Article

The Relationship between Air Travel Service Quality and Factors of Theory of Planned Behavior: Evidence from Low-Cost Airlines in Thailand

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Abstract: Despite an increased emphasis on improvement in airline service quality concerning consumer behavior, such as passenger repurchasing as a result of their behavioral intention over the last several decades, there is still much less concern with the nature of airline service quality than should exist in the so-called “logistics service quality” and less concern with examining the specific behavioral intention preceding repurchasing behavior together with the theory of planned behavior. As such, this study aims to explore these issues, along with the psychological factors of the theory of planned behavior, that can lead to repurchasing behavior via word-of-mouth intention (WOMI). With an online survey of 383 respondents experienced with flying, the results reveal that the logistics service quality and each determinant in the theory positively influence a passenger’s repurchasing behavior through WOMI. Accordingly, service marketers can implement service design and apply integrated marketing communication by learning from repurchasing behavior that was formed by the given factors to retain their existing customers. Moreover, this study is the first to empirically and explicitly validate dimensions of airline services through the lens of logistics that are deemed fit with the nature of the airlines. It advances the understanding of theory approaching and connects what has hampered its advancement in a body of knowledge, simultaneously in a context of airline context where it should not be relegated to transportation and consumer and service orientation.

Keywords: service marketing; consumer behavior; airlines; service quality; theory of planned behavior; service through logistics

1. Introduction

In the age of globalization, air travel has evolved from a luxury reserved only for the wealthy to the primary mode of transportation for the majority of people traveling throughout the world, either for business or pleasure. This is evidenced not only by the substantial increase in the number of people choosing to travel by air in recent years but also by the fact that the number of people traveling by air is expected to increase from nearly 2 billion in 2021 to 2.6 billion in 2026 and to 8.2 billion in 2037 [1–3].

Earlier in 2019, the airline sector was hit the hardest after COVID-19 caused a precipitous decline in air passenger traffic around the world, including low-cost airlines operating in Thailand [4,5]. On the one hand, a report by the Thai aviation state for 2020 during the pandemic indicated that domestic passenger traffic dropped dramatically that year due to efforts to contain the disease, whether through partial or full lockdowns, closed borders, restrictions on air travel, and advisories against all non-essential travel, representing a drop in passenger numbers of about 41.99 million compared to 2019 [5,6]. The slump in air traffic is also estimated to translate into a loss in total airline revenue of THB 2.3 hundred million [5]. The volume of domestic air passenger traffic of low-cost airlines...
in Thailand is also relatively declining, especially between May and September 2021, due to the Delta variant of the COVID-19 virus, resulting in the lowest number of passengers, which amounted to 0.01 million [7]. On the other hand, the near-term outlook reveals that air passenger numbers are anticipated to recover to reach the pre-pandemic level in 2019 (144 million), especially for domestic air travel in 2025. This is partially owing to a greater population that is fully vaccinated against COVID-19, restrictions being lifted, and government incentives such as tourism promotion [8]. As evident in the first quarter of 2022, the overall number of domestic air passengers was 9.74 million, increasing by 23.4 percent or 1.85 million, compared to the previous quarter in 2021, in which the total number of domestic passengers amounted to 7.89 million [9].

Given these factors, not only did the airlines face a challenge to support themselves to survive during this tough situation, but they also encountered a challenge to retain their existing passengers over their rivals for their business continuity, which inevitably involved their passengers’ future consumption behavior towards the airlines—or what is considered repurchasing—since passenger repurchasing has proven to be lucrative for the airlines [4,10]. As such, airlines must understand what contributes to their passengers’ repurchasing. In recent times, researchers have emphasized the quality of services as one significant factor that contributes to repurchasing, especially for service-oriented businesses such as airlines, the essence of which can be viewed through the logistics lens, emphasizing the fact that the service nature of the airlines should include not only transportation of passengers but also implicit and explicit interaction with passengers [11,12]. That is, in view of the logistics, every passenger’s encounter in the episode of service requires careful attention to detail, from tangible features to personnel contact, timeliness, information, and flight availability, so as to provide high-quality logistics services. Thongkruer and Wanarat [12] coined the phrase “a variety-based perspective” to illustrate a definition of logistics service quality based on passengers’ perspective that plays an essential part in their experience of service quality or each different set of service attributes provided by the airlines. This definition also raises the importance of logistics in the service-based context of businesses such as airlines to contribute to passengers’ future consumption, such as repurchasing.

Other key factors contributing to repurchase by passengers are psychological/attitudinal factors related to service use [10,13–15]. In service businesses such as airlines, passengers’ decision-making process prior to repurchase is formed not only by their past experience with business aspects such as service quality but also by their perception of the presence of a favorable feeling, their expectation of positive outcomes, and their opinion congruence with others, as well as their ability to control relevant resources when using services [10,14]. These psychological or attitudinal factors can be explained by the theory of planned behavior, which predicts a particular behavior through the associated behavioral intention as a consequence of three antecedents, namely attitudes, subjective norms, and perceived behavioral control [16].

Although researchers today usually address customer repurchase by studying either service quality or/and psychological/attitudinal factors in the service context, there seem to be two main directions in this regard, which may imply several research gaps. Regarding the first direction, in general, numerous studies have been conducted in many service-related contexts, including airlines, showing that service quality plays an important role and that it predominantly affects passengers’ willingness to choose an airline [17–22], but psychological/attitudinal factors were always absent from these results, even though consumer decision-making theory, particularly the theory of planned behavior, suggests that consumers are likely to select products or services based on attitudinal and behavioral factors as well as their past experiences [14,15,23]. In other words, most research primarily focuses on service quality and behavioral intention without considering behavior and other factors, such as attitudinal/psychological influences, which are crucial in explaining behavioral intention and behavior, as evidenced by several studies that applied the so-called theory of planned behavior in conjunction coupled with service quality to
investigate this aspect, which is consistent with the second research direction. For instance, Truong and Pan [10] and Buaphiban and Truong [15] applied the theory of planned behavior to investigate ticket purchases by LCC passengers in Thailand, emphasizing the importance of attitudinal and behavioral factors in purchase intentions and behavior, while Pan and Truong [14] studied service quality as an additional factor to the factors in the theory of planned behavior to explain behavioral intention. The work of Kim and Lee [13] studied the same topic.

While their research shows that such psychological/attitudinal factors, as well as the service quality that airlines provide to passengers, can increase the likelihood of passengers’ behavioral intention [13,14] and thus increase repurchase behavior [10,15], their findings were generally inconclusive in relation to the service sector, especially the airlines, where the measurement of service quality should be derived from its nature with various service attributes or from the perspective of logistics service, as suggested by Thongkruer and Wanarat [12]. Instead, their work measures service quality with only three elements, where each element includes only onboard facilities and physical features [13,14], and overall service quality is associated with a satisfactory feeling [10,24], thus ignoring many other aspects that are actually part of the essence of airline service quality. Moreover, it is worth noting that people are likely to rely on such safety and hygiene aspects during a COVID-19 pandemic, as stated by Bove and Benoit [4], along with the CAAT’s practical guidelines aimed at ensuring the safety and sanitary measures for public health, particularly for domestic flights. The inclusion of safety and sanitation in the dimension of LSQ can not only fit into the basic safety dimension of LSQ but also is promising and timely in the current situation. Thus, it is important for this study to incorporate this essential and timely aspect as one of the dimensions of logistics service quality related to low-cost airlines in Thailand.

Despite the importance of these previous studies and their application of the theory of planned behavior with an additional factor, namely service quality, which led to strong evidence of the mediating role of attitudes between LSQ and WOMI [10,14,17,22], it still fails to capture the mediating role of attitudes and perceived behavioral control between subjective norms and word-of-mouth intention (with the exception of the work by Truong and Pan [10]. This was a result of not considering subjective norms’ influence on other attitudinal factors of passengers in the theory, which are attitudes and perceived behavioral control. With an openness of the TPB, these two attitudinal factors can also be passengers’ attitudinal responses from a congruence of opinion of significant others or what is considered as subjective norm [16,25,26]. Such attitudinal responses can be regarded as attitudinal outcomes of the individual towards a particular behavior that develops throughout an evaluation process [1,26,27].

Specifically, the consumer’s evaluation process includes attitudinal factors such as attitudes, subjective norms, and perceived behavioral control, as well as past experience with service quality, which ultimately leads to a behavioral intention.

This study suggests that repurchase behavior or availing of the airline’s services again is not just a behavior that passengers exhibit in isolation from the relevant factors surrounding them. They rely heavily on informal sources of information, particularly the opinions of their family, colleagues, friends, acquaintances, and others in the community [17,28,29]. In service contexts, where the opinions of others are an essential component in evaluating the quality of the service provider, including airlines [11,17,30], the congruence of such opinions is either needed or expected to secure their thought process, especially when it comes to positive outcomes and their attainability in terms of repurchase behavior [11,31]. Consumers who are persuaded by their referents regarding positive outcomes/feelings and behavioral attainability are likely to engage intensively in positive word of mouth and, thus, become repeat users of the service [31]. Therefore, attitudes and perceived behavioral control are expected to play a mediating role between subjective norms and word-of-mouth intention in the evaluation process of passengers’ use of airline services, as well as between logistics service quality and word-of-mouth intention.
Moreover, as a consequence of attitudinal factors in the theory of planned behavior and past experience, such as service quality, most behavioral intentions in the literature often overlap with the corresponding behaviors in other studies, making it inconsistent with examining this, while as Soderlund [32] points out, overlooking and underestimating any, especially WOMI, not only ensures willingness to use airlines and mitigate passengers’ own uncertainty [17,33–35] but also significantly influences customers’ decision-making process in choosing low-cost airlines for their future trips, thereby serving as a guarantee for repurchasing and thus an outcome measurement for business performance [17,21,34,36].

To address these research gaps, this study specifically examines passengers’ perspectives of past experience on service quality through the logistical lens or what is considered as logistics service quality and attitudinal factors in the theory of planned behavior in relation to passengers’ repurchase intention through word-of-mouth in the context of low-cost airlines operating in Thailand, with the following research objectives:

(1) To examine the positive influence of the LSQ on factors of the theory of planned behavior, namely attitudes, subjective norms, perceived behavioral control, and word-of-mouth intention.

(2) To examine the positive influence of the antecedents in the theory of planned behavior on behavioral intention, including word-of-mouth intention and repurchasing, respectively.

(3) To study the possible influence of subjective norms on attitudes and perceived behavioral control.

(4) To examine whether attitudes and perceived behavioral control mediate the relationship between logistic service quality and word-of-mouth intention and between subjective norms and word-of-mouth intention.

Specifically, this study makes the following contributions: first, it adds to the very limited research in the airline context regarding service quality through the logistics lens and the importance of passengers’ cognitive aspects in the theory of planned behavior, including attitudes, subjective norms, perceived behavioral control, word-of-mouth intention and repurchase behavior. It also provides empirical evidence of the relationship between these factors in the context of low-cost airlines in Thailand.

Second, the findings of this study could assist airline managers and policy makers in managing and making decisions about the best use of their material resources by providing them with the most important items and factors that are most valued by passengers. The findings of this study could also provide them with useful information and serve as a way to gain a competitive advantage over their rivals by retaining their passengers after the relaxation of COVID-19 restrictions. Accordingly, this study is practical and realistic and corresponds to the current situation.

Furthermore, this study is the first to empirically validate the various dimensions of airline services through the lens of logistics and to demonstrate the influence of service quality though logistics and passengers’ cognitive aspects within the framework of the theory of planned behavior. To our knowledge, there has been no previous study on low-cost airlines that considers all of the above factors simultaneously. As a result, this study adds to the body of prior research and provides a comprehensive account of the state of knowledge in the service market field.

2. Theoretical Background and Hypotheses Development

2.1. Logistics Service Quality

Nowadays, logistics service quality (LSQ) is a fundamental concept not only in transportation but also marketing, services [12,37], and business strategy [38]. Coyle, Bardi, and Langley [39] stated that LSQ consists of the relevant resources from tangible aspects, such as physical features and amenities, to intangible aspects, such as personnel and information, to ensure service flow. According to Mentzer and Rutner [40], LSQ emerges the
moment a firm manages to provide services to its customers that place not only conventional emphasis on observable firm-related aspects such as transportation and production but also on unobservable customer-related aspects such as preparation for each explicit and implicit interaction with the customers throughout the moment/duration of their service encounter, or what Thongkrueer and Wanarat [12] considered as a variety based perspective that represents a set of service attributes by management, placement, and preparation of services, support services, and facilitating goods that add up to good-quality services. In relation to this meaning/knowledge, particularly in the context of airlines. LSQ is defined in this study as a set of performance factors related to the ability to provide good customer service and ensure the flow of services through well-managed related aspects such as timeliness, tangible features, personnel, sanitary and safety, information, and flight availability [12,41].

However, in many previous studies, the measurement was often weighed from a comparative aspect between customers' expectations and perceptions, the so-called SERVQUAL measurement, and the process aspect involving each phase of the airlines, i.e., pre-flight, on-board, and post-flight services [12,37,41]. Similarly, several works applied a service measurement called AIRQUAL proposed by Ekiz, Hussain, and Bavik [42] to evaluate airline service quality based on five dimensions: airline tangibles, terminals tangibles, personnel service, empathy, and airline image [43,44]. Although these measurements seem to be reasonable in their studies, they did not generate and cover a complete picture of logistics service quality. As for the comparative aspect in the first measurement, each dimension of service quality is involved in the field of personnel (responsiveness, assurance, empathy, and reliability), as Philip and Stewart [45] suggest, as well as the fact that passengers must have their service expectation every time they travel with the airlines, which makes it unrealistic and not fully consistent with the field of logistics. Regarding the process aspect, passengers may not be involved in every phase of the airline, such as reservation in pre-flight and post-flight baggage claim [12,46,47]. The latter measurement, although developed specifically to assess airline service quality, is still incomplete and, as Law, Zhang, and Gow [48] point out, needs to be further developed to include logistics service quality.

As highlighted by Thongkrueer and Wanarat [12] and Park, Robertson [46], the measurement of service quality in the context of airlines must correspond to their nature, which includes not only the conventional view (e.g., transport passengers from one place to another) but also the customer-oriented point of view, along with service-oriented nature (e.g., experience or interaction and a great deal of credence attributes). Given this understanding, LSQ should cover these aspects or, as Thongkrueer and Wanarat [12] suggest, include a variant-based aspect that includes a set of logistics indicators covering various dimensions of service quality, such as facilities, personnel, information quality, flight availability, sanitary safety [49], and any other relevant set of service attributes [50]. Several studies, especially in the airline field, have also used the term service quality to refer to various types of service attributes that are consistent with the core aspects of logistics service quality, suggesting the importance of logistics service quality [12]. Although these studies seem to underestimate the role of LSQ in the application of these different service attributes, it is considered the most appropriate and highly relevant measurement in the airline context [12].

2.2. Theory of Planned Behavior (TPB)

TPB is a psychological theory that explains the phenomenon of an individual's behavioral intentions that may lead to a particular behavior [16]. In this theory, it is assumed that individual behavioral intention or any other relevant intention is an indicator of the willingness or aspiration to perform a particular behavior and is an important driving force for the particular behavior [16,26]. As proposed by Ajzen [16], this behavioral intention is influenced by three psychological antecedents, including attitude, subjective norms (SN), and perceived behavioral control (PBC). The TPB has been extensively studied in
the literature to understand and anticipate consumer behavior in various fields, such as the tourism industry [51,52], the hospitality industry [53,54], the food industry [55], and self-service technology adoption [56]. Likewise, TPB has been applied exclusively to the study of passengers’ behavioral intention in the airline industry, either for word-of-mouth intention [25] or repurchase intention, with most related research considering word-of-mouth as the same construct as repurchase intention [10,13–15,57], as presented in the research gap in the previous section. In this study, behavioral intention is specific to word-of-mouth intention, which refers to passengers’ intention to provide positive feedback about their service experience with the low-cost airline, implying their potential or willingness to use the same airline’s services in the future.

Moreover, most of these studies were developed by adding an additional factor, service quality, to the TPB framework. It has been empirically demonstrated that the extended TPB framework has better predictive power than the original one [10,13,14]. Therefore, this study attempts to extend the established TPB framework to include logistics service quality as another factor influencing behavioral intention, as this additional factor was provided after a comprehensive review of the related literature. It should be noted that the details of each theoretical precondition related to the TPB were provided in the respective precondition role in hypothesis development.

2.3. Hypothesis Development

2.3.1. Logistics Service Quality and Word-of-Mouth Intention

The role of LSQ as an antecedent of behavioral intention has been investigated in various fields, particularly in studies of tourism, transportation, and service marketing, including airlines, where behavioral intention inevitably includes or specifies word-of-mouth intention, since service quality seems to be the most important factor when customers communicate positive aspects to other customers [14,21,24,58,59]. Soleimani and Hannaneh [58] point out that managers must ensure that their customers receive good customer service so that they are likely to refer positively to a service unit. Similarly, a study by Liu and Lee [21] on passengers traveling on low-cost airlines in Taiwan found that service quality influenced passengers’ intention to engage in word-of-mouth referrals about the airline’s services, amenities, and employees. Rajaguru [37] found the same result among passengers from Singapore and Malaysia and posited that service quality could contribute to airline performance by influencing passengers’ behavioral intentions, including word-of-mouth intention. Another study conducted among travelers using travel agencies in Iran revealed that travel agency service quality influences travelers’ intention to encourage significant others to use a particular travel agency [58]. The results of a study by Pan and Truong [14] and a study by Buaphiban [24] carried out on passengers of low-cost airlines in China and in Thailand, respectively, confirmed the importance of logistics service quality in anticipating passengers’ intention to recommend airlines to others. This means that if passengers are provided with better-quality logistics service, their intention to provide positive feedback on using the services of the respective airline is likely to increase. Based on the above considerations, the following hypothesis is proposed:

**Hypothesis 1.** Logistics service quality has a positive influence on word-of-mouth intention.

2.3.2. Logistics Service Quality on Attitudes and Perceived Behavioral Control

Due to the openness of TPB to other factors and another antecedent role of LSQ from previous studies, LSQ has been shown to improve travelers’ attitudes and perceived behavioral control [10,14,60]. With regard to the former, it is hypothesized that passengers’ attitudes toward their future airline travel, whether in the form of a positive probable outcome or a positive feeling, are shaped by their service experience with the airlines [10,14,17,36]. Extant literature has also found a positive influence of service quality on passengers’ attitudes toward their travel with the airlines [10,14,17,36]. Saha and Theingi
[36] found that passengers evaluate airline services based on various service attributes such as flight attendants, ground staff, flight schedule, and tangible features, which, in turn, leads them to be satisfied with flying with the airline. Pan and Truong [14] and Truong and Pan, and Buaphiban [10] also found that passengers’ attitudes in deciding to fly are shaped by the airline’s service quality as well as tangible features and safety aspects, as they can make them feel comfortable and create a good perception of their air travel.

Furthermore, Bakır, Akan, and Durmaz [61] stated that the interaction between passengers, airlines, and staff, which adds up to the airline’s service quality, can potentially influence passengers’ attitudes. Likewise, work by Shen and Yahya [41] indicated that airline service quality is a critical factor that leads to high passenger satisfaction. Accordingly, this study hypothesizes that passenger satisfaction and the likelihood of traveling with airlines are higher when airlines provide a high level of service quality. Therefore, the following hypothesis is proposed:

**Hypothesis 2.** Logistics service quality has a positive influence on attitudes.

Passengers’ perceived behavioral control can be enhanced by their understanding of the services provided by the airlines. One possible approach to achieve this is to provide passengers with more information about the resources they need to use airline services, whether in the form of a demonstration, an explanation, an interaction, or an experience with this procedure [60]. In this case, it may be airline logistics services offered to passengers that translate into their service interaction/experience with the airlines that can enhance their understanding. Airline passengers often recall a large portion of the services they use through direct and indirect interactions and encounters with various service attributes ranging from flight availability, airline staff, facilities, information relayed to passengers, hygiene compliance, and on-time arrival [12,36,62]. When these are well prepared and managed, airlines are able to provide a good quality of logistics service through interactions and encounters such as well-explained procedures and clear announcements, accurate compliance with hygiene regulations, and a certain level of punctuality as well as impressive staff manners and gestures [12]. This can deepen the passengers’ understanding of the use of airline services and provide them with some assurance about their service experience with the airline in question so that they can better control the use of services, as Maister [63] suggests. In this way, their sense of PBC will improve/increase [13]. Given these considerations, a hypothesis is developed as follows:

**Hypothesis 3.** Logistics service quality has a positive influence on perceived behavioral control.

2.3.3. Attitudes and Word-of-Mouth Intention

According to the TPB, attitude is the first factor that influences behavioral intention for a particular behavior. It is defined as the extent to which a person evaluates a behavior, either positively or negatively [64], based on the perception that performing a particular behavior is likely to lead to positive or negative consequences [16,26]. In fact, the use of attitudes has been applied in a positive sense where it denotes either positive outcomes (such as convenience) or positive feelings when performing the behavior (such as satisfaction), and its influence has also been examined on behavioral intention, which includes WOMI related to the behavior [10,13,14,51]. Particularly in the context of the airlines, several studies found a significant and positive influence of passengers’ attitudes toward using airline services on their intention to engage in positive word-of-mouth [13,14,17,57]. Ahmadi [17] disclosed that passengers’ intention to engage in positive word-of-mouth is a result of their positive feelings toward the airline’s services. Pan and Truong [14] also revealed that passengers’ attitudes, such as perceiving a relaxed and pleasant feeling when flying with the airline, positively affect the likelihood of recommending their experience with the airline to others. Thus, this study formulates the following hypothesis:
Hypothesis 4. Attitudes have a positive influence on word-of-mouth intention.

2.3.4. Subjective Norms and Word-of-Mouth-Intention

According to the TPB framework, subjective norms are the second factor influencing behavioral intentions. Subjective norms are defined as an individual’s perception of a particular behavior by his or her significant others [16]. They are a function of an individual’s perception of how significant others interpret and approve of the behavior. This can be expressed either in the prevailing opinion and/or in the observable actions that imply such approval to participate in the corresponding behavioral intention [26]. As Sweeney, Soutar, and Mazzarol [30] noted, positive feedback about products and services from other customers can lead them to tend to respond positively by recommending others in the same regard.

This antecedent role of subjective norms for word-of-mouth intention as a behavioral intention is also prominent in the literature on service marketing, tourism, and air travel [10,13,14,25,51,55]. In the context of airlines, a number of previous reports provide empirical evidence that subjective norms positively influence passengers’ word-of-mouth intention as a behavioral intention in their decision-making process regarding the use of airline services [10,13,14,25]. For instance, Pan and Truong [14] studied airline e-purchase intention and showed that the subjective norm has a positive influence on passengers’ word-of-mouth intention. Similarly, Kim and Lee [13] revealed the positive influence of subjective norms on the word-of-mouth intention of passengers who had experienced premium economy class in Korea. Accordingly, this study hypothesizes that passengers who are convinced by their significant others to use the airline services are likely to provide positive feedback about it to others. This leads to the following hypothesis:

Hypothesis 5. Subjective norms have a positive influence on word-of-mouth intention.

2.3.5. Perceived Behavioral Control and Word-of-Mouth Intention

The third factor that is considered an antecedent of behavioral intention is perceived behavioral control [16]. This is considered as a person’s belief that he or she is able to perform a certain behavior [16]. In order to perform the behavior, one must have the appropriate resources and be able to manage them well. These include knowledge, the ability to understand information, time, and money [26]. In other words, it refers to the perceived ease or difficulty of performing a particular behavior [65]. Perceived behavioral control is applied as the sense of how well one can control these resources that play a role in performing the behavior. This is translated as ownership of these and serves as a high level of PBC that can influence BI in its decision-making process to perform the behavior [51]. The significant influence of PBC on people’s behavioral intentions, which include word-of-mouth intention, has been investigated in many previous studies [13,55,66]. For instance, Tommasetti, Singer, and Maione [55] revealed that customers tend to give positive feedback to others in their decision to revisit (BI) when they feel they have control over the resources they can use for their revisit behavior.

However, only a few research studies on air travel have empirically found an insignificant influence of PBC on WOMI given the low need for perceived behavioral control on relevant resources in low-cost airline flights, such as the study by Pan and Truong [14], except for the result of a paper by Kim and Lee [13], in which they presented the undeniable influence of PBC on WOMI as BI. Passengers are likely to engage in generating positive feedback only if they have confidence in their abilities and resources required to fly with the airline, such as sufficient knowledge of the airline’s service process. If they feel they cannot cope with the resources required for a service process, they may not be willing to recommend others to use these services as well. Factors such as skills, knowledge, time, and resources are critical in anticipating behavioral intentions, especially in the midst of the uncertain pandemic situation where passengers are more aware of their air travel as it requires different aspects of travel, from registering for air travel to wearing masks,
staying longer in each service process associated with social distancing, and other multi-
layered approaches to hygiene measures throughout the flight [67]. Possessing these fac-
tors can provide likely behavioral intentions related to airline service use, such as provid-
ing positive feedback to others and/or convincing others of these factors to travel with the
airline again. Based on this understanding, the following hypothesis is proposed:

**Hypothesis 6.** Perceived behavioral control has a positive influence on word-of-mouth intention.

### 2.3.6. Word-of-Mouth Intention and Repurchasing

The word-of-mouth intention, represented in planning theory as a behavioral intention, is not only a function of three theoretical antecedents (namely, attitude, subjective norm, and perceived behavioral control), but it also likely leads to a particular behavior. Word-of-mouth refers to the intention to pass on information and/or experiences regarding the use of products, the use of services, or interactions with companies from one cus-
tomer to another, which may lead to customers’ repeated buying behavior. This underly-
ing potential of WOMI has received attention in many fields, especially in relationship
marketing and service-related strategies, to increase the likelihood of repeat purchase be-
havior [68]. Dixon and Bridson [68] used customers’ willingness to recommend a store to
others as an indicator of what Ambler [69] called “tomorrow’s best estimate of behavior’
because it shows the potential of customers’ intention to maintain the relationship with
the store through their repeat purchases. This is also evident from the fact that a number
of researchers have used customers’ intention to recommend certain services, products,
or places, or what can be called word-of-mouth, to predict their future consumption,
whether in the form of a future choice, revisit, or repeat purchase [55,68,70,71]. Therefore,
WOMI has the potential to affect related behavior, including repurchase. As for repur-
chasing by the customer based on a specific behavioral function, it should show a firm
and noticeable intention, such as a recommendation or positive feedback to others, as sug-
gested by Dixon and Bridson [68]. Moreover, repurchase behavior in this study was con-
sidered either as an ongoing or future action that represents the potential for the repeated
use of services from the same low-cost airline, as the terms repurchase behavior and in-
tention are widely used and interchangeable in the repurchase literature
[15,24,36,58,72,73]. Accordingly, this study assumes that passengers who are willing to
recommend or positively rate an airline’s services are more likely to use the same airline’s
services again in the future [68]. Based on this consideration, the following hypothesis is
made:

**Hypothesis 7.** Word-of-mouth intention has a positive influence on repurchasing.

### 2.3.7. Subjective Norms and Attitude and Perceived Behavioral Control

Given the high credibility of SN, which leads passengers to heavily weigh the opin-
ions of others when making purchase decisions about using airline services, and the open-
ness of TPB, which allows not only for additional factors but also for additional relation-
ships between the original factors as long as they are rational in a given situation, as Ajzen
[74] notes, the literature has eagerly explored the influence of SN on another theoretical
precondition—attitudes [10,75]. Bigne and Andreu [25] based this view on the fact that
passengers form their attitudes toward airlines largely based on the opinions of their sig-
nificant others, such as family and colleagues. Their study found a positive influence of
SN on the ATT of Spanish passengers. Martensen and Gronholdt [75] also reported the
same result wherein customers tend to have positive perceptions when they are encour-
aged by others they care about and found that subjective norms are an essential aspect of
rational choice in influencing positive attitudes of customers, either in the form of positive
feelings or positive probable outcomes when using the travel agency in Denmark. Simi-
larly, Truong and Pan [10] confirmed the primacy of subjective norms in influencing pas-
sengers’ attitudes in the context of low-cost airlines in Thailand. In this study, it is
assumed that the attitude of passengers can be promoted by their important caregivers, such as friends, family, and most people in society who recommend them to fly with the airline, and therefore hypothesizes the following:

**Hypothesis 8.** Subjective norms have a positive influence on attitudes.

However, other empirical studies have not investigated the influence of SN on PBC, although it does indeed play an important role by providing reliable information and recommendations that may improve an individual’s ability to perform a particular behavior and the associated BI. Such opinions can be considered reliable information and are useful for passengers to identify relevant areas where adjustments, preparations, and understanding are needed for performance [36]. It follows that passengers who receive opinions, advice, recommendations, and information about using airline services understand more about the service process and are aware of the resources needed to use each service (e.g., ticket-reading skills, the time needed to get to the gate, and the affordability of the ticket) in order to plan, prepare, and adjust their use of these services. When they believe they have such resources, they tend to view service use as less complicated and more attainable, and their sense of perceived behavioral control will increase [10,13]. Based on these considerations, this study hypothesizes the following:

**Hypothesis 9.** Subjective norms have a positive influence on perceived behavioral control.

### 2.3.8. The Mediating Effect of Attitudes and Perceived Behavioral Control

Logistics service quality has a direct effect on word-of-mouth intention through attitudes. That is, service quality can increase passengers’ intention to provide positive feedback if they have a positive attitude/perception towards the services, as shown by Ahmadi [17] in the case of low-cost airlines in Thailand. Similarly, a study by Pan and Truong [14] demonstrated the mediating role of passengers’ attitudes between LSQ and their WOM intention. Han and Alansi [19], who studied passengers in Korea, also found that passenger attitude positively mediated the relationship between airline service quality and word-of-mouth intention. Similarly, Truong and Pan [10], in a study of low-cost airlines in Thailand, concluded that service quality could induce passengers to provide positive feedback about their attitudes toward airline services.

In addition, previous work [10,75,76] found that attitudes mediate the relationship between subjective norms and word-of-mouth intention. For example, Martensen and Gronholdt [75] showed that consumers who have received opinions from others are more likely to provide positive feedback if they have a positive perception and feel good about the service experience with travel agents. Godes and Mayzlin [77] concluded that the opinions of others might confirm consumers’ positive feelings about their current choice of products/services, which may lead to the intention to engage in this regard through positive word of mouth. Truong and Pan [10] also investigated the mediating role of passengers’ attitudes toward their service experience with low-cost airlines. They emphasized that subjective norms are particularly important because they can improve passengers’ travel decisions, especially attitudes toward airline services, which in turn can increase behavioral intentions.

**Hypothesis 10.** Attitudes mediate the relationship between logistics service quality and word-of-mouth intention.

**Hypothesis 11.** Attitudes mediate the relationship between subjective norms and word of mouth intention.

Regarding the mediating role of the PBC, an indirect effect of LSQ on WOM intention through PBC can clearly be seen, as shown in a paper by Li and Huang [60], in which they...
demonstrated that customers reflect on their past service use. The service provider can help them acquire the necessary knowledge and skills to successfully complete each service task within the service process. An effective way to help them achieve this is to provide high-quality services, e.g., through interaction, information, and appropriate facilities that provide customers with an understanding of the service processes. These will then facilitate their overall use of services, which increases their ability to use the services [60]. As Bitner and Ostrom [78] stated, service providers should clearly provide the relevant information to help customers overcome difficulties in using services. Without these, customers’ urge to provide positive feedback may be suppressed [60,79]. Therefore, in this study, it was assumed that the quality of airline logistic services would improve passengers’ understanding of the service process and enable them to use the services. This means that when they use the airline’s services, they will develop a stronger ability to control their behavior, which will promote their intention to provide positive feedback to others.

Hypothesis 12. PBC mediates the relationship between logistics service quality and word-of-mouth intention.

Similarly, an indirect effect of SN on WOM intention through PBC should not be overlooked, as clients’ understanding of what to do during service use can potentially be improved through opinions, recommendations, guidance, and advice from their significant others [60]. Such opinions are considered valuable information that passengers rely on when making airline choices [17]. They tend to follow the recommendations of their significant others and change their behavior according to these recommendations [25], as well as respond positively, including the intention to provide positive feedback. However, the literature does not seem to indicate the mediating role of PBC in the relationship between SN and WOM intention. It is worth noting that most passengers prefer to be well-prepared for services that require a high level of credibility and expertise, such as airlines [80,81]. This includes receiving sufficient information and recommendations from their significant others so that they understand the service process and feel able to use the services if they have the resources [17,25]. When they are well-prepared and ready to use airline services, this indicates a high level of perceived behavioral control, which may positively affect their behavioral intentions toward services, including intentions to provide positive feedback to others [60,82,83]. Based on these findings, this study hypothesizes the following:

Hypothesis 13. PBC mediates the relationship between subjective norms and WOM intention.

Figure 1 depicts the conceptual framework for this study.
3. Method

3.1. Data Collection

The sample for the study consisted of Thai passengers who had traveled on a domestic flight in Thailand with one of three low-cost airlines (Thai Air Asia, Thai Lion Air, and Nok Air) in the past 12 months. Since the airport followed the health guidelines issued by the CAAT [84] during the pandemic to prevent any action that could pose a public health risk for the spread of communicable diseases, an online survey, especially through an online air travel website and air travel community, seems appropriate to collect the data efficiently. Such an online survey via an air travel website and air travel community is indeed crucial in obtaining the data directly from the respondents who have direct experience of air travel and are implicitly willing to share their experience with the air travel community [85]. It is also widely used in tourism research and studies of services, including airlines, and is thus considered one of the most widely used and feasible survey methods [86]. Since the list of passengers who traveled with the airlines was not accessible, a non-probability sample, referred to here as convenient sampling, was used. Because the online survey can be answered anytime, anywhere, passengers can answer the questionnaire at a time that is convenient for them and take as much time as they can to complete it based on their airline travel experience via a questionnaire link. The link was posted on either a website, Facebook group, or Facebook page that are among the most popular and widely used online sites related to air travel (Pantip Blue Planet, ProAddict, Arpae.com, Traveloka Thailand group, and Wongnai travel) for passengers who have had previous experiences with the aforementioned low-cost airlines. This questionnaire was designed with screening questions to filter out passengers who did not meet the predetermined criteria. All items of the questionnaire were rated on a seven-point Likert scale from 1 (“strongly disagree”) to 7 (“strongly agree”).

Prior to data collection, a Harkness, Pennell [87] back-translation was performed to ensure the quality and accuracy of the entire questionnaire, as the survey was conducted in Thailand. An original version of the English questionnaire was translated into Thai by the authors and then back-translated into English by a professional translator for comparison with the original version of the questionnaire. Then, in accordance with the translator’s feedback, changes such as the use of certain words and the instructions in the questionnaire were made. Then, the index of item-objective congruence (IOC) was performed following Rovinelli and Hambleton [88] for all items with two aviation ex-perts and one person who frequently travels with low-cost airlines, resulting in 56 items. Subsequently, these items were pilot-tested for scale reliability using Cronbach’s alpha with data.
collected from 30 respondents, and all scores were above 0.7: LSQ (tangible characteristic at 0.84, punctuality at 0.938, staff contact at 0.964, information at 0.94, flight availability at 0.922, and sanitary safety at 0.933), attitudes (0.97), subjective norms (0.945), perceived behavioral control (0.965), word-of-mouth (0.918), and repurchase (0.92), as shown in Table 1.

Table 1. Measurement model results.

<table>
<thead>
<tr>
<th>Construct</th>
<th>Items</th>
<th>Factor Loading</th>
<th>Cronbach Alpha</th>
<th>CR</th>
</tr>
</thead>
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<td>TF</td>
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<td>0.84</td>
<td>0.949</td>
</tr>
<tr>
<td></td>
<td>TF1</td>
<td>0.887</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TF2</td>
<td>0.888</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TF3</td>
<td>0.893</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TF4</td>
<td>0.892</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TF5</td>
<td>0.872</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TM</td>
<td>0.671</td>
<td>0.938</td>
<td>0.941</td>
</tr>
<tr>
<td></td>
<td>TM1</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TM2</td>
<td>0.853</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>TM3</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>TM4</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TM5</td>
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<tr>
<td></td>
<td>TM6</td>
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<tr>
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</tr>
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<td></td>
</tr>
<tr>
<td></td>
<td>PC2</td>
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<td></td>
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<tr>
<td></td>
<td>PC3</td>
<td>0.872</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PC4</td>
<td>0.859</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>PC5</td>
<td>0.862</td>
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<td></td>
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<tr>
<td></td>
<td>PC6</td>
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<tr>
<td></td>
<td>IF</td>
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<td></td>
<td>IF2</td>
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<tr>
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<td>IF3</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>IF5</td>
<td>0.86</td>
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<tr>
<td></td>
<td>FA</td>
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<td>0.922</td>
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<tr>
<td></td>
<td>FA1</td>
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<td></td>
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<tr>
<td></td>
<td>FA2</td>
<td>0.847</td>
<td></td>
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<td></td>
<td>FA4</td>
<td>0.835</td>
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<td></td>
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<tr>
<td></td>
<td>FA5</td>
<td>0.889</td>
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<tr>
<td></td>
<td>SS</td>
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<td></td>
<td>SS1</td>
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<td></td>
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<td></td>
<td>SS2</td>
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<td></td>
<td>SS3</td>
<td>0.796</td>
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<td>SS4</td>
<td>0.822</td>
<td></td>
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<tr>
<td></td>
<td>ATT</td>
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<td>0.928</td>
</tr>
<tr>
<td></td>
<td>ATT1</td>
<td>0.834</td>
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<tr>
<td></td>
<td>ATT2</td>
<td>0.851</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ATT3</td>
<td>0.831</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ATT4</td>
<td>0.85</td>
<td></td>
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</tr>
</tbody>
</table>
To determine the minimum sample size for structural equation models following Hair, Anderson [89], the sample size in this study was 400. Ultimately, a total of 400 passengers responded to the survey. Although 17 responses were eliminated due to outliers, leaving 383 usable responses, the sample was sufficient to meet the requirements of SEM.

3.2. Questionnaire

The survey consisted of four main sections. The first section included confidentiality and informed consent statements and a screening question asking respondents if they had ever traveled on any of the named airlines (Thai Air Asia, Thai Lion Air, and Nok Air) in the past 12 months, as these three airlines serve the same routes, to indicate a similar service pattern. The second section consisted of questions asking respondents to select a specific airline they have flown with in the last twelve months and questions about their level of opinion for the questionnaire. The third section asked questions about their air travel, which included logistical service quality, attitudes, subjective norms, perceived behavioral control, word-of-mouth intention, and repurchase. In this section, 56 items from previous studies were developed to assess the relevant constructs. A total of 31 items were developed for the LSQ; 4 items for physical characteristics [14,90,91], 6 adapted items for punctuality [17,92,93], 6 adapted items for contact with staff [36,94,95], 5 items for information [91,96,97], 5 items for flight availability [36,98], and 4 items for sanitary safety [84]. Five items for attitudes were adapted [10,55,99], and another five items for subjective norms were developed [10,55,100], as well as six items for perceived behavioral control, which were also adapted [10,55,101–103]. There were four items for word-of-mouth intention developed by Molinari and Abratt [104] and Ahmadi [17], and five items for repurchase adapted from Matute, Po-lo-Redondo [105], Buaphiban and Truong [15], and Adekunle and Ejechi [106]. The last section consisted of demographic profile questions, including gender, age, occupation, highest educational attainment, and income.
4. Results and Analysis

4.1. Respondent Profile

A total of 383 respondents had traveled with one of the three specified low-cost airlines on one of the specified routes in the past 12 months, most with Thai Air Asia (177 respondents or 46.2 percent), followed by 150 respondents (39.2 percent) with Thai Lion Air and 56 respondents (14.6 percent) with Nok Air. Of these respondents, 50.7 percent were female (194 respondents), and 49.3 percent were male (189 respondents), which is consistent with a study by Truong and Pan [10]. Ages varied from 30 to 39 years (37.1 percent) and 20 to 29 years (30.5 percent). The majority of respondents reported working as employees in a private company (44.1 percent) and working for a public or government company (20.9 percent). Of these respondents, 48.3 percent had a bachelor’s degree, and 25.1 percent had a master’s degree. In terms of income level, 37.6 percent of the respondents had an income between 20,001 and 30,000 baht, which is the average income in Thailand [10], and 23.5 percent had an income between 10,001 and 20,000 baht.

The validity and reliability of the measured variables were assessed using structural equation modeling (SEM) with AMOS 24, as this method can investigate nomological networks by representing theoretical concepts about constructs and linking them to a structural model to examine their relationships, making it an essential statistical tool in social and behavioral sciences [107]. Furthermore, after screening the data for the normality assumption, as required by SEM with reference to Byrne [108], the data were found to be normally distributed, i.e., there were no missing data, 17 outliers were eliminated, and each value was within the acceptable values for skewness and kurtosis, with all absolute values not exceeding 3 and 10, respectively. Accordingly, the screened data, which yielded 383, were considered suitable for data analysis using SEM.

4.2. Measurement Model Assessment

The measurement model assessment was first tested to establish an acceptable goodness-of-fit value [109]. The measures of all factors were examined simultaneously as a pooled measurement model, and the result showed that the measurement model was not fully fit (Chi-square = 4216.896, df = 1463, χ²/df = 2.882, p-value = 0.000, GFI = 0.723, NFI = 0.826, RFI = 0.817, IFI = 0.88, TLI = 0.872, CFI = 0.879, and RMSEA = 0.07), as the values of GFI, NFI, RFI, IFI, TLI, and CFI did not meet the acceptable criteria, where GFI should be greater than 0.80 according to Doll, Xia [110] and the rest should be greater than 0.9 according to Bentler [111], Hu and Bentler [112], and Hair, Black [113], while the values of Chi-square/df and RMSEA were acceptable, as the value was less than 5 and 0.08, respectively [114].

Tables 1 and 2 show the details of the validity and reliability of each item and its respective construct after model adjustment. The following criteria were used to assess the measurement model: all item factor loadings should be greater than 0.6, indicating that each latent variable can explain the variance of its items [115]; the value of Cronbach’s alpha and composite reliability (CR) for each construct should be greater than 0.7, so that the reliability test was considered satisfactory [116–119]; and the average variance extracted (AVE) should be above 0.50 to be sufficient for convergent validity [119], as well as the square root of AVE, which should be greater than the correlations between the constructs to achieve discriminant validity [120]. In Table 2, it is clear that all factor loadings exceeded the threshold of 0.6, and the value of Cronbach’s alpha and composite reliability (CR) for each construct were also above the threshold of 0.7. As for the convergent and discriminant validity in Table 3, the specified criteria were successfully met. The values of AVE were above the threshold of 0.50, and the square root values were also greater than the correlations between each construct and the other constructs, confirming convergent and discriminant validity, respectively.

Table 2. The result of convergent validity and discriminant validity.
Construct  | AVE | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  |
---        |-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
1 TF       | 0.788 | 0.887 |
2 TM       | 0.727 | 0.450 | 0.853 |
3 PC       | 0.750 | 0.395 | 0.409 | 0.866 |
4 IF       | 0.757 | 0.443 | 0.483 | 0.440 | 0.870 |
5 FA       | 0.742 | 0.457 | 0.458 | 0.418 | 0.391 | 0.861 |
6 SS       | 0.693 | 0.416 | 0.464 | 0.445 | 0.436 | 0.445 | 0.832 |
7 ATT      | 0.719 | 0.374 | 0.352 | 0.358 | 0.286 | 0.344 | 0.322 | 0.848 |
8 SN       | 0.762 | 0.015 | 0.042 | 0.034 | 0.016 | 0.052 | 0.034 | 0.135 | 0.844 |
9 PBC      | 0.712 | 0.201 | 0.157 | 0.240 | 0.161 | 0.348 | 0.213 | 0.293 | 0.844 |
10 WOMI    | 0.801 | 0.311 | 0.253 | 0.360 | 0.288 | 0.270 | 0.277 | 0.507 | 0.263 | 0.403 | 0.895 |
11 REP     | 0.751 | 0.273 | 0.202 | 0.355 | 0.260 | 0.294 | 0.230 | 0.276 | 0.044 | 0.221 | 0.427 | 0.866 |

Square roots of average variance extracted are on the diagonal in bold letters, and correlations among constructs are below the diagonal.

Table 3. Multicollinearity analysis.

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>-1.002</td>
<td>0.424</td>
<td>-2.36</td>
</tr>
<tr>
<td>LSQ</td>
<td>0.301</td>
<td>0.074</td>
<td>0.189</td>
</tr>
<tr>
<td>ATT</td>
<td>0.392</td>
<td>0.052</td>
<td>0.338</td>
</tr>
<tr>
<td>SN</td>
<td>0.249</td>
<td>0.054</td>
<td>0.193</td>
</tr>
<tr>
<td>PBC</td>
<td>0.27</td>
<td>0.054</td>
<td>0.218</td>
</tr>
</tbody>
</table>

A Dependent Variable: WOMI.

4.3. Structural Model Assessment

The evaluation of the structural model involves testing the predictive power of the postulated relationships between the constructs [1]. This study is primarily concerned with examining the structural relationship in the context of the theory of planned behavior, which, according to Hair, Ringle, and Sarstedt [121], is compatible with the CB-SEM approach when the research objective is to test the proposed theoretical assumptions. The model was first tested to confirm that there was no case of multicollinearity. All variance inflation factor (VIF) values of the independent variables ranged from 1.087 to 1.311 (see Table 3), which is below the threshold of 10 [122], indicating that multicollinearity was not problematic.

The structural model was then tested and analyzed using AMOS 24 for all given paths between constructs. Thereafter, Table 4 shows that attitude had the strongest positive influence (β = 0.338, p < 0.001) on word-of-mouth intention, followed by perceived behavioral control (β = 0.217, p < 0.001), service quality (β = 0.195, p < 0.05), and subjective norms (β = 0.154, p < 0.001). The R2 value of 0.379 indicates that 37.9% of the variances in word-of-mouth intentions were explained by the four antecedents (logistic service quality, attitudes, subjective norms, and perceived behavioral control), indicating a substantive model [123]. Consequently, H1 (LSQ to WOMI), H4 (ATT to WOMI), H5 (SN to WOMI), and H6 (PBC to WOMI) were supported. Logistic service quality (β = 0.513, p < 0.001) and subjective norms (β = 0.121, p < 0.05) had a positive influence on attitudes, with the variance in attitudes explained by these two antecedents having a substantial R2 value of 0.277 [123], confirming H2 and H8, respectively. Similarly, logistic service quality (β = 0.322, p < 0.001) and subjective norms (β = 0.29, p < 0.001) had a positive influence on perceived behavioral control, with their constructs explaining a moderate R2 value of 0.188 [115], supporting H3 and H9. As for the positive influence of word of mouth (β = 0.429, p < 0.001) on
repurchase supporting H7, it explained a moderate amount of variance, with an R2 value of 0.184 [123].

Table 4. Summary of the results of hypotheses testing.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Relationship</th>
<th>Standardized Regression Weight</th>
<th>t-Value</th>
<th>Sig.</th>
<th>Result</th>
<th>R2</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>LSQ -&gt; WOMI</td>
<td>0.195</td>
<td>3.037</td>
<td>0.002</td>
<td>Supported</td>
<td>0.379</td>
</tr>
<tr>
<td>H2</td>
<td>LSQ -&gt; ATT</td>
<td>0.513</td>
<td>7.072</td>
<td>***</td>
<td>Supported</td>
<td>0.277</td>
</tr>
<tr>
<td>H3</td>
<td>LSQ -&gt; PBC</td>
<td>0.322</td>
<td>5.202</td>
<td>***</td>
<td>Supported</td>
<td>0.188</td>
</tr>
<tr>
<td>H4</td>
<td>ATT -&gt; WOMI</td>
<td>0.338</td>
<td>5.773</td>
<td>***</td>
<td>Supported</td>
<td></td>
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<tr>
<td>H5</td>
<td>SN -&gt; WOMI</td>
<td>0.154</td>
<td>3.571</td>
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<tr>
<td>H6</td>
<td>PBC -&gt; WOMI</td>
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<td>4.254</td>
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<td>WOMI -&gt; REP</td>
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<td>Supported</td>
<td>0.184</td>
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<tr>
<td>H8</td>
<td>SN -&gt; ATT</td>
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<td>2.634</td>
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<td>H9</td>
<td>SN -&gt; PBC</td>
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<td>5.917</td>
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<td>Supported</td>
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</tr>
</tbody>
</table>

Note: *** p < 0.001.

The final structural model is presented in Figure 2, where all goodness-of-fit values are acceptable (Chi-square = 1920.731, df = 1424, χ²/df = 1.349, p-value = 0.000, GFI = 0.858, NFI = 0.921, RFI = 0.914, IFI = 0.978, TLI = 0.976, CFI = 0.978, and RMSEA = 0.03), given the criteria proposed by many researchers [109,111–113].

The mediating effects of attitudes and PBC are shown in Table 5. Consistent with the multiple-mediation analysis in [1,124], four mediating hypotheses, including H10 (LSQ -> ATT -> WOMI), H11 (SN -> ATT -> WOMI), H12 (LSQ -> PBC -> WOMI), and H13 (SN -> PBC -> WOMI), were analyzed using the bootstrap method in AMOS 24, with 2,000 replicate samples analyzed. The results show that all hypotheses were statistically significant.
In terms of the effect of LSQ on WOMI in H1, the indirect effect, including that of ATT (0.1733 in H10) and PBC (0.0698 in H12), was 0.243, whereas the overall effect and direct effect of LSQ on WOMI were 0.438 and 0.195, respectively. The mediating effects of ATT in H10 (β = 0.1733 at p < 0.05) and PBC in H12 (β = 0.0698 at p < 0.05) were also found to be statistically significant, as evidenced by a 95 percent bias-corrected and accelerated confidence interval that did not include zero between the lower and upper bounds of the confidence interval. Regarding the effect of SN on WOMI from H5, the indirect effect, including that of ATT (0.0408 in H11) and PBC (0.0629 in H13), was 0.104, whereas the overall effect and direct effect of SN on WOMI were 0.258 and 0.154, respectively. The mediating effect of ATT in H11 (β = 0.0408 at p < 0.05) and PBC in H13 (β = 0.0629 at p < 0.05) also proved to be statistically significant, as the range between the lower and upper limits of the confidence interval for the 95 percent bias-corrected and accelerated confidence intervals did not include zero [1]. In addition, both direct and indirect effects were found to be statistically significant with equal directions, and the direct and indirect effect coefficients were positive, suggesting a partial mediating role of ATT between LSQ and WOMI in H10 and H11 and that of PBC between LSQ and WOMI in H12 and H13 [1,125].

### Table 5. Mediating effects of attitudes and perceived behavioral control.

<table>
<thead>
<tr>
<th>Hypotheses Relationship</th>
<th>Total Effect (Std. β)</th>
<th>Direct Effect (Std. β)</th>
<th>Indirect Effect (Std. β)</th>
<th>95% BCA CI</th>
<th>Decision</th>
<th>VAF</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSQ -&gt; WOMI</td>
<td>0.438 **</td>
<td>0.195 **</td>
<td>0.243 **</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H10 LSQ -&gt; ATT -&gt; WOMI</td>
<td>-</td>
<td>-</td>
<td>0.1733 ** [0.216; 0.535]</td>
<td>Supported</td>
<td>16.67</td>
<td></td>
</tr>
<tr>
<td>H12 LSQ -&gt; PBC -&gt; WOMI</td>
<td>-</td>
<td>-</td>
<td>0.0698 ** [0.071; 0.245]</td>
<td>Supported</td>
<td>21.65</td>
<td></td>
</tr>
<tr>
<td>Total indirect effect of H10 and H12</td>
<td>-</td>
<td>-</td>
<td>0.243</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SN -&gt; WOMI</td>
<td>0.258 ***</td>
<td>0.154 ***</td>
<td>0.104 ***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H11 SN -&gt; ATT -&gt; WOMI</td>
<td>-</td>
<td>-</td>
<td>0.0408 ** [0.018; 0.134]</td>
<td>Supported</td>
<td>42.27</td>
<td></td>
</tr>
<tr>
<td>H13 SN -&gt; PBC -&gt; WOMI</td>
<td>-</td>
<td>-</td>
<td>0.0629 ** [0.046; 0.174]</td>
<td>Supported</td>
<td>17.90</td>
<td></td>
</tr>
<tr>
<td>Total indirect effect of H11 and H13</td>
<td>-</td>
<td>-</td>
<td>0.104</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

LSQ, logistics service quality; WOMI, word-of-mouth intention; ATT, attitudes; SN, subjective norms; PBC, perceived behavioral control; BCA CI, bias-corrected and accelerated confidence interval; VAF, variance accounted for. ** p < 0.01, *** p < 0.001.

## 5. Discussion, Implications, Limitations, and Future Research

### 5.1. Discussion

Regarding the scope of the factor, this study provides interesting results. First, this study provides empirical evidence for Thongkruer and Wanarat’s [12] assertion that an airline’s service quality should be derived from its service character, which lies in various service models that can be considered as logistic service quality. From the results, logistic service quality not only has a direct and positive influence on attitude and WOMI, which is consistent with several studies [14,17,19,22], but also on PBC, which provides a new insight into passengers’ evaluation compared to many other related findings, except for work by Li and Huang [60], who found a positive influence of service quality on perceived behavioral control. However, they did not examine different service models, nor did they consider all relevant resources consistent with PBC in TPB. For example, Shah and Syed [22] examined service quality based only on the SERVQUAL instrument, with their main focus only on service expectation and perception, and Truong and Pan [10] and Pan and Truong [14] measured service quality in terms of only tangible characteristics, while Li and Huang [60] focused only on self-service machines in retail banks, not fully covering what perceived behavioral control should measure in the context of airlines. Thus, the result of this study highlights the importance of the extent to which airlines can provide good-service quality to facilitate their passengers’ air travel, as well as passengers’ attitudes and WOMI. If LSQ is high, i.e., if airlines provide strong service support to their
passengers, not only will passengers' attitudes toward using airline services improve, but their perceived behavioral control toward using airline services will also improve, leading to passengers' WOMI.

Second, the results show that each attitudinal/psychological factor in TPB has a positive and direct influence on WOMI. Although Truong and Pan [10], Pan and Truong [14], and Buaphiban and Truong [15] investigated these relationships, only the influence of PBC on WOMI was found to be non-significant in their results, as well as a non-significant result of the influence of SN on WOMI in Kim and Lee's work [13]. As for the former non-significant result, they reasoned that passengers are not concerned about purchasing airline services when providing feedback to others because they are so affordable that they usually do not consider perceived behavioral control. It is worth noting that their study was conducted prior to the COVID-19 situation, which had no impact on their air travel and especially its affordability. In contrast, this study was conducted during the pandemic, in which most people experienced financial hardship [126] and were concerned about the operations during their air travel, including safety and hygiene aspects [4], which is also reflected in the results of this study. For the latter non-significant result, Kim and Lee [13] concluded that passengers who have experience with premium economy class are less sensitive to other recommendations, which also seem to be few in number and not widespread compared to other services. Therefore, it is difficult for them to receive or make recommendations from or for others. However, this study examined this aspect in the context of low-cost airlines, where they are widely used and passengers are considered influential. Despite these contrasting findings from other work, the result of this study is consistent with previous research findings in the non-airline context. For example, Tommasetti, Singer, and Maione [55] showed that customers rely on their positive attitudes, other opinions, and ease of service when choosing a sustainable restaurant. Many other studies also suggest that these attitudinal/psychological factors of customers play an important role in shaping behavioral intentions, such as the WOMI of customers who are anxious to use a service, use a product, or revisit the destination [51,57,127].

This study examined the influence of SN on attitudes and PBC, which is consistent with an openness of TPB that allows not only an additional determinant for each of the original factors (ATT, SN, and PBC), but also their influence on each other [74]. Most research on service context, including airlines, has used service quality as an additional factor influencing the first antecedent of the theory, attitude [14,24,128], while a few papers have also used SN as an additional antecedent of attitude [10]. They assume that service quality is one of the main reasons why passengers choose airline services, as it improves their attitude and subsequently leads to their behavioral intention and behavior, as SQ is considered a past experience. Truong and Pan [10] have also shown that SN can promote passengers' positive perception towards using airline services. However, they did not consider another possible influence of SN on PBC, as other people's opinions/advice regarding services can indeed improve customers' understanding, knowledge, and competence, which translates into higher levels of PBC [25]. Therefore, the impact of SN in this regard should not be overlooked, especially in a service-based context such as that of airlines, where passengers rely on the opinions of others to ensure their ability to use the services for their decision-making when selecting airline services. In light of these findings, this study goes beyond this conventional and additional antecedent of passenger attitude explaining behavioral intention and behavior. That is, it has shown that research related to airlines should consider not only passengers' previous experiences, such as the quality of logistics services (when it comes to passengers using an airline's services and applying additional factors for reasons of parsimony in TPB), but also the likely influencing factor among the original antecedents, which here refers to SN. As Bigne and Ruiz [129] stated, SN, either in terms of agreement with advice, feedback, or recommendations, is an important determinant of consumers' decision-making process. In this sense, this study has shown that SN is highly relevant to the service context, especially for airlines where passenger attitudes and perceived behavioral control can be improved by such opinions from
others, which is consistent with the emphasis on this aspect by Bigne and Andreu [25] and [129], respectively.

Finally, the results of this study have demonstrated the positive and significant mediating role of attitudes and perceived behavioral control between logistic service quality and WOMI and between subjective norms and WOMI. In other words, the quality of logistics services indirectly affects WOMI through travelers’ attitudes and perceived behavioral control. The results of this study are also consistent with previous studies [14,19,22,60]. Thus, it is proven that high-quality logistic services promote a positive attitude towards using airline services and reaching relevant resources, which leads to the intention to provide positive feedback about airline services. Similarly, the results show an indirect effect of subjective norms on WOMI via passenger attitudes, which is consistent with work by Truong and Pan [10], as well as via perceived behavioral control, which, to the best of the authors’ knowledge, has not yet been studied. This is an important finding that highlights PBC as a mediator between SN and WOMI. It shows that the opinions of others (family, friends, colleagues, and people in the community) can be considered not only as a basis for passengers’ attitudes toward using airline services but also as a basis for improving passengers’ ability to use airline services if they have the appropriate resources, which can lead them to provide positive feedback in this regard.

5.2. Implications

This study provides meaningful information to airline managers by demonstrating the importance of understanding logistical service quality as a foundation for developing capabilities to retain their existing customers. Because logistics service quality encompasses various service attributes related to what services can be explicitly and implicitly provided to passengers, airline managers should seek to consider the associated forms of involvement in the service design phase to identify all the facilities and resources involved so that each aspect can be improved in a precise and appropriate manner. For example, designing an information dimension of LSQ could begin by considering the relevant information that may be presented during the passenger’s use of the airline’s services, such as a boarding announcement, in-flight safety instruction, and in-flight souvenirs. This information includes various facilities and resources, such as the clarity of the message for a particular purpose, the adequacy of the physical demonstration, and the facilities needed to convey the information and assist in the performance of each task. Therefore, managers should apply this understanding to achieve a better quality of logistics services and their outcomes. In addition, airline managers need to ensure that passengers are well served because LSQ impacts both ATT and PBC, which in turn can lead to WOMI and its direct impact on WOMI. Specifically, they should target their service strategies at each dimension of LSQ (tangible features, punctuality, staff contact, information, flight availability, and sanitary security) to create a positive perception in passengers’ minds and encourage them to use the airline’s services, which in turn drives passengers’ WOMI and leads to their repurchase.

Equally important, this study helps airline managers to put themselves in the shoes of their passengers when they consider generating positive feedback and, in turn, repurchasing the airline’s services in the future, as evidenced by the positive influence of passengers’ attitudes/psychological aspects on the TPB. Therefore, they can design communication strategies based on passengers’ attitudinal aspects: namely, attitudes, subjective norms, and PBC. Communicated content can be related to positive outcomes and positive feelings about using air services (e.g., convenience and a pleasant feeling), as well as the feeling that many people in society are likely to use the air services and that using the services can either persuade, encourage, or make passengers consider these likely outcomes for their behavioral intentions and behaviors toward using air services.

In addition, this study highlights the importance of social influence in the form of opinion congruence with a significant other, given the impact of subjective norms on ATT and PBC, which may lead to WOMI. Therefore, airline marketers and service managers
should develop strategies, create spaces, or initiate campaigns that promote knowledge sharing among passengers. They can provide and/or host social media pages on their websites that enable such sharing, such as blogs, forums, and chat rooms, to enable their customers to share relevant information. These social media can provide advice on the relevant information about the airline’s services that will influence passengers’ attitudes and performance when using the services and increase the likelihood that they will provide positive feedback and thus purchase the airline’s services again.

This study supports the claims of Thongkruer and Wanarat [12] that LSQ is necessary and appropriate for assessing airline service quality and extends this knowledge with new empirical data in the context of airlines, where the measurement is derived from its service-based nature. The results of this study could serve as a basis for researchers to understand which logistic dimension of service quality should be chosen and considered, given its relevance with the passengers during the use of airline services. Another contribution is the discovery of attitudinal factors that serve as mediators (attitudes and perceived behavioral control) linking LSQ and WOMI and SN and WOMI.

Importantly, this study contributes to discovering what mediating role such attitudinal factors should play in order to further develop these relationships, either starting from looking at the use of service quality to their positive outcomes and performance leading to their intention to provide positive feedback or starting from looking at their agreement with other opinions on these aspects. Given these findings, this study extends the conventional application of attitude factors in theory and provides a new way to understand the extent to which travelers form their word-of-mouth intention based on TPB theory.

Last but not least, this study contributes to the existing service literature on TPB by empirically examining the relationships between attitudinal factors and behavioral intentions that lead to a particular behavior and responding to the research demand by relating LSQ to its antecedents and consequences, as suggested by Thongkruer and Wanarat [12], and by specifically examining WOMI as a behavioral intention [32]. It improves the understanding of how passengers exhibit repurchase behavior as a result of their behavioral intention, especially WOMI, which seems to be positively influenced by attitudinal factors such as positive outcomes and positive feelings. Bringing these factors together provides a more comprehensive representation of consumer behavior in relation to service utilization.

5.3. Limitations and Recommendations for Future Research

The result of this study did not provide the given relationship between variables in changing situations or changing views of passengers because it was a cross-sectional study conducted in the middle of the COVID-19 pandemic. Future studies could focus on these variables in a different situation, such as after a pandemic, or on other airlines and different types of airlines, such as regular and non-low-cost airlines. In addition, an online survey was conducted among Thai passengers to recall their travel experiences with a particular low-cost airline in Thailand in the past twelve months. Recollection of such experiences could become less important over time. Future studies could include data collection in a natural setting, including airports, to obtain more meaningful responses from passengers. In addition, this study focused only on Thai passengers. Future studies could therefore focus on other nationalities, such as international passengers, and compare responses from different nationalities. Gathering such information could shed light on how different nationalities experience airline services or how different their perceptions are regarding attitude-related aspects in the theory of planned behavior.

6. Conclusions

With continued intense competition among airlines due to increasing demand for air travel, especially among low-cost carriers, and the sudden onset of the current COVID-19 pandemic that has caused them to lose time, airlines must not only compete to maintain their business but also compete with their competitors by retaining their existing
passengers. This is achieved through a basic understanding of their passengers’ repurchase behavior through their behavioral intentions, which can be understood through their psychological/attitudinal aspects and their past experiences, such as service quality. This study investigated the factors influencing passengers’ repurchase behavior through word-of-mouth in the context of low-cost airlines operating in Thailand by incorporating passengers’ logistical service quality and psychological/attitudinal factors into a comprehensive framework as an extended theory of planned behavior. The target population of this study was Thai passengers of low-cost airlines. This study shows that all dimensions of logistics service quality have a positive influence on the intention to recommend as well as on the individual attitudinal factors of the theory of planned behavior. These attitudinal factors also have a significant positive influence on word-of-mouth intention. Of these attitudinal factors, subjective norms were expected to have a positive and significant influence on attitudes and perceived behavioral control, which was then found to be statistically significant. This study then further examined the mediating role of attitudes and perceived behavioral control between logistics service quality and word-of-mouth intention. As a result, both were found to partially mediate these relationships, underscoring the importance of their potential for the overall relationship.

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