pivotal role of service quality in determining passengers' choices regarding train services. Notably, tangible aspects, which encompass the physical environment's beauty, cleanliness, and usability, emerged as the most substantial and influential variables impacting the decision-making process. Additionally, factors contributing to the creation of consumer value awareness include the reliability of service providers, such as the reputation of reliable shops, knowledgeable and informative employees, and the establishment of customer confidence. Ensuring that service providers are

knowledgeable, courteous, friendly, and ethical is essential to ensure customers receive services that meet established standards. These findings align with the concept and theory of service quality proposed by Parasuraman, Zeithaml, and Berry (1985).

Furthermore, this study's outcomes corroborate the research conducted by Ikani and Ikani (2013) in Iran, which identified safety and infrastructure as influential factors in train passenger decision-making. Additionally, Harrington and Parolin (1991) explored factors affecting the use of bus and rail services and emphasized the need for innovative marketing strategies to attract passengers to their respective services.

5.2.7 Hypothesis 7 Service quality (SQ) directly influences service satisfaction (SS).

The study's findings demonstrate a significant and direct impact of service quality (SQ) on service satisfaction (SS) ($p \leq .01$). This outcome can be attributed to the National Railways' strategic approach, which involves a combination of two variables to influence passengers' decision-making regarding train usage. As explained by Spector (2000), satisfaction emerges as a result of the evaluation process, where individuals compare the disparities between their expectations and the actual performance or delivery of the product or service. Additionally, Kotler and Keller (2006) define satisfaction as the level of positive feelings an individual holds towards a product or service.

These findings are consistent with the research conducted by Amage and Thudam (2018), who found that service quality significantly influences the satisfaction of passengers utilizing Thai Southern railway passenger services.

5.2.8 Hypothesis 8: Service satisfaction (SS) directly influences SRT passenger train user decision (SUD).

The study's findings reveal a significant and direct influence of service satisfaction (SS) on a train passenger's decision to use SRT passenger train services in Thailand ($p \leq .01$). This outcome can be attributed to the National Railways' emphasis on considering passenger satisfaction, which plays a crucial role in passengers' decisions to utilize the train service. Notably, two variables emerged as the most significant and impactful factors influencing the decision-making process:

Provision of Equitable Services: This entails treating all users equally, applying the same service standards to every individual without any discrimination. Ensuring fairness in service provision is vital.

Continuous Service: Consistency in train service delivery is another important factor. The provision of train services should remain uninterrupted and consistent to inspire confidence and satisfaction among passengers.

These three variables align with Millet's (2012) concept of service quality, which emphasizes the importance of providing satisfactory service that fulfills the needs of service recipients.

These findings corroborate the research conducted by Amage and Thudam (2018), who also found that service satisfaction significantly impacts the satisfaction of Thai southern railway service users.

5.2.9 Hypothesis 9 Service motivation (SM) directly influences service satisfaction (SS).

The study's findings reveal a significant and direct influence of service motivation (SM) on train users' decision to use the train service in Thailand ($p \leq .01$). As Domjan (1996) aptly describes, motivation represents a state in which an individual consciously engages in a specific behavior or activity to achieve personal goals. Similarly, Walter (1978) defines motivation as an internal driving force within a person, leading to purposeful actions and behaviors. Loundon and Bitta (1988) argue that motivation is an internal state that serves as a force propelling the body towards a chosen goal, often an existing goal within the individual's environment. These findings align with the research conducted by Ikani and Ikani (2013), who demonstrated that service motivation plays a significant role in passenger satisfaction with rail transport services.

5.2.10 Hypothesis 10 Service motivation (SM) directly influences SRT passenger train user decision (SUD).

The study's findings indicate a significant and direct impact of service motivation (SM) on commuter decisions to use the SRT passenger train service in Thailand ($p \leq .01$). This outcome can be attributed to the National Railways' deliberate consideration of motivation as a crucial factor in influencing passengers' choices regarding the train service. Notably, the most substantial variable affecting the decision to use the train service was the emotional factor, which is motivated by buyers' rational considerations before making a purchase. This suggests that passengers are influenced by both emotional and rational factors when deciding to use the train service.

Both emotional and rational variables are considered important in accordance with Lovell's (1980) concept of service motivation, which posits that motivation is the process that induces or convinces an individual to strive to fulfill specific needs.

These findings align with the research conducted by Ikani and Ikani (2013), who also found that service motivation significantly impacts train service commuters.

5.3 Academic Breakthroughs from Research

The results of this study A new academic discovery are:

1) The relationship between organizational image, service quality, service motivation, service satisfaction, and service use decision-making regarding railway service usage by passengers in Thailand was 71% ($p < 0.001$). This finding can be further developed in academic disciplines such as research, management, and strategic planning. It can be effectively applied in the railway industry, both in the context of freight transportation services and passenger transportation services.

These findings are consistent with the research conducted by Ikani and Ikani (2013), which found that service quality influences the decision-making of transportation service users. Harrington and Parolin (2015) also found that service quality influences passenger and railway service usage. Furthermore, the research by Amage and Thudam (2018) found that service quality, corporate image, and customer satisfaction affect the decision of passengers to use southern railway services in Thailand.

2) Based on the research findings, it was discovered that the service quality variables collectively influence the decision of Thai passengers to use railway services, with a total effect value of 0.89. Additionally, service quality directly affects the service motivation to use the service and satisfaction with the service, with respective total effect values of 0.28 and 0.82. Furthermore, service quality indirectly influences the decision of Thai passengers to use passenger train services through the motivation to use the service and satisfaction with the service.

These results are consistent with the research from Ikani and Ikani (2013), which found that the quality of service affects the decision of rail transport service users. Harrington and Parolin (2015) added that service quality affects bus and train service use. Amage and Thudam (2018) found that service quality affects the decision of passengers to use Thailand's southern train service.

To ensure sustainable decision-making regarding the usage of passenger train services by passengers in Thailand, the management of the State Railway of Thailand must prioritize the service quality variables as they have the highest cumulative impact. Therefore, the management should focus on tangible aspects that create a positive impression since they carry the highest weight and emphasize trust-building. They should also provide convenient and efficient services that cater to the passengers' needs, employ technology for convenience, establish good customer relations, take care and show concern for customers, and have confidence in the railway service personnel's knowledge, competence, friendliness, and ethical behavior. These efforts will instill confidence in passengers that they will receive services that meet the standards.

3) The research results found that customer satisfaction with the service significantly influences the decision to use railway services in Thailand, with an effect size of 0.67. This finding is consistent with the research conducted by Amage and Thudam (2018), which found that customer satisfaction impacts passenger satisfaction with the Southern railway line.

Therefore, the management of the State Railway of Thailand must consistently provide fair and equitable service, emphasizing timely and punctual service to enhance customer satisfaction. Adequate service should be provided on each railway line, and efforts should be made to improve the quality and performance of employees to ensure sustained and continuous effectiveness. Creating customer satisfaction through these measures will encourage passengers to participate and contribute positively, leading to favorable decisions to use railway services in Thailand.

4) According to the research results, it was found that the corporate image variable had a total influence on the decision to use the train service of passengers in Thailand with an influence size of 0.63. Additionally, Amage and Thudam (2018) found that organizational image positively correlates with the decision to use southern passenger services in Thailand.

Therefore, the management of the State Railway of Thailand must work on communication between the organization and the public, which reflects the meaning, opinions, news, and various facts to the group of railway passengers. It is essential to create an image that reflects the product's characteristics and emphasizes specific features or selling points accessible to passengers. Providing diverse channels for service delivery and, importantly, the image of management should involve friendly and good interpersonal relationships with passengers, enabling them to provide information effectively.

5) The research findings found that the service motivation in using services has a cumulative influence on passengers' decision to use railway services in Thailand, with a magnitude of influence equal to 0.53. This is consistent with the research conducted by Ikani and Ikani (2013), which found that motivation in using services has an impact on the decision to use railway services by service users.

Therefore, the management of the State Railway of Thailand must create a sense of shared enthusiasm and utilize personal feelings in selecting things that can meet the needs of passengers, such as fear, friendliness, and pride. Railway passengers will use attitudes to make choices in order to maximize satisfaction. Thus, creating emotional motivation will be crucial in influencing the decision to use railway services.

Additionally, adherence to principles and rationality will influence railway passengers' decision to use the service. Railway passengers make decisions based on maximizing benefits or creating maximum satisfaction, such as satisfaction with the product itself from promotional activities or passengers' target goals, which are influenced by overall objectives, such as price, product quality, and service convenience.

Organizational Image Creating a brand image that leaves a strong impression or evokes a clear perception while also generating the desire to use SRT passenger train services among groups of passengers.

Service Quality Creating a brand image that leaves a strong impression or evokes a clear perception while also generating the desire to use SRT passenger train services among groups of passengers.

Service Motivation Service quality entails understanding and recognizing the needs of SRT train passengers while simultaneously building passenger service confidence concretely. This includes the creation of reliability and meeting each passenger's needs. Confidence is key.

Service Satisfaction Guidelines are in place to provide convenience to passengers and meet their needs. This includes consistent service, timely service, sufficient service, continuous service, and progressive service, all aimed at creating a positive impression or satisfaction among passengers.

Service Use Decision The emphasis is on creating a lasting impression for passengers to influence their decision to use the service, providing convenience, having a welcoming atmosphere, being punctual, and offering emotional value to those who utilize the passenger train service.

It is critical to establish clear communication channels and mechanisms to enhance understanding and meet the needs of railway passengers. The State Railway of Thailand should focus on the following aspects:

Customer Understanding: Conduct regular surveys, interviews, and feedback collection from passengers to gain insights into their preferences, expectations, and concerns. This will help the organization understand the demographics, travel patterns, and specific requirements of different passenger groups.

Service Personalization: Based on the gathered information, develop strategies to personalize the services offered to passengers. This can include providing options for seat preferences, catering to particular needs or preferences, and offering tailored promotions or discounts to specific customer segments.

Transparent and Honest Communication: Establish open and transparent communication channels to build trust and confidence among passengers. This can be achieved through clear and accurate information dissemination about schedules, fares, service updates, and any changes or disruptions. Proactive communication during incidents or delays will help manage passenger expectations and minimize dissatisfaction.

Responsive Customer Service: Implement a robust customer service system that is easily accessible to passengers. This can include dedicated customer service helplines, online chat support, and responsive social media channels to promptly address inquiries, complaints,

and suggestions—train staff to handle customer interactions with empathy, professionalism, and a solution-oriented approach.

Continuous Improvement: Regularly evaluate and analyze customer feedback, suggestions, and complaints to identify areas for improvement. Use this information to refine services, address recurring issues, and introduce new features or amenities that align with passenger expectations. Demonstrate a commitment to ongoing improvement and actively communicate the steps to enhance the passenger experience.

By focusing on these aspects, the State Railway of Thailand can foster understanding, meet customer expectations, build trust, and ensure responsiveness to passenger needs when using railway services.

To create a strong impression and a clear perception, as well as to evoke emotions and generate the desire to use railway services among a group of passengers, several strategies can be employed:

Consistent branding: Develop a consistent and recognizable brand image for the railway service. This includes designing a visually appealing logo, choosing consistent colors and typography, and applying them consistently across all communication channels.

Quality service: Ensure the railway service consistently provides high-quality and reliable services. This includes maintaining clean and comfortable train cars, ensuring punctuality, and providing excellent customer service.

Engaging communication: Develop effective communication strategies to engage with passengers. This can be done through numerous channels, such as social media, websites, mobile apps, and traditional advertising. The communication should be informative, engaging, and tailored to the target audience.

Personalization: Customize the service experience to meet the individual preferences and needs of passengers. This can include offering personalized recommendations, special offers, or discounts and creating a sense of exclusivity for frequent travelers.

Positive customer experiences: Focus on delivering positive and memorable customer experiences. This can be achieved through attentive and friendly staff, efficient ticketing and boarding processes, and providing additional amenities or services on board.

Community engagement: Foster a sense of community among railway passengers. This can be done by organizing events, supporting local initiatives, and actively listening to feedback and suggestions from passengers to improve the service continuously.

Partnerships and collaborations: Collaborate with other businesses or organizations to enhance the overall experience for passengers. This can include partnerships with local attractions, hotels, or transportation services to offer integrated travel packages or seamless connections.

By implementing these strategies, a railway service can create a solid and compelling brand image, evoke positive emotions, and meet the desires and expectations of passengers, ultimately encouraging their preference for and usage of the railway service.

5.4 Limitation

Methodological limitations of the study in this study Details are as follows:

1. In this study, it is quantitative research by collecting data from train passengers in Thailand who use the service at each train station and assuming that it is representative of the sample unit of that station. To normalize the distribution of the data and to analyze the structural equation model to have a more robust model, the researcher used a 5-level estimation scale questionnaire, so that the sample who responded to the questionnaire may not focus on real feelings.

2. This research has limited data collection in the analysis of passenger train service decisions in Thailand. The sample group is train passengers in Thailand, but with the context of travel nowadays, the passengers at each station per station have a significant effect. Therefore, the researcher expects data from train passengers. The contexts and perspectives of each person should be studied together in order to discover variables or factors that will create both management potential and long-term railway management potential for the mutual benefit of the organization and the train passengers who use the service.

5.5 Application of Research Results and Models

Based on the study's results, the State Railway of Thailand (SRT) can utilize them to develop innovative strategies for long-term decision-making by railway service users in Thailand. The following points are highlighted:

1. Organizational image development, service quality, service motivation, and service satisfaction are significant variables that directly and indirectly influence the decision-making of train passengers in Thailand. Therefore, the SRT must accelerate development in these areas, as they play a vital role in shaping passengers' decision-making process and ensuring the organization's long-term efficiency.

2. The study reveals that service quality, directly and indirectly, affects the decision-making of railway passengers in Thailand. It is mediated by two components: emotions and reasoning. Additionally, service satisfaction is influenced by five components: timeliness, adequacy of service, consistency in service, continuous service, and progressive service. These components can be utilized to enhance the efficiency and effectiveness of the organization by incorporating them into the organizational policies.

Railway management should encourage employees to listen to feedback and suggestions, fostering familiarity and acceptance from passengers. This can be achieved through communication channels such as service centers and LINE applications or by introducing additional avenues and approaches to connect employees with passengers to exchange information and knowledge. These efforts aim to motivate passengers, build trust, ensure service quality, and create satisfaction, ultimately leading to continuous decisions favoring passenger train services in Thailand.

5.6 Research Recommendations

In the section on research recommendations, the researcher divides the content into three parts: academic recommendations, practical approaches to innovation and industry, and recommendations for future research. The details are as follows:

5.6.1 Academic recommendations

This study has yielded valuable theoretical findings, presenting new knowledge. The researcher would like to provide the following details:

Based on the study results, there is a correlation between service quality and decision-making regarding the use of passenger train services by passengers in Thailand, with a total influence value of 0.89. This is a new discovery, as the literature review found no studies on this specific aspect. Also, service quality was determined to indirectly influence passengers' decision-making through factors such as service motivation and service satisfaction with the provided service. This indicates that service quality is crucial for passengers' usage of passenger train services in Thailand, both for direct and indirect routes.

Since service quality is essential for creating a favorable and satisfying experience for passengers regarding products or services in various aspects, it significantly affects the success of an organization or business. Creating value in consumers' eyes or inspiring and satisfying passengers leads to positive decision-making behavior in using SRT passenger train service and retaining existing passengers.

This study's findings reveal that in managing Thailand's railway operations and formulating strategic plans in the transportation industry, organizational image variables directly and indirectly, affect passengers' decision-making regarding the use of passenger train services in Thailand. This study's data can be utilized to develop the organizational image as a guideline for improving service organizations in Thailand's railway industry. This development aims to benefit the country by enhancing the efficiency of the service system, which, in turn, contributes to the development of technology to be more efficient and elevates the quality and standards of service.

5.6.2 Proposed Strategies for Implementing Innovation and Industry Development

Therefore, the researchers propose that the State Railway of Thailand (SRT) should have management and strategic planning with the following recommendations:

In the current business environment, which is highly competitive and driven by innovative technology to enhance organizational efficiency, the SRT should adopt service innovation in its organizational management to create a positive image for the organization. This will lead to improved service quality, customer motivation to use the service and customer satisfaction.

For example, innovative customer service channels can be implemented to provide customers with the best quality service, and customers can instantly contact and provide feedback or suggestions through mobile applications. This flexibility in communication without limitations of location and time is a competitive advantage.

Nowadays, technology is widely used for customer service through online platforms 24/7. While telephone service is available to report issues, the researcher explains that customer behavior has shifted towards online interactions more than calling employees. Although both methods can address issues, the impression and strategic planning of the SRT differ. Therefore, the management can utilize the findings from this research to plan and develop a workforce that delivers excellent service, thus significantly influencing passengers' decision-making in using SRT passenger train services.

In the business context of service provision or passenger care at every station, SRT management can apply organizational image-building theories, service quality, customer motivation, and customer satisfaction to manage and operate the SRT. This will allow SRT management and staff to provide passengers high-quality service and foster cooperation between employees and passengers. This will increase passengers' decision-making to use the passenger train service at each station while enhancing the operational efficiency potential.

Training programs and activities should be organized to equip employees with knowledge of service quality development. This will contribute to delivering excellent service, satisfying customers, and building confidence, resulting in a systematic and continuous service quality. This factor is crucial and influential in passengers' decision-making to use railway services in Thailand.

5.6.3 Recommendations for further research

Based on this study, the researchers have examined variables that influence the decision-making process of railway service usage by passengers in Thailand, and these variables together explain 71% of the variance. However, other variables may have yet to be studied in this research. Therefore, in future studies, consideration should be given to studying

additional variables that have been previously investigated, such as service innovation, customer expectations, and customer value perception.

It is also advisable to conduct a causal-level analysis of variables that influence the decision-making process of railway service usage by passengers in Thailand. This can be achieved by analyzing data at two levels: the managerial level and the passenger level. This comprehensive approach could provide a better understanding of the decision-making process of passengers in using passenger train services in Thailand, as there may be variables related to policies and management practices, as well as the leadership qualities of service providers. Moreover, a study could explore whether the hierarchical structural equation models of factors influencing the decision-making process of passenger train service usage in Thailand align with empirical data when different data are collected.

Finally, the research findings indicate that variables related to service quality have the highest overall influence. Therefore, focusing on research and development (R&D) in service quality is recommended. Additionally, adopting a participatory action research (PAR) approach can be beneficial in generating insights and decision-making regarding passenger train service usage in Thailand. This approach allows researchers and stakeholders to collaborate, achieving practical and actionable outcomes.

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APPENDICES

Appendix A:

Questionnaire

Appendix A:

Questionnaire

explanation This research is done courtesy of passengers using the train. In Thailand Your answers will be used numerically rather than specifically. The information is kept confidential and destroyed after it is developed into numbers.

Instructions Place a check mark √ in the box ❑ that best agreement.

Part 1 General information of the respondents

1.Gender

( ) Male ( ) Female

2.Age

( ) 20 years old or less ( ) 21–30 years of age

( ) 31-40 years of age ( ) 41-50 years of age

( ) 51-60 years of age ( ) 60 years or older

3. Marital Status

( ) Single ( ) Married

( ) divorced / widowed / seperated

4. Highest level of education

( ) Lower Bachelor's degree

( ) Bachelor's degree

( ) Master's degree

( ) Ph.D.

5. Monthly Income in Thai Baht

( ) less than or equal to 10,000 baht

( ) 10,001-20,000 Thai baht per month

( ) 20,001-30,000 Thai baht per month

( ) 30,001-40,000 Thai baht per month

( ) 40,001-50,000 Thai baht per month

( ) more than 50,000 baht

6. The average number of times each passenger used SRT passenger services each week

( ) Less than 3 times a week

( ) 3-5 times a week

( ) 6 - 8 times a week

( ) 9 - 10 times a week

( ) More than 10 times a week

Part 2 Questionnaire on the decision to use the SRT passenger train service in Thailand

Instructions: Place a check mark √ in the box ❑ that best agreement to your train opinion about using the SRT passenger train service.

5 = Highest 4 = High 3 =. Medium 2 = Low 1= . Lowest

Decision to use the SRT passenger train service items	**Level of Agreement**				
	5	**4**	**3**	**2**	**1**
Product					
1. There are a sufficient number of trains, routes and schedules for me and other passengers to use.					
2. The train coach size is comfortable for me and other passengers to use.					
3. The SRT passenger train coaches maintain a comfortable temperature when the coach is airconditioned.					
4. The SRT passenger train coaches are clean.					
5. There are an adequate number of train and routes serving each main station.					
6. The SRT train system has no problems.					
7. The SRT train system is safe.					
8. The SRT maintains enough service route covering important areas.					
9. The SRt is continuously expanding its service routes.					
10. There is an adequate amount of hand washing soap, water and alcohol gel at all SRT service points					
11. All passengers are screened using Thai Save Thai (TST) or other APPs.					

Decision to use the SRT passenger train service items	Level of Agreement				
	5	4	3	2	1
Price					
12. The price is reasonable for the distance.					
13. The price is reasonable for the speed of travel.					
14. The price is reasonable for the convenience of traveling.					
15. The price is reasonable for the quality of the railway system.					
16. The price is at an acceptable level.					
Place (Distribution Channels)					
17. There are a sufficient and convenient number of ticket offices and counters for SRT passengers.					
18. There are a sufficient number of ticket vending machines for SRT passengers.					
19. Each automatic ticket vending machine has clear explanation of the ticket purchase process. I THINK YOU SHOULD ADD "in foreign languages and Thai"					
20. The SRT system provides various convenient and alternative advance ticketing channels such as by phone, website, and smartphone applications which also reduces personal contact risk.					
Marketing Promotion (Promotion)					
21. SRT passenger train promotional prices are reasonable.					
22. The benefits obtained from using the card are appropriate.					
23. The SRT business partner benefits are appropriate. An example is special discounts riders can receive from their mobile network when topping up their ticket cards.					
People (Personnel/Staff)					
24. SRT station staff provides good advice and public relations.					
25. SRT station platform security personnel provide good service.					
26. SRT station staff are appropriately dressed.					
27. SRT station staff are polite and courteous					
28. All SRT station staff are given full-dose vaccination and ATK screening every 7 days.					

Decision to use the SRT passenger train service items	Level of Agreement				
	5	4	3	2	1
29 All officers or employees comply with UP-DMHTA measures with a person responsible for strictly monitoring and supervising the implementation of the measures.					
30. There is a risk screening for every officer or employee with Thai Safe Thai.					
31. All SRT station staff strictly follow DMHTA measures.					
Process					
32. The SRT system has a convenient E-Ticketing system.					
33. The SRT system uses a fast ticketing system.					
34. The SRT system service uses a first-come, first-served basis which does not discriminate between passengers.					
35. SRT staff are quickly able to solve train system failures and dealys.					
Physical Appearance (Physical Evidence)					
36. The SRT stations and platforms are safe.					
37. SRT stations provide for a plesant and comfortable environment.					
38. SRT station staff clean and disinfect each facility frequently.					
39. There are convenient shops and services within each SRT station.					
40. Each SRT station and platform displays an appropriate number of signs for things such as train fares, exit and entrance signs, and local area maps.					
41. Each SRT station provides facilities for the disabled.or passengers with large or numerous luggages.					
42. Each SRT station provides easy connection points to other public transportations systems such as buses, taxis, and light rail.					
43. Each SRT station provides easy connections to other commercial facilities such as shopping malls and hotels.					
44. Each SRT station provides a method in which passengers can avoid congestion and have appropriate distances between passengers when waiting for service.					
45. Each SRT coach only allows a maximum capacity of 75%.					
46. SRT train coach benches are properly arranged with respect to spacing measures. in order not to cause congestion.					
47. Station staff efficiently organize the flow of passengers, baggage claim, and proper spacing.					

Part 3 Questionnaire on the Organization Image

Instructions: Place a check mark √ in the box ❑ that best agreement to Organization Image

5 = Highest 4 = High 3 =. Medium 2 = Low 1= . Lowest

Organization Image Items	Level of Agreement				
	5	4	3	2	1
Information					
1. The railway has publicized news about the administration to the public.					
2. The Railway disseminates news and activities within the railway to users to be informed comprehensively and thoroughly.					
3. The railway has a variety of communication channels.					
4. Railways have outstanding publicity and uniqueness. Easy to remember					
5. Railways are publicized using modern technology for effective communication.					
Brand Image					
6. The SRT brand reflects the train system's uniqueness.					
7. The SRT is well known among travelers.					
8. The SRT brand gives a feeling of security when using the service.					
9. The SRT brand impresses passengers.					
10. The SRT system uses high quality materials and equipment.					
Goods or Services					
11. The SRT projects an image which is modern clean and safe.					
12. SRT staff project an image which is courteous, professional, non-dscrimitatory, honest, friendly and helpful.					
13. SRT service is in accordance with established standards.					
14. Products and services are unique and impressive.					
15. SRT service can be compared to the passenger train service of foreign countries					

Part 4 Questionnaire on the Service Quality

Instructions: Place a check mark √ in the box ❑ that best agreement to Service Quality

5 = Highest 4 = High 3 =. Medium 2 = Low 1= . Lowest

Service Quality Items	Level of Agreement				
	5	4	3	2	1
Tangile/Physical Evidence					
1. Each SRT coach is is clean and suitable for service.					
2. SRT staff uniforms are neat.					
3. SRT facility passenger service signs and symbols are beautiful.					
4. SRT facilities and trains meet passengers' needs.					
Reliability					
5. SRT trains are reliable and on schedule.					
6. SRT trains are safe.					
7. SRT train service is consistent.					
8. SRT facilities and trains provide adequate notification of rules and regulations at all levels.					
Responsiveness					
9. SRT personnel provide prompt passenger service requests.					
10. SRT personnel are friendly and courteous.					
11. SRT personnel provide services to passengers willingly.					
12. SRT personnel are enthusiastic in solving passenger problems.					
Assurance					
13. SRT personnel uniforms and dress are in accordance with the regulations.					
14. SRT personnel on trains are kowledeable and experienced.					
15. SRT personnel serve passengers with a smile.					
16. SRT personnel provide courteous train coach service.					
17. SRT personnel are honest.					
Empathy					
18. SRT personnel are willing to listen to passenger suggestions.					
19. When you have a need for help, SRT personnel are able to understand your needs correctly.					

Service Quality Items	Level of Agreement				
	5	**4**	**3**	**2**	**1**
20. SRT train personnel regularly attend to comfort and well-being of their coach passengers.					
21. SRT personnel are good at identifying and solving passenger issues and problems.					

Part 5 Questionnaire on the Service Motivation

Instructions: Place a check mark √ in the box ❑ that best corresponds to Service Motivation

5 = Highest 4 = High 3 =. Medium 2 = Low 1= . Lowest

Service Motivation	Level of Agreement				
	5	4	3	2	1
Emotion					
1. SRT passengers feel confident and trusting when they use all passenger train classes.					
2. SRT passengers feel relaxed no matter which passenger class they are in.					
3. Traveling by SRT train makes you feel like a new generation					
4. SRT train travel is fun.					
Reasoning					
5. SRT train travel is affordably priced.					
6. SRT train travel is safer than other modes of transportation.					
7. SRT train travel makes me feel comfortable during my journey.					

Part 5 Questionnaire on the Service Satisfaction

Instructions: Place a check mark √ in the box ❑ that best agreement to Service Satisfaction

5 = Highest 4 = High 3 =. Medium 2 = Low 1= . Lowest

Service Satisfaction Items	Level of Agreement				
	5	4	3	2	1
Service Equality					
1. SRT staff provides good service on a first-come, first-serve basis.					
2. SRT staff provides me services which are equal to others and non-discriminatory.					
Timely Service					
3. SRT train service is satisfying punctual, and consistent.					
4. There are an adequate numbers of trains each day to an adequate number of destinations.					
Adequate Service					
5. There are an adequate number of train ticket vending machines.					
6. There are an adequate number of train station staff at each train station.					
Continuous Service					
7. Each SRT station and pltforms provide a sufficient amount of singage including maps and entrance, exit or boarding points for each station.					
8. I am satisfied with the ease of my connection from SRT facilities to other public transport systems.					
Progressive Service					
9. I am satisfied with the SRT train route extensions.					
10. I am satisfied with the SRT train's development and technology system used in the train service.					

แบบสอบถามการวิจัย
เรื่อง การพัฒนาโมเดลสมการโครงสร้างของปัจจัยที่ส่งผลต่อ
การตัดสินใจใช้บริการรถไฟของผู้โดยสารในประเทศไทย

<u>คำอธิบาย</u>

การวิจัยในครั้งนี้เป็นการวิจัยที่ต้องอาศัยความอนุเคราะห์จากผู้โดยสารที่ใช้บริการรถไฟ ในประเทศไทย โดยที่คำตอบของท่านจะนำไปใช้ในลักษณะตัวเลขมากกว่าที่จะระบุเฉพาะเจาะจง ข้อมูลต่าง ๆ จะถูกเก็บไว้เป็นความลับและทำลายทิ้งหลังจากพัฒนาเป็นตัวเลขแล้ว

<u>คำชี้แจง</u>

กรุณาตอบคำถามนี้ทุกข้อโดยการกาเครื่องหมาย ✓ลงบนตัวเลขหรือในช่อง ที่ตรงกับความคิดเห็นของท่านมากที่สุด

ตอนที่ 1 ข้อมูลทั่วไปของผู้ตอบแบบสอบถาม

1. เพศ

( ) 1. ชาย ( ) 2. หญิง

2. อายุ

( ) 1. น้อยกว่าหรือเท่ากับ 20 ปี ( ) 2. 21–30 ปี
( ) 3. 31-40 ปี ( ) 4. 41-50 ปี
( ) 5. 51-60 ปี ( ) 6. มากกว่า 60 ปี

3. สถานภาพ

( ) 1. โสด ( ) 2. สมรส
( ) 3. หย่าร้าง/ หม้าย/ แยกกันอยู่

4. ระดับการศึกษาสูงสุด

( ) 1. ต่ำกว่าปริญญาตรี ( ) 2. ปริญญาตรี
( ) 3. ปริญญาโท ( ) 4. ปริญญาเอก

5. รายได้ต่อเดือน

( ) 1. ต่ำกว่าหรือเท่ากับ 10,000 บาท ( ) 2. 10,001-20,000 บาท
( ) 3. 20,001-30,000 บาท ( ) 4. 30,001-40,000 บาท
( ) 5. 40,001-50,000 บาท ( ) 6. มากกว่า 50,000 บาท

6. จำนวนครั้งที่ท่านใช้บริการรถไฟโดยเฉลี่ยต่อสัปดาห์

( ) 1. น้อยกว่า 3 ครั้งต่อสัปดาห์ ( ) 2. 3 - 5 ครั้งต่อสัปดาห์

( ) 3. 6 - 8 ครั้งต่อสัปดาห์ ( ) 4. 8 - 10 ครั้งต่อสัปดาห์

( ) 5. มากกว่า 10 ครั้งต่อสัปดาห์

ตอนที่ 2 ข้อมูลเกี่ยวกับการตัดสินใจใช้บริการรถไฟของผู้โดยสารในประเทศไทย

คำอธิบาย : โปรดใส่เครื่องหมาย ✓ ลงในช่องที่ท่านเห็นว่ามีความเห็นด้วยมากที่สุดโดย

5 = มากที่สุด 4 = มาก 3 = ปานกลาง 2 = น้อย 1 = น้อยที่สุด

รายการ	ระดับความคิดเห็น				
	5	4	3	2	1
ด้านผลิตภัณฑ์					
1. มีจำนวนขบวนรถไฟเหมาะสมกับผู้ใช้บริการ					
2. มีขนาดห้องโดยสารของรถไฟเหมาะสมกับผู้ใช้บริการ					
3. ห้องโดยสารของขบวนรถไฟมีอุณหภูมิเหมาะสม					
4. ห้องโดยสารของขบวนรถไฟมีความสะอาด					
5. ความถี่ของขบวนรถไฟที่วิ่งเข้าสู่สถานีสูงมีความเหมาะสม					
6. ระบบรถไฟไม่มีปัญหาขัดข้อง					
7. ระบบรถไฟมีความปลอดภัย					
8. มีเส้นทางให้บริการครอบคลุมพื้นที่สำคัญ					
9. มีการขยายเส้นทางการให้บริการอย่างต่อเนื่อง					
10. จุดบริการล้างมือด้วยสบู่และน้ำหรือเจลแอลกอฮอล์อย่างเพียงพอ					
11. ผู้โดยสารทุกคน มีการคัดกรองด้วย Thai Save Thai (TST) หรือ APP อื่นๆ					
ด้านราคา					
12. มีราคาเหมาะสมกับระยะทาง					
13. มีราคาเหมาะสมกับความรวดเร็วในการเดินทาง					
14. มีราคาเหมาะสมกับความสะดวกสบายในการเดินทาง					
15. มีราคาเหมาะสมกับคุณภาพของระบบรถไฟ					
16. มีราคาที่อยู่ในระดับที่สามารถยอมรับได้					
ด้านช่องทางการจัดจำหน่าย					
17. จำนวนของห้องจำหน่ายตั๋วโดยสาร มีความเพียงพอกับผู้ใช้บริการ					
18. จำนวนของเครื่องจำหน่ายตั๋วโดยสารอัตโนมัติ มีความเพียงพอกับผู้ใช้บริการ					

รายการ	ระดับความคิดเห็น				
	5	4	3	2	1
19. เครื่องจำหน่ายตั๋วโดยสารอัตโนมัติ มีคำอธิบายเกี่ยวกับขั้นตอนการซื้อตั๋วโดยสารอย่างชัดเจน					
20. มีช่องทางการจำหน่ายตั๋วโดยสารล่วงหน้าผ่านช่องทางต่างๆ เช่น ทางโทรศัพท์ เว็บไซต์ แอปพลิเคชัน เพื่อลดความเสี่ยงในการติดต่อสัมผัส					
ด้านการส่งเสริมการตลาด					
21. ราคาโปรโมชั่นมีความเหมาะสม					
22. สิทธิประโยชน์ที่ได้รับจากการใช้บัตรมีความเหมาะสม					
23. สิทธิประโยชน์ที่ได้รับจากพันธมิตรทางธุรกิจของรถไฟมีความเหมาะสม เช่น ผู้ใช้เครือข่ายมือถือ A สามารถได้รับส่วนลดพิเศษเมื่อเติมเงินบัตรโดยสาร					
ด้านบุคคล					
24. เจ้าหน้าที่หรือพนักงานภายในสถานี อำนวยความสะดวกได้ดี เช่น มีการประชาสาพันธ์ และให้คำแนะนำที่ดี					
25. เจ้าหน้าที่ดูแลความปลอดภัย (Securities) บริเวณชานชาลาสามารถให้บริการได้ดี					
26. เจ้าหน้าที่หรือพนักงานภายในสถานี มีการแต่งกายที่สุภาพเรียบร้อย					
27. เจ้าหน้าที่หรือพนักงานภายในสถานี มีกิริยามารยาทที่สุภาพเรียบร้อย					
28. เจ้าหน้าที่หรือพนักงานทุกคน ฉีดวัคซีนครบโดสและทำการตรวจคัดกรองด้วย ATK ทุก 7 วัน					
29 เจ้าหน้าที่หรือพนักงานทุกคนปฏิบัติตามมาตรการ UP-DMHTA โดยมีผู้รับผิดชอบ กำกับติดตาม การปฏิบัติตามมาตรการโดยเคร่งครัด					
30. มีคัดกรองความเสี่ยงเจ้าหน้าที่หรือพนักงานทุกคนด้วยไทยเซฟไทย					
31. เจ้าหน้าที่หรือพนักงานทุกคนปฏิบัติตามมาตรการ DMHTA อย่างเคร่งครัด					
ด้านกระบวนการ					
32. มีระบบออกตั๋วโดยสาร E-Ticket SRT ที่มีความสะดวก					
33. มีระบบออกตั๋วโดยสารที่มีความรวดเร็ว					
34. มีการให้บริการอย่างเสมอภาคตามลำดับก่อนหลัง และไม่เลือกปฏิบัติ					
35. สามารถแก้ปัญหาความขัดข้องของระบบรถไฟได้อย่างรวดเร็ว					
ด้านลักษณะทางกายภาพ					
36. ภายในสถานีและชานชาลามีความปลอดภัย					

รายการ	ระดับความคิดเห็น				
	5	4	3	2	1
37. ภายในสถานีมีบรรยากาศที่ดี					
38. ภายในสถานีมีความสะอาดและทำการฆ่าด้วยฆ่าเชื้อด้วยโซเดียมไฮโปคลอไรท์					
39. มีร้านค้าและบริการต่างๆ ภายในสถานีที่เปิดให้บริการอย่างเหมาะสม					
40. มีป้ายต่างๆ เช่น ป้ายแสดงสถานีและค่าโดยสาร ป้ายบอกทิศทางและรายละเอียดทางออก แผนที่ ที่ถูกแสดงไว้อย่างเหมาะสม					
41. มีอุปกรณ์อำนวยความสะดวกแก่คนพิการ หรือผู้โดยสารที่มีสัมภาระขนาดใหญ่อย่างเพียงพอ					
42. สถานีรถไฟสามารถเชื่อมต่อกับระบบขนส่งมวลชนอื่นๆ ได้สะดวก					
43. สถานีรถไฟฟ้าสามารถเชื่อมต่อกับสถานที่อื่นๆ ได้สะดวก เช่น ห้างสรรพสินค้า โรงแรม และอื่นๆ					
44. มีการควบคุมจำนวนผู้โดยสารไม่ให้แออัด และให้มีการเว้นระยะห่างระหว่างรอรับบริการ					
45. จัดให้มีจำนวนผู้โดยสารได้ไม่เกินร้อยละ 75 ของขีดความสามารถในการรองรับผู้โดยสารของยานพาหนะ					
46. มีการจัดที่นั่งในยานพาหนะอย่างเหมาะสมโดยคำนึงถึงมาตรการเว้นระยะห่าง เพื่อไม่ให้เกิดความหนาแน่นแออัด					
47. จัดให้ให้ผู้ดำเนินการรถโดยสารจัดระบบไหลเวียนของผู้โดยสารและการรับกระเป๋า ให้มีการเว้นระยะห่างอย่างเหมาะสม					

ตอนที่ 3 ข้อมูลเกี่ยวกับภาพลักษณ์องค์การ

คำอธิบาย : โปรดใส่เครื่องหมาย ✓ ลงในช่องที่ท่านเห็นว่ามีความเห็นด้วยมากที่สุดโดย

5 = มากที่สุด 4 = มาก 3 = ปานกลาง 2 = น้อย 1 = น้อยที่สุด

รายการ	ระดับความคิดเห็น				
	5	4	3	2	1
ด้านการประชาสัมพันธ์					
1.การรถไฟมีการประชาสัมพันธ์ข่าวสารเกี่ยวกับการบริหารให้ประชาชนทราบ					
2.การรถไฟมีการเผยแพร่ข่าวสารกิจกรรมภายในการรถไฟให้ผู้ใช้บริการได้รับทราบมีความครอบคลุมและทั่วถึง					
3.การรถไฟมีความหลากหลายของช่องทางในการติดต่อสื่อสาร					
4.การรถไฟมีการประชาสัมพันธ์ที่โดดเด่น มีเอกลักษณ์ จดจำง่าย					
5.การรถไฟมีการประชาสัมพันธ์โดยใช้เทคโนโลยีที่ทันสมัยเพื่อการสื่อสารที่มีประสิทธิภาพ					
ด้านภาพลักษณ์สินค้า					
6. ตราสินค้าสามารถสะท้อนความเป็นเอกลักษณ์ของการรถไฟได้เป็นอย่างดี					
7. การรถไฟแห่งประเทศไทยมีชื่อเสียงเป็นที่รู้จักในกลุ่มนักเดินทาง					
8. ตราสินค้าของของการรถไฟแห่งประเทศไทยให้ความรู้สึกมั่นคงปลอดภัยเมื่อได้ใช้บริการ					
9. ตราสินค้าของการรถไฟแห่งประเทศไทยสามารถสร้างความประทับใจแก่ผู้ใช้บริการ					
10. วัสดุอุปกรณ์ที่ใช้กับตราสินค้าของการรถไฟแห่งประเทศไทยมีคุณภาพสูง					
ด้านสินค้าและบริการ					
11. ภาพรวมของภาพลักษณ์ ขบวนรถไฟ เช่น ความทันสมัย สะอาด ความปลอดภัย					
12. ภาพรวมของภาพลักษณ์ พนักงาน เช่น บริการด้วยความเต็มใจ ไม่เลือกปฏิบัติ ซื่อสัตย์และจริงใจ สุภาพ ยิ้มแย้ม ดูเป็นมิตร					
13. การให้บริการของรถไฟเป็นไปตามมาตรฐานที่กำหนดไว้					
14. สินค้าและบริการมีเอกลักษณ์เฉพาะที่น่าประทับใจ					
15. การให้บริการของรถไฟ ของการรถไฟแห่งประเทศไทยสามารถเทียบได้กับการให้บริการรถไฟโดยสารของต่างประเทศ					

ตอนที่ 4 ข้อมูลเกี่ยวกับคุณภาพการให้บริการ

คำอธิบาย : โปรดใส่เครื่องหมาย ✓ ลงในช่องที่ท่านเห็นว่ามีความเห็นด้วยมากที่สุดโดย

5 = มากที่สุด 4 = มาก 3 = ปานกลาง 2 = น้อย 1 = น้อยที่สุด

รายการ	ระดับความคิดเห็น				
	5	4	3	2	1
ด้านสิ่งที่สัมผัส/เป็นรูปธรรม					
1.ภายในขบวนรถไฟมีความสะอาดเหมาะแก่การใช้บริการ					
2.การแต่งกายของเจ้าหน้าที่มีความเรียบร้อย					
3.เครื่องหมายและสัญลักษณ์สาหรับแจ้งข้อมูลแก่ผู้โดยสารภายในรถไฟมีความสวยงาม					
4.ภายในรถไฟมีสิ่งอานวยความสะดวกเพียงพอต่อความต้องการของผู้โดยสารทุกคน					
ด้านความน่าเชื่อถือ					
5. รถไฟสามารถพาท่านไปถึงที่หมายได้ตรงตามเวลาที่แจ้งไว้					
6. ท่านสามารถถึงที่หมายได้อย่างปลอดภัยด้วยการเดินทางโดยรถไฟ					
7. คุณภาพการบริการที่ท่านจะได้รับจากการใช้รถไฟ ในการเดินทาเหมือนเดิมทุกครั้ง					
8. มีการแจ้งระเบียบ และกฎเกณฑ์ในการใช้บริการให้ผู้โดยสารทราบได้อย่างทั่วถึงทุกระดับชั้น					
ด้านการตอบสนองต่อความต้องการบริการ					
9. เจ้าหน้าที่จะให้บริการแก่ผู้โดยสารทันทีที่มีการร้องขอ					
10.ขณะให้บริการผู้โดยสาร เจ้าหน้าที่ให้บริการด้วยความเป็นมิตร					
11.เจ้าหน้าที่ให้บริการแก่ผู้โดยสารด้วยความเต็มใจ					
12.เจ้าหน้าที่มีความกระตือรือร้นในการแก้ปัญหาให้กับผู้โดยสาร					
ด้านการสร้างความมั่นใจ					
13. เครื่องแบบและการแต่งกายของเจ้าหน้าที่ถูกต้องตามระเบียบ					
14. เจ้าหน้าที่ที่ให้บริการในรถไฟ มีความรู้และประสบการณ์ในด้านการปฏิบัติงาน					
15. เจ้าหน้าให้บริการแก่ผู้โดยสารด้วยความยิ้มแย้มแจ่มใส					
16. ท่านจะได้รับการบริการที่สุภาพจากเจ้าหน้าที่ภายในขบวนรถโดยสาร					
17. เจ้าหน้าที่ในรถไฟ ให้บริการด้วยความซื่อสัตย์					

รายการ	ระดับความคิดเห็น				
	5	4	3	2	1
ด้านการเอาใจใส่					
18. เจ้าหน้าทุกคนมีความเต็มใจที่จะรับฟังข้อเสนอแนะของผู้โดยสาร					
19. เมื่อท่านมีความต้องการความช่วยเหลือเจ้าหน้าที่สามารถที่จะเข้าใจความต้องการของท่านได้อย่างถูกต้อง					
20. เจ้าหน้าที่จะมีการสอบถามถึงความต้องการของผู้โดยสารในระหว่างการเดินทางอย่างสม่ำเสมอ					
21.เมื่อท่านมีปัญหาเจ้าหน้าที่มีการสอบถามเพื่อหาสาเหตุที่ถูกต้องของปัญหาและแก้ไขให้ท่านอย่างถูกต้อง					

ตอนที่ 5 ข้อมูลเกี่ยวกับแรงจูงใจในการใช้บริการรถไฟ

คำอธิบาย : โปรดใส่เครื่องหมาย ✓ ลงในช่องที่ท่านเห็นว่ามีความเห็นด้วยมากที่สุดโดย

5 = มากที่สุด 4 = มาก 3 = ปานกลาง 2 = น้อย 1 = น้อยที่สุด

รายการ	ระดับความคิดเห็น				
	5	4	3	2	1
ด้านอารมณ์					
1.ความรู้สึกเชื่อมั่นและไว้วางใจจากการใช้รถไฟโดยสารทุกระดับชั้น					
2. ความรู้สึกผ่อนคลายจากการใช้รถไฟโดยสารทุกระดับชั้น					
3. การเดินทางด้วยรถไฟ ทำให้ท่านรู้สึกเป็นคนรุ่นใหม่					
4. ความสนุกสนานในการเดินทางด้วยรถไฟ					
ด้านเหตุผล					
5. ท่านรู้สึกว่าการเดินทางด้วยรถไฟมีความคุ้มค่ากับจำนวนเงินที่ท่านต้องจ่ายไป					
6. เมื่อท่านเดินทางด้วยรถไฟ ท่านได้รับความปลอดภัยมากกว่าการเดินทางด้วยวิธีอื่น					
7. การเดินทางด้วยรถไฟ ทำให้ท่านได้รับความสะดวกสบายระหว่างการเดินทางมากขึ้น					

ตอนที่ 6 ข้อมูลเกี่ยวกับความพึงพอใจในการให้บริการ

คำอธิบาย : โปรดใส่เครื่องหมาย ✓ ลงในช่องที่ท่านเห็นว่ามีความเห็นด้วยมากที่สุดโดย

5 = มากที่สุด 4 = มาก 3 = ปานกลาง 2 = น้อย 1 = น้อยที่สุด

รายการ	ระดับความคิดเห็น				
	5	4	3	2	1
ด้านการให้บริการเสมอภาค					
1. ท่านมีความพึงพอใจต่อการให้บริการของพนักงานรถไฟตามลำดับก่อน – หลัง อย่างถูกต้อง					
2. ท่านมีความพึงพอใจต่อการให้บริการของพนักงานรถไฟที่บริการด้วยความเสมอภาค ไม่เลือกปฏิบัติ					
ด้านการให้บริการอย่างทันเวลา					
3. ท่านมีความพึงพอใจต่อการให้บริการและการเดินทางของรถที่มีความตรงต่อเวลาและสม่ำเสมอ					
4. ท่านมีความพึงพอใจต่อจำนวนเที่ยวที่เปิดให้บริการต่อวันของรถไฟ					
ด้านการให้บริการอย่างเพียงพอ					
5. ท่านมีความพึงพอใจต่อจำนวนเครื่องจำหน่ายตั๋วโดยสารของรถไฟ					
6. ท่านมีความพึงพอใจต่อจำนวนพนักงานที่ให้บริการในแต่ละสถานีรถไฟ					
ด้านการให้บริการอย่างต่อเนื่อง					
7. ท่านมีความพึงพอใจต่อป้ายบอกรายละเอียด แผนที่ และป้ายบอกทางออกหรือจุดขึ้น – ลงของแต่ละสถานี					
8. ท่านมีความพึงพอใจต่อการที่รถไฟสามารถทำให้ท่านเชื่อมต่อกับระบบขนส่งมวลชนอื่น ๆ ได้อย่างสะดวก					
ด้านการให้บริการอย่างก้าวหน้า					
9. ท่านมีความพึงพอใจต่อการขยายเส้นทางการเดินรถของรถไฟ					
10. ท่านมีความพึงพอใจต่อพัฒนาระบบเทคโนโลยีที่นำมาใช้ในการบริการการเดินรถของรถไฟ					

Appendix B:

Conformity Index (IOC) results

Appendix B:

Conformity Index (IOC) results

Table A.1 Conformity Index (IOC) results of luminaries

variables	luminaries					IOC	results
	1	2	3	4	5		
Decision to use the SRT passenger train service							
Product							
1. There are a sufficient number of trains, routes and schedules for me and other passengers to use.	+1	+1	+1	+1	+1	1.00	Yes
2. The train coach size is comfortable for me and other passengers to use.	+1	+1	+1	+1	+1	1.00	Yes
3. The SRT passenger train coaches maintain a comfortable temperature when the coach is airconditioned.	+1	+1	+1	+1	+1	1.00	Yes
4. The SRT passenger train coaches are clean.	+1	+1	+1	+1	+1	1.00	Yes
5. There are an adequate number of train and routes serving each main station.	+1	+1	+1	+1	+1	1.00	Yes
6. The SRT train system has no problems.	+1	+1	+1	+1	+1	1.00	Yes
7. The SRT train system is safe.	+1	+1	+1	+1	+1	1.00	Yes
8. The SRT maintains enough service route covering important areas.	+1	+1	0	+1	+1	0.67	Yes
9. The SRt is continuously expanding its service routes.	+1	+1	+1	+1	+1	1.00	Yes
10. There is an adequate amount of hand washing soap, water and alcohol gel at all SRT service points.	+1	+1	+1	+1	+1	1.00	Yes
11. All passengers are screened using Thai Save Thai (TST) or other APPs.	+1	+1	+1	+1	+1	1.00	Yes

Table A.1 (continued)

variables	luminaries					IOC	results
	1	2	3	4	5		
Price							
12. The price is reasonable for the distance.	+1	+1	+1	+1	+1	1.00	Yes
13. The price is reasonable for the speed of travel.	+1	+1	+1	+1	+1	1.00	Yes
14. The price is reasonable for the convenience of traveling.	+1	+1	+1	+1	+1	1.00	Yes
15. The price is reasonable for the quality of the railway system.	+1	+1	+1	+1	+1	1.00	Yes
16. The price is at an acceptable level.	+1	+1	+1	+1	+1	1.00	Yes
Place (Distribution Channels)							
17. There are a sufficient and convenient number of ticket offices and counters for SRT passengers.	+1	+1	+1	+1	+1	1.00	Yes
18. There are a sufficient number of ticket vending machines for SRT passengers.	+1	+1	+1	+1	+1	1.00	Yes
19. Each automatic ticket vending machine has clear explanation of the ticket purchase process. I THINK YOU SHOULD ADD "in foreign languages and Thai"	+1	+1	+1	+1	+1	1.00	Yes
20. The SRT system provides various convenient and alternative advance ticketing channels such as by phone, website, and smartphone applications which also reduces personal contact risk.	+1	+1	+1	+1	+1	1.00	Yes
Marketing Promotion (Promotion)							
21. SRT passenger train promotional prices are reasonable.	+1	+1	+1	+1	+1	1.00	Yes
22. The benefits obtained from using the card are appropriate.	+1	+1	+1	+1	+1	1.00	Yes

Table A.1 (continued)

variables	luminaries					IOC	results
	1	2	3	4	5		
23. The SRT business partner benefits are appropriate. An example is special discounts riders can receive from their mobile network when topping up their ticket cards.	+1	+1	+1	+1	+1	1.00	Yes
People (Personnel/Staff)							
24. SRT station staff provides good advice and public relations.	+1	+1	+1	+1	+1	1.00	Yes
25. SRT station platform security personnel provide good service.	+1	+1	0	+1	+1	0.67	Yes
26. SRT station staff are appropriately dressed.	+1	+1	+1	+1	+1	1.00	Yes
27. SRT station staff are polite and courteous.	+1	+1	+1	+1	+1	1.00	Yes
28. All SRT station staff are given full-dose vaccination and ATK screening every 7 days.	+1	+1	+1	+1	+1	1.00	Yes
29 All officers or employees comply with UP-DMHTA measures with a person responsible for strictly monitoring and supervising the implementation of the measures.	+1	+1	+1	+1	+1	1.00	Yes
30. There is a risk screening for every officer or employee with Thai Safe Thai.	+1	+1	+1	+1	+1	1.00	Yes
31. All SRT station staff strictly follow DMHTA measures.	+1	+1	+1	+1	+1	1.00	Yes
Process				+1	+1		
32. The SRT system has a convenient E-Ticketing system.	+1	+1	+1	+1	+1	1.00	Yes
33. The SRT system uses a fast ticketing system.	+1	+1	+1	+1	+1	1.00	Yes

Table A.1 (continued)

variables	luminaries					IOC	results
	1	2	3	4	5		
34. The SRT system service uses a first-come, first-served basis which does not discriminate between passengers.	+1	+1	+1	+1	+1	1.00	Yes
35. SRT staff are quickly able to solve train system failures and leasa.	+1	+1	+1	+1	+1	1.00	Yes
Physical Appearance (Physical Evidence)							
36. The SRT stations and platforms are safe.	+1	+1	+1	+1	+1	1.00	Yes
37. SRT stations provide for a leasant and comfortable environment.	+1	+1	+1	+1	+1	1.00	Yes
38. SRT station staff clean and disinfect each facility frequently.	+1	+1	+1	+1	+1	1.00	Yes
39. There are convenient shops and services within each SRT station.	+1	+1	+1	+1	+1	1.00	Yes
40. Each SRT station and platform displays an appropriate number of signs for things such as train fares, exit and entrance signs, and local area maps.	+1	+1	+1	+1	+1	1.00	Yes
41. Each SRT station provides facilities for the disabled.or passengers with large or numerous luggages.	+1	+1	+1	+1	+1	1.00	Yes
42. Each SRT station provides easy connection points to other public transportations systems such as buses, taxis, and light rail.	+1	+1	+1	+1	+1	1.00	Yes
43. Each SRT station provides easy connections to other commercial facilities such as shopping malls and hotels.	+1	+1	+1	+1	+1	1.00	Yes

Table A.1 (continued)

variables	luminaries					IOC	results
	1	2	3	4	5		
44. Each SRT station provides a method in which passengers can avoid congestion and have appropriate distances between passengers when waiting for service.	+1	+1	+1	+1	+1	1.00	Yes
45. Each SRT coach only allows a maximum capacity of 75%.	+1	+1	+1	+1	+1	1.00	Yes
46. SRT train coach benches are properly arranged with respect to spacing measures. In order not to cause congestion.	+1	+1	+1	+1	+1	1.00	Yes
47. Station staff efficiently organize the flow of passengers, baggage claim, and proper spacing.	+1	+1	0	+1	+1	0.67	Yes
Organization Image							
Information							
1. The railway has publicized news about the administration to the public.	+1	+1	+1	+1	+1	1.00	Yes
2. The Railway disseminates news and activities within the railway to users to be informed comprehensively and thoroughly.	+1	+1	+1	+1	+1	1.00	Yes
3. The railway has a variety of communication channels.	+1	+1	+1	+1	+1	1.00	Yes
4. Railways have outstanding publicity and uniqueness. Easy to remember	+1	+1	+1	+1	+1	1.00	Yes
5. Railways are publicized using modern technology for effective communication.	+1	+1	+1	+1	+1	1.00	Yes
Brand Image							
6. The SRT brand reflects the train system's uniqueness.	+1	+1	+1	+1	+1	1.00	Yes
7. The SRT is well known among travelers.	+1	+1	+1	+1	+1	1.00	Yes

Table A.1 (continued)

variables	luminaries					IOC	results
	1	2	3	4	5		
8. The SRT brand gives a feeling of security when using the service.	+1	+1	+1	+1	+1	1.00	Yes
9. The SRT brand impresses passengers.	+1	+1	+1	+1	+1	1.00	Yes
10. The SRT system uses high quality materials and equipment.	+1	+1	+1	+1	+1	1.00	Yes
Goods or Services							
11. The SRT projects an image which is modern clean and safe.	+1	+1	+1	+1	+1	1.00	Yes
12. SRT staff project an image which is courteous, professional, non dscrimitatory, honest, friendly and helpful.	+1	+1	+1	+1	+1	1.00	Yes
13. SRT service is in accordance with established standards.	+1	+1	+1	+1	+1	1.00	Yes
14. Products and services are unique and impressive.	+1	+1	+1	+1	+1	1.00	Yes
15. SRT service can be compared to the passenger train service of foreign countries	+1	+1	+1	+1	+1	1.00	Yes
Service Quality							
Tangile/Physical Evidence							
1. Each SRT coach is is clean and suitable for service.	+1	+1	+1	+1	+1	1.00	Yes
2. SRT staff uniforms are neat.	+1	+1	+1	+1	+1	1.00	Yes
3. SRT facility passenger service signs and symbols are beautiful.	+1	+1	+1	+1	+1	1.00	Yes
4. SRT facilities and trains meet passengers' needs.	+1	+1	+1	+1	+1	1.00	Yes
Reliability							
5. SRT trains are reliable and on schedule.	+1	+1	+1	+1	+1	1.00	Yes
6. SRT trains are safe.	+1	+1	0	+1	+1	0.67	Yes

Table A.1 (continued)

variables	luminaries					IOC	results
	1	2	3	4	5		
7. SRT train service is consistent.	+1	+1	0	+1	+1	0.67	Yes
8. SRT facilities and trains provide adequate notification of rules and regulations at all levels.	+1	+1	0	+1	+1	0.67	Yes
Responsiveness							
9. SRT personnel provide prompt passenger service requests.	+1	+1	+1	+1	+1	1.00	Yes
10. SRT personnel are friendly and courteous.	+1	+1	+1	+1	+1	1.00	Yes
11. SRT personnel provide services to passengers willingly.	+1	+1	+1	+1	+1	1.00	Yes
12. SRT personnel are enthusiastic in solving passenger problems.	+1	+1	+1	+1	+1	1.00	Yes
Assurance							
13. SRT personnel uniforms and dress are in accordance with the regulations.	+1	+1	+1	+1	+1	1.00	Yes
14. SRT personnel on trains are kowledeable and experienced.	+1	+1	+1	+1	+1	1.00	Yes
15. SRT personnel serve passengers with a smile.	+1	+1	+1	+1	+1	1.00	Yes
16. SRT personnel provide courteous train coach service.	+1	+1	+1	+1	+1	1.00	Yes
17. SRT personnel are honest.	+1	+1	+1	+1	+1	1.00	Yes
Empathy							
18. SRT personnel are willing to listen to passenger suggestions.	+1	+1	+1	+1	+1	1.00	Yes
19. When you have a need for help, SRT personnel are able to understand your needs correctly.	+1	+1	+1	+1	+1	1.00	Yes

Table A.1 (continued)

variables	luminaries					IOC	results
	1	2	3	4	5		
20. SRT train personnel regularly attend to comfort and well-being of their coach passengers.	+1	+1	+1	+1	+1	1.00	Yes
21. SRT personnel are good at identifying and solving passenger issues and problems.	+1	+1	+1	+1	+1	1.00	Yes
Service Motivation							
Emotion							
1. SRT passengers feel confident and trusting when they use all passenger train classes.	+1	+1	+1	+1	+1	1.00	Yes
2. SRT passengers feel relaxed no matter which passenger class they are in.	+1	+1	+1	+1	+1	1.00	Yes
3. Traveling by SRT train makes you feel like a new generation	+1	+1	+1	+1	+1	1.00	Yes
4. SRT train travel is fun.	+1	+1	+1	+1	+1	1.00	Yes
Reasoning							
5. SRT train travel is affordably priced.	+1	+1	+1	+1	+1	1.00	Yes
6. SRT train travel is safer than other modes of transportation.	+1	+1	+1	+1	+1	1.00	Yes
7. SRT train travel makes me feel comfortable during my journey.	+1	+1	+1	+1	+1	1.00	Yes
Service Satisfaction							
Service Equality							
1. SRT staff provides good service on a first-come, first-serve basis.	+1	+1	0	+1	+1	0.67	Yes
2. SRT staff provides me services which are equal to others and non-discriminatory.	+1	+1	0	+1	+1	0.67	Yes

Table A.1 (continued)

variables	luminaries					IOC	results
	1	2	3	4	5		
Timely Service							
3. SRT train service is satisfying punctual, and consistent.	+1	+1	0	+1	+1	0.67	Yes
4. There are an adequate numbers of trains each day to an adequate number of destinations.	+1	+1	+1	+1	+1	1.00	Yes
Adequate Service							
5. There are an adequate number of train ticket vending machines.	+1	+1	+1	+1	+1	1.00	Yes
6. There are an adequate number of train station staff at each train station.	+1	+1	+1	+1	+1	1.00	Yes
Continuous Service							
7. Each SRT station and pltforms provide a sufficient amount of singage including maps and entrance, exit or boarding points for each station.	+1	+1	+1	+1	+1	1.00	Yes
8. I am satisfied with the ease of my connection from SRT facilities to other public transport systems.	+1	+1	+1	+1	+1	1.00	Yes
Progressive Service							
9. I am satisfied with the SRT train route extensions.	+1	+1	+1	+1	+1	1.00	Yes
10. I am satisfied with the SRT train's development and technology system used in the train service.	+1	+1	+1	+1	+1	1.00	Yes

Table A.1 It was found that the experts were of the opinion that all questions in the questionnaire were content accurate. Have a conformity index (IOC) between 0.67-1.00, which is higher than the specified threshold (threshold 0.50).

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