DEVELOPING CONSUMER-BASED SERVICE BRAND EQUITY (CBSBE): AN AIRLINE INDUSTRY PERSPECTIVE

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FACULTY OF BUSINESS AND ACCOUNTANCY
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KUALA LUMPUR

2020

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THESIS SUBMITTED IN FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

FACULTY OF BUSINESS AND ACCOUNTANCY
UNIVERSITY OF MALAYA
KUALA LUMPUR

2020

UNIVERSITY OF MALAYA
ORIGINAL LITERARY WORK DECLARATION

Name of Candidate: Md Moniruzzaman Sarker

Matric No: CHA150031

Name of Degree: Doctor of Philosophy

Title of Thesis: Developing Consumer-Based Service Brand Equity (CBSBE): An Airline Industry Perspective

Field of Study: Services Marketing and Brand Management

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DEVELOPING CONSUMER-BASED SERVICE BRAND EQUITY (CBSBE): AN AIRLINE INDUSTRY PERSPECTIVE

ABSTRACT

The competitive challenges facing airline companies such as consolidation, merger, acquisition and passengers' dynamic buying behaviour require sound branding strategies that may help organisations survive and thrive effectively. Although contemporary brand equity models have been acknowledged and tested in the service branding context, they are not quite adaptable to the airline sector. A critical review of the literature also confirms that earlier models are more appropriate for product-dominant brands, as they ignore the crucial roles of direct service experience, which is the nucleus of service organisations. Besides, the two essential elements of brand asset (i.e., brand consistency and perceived value) are disregarded in previous service branding model. Therefore, using airline service as the basis, this research aims at proposing and examining an alternative service branding theory known as consumer-based service brand equity (CBSBE) model which takes into consideration the direct service experience, brand consistency and perceived value along with existing components such as brand awareness, brand meaning and brand equity.

Using the survey research methodology, data were collected via a structured questionnaire, through: 1) airport intercept from international airline passengers in Kuala Lumpur International Airport (KLIA); and 2) online platforms such as WhatsApp, WeChat, Facebook messenger and email. A total of 652 usable responses were gathered and analysed. Using the partial least squares structural equation modelling (PLS-SEM) techniques, the results indicate that airline service direct experience and brand consistency are highly important aspects for strengthening brand equity components of services. Subsequently, maximizing perceived value, followed by creating favourable brand meaning are the nucleus of branding services. The rather feeble influence of brand

awareness in creating positive SBE may suggest that consumer experience-based assessment through perceived value and brand meaning is more powerful than brand awareness in eliciting a positive differential response of SBE. Overall, the theoretical conceptualisation and empirical evidences of this study affirm that the proposed CBSBE model is valid in explaining branding strategy of the airline industry.

The research yields theoretical, methodological and practical implications. From a theoretical standpoint, the inclusion of brand consistency and perceived value in suggesting an alternative service branding framework called the CBSBE model enhances the depth of service branding theory. Theoretically, building an airline brand depends very much on high perceived value and favourable brand meaning, which are invincibly materialised by airline service direct experience and brand consistency. Also, the adoption of quantitative methods in operationalising the model in airline service setting provides some methodological contributions. As a higher-order formative construct, airline service direct experience offers a comprehensive understanding by integrating five essential dimensions - in-flight-core service, employee service, interaction with other passengers, purchase decision experience and airport service experience. The study further argues that the generalisability of the CBSBE model would be achieved if direct service experience components are tailored to a specific service setting. Finally, for the airline brand/marketing manager, this research offers crucial insights in designing airline branding strategy. In-flight-core service and employee service are the most critical aspects of airline service; whereas airport service experience, interaction with other passengers and purchase decision experience are the integral parts of airline service direct experience. Thus, maximising value, creating favourable meaning and managing consistency in delivering an enjoyable airline service (i.e., brand consistency) through direct service encounters will mitigate managerial and marketing difficulties when building a strong airline brand.

Keywords: Service brand equity; CBSBE; Direct service experience; Brand consistency; Perceived value; Airline service

MEMBANGUNKAN EKUITI JENAMA PERKHIDMATAN BERASASKAN PENGGUNA (CBSBE): DARI PERSPEKTIF INDUSTRI PENERBANGAN

ABSTRAK

Cabaran persaingan yang didepani oleh syarikat-syarikat penerbangan contohnya penstrukturan, penggabungan, pengambilalihan, dan tingkahlaku pengguna yang dinamik memerlukan strategi penjenamaan yang dapat membantu organisasi untuk bertahan dan berkembang dengan lagi efektif. Walaupun model ekuiti jenama kontemporari sudah diakui dan digunapakai di dalam konteks penjenemaan perkhidmatan, ianya didapati tidak begitu sesuai dengan sektor penerbangan. Sorotan kajian juga mendapati bahawa model-model terdahulu adalah lebih cenderung kepada produk oleh kerana mengabaikan peranan pengalaman perkhidmatan secara langsung, iaitu intipati utama di dalam organisasi perkhidmatan. Disamping itu, dua elemen penting dalam asset jenama (i.e., ketekalan jenama dan nilai yang diamati) dihiraukan di dalam model penjenamaan perkhidmatan terdahulu. Oleh itu, dengan menggunakan perkhidmatan penerbangan sebagai asas, kajian ini menyasarkan untuk mengusul dan meneliti satu teori alternatif bagi penjenamaan perkhidmatan atau dikenali sebagai Model Ekuiti Jenama Berasaskan Pengguna Consumer-Based Service Brand Equity (CBSBE) yang mengambilkira pengalaman perkhidmatan secara langsung dan nilai yang diamati bersama komponen sedia ada seperti kesedaran tentang jenama, erti jenama dan ekuiti jenama.

Dengan menggunakan kaedah kajian tinjauan, maklumat dikumpul melalui soal selidik dengan 1) penumpang syarikat penerbangan antarabangsa di Lapangan Terbang Antarabangsa Kuala Lumpur (KLIA); dan 2) platfom dalam talian seperti WhatsApp, WeChat, Facebook Messenger dan e-mel. Sebanyak 652 maklumbalas berguna telah dikumpul dan dianalisa. Dengan menggunakan teknik Partial Least Squares Structural Equation Modelling (PLS-SEM), hasil kajian mendapati bahawa pengalaman perkhidmatan secara langsung dan ketekalan jenama adalah dua aspek penting bagi

mengukuhkan lagi ekuiti jenama perkhidmatan. Seterusnya, intipati penjenamaan perkhidmatan juga termasuk memaksimumkan nilai yang diamati, diikuti dengan menghasilkan erti jenama yang memuaskan. Kesedaran tentang jenama yang lemah dalam penghasilan ekuiti jenama perkhidmatan *service brand equity (SBE)* menyarankan penilaian berasaskan pengalaman pengguna melalui nilai yang diamati dan erti jenama adalah lagi utuh daripada kesedaran tentang jenama dalam membezakan tindakbalas SBE. Secara keseluruhannya, penghasilan teori dan bukti empirikal kajian ini mengukuhkan usul awal model CBSBE adalah sah dalam menghuraikan strategi penjenamaan di dalam industri penerbangan.

Hasil kajian ini membawa implikasi dari segi teori, metodologi dan praktikal. Dari segi teori, ketekalan jenama dan nilai yang diamati dalam mengusulkan satu kerangka alternatif penjenamaan perkhidmatan yang dipanggil model CBSBE menambahbaikkan lagi definisi teori penjenamaan perkhidmatan. Membina jenama perkhidmatan penerbangan sangat bergantung kepada nilai yang diamati dan erti jenama yang tinggi; hasil kombinasi utuh antara pengalaman perkhidmatan penerbangan secara langsung dan ketekalan jenama. Penggunaan kaedah kuantitatif dalam operasi model di dalam perkhidmatan penerbangan memberi sedikit sebanyak sumbangan dari segi metodologi. Sebagai konstruk formatif di tertib yang tinggi, pengalaman secara langsung penerbangan membuka ruang untuk memahami secara lebih mendalam dengan menyatukan lima dimensi penting iaitu perkhidmatan teras penerbangan, perkhidmatan kru, interaksi bersama penumpang yang lain, pengalaman dalam keputusan pembelian dan pengalaman perkhidmatan lapangan terbang. Kajian ini juga berdebat bahawa kebolehubahsuaian model ini akan dicapai jika komponen-komponen pengalaman perkhidmatan langsung disesuaikan dengan tetapan perkhidmatan tertentu. Akhir sekali, usaha ini menyediakan beberapa pandangan yang berguna untuk pengurus pemasaran/jenama syarikat penerbangan dalam merekabentuk strategi penjenamaan syarikat penerbangan.

Perkhidmatan teras penerbangan dan perkhidmatan kru adalah aspek-aspek paling kritikal dalam perkhidmatan penerbangan; dimana pengalaman di lapangan terbang, interaksi bersama penumpang yang lain dan pengalaman membuat keputusan pembelian adalah bahagian-bahagian penting yang membentuk pengalaman perkhidmatan penerbangan secara langsung. Oleh itu, konsistensi dalam menyampaikan perkhidmatan syarikat penerbangan yang menyeronokkan (i.e., konsistensi jenama) melalui pertemuan-pertemuan seperti di atas akan mengurangkan masalah pengurusan dan pemasaran apabila membina jenama syarikat penerbangan yang kukuh.

Kata kunci: Ekuiti jenama perkhidmatan; CBSBE; Pengalaman perkhidmatan langsung; Konsistensi jenama; Nilai yang dirasakan; Perkhidmatan syarikat penerbangan

ACKNOWLEDGEMENTS

All praise is due to the almighty Allah S.W.T (Alhamdulillah) for granting me blessings, wisdom, sound health and strength to complete this study.

This effort would not have come to fruition without the love, support and contributions from many individuals along the way. First of all, I wish to express my sincere gratitude to both of my supervisors - *Associate Professor Dr. Yusniza Kamarulzaman* and *Dr. Amrul Asraf Mohd-Any* for their relentless support, encouragement and inspiration throughout the three and a half years of my PhD journey. They have always kept an open door for me to share and discuss my thoughts with them. Their scholarly guidance and timely, positive and constructive feedback have equipped me with the fundamentals of marketing research and professionalism necessary to become an independent researcher. I am extremely privileged to have them as my supervisors. Alongside, I would like to thank *Prof. Dr. Ghazali Musa* and *Dr. Mahfuzur Rahman* for giving me continuous support and inspirations to hold up my spirit positive toward finishing this study.

I am extremely fortunate to have received valuable feedback on my conceptual model from *Professor Leonard L. Berry*, of Texas A&M University, USA, for which I could not be more grateful. Also, I wish to thank *Professor Dr. Marko Sarstedt*, of Otto-von-Guericke-University Magdeburg, Germany and *Professor T. Ramayah*, of Universiti Sains Malaysia (USM), Malaysia for their feedback on various issues related to the research design of this study. I have also received many constructive comments from the internal and external examiners and I extend my gratitude to them for their valuable feedback.

I acknowledge the support received from the Kuala Lumpur International Airport (KLIA) authorities, specifically *Ms. Siti Eli Ilyana Salim*, the Senior Public Relations Executive in the Corporate Communication Division of Malaysia Airports Holdings Berhad (MAHB). She has been extremely cooperative in granting me access for the airport intercept survey in KLIA. I would also like to thank my beloved wife – *Nafisa Kasem* and PhD mates and friends - *Mohammed Abdulmalek Sulaiman, Hussam Mohammed Kamil, Mohammed Mustafa Mohammed Yosuf* and *AMR Mohammed Nasser* for helping me with the data collection. Without their tireless support, my data collection stage would not have been possible.

Notably, my PhD journey would not have been steady without the support and help from my soulmate and wife who is also pursuing her PhD in UM. I take this opportunity to convey my heartfelt gratitude to her for the love, affection, encouragement and inspiration. Not only has she been extremely patient, understanding, helpful and caring, she has also assisted me with various boring and tedious tasks including idea generation, data collection, data entry and providing constructive feedback on my research work. Her love and sacrifices are beyond any word of expression. Without her support, this thesis would certainly not have been completed.

Finally, I would like to express my greatest appreciation to my beloved parents - *Md Abdul Mannaf Sarker* and *Monoura Begum* for their constant love, prayers and wisdom. Also, I am indebted to my parents-in-law - *Dr Abul Kasem* and *Ummey Kulsum* for their selfless support, love and trust on me. There are no limits to express my gratitude to all of you. You are the spiritual and emotional avenues of my life. I love you with all my heart. I am also grateful to my other family members and friends who have supported me along the way. I couldn’t have done it without all of you. THANK YOU SO MUCH!

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ASDE	:	Airline service direct experience
AS	:	Airport service experience
AVE	:	Average variance extracted
ABDC	:	Australian Business Deans Council
BCa-CI	:	Bias-corrected and accelerated confidence interval
BA	:	Brand awareness
BC	:	Brand consistency
BE	:	Brand equity
BM	:	Brand meaning
B2B	:	Business to business
Chartered ABS	:	Chartered Association of Business Schools
CI	:	Confidence interval
CLC	:	Construct level correction
CBBE	:	Consumer-based brand equity
CBSBE	:	Consumer-based service brand equity
CMB	:	Common method biases
CMV	:	Common method variance
CR	:	Composite reliability
CB-SEM	:	Covariance-based structural equation modelling
CA	:	Cronbach's alpha
ES	:	Employee service
ERA	:	Excellence in Research in Australia
FORC	:	First-order reflective constructs
FL	:	Fornell-Larcker
CS	:	Inflight-core service
OP	:	Interaction with other passengers
IATA	:	International Air Transport Association
KLIA	:	Kuala Lumpur International Airport
LVs	:	Latent variables
LM	:	Linear regression model
LCCs	:	Low-cost carriers
MAHB	:	Malaysia Airports Holdings Berhad
MV	:	Marker Variable

MAE	:	Mean absolute error
MLMV	:	Measured latent marker variable
MICOM	:	Measurement invariance of composites
MCAR	:	Missing completely at random
MGA	:	Multigroup analysis
PLS-SEM	:	Partial least squares structural equation modelling
PLS-MGA	:	Partial least squared multigroup analysis
PV	:	Perceived value
PD	:	Purchase decision experience
RO	:	Research objectives
RQ	:	Research questions
RPK	:	Revenue passenger kilometres
RMSE	:	Root mean squared error
SBE	:	Service brand equity
SDL	:	Service-Dominant Logic
SD	:	Standard Deviation
SPSS	:	Statistical package for social science
S-O-R	:	Stimulus-Organism-Response
SEM	:	Structural equation modelling
UMREC	:	University of Malaya Research Ethics Committee
VAF	:	Variance accounted for
VIF	:	Variance inflation factor
VFR	:	Visiting friends and relatives
WoS	:	Web of Science
WOM	:	Word-of-mouth
R^2	:	Coefficient of determination
rho_A	:	Djikstra-Henseler rho
f^2	:	Effect size
HTMT	:	Heterotrait-Monotrait
Q^2	:	Stone-Geisser predictive relevance
q^2	:	Relative predictive relevance

LIST OF APPENDICES

CHAPTER 1: INTRODUCTION

1.1 Chapter Introduction

Chapter 1 is designed to highlight the background of the current study which amplifies the importance of conducting this research. The chapter begins by discussing the key issues and background of the research. An overview of the airline industry is also highlighted to define the research context. Then, the research gaps are identified which guide the formulation of research questions. The research objectives are presented based on the key questions addressed in this chapter.

1.2 Background of the Research

Air transport service is one of the key aspects of the travel and tourism industry. With more than 4.3 billion travellers globally in 2018 (Statista, 2019), the airline industry is widely considered as one of the largest and growing sectors (Deloitte, 2018). In 2018, the industry contributed about 854 billion US dollars to the global GDP and triggered economic growth worldwide (IATA, 2019a). Despite this fact, this industry has been facing competitive challenges leading to closure or merger of some companies (Choi, Lee, & Olson, 2015; Hussain, 2016; S. W. Wang, 2014). These include the recent shutdown of Hawaii's second-largest airline—Island Air (USA TODAY, 2017) and the merger between US Airways and American Airlines in 2015 (Harlan, 2015). The emerging trends signal the need for airline companies to rethink and revive their traditional strategies in order to gain competitive advantage and secure a desired brand position (Adapa & Roy, 2017).

In the services marketing literature, branding has been acknowledged to account for a great number of successes of service organisations or providers (Berry, 2000; Brodie, 2009a; Jara & Cliquet, 2012; McDonald, de Chernatony, & Harris, 2001; Sok & O'Cass, 2011). For example, of the world's 10 most valuable brands in 2018, six were service brands, namely Google, Microsoft, Facebook, Amazon, Disney and AT&T (Forbes, 2018). Moreover, successful brands survive amidst the competition, gain long-term financial stability and ensure consumer trust (C.-F. Chen & Chang, 2008; Jeng, 2016). While consumers can be less price sensitive to a brand due to the assurance of delivering desirable benefits (Rusetski, Andrews, & Smith, 2014), a brand also satisfies their rational and emotional needs and helps to retain them as loyal customers (Aaker, 1991; de Chernatony, McDonald, & Wallace, 2011). Therefore, implementing an effective branding strategy is imperative for service marketers to withstand intense competition, including that of airlines.

Previous literature have shown that contemporary studies on airline service are more about *passenger travel satisfaction/dissatisfaction* and *service quality* (Bubalo & Gaggero, 2015; C.-F. Chen, 2008; Han & Hwang, 2017; Hussain, 2016; Kefallonitis, 2015; Lim & Tkaczynski, 2017; J.-W. Park, Robertson, & Wu, 2006; Perçin, 2018), *airline brand credibility, brand image and/or brand personality* (Cervera-Taulet, Schlesinger, & Yagüe-Guillen, 2013; Dirsehan & Kurtuluş, 2018; Jeng, 2016; Kotsi & Slak Valek, 2017), *brand loyalty* (Dolnicar, Grabler, Grün, & Kulnig, 2011; Hwang & Hyun, 2017; Mikulić, Šerić, & Matas Milković, 2017), *airline alliances* (Casanueva, Gallego, Castro, & Sancho, 2014; C. Chen & Ren, 2007; Douglas & Tan, 2017), *airline service failure and recovery* (Migacz, Zou, & Petrick, 2018; Mohd-Any, Mutum, Ghazali, & Mohamed-Zulkifli, 2019; Nikbin, Marimuthu, Hyun, & Ismail, 2015) and *low-cost airline service* (Akamavi, Mohamed, Pellmann, & Xu, 2015; Coles, Fenclova, & Dinan, 2011; Graham, 2013; Morrison & Mason, 2016; Soyk, Ringbeck, & Spinler, 2018). Although three studies have been found to be relevant to *airline branding* [see C.-F. Chen and Chang (2008); C.-F. Chen and Tseng (2010); Uslu, Durmuş, and Kolivar (2013)], these studies are narrowly focused on brand equity constructs, while ignoring the importance of airline service experience in their models. For instance, C.-F. Chen and

Chang (2008) indicate the effect of brand equity on brand preference and purchase intention while C.-F. Chen and Tseng (2010) and Uslu et al. (2013) adapt Aaker's brand equity constructs and conceptualise the relationships based on Konecnik and Gartner (2007) who examine the relationships between brand equity components and overall brand equity. However, the effect of airline service experience touchpoints on brand equity constructs are ignored. Cronin (2016), Lemon and Verhoef (2016) assert that customer experience with the service organisation through myriad of touchpoints are the source of creating value for the brand which is different from product consumption experience. Hence, it can be argued that service experience touchpoints are required to have a distinct role in creating a strong service brand in the airline industry. In other words, the need to develop a more adaptable consumer-based service brand equity model for airlines has been largely disregarded. S. W. Wang (2014) also highlights the issue related to limited research on consumer perspective of airline branding which would help to redesign the airline marketing strategy.

In the marketing literature, much effort has been devoted to conceptualising a branding theory or model [i.e., consumer-based brand equity (CBBE)] to help managers in their branding strategy formulation. Despite this effort, existing brand equity models/theories (i.e., CBBE) have adopted a narrow focus on goods-dominant brands, thus, showing poor adaptability in service-dominant brands setting (Çifci et al., 2016). Therefore, it is necessary to develop a more adaptable brand equity model to consumer-based service, particularly in the context of airline services. Previous marketing literature have also highlighted the discrepancy between goods/product and services in regard to the existing theoretical models of brand equity (Berry, 2000, 2016; Brodie, 2009a; de Chernatony & Segal-Horn, 2001; Hsu, Hung, & Tang, 2012; Krystallis & Chrysochou, 2014). This is because branding issue is more significant in services compared to goods (de Chernatony et al., 2011), as brands can increase customer's trust of the invisible purchase (Berry, 2000; Javalgi, Martin, & Young, 2006; Pinar, Girard, Trapp, & Eser, 2016). Berry (2016) remarks that the intangible nature of services is the main hurdle of branding and more research should be undertaken to refine the existing CBBE model for services. He further emphasises that direct experience with the service is the dominant aspect of building a service brand which differs from branding a product. Hence, there is reason to believe that the existing brand equity models are not quite suitable for a service context like airline.

Among the four types of buying behaviour, *complex buying situation* holds the most difficulty compared to other types of buying behaviour as consumer's evaluation of perceived differences among the brands are high and they are highly involved in the purchasing process (Kotler & Armstrong, 2017). This scenario is more prevalent in a service-dominant setting, which is mainly intangible in nature and therefore, making purchase decision a challenge. Based on the *tangibility and intangibility continuum* of value creation (Shostack, 1982), airline service is dominantly intangible. Besides, consumer buying behaviour of airline service is complex and direct experience is the key component of this type of service (A. H. Chen, Peng, & Hackley, 2008; S. Kim, Kim, & Hyun, 2016; Mikulić & Prebežac, 2011). In a complex buying behaviour setting like airline service, brands play an important role in consumer decision making. However, there has been limited research on examining the factors that affect the brand equity of airline service. Thus, developing an alternative service branding model in the context of airline service would mitigate the prevailing concerns that are highlighted in this research.

1.3 Overview of the Airline Industry

Airline travel is regarded as a preferred transportation option by many travellers given its convenience and the ease of reaching various destinations quickly (Preske, 2017). With more and more people travelling by air (Statista, 2019), airline companies are expanding their routes to different hubs in order to capitalise on the market's growth and potential (Dhital, 2018). One of the global concerns for the airline industry is climate change due to the massive amount of carbon (CO_2) discharged by aeroplanes every year (A. Stone, 2019). Hence, it has been imperative for airline authorities to reduce CO_2 emission using eco-friendly aircraft engines which eventually increase costs. Given the economic, political, social and ecological volatility, the airline industry has been facing many challenges recently (Dhital, 2018) – including cost-cutting, invariable demand, lack of service innovation, safety and security issues, service quality and intense competition—making it susceptible to vulnerability (Baker, 2013; Khan, Jung, Kim, & Kim, 2019; Koklic, Kukar-Kinney, & Vegelj, 2017). Although airline companies generate their revenue from both passenger and cargo services, the major source of inflow still comes from the passenger services (IATA, 2019b). An overview of the passenger airline industry in terms of its size and profile is presented next.

1.3.1 Financial Performance of the Airline Industry Globally

According to the International Air Transport Association (IATA), the number of global passengers is increasing steadily every year (see Figure 1.1). Specifically, the growth has been observed over the last six years from about 3.1 billion airline passengers in 2013 to 4.3 billion in 2018. Despite this, the year-wise estimation for instance remains inconsistent. For example, while the net profit increased every year from 2013 to 2015, it decreased to US$ 34.2 billion in 2016 compared to US$ 36 billion in 2015. By 2017, it increased to US$ 37.7 billion while dropping again to US$ 32.3 billion at the end of 2018. Similarly, the rate of passenger traffic growth or revenue passenger kilometres (RPK) had grown marginally until 2017; the growth percentage however declined to 6.5% in 2018 from 2017's 8% (see Figure 1.1).

The profitability performance of the airline industry indicates that despite having a continuous growth, certain challenges undermine the financial performance of the airline industry. Over the last ten years, the world has experienced differing economic and political instabilities which have affected the financial performance of several businesses including the airline. Besides, cost-cutting pressure due to competition with low-cost carriers (LCCs), technological innovation etc., are threatening the financial stability of this business sector (Baker, 2013; Dhital, 2018; Khan et al., 2019; Koklic et al., 2017).

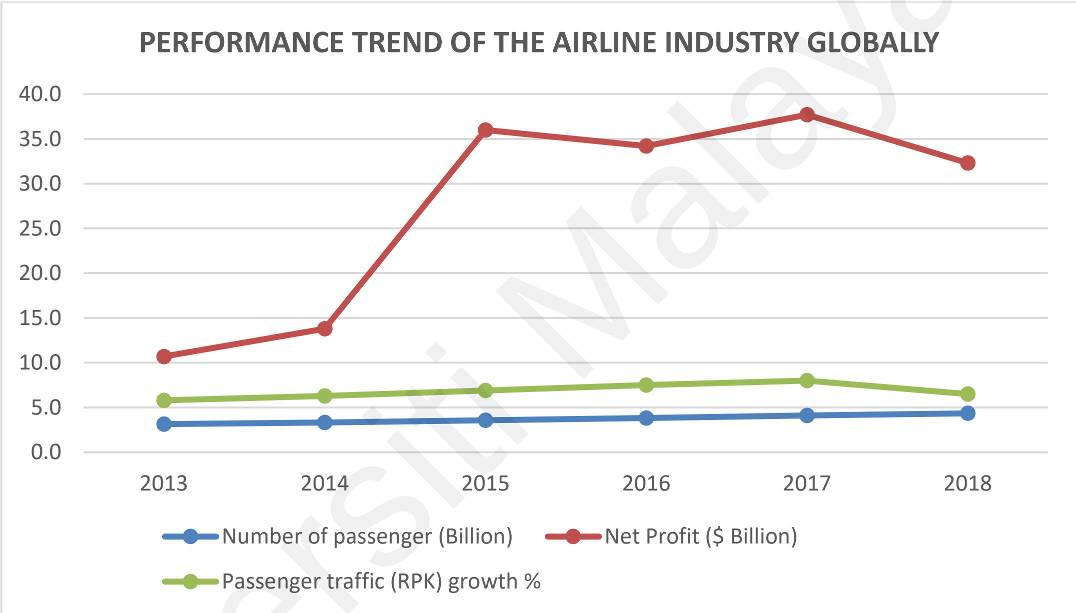

Figure 1.1: Financial performance of the airline industry globally [Source: IATA (2019a)]

1.3.2 Financial Performance of the Airline Industry Regionally

In terms of revenue passenger kilometres growth %, Asia-Pacific has performed comparatively better than North America, Europe, Middle East, Latin America and Africa over the last six years (see Figure 1.2). Evidently, the region experienced a steady increase in RPK growth % until 2017 – this decreased from 10.9% in 2017 to 8.5% in 2018. Except for North America, there is a downgrade pattern in RPK growth % from 2017 to 2018 in all parts of the world. This scenario is also evidenced by the net profit earning trend of the airline industry among the regions. Figure 1.3 shows that North America, Asia-Pacific and Europe, respectively, are the top regions which have gained the highest amount of net profit over the last six years. However, a downward trend of net profit earning has been found from 2015 to 2108 in North America, Middle East and Africa while in the Asia-Pacific region, the net profit has started to decrease from 2017 ($9.9 billion) to 2018 ($9.6 billion). Europe and Latin America have similar experience of a downward slope in net profit from 2016.

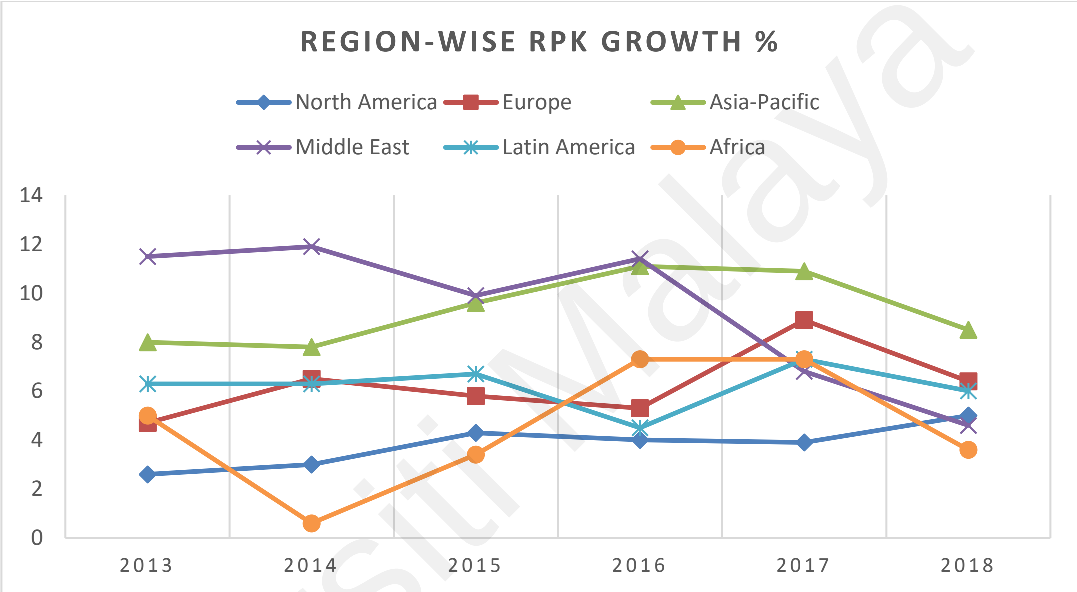

Figure 1.2: Region-wise RPK growth performance of the airline [Source: IATA (2019a)]

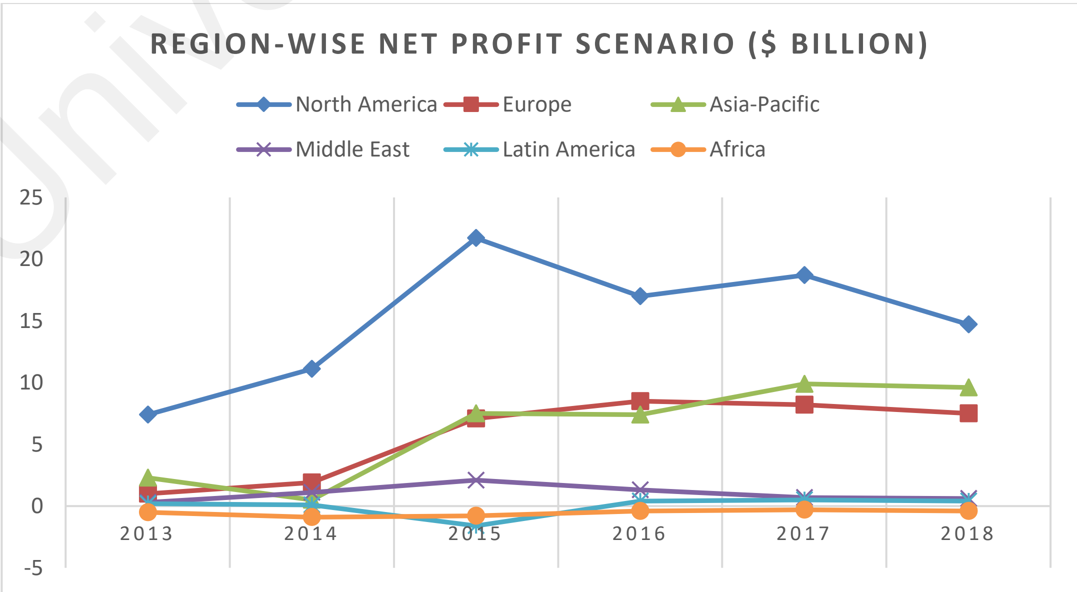

Figure 1.3: Region-wise net profit performance of the airline [Source: IATA (2019a)]

The above scenarios indicate that the airline industry has been experiencing a downward trend in profit and RPK growth, both globally and regionally. As airline is considered as a preferred transportation option by many individuals (LaMondia, Fagnant, Qu, Barrett, & Kockelman, 2016), the future outlook of this industry is positive. However, the current profitability trend shows that the industry has been facing some challenges such as merger, acquisition, cost-cutting, increasing number of price-sensitive consumers, intense competition, technological innovation etc. The rise of low-cost carriers also poses a significant threat to full-service airlines (Khan et al., 2019; Koklic et al., 2017; Sai, Ekiz, & Kamarulzaman, 2011). For instance, in shorter distance or cross border travel, LCCs are found to be the preferred mode of transport over their full-service rivals (J. Park et al., 2019). Although full-service airlines still hold top position in the combined ranking of the world's best airlines (SKYTRAX, 2019)[1], the low or declining profit rates suggest an impending competitive challenge. Scholars have reported a positive association between brand equity and company's profitability and claim that companies can achieve financial sustainability in the long-run by building a strong brand equity (C.-F. Chen & Chang, 2008; Grashuis, 2019; Mizik, 2014). Hence, building a strong brand would be a timely strategy for airlines to mitigate these challenges and survive in the future.

1.4 Problem Statement

Based on the industry assessment above, it is evident that the key determinant of an airline's long-term survival lies with customer's attitudinal and behavioural loyalty, which can be achieved by developing a competitive branding strategy (Akamavi et al., 2015; Jeng, 2016). However, a suitable service branding strategy specifically for airline is still sparse. Although C.-F. Chen and Tseng (2010) developed an airline brand equity

[1]AirAsia is ranked 28th in the combined ranking of world's best airlines in 2019, which is the top position of an airline among the low-cost carriers.

model adopting Aaker's (1991) brand equity framework, their model only provides general guidelines for practitioners. There is hardly any specific evidence which highlights the importance of airline service experience and the role it plays in creating brand awareness, brand image and perceived quality. The study only suggests how airline brand equity can be created through brand equity constructs. Consumers evaluate any objects based on the external stimuli (marketing mix elements) which are offered by the marketers. Nonetheless, this assessment ignores the experience components of airline service. Thus, it is argued that the significance of passenger experience in building a strong airline brand is largely disregarded in Chen and Tseng's study.

Several other customer-based brand equity theories/models in the marketing literature have been developed to explain how consumers evaluate and behave toward brands (Aaker, 1991, 1996; Berry, 2000; Blackston, 1992; Burmann, Jost-Benz, & Riley, 2009; de Chernatony & Dall'Olmo Riley, 1998; Kapferer, 2008; Keller, 1993; Sharp, 1996). In this regard, Aaker (1991) and Keller's (1993) brand equity conceptualisations are the most referenced and operationalised (Buil, Martínez, & de Chernatony, 2013a; Christodoulides, Cadogan, & Veloutsou, 2015; Çifci et al., 2016). However, the operationalisation of these two models is more focused on product/goods-dominant brands (Christodoulides et al., 2015; Krystallis & Chrysochou, 2014; Nysveen, Pedersen, & Skard, 2013), making them less suitable for service-dominant brands setting. For example, Aaker's (1991) model has been operationalised by Yoo, Donthu, and Lee (2000) using product brands such as athletic shoes, television and camera film. However, the perceived quality component in Aaker (1991) ignores the symbolic aspect of brand dimensions and has poor validity in service setting (Çifci et al., 2016; Nam, Ekinci, & Whyatt, 2011). Quality of service is also ensured by the various direct consumption touchpoints such as servicescapes, employee service, service delivery process, which Aaker (1991, 1996) conceptualises as a unidimensional (global) measure. The use of such measure has, indeed, been widely criticized for the lack of depth where measurement theory is concerned (Dagger, Sweeney, & Johnson, 2007; S. B. MacKenzie, Podsakoff, & Podsakoff, 2011). Addressing this limitation, Çifci et al. (2016) then propose an alternative brand equity model that comprises of brand awareness and physical quality along with three other constructs related to symbolic consumption (lifestyle congruence, brand identification, self-congruence) and validate it in the context of global fashion brands in Turkey and private label brands in Spain. Still, the consumer touchpoints in services are ignored in their model and lacks the potential for generalisability in other service sectors.

For airline branding, in particular, C.-F. Chen and Tseng (2010) adopt Aaker's (1991) brand equity constructs. Despite conceptualising brand loyalty and brand equity as two distinctive variables in their model, the items/scales employed to measure brand loyalty and brand equity constructs indicate a similar meaning such as consumer's intended action toward the brand (Baalbaki & Guzmán, 2016). Furthermore, taking brand loyalty as an antecedent of brand equity opens up a criticism among scholars, since, brand loyalty is an outcome variable of brand equity (Mourad, Ennew, & Kortam, 2011; Na, Marshall, & Keller, 1999). Christodoulides et al. (2015) and Pinar et al. (2016) also investigate internet and banking service brand respectively adopting Aaker's (1991) conceptualisation of brand equity elements. Nevertheless, the role of service experience is overlooked in their studies. Brodie, Whittome, and Brush (2009b) empirically investigate service brands using airline services on five image dimensions, perceived value, brand loyalty. They suggest future research of an alternative theoretical framework by addressing other brand equity elements in order to provide a better understanding of service brands. These extant studies also fail to include the various dimensions of consumer touchpoints in their conceptualisation. Nearly all other models, including that of C.-F. Chen and Tseng (2010) conceptualise brand equity with only perceptual and behavioural dimensions. It is evident that consumer's understanding, feelings and perception of a brand arise when they come across various brand-related stimuli or touchpoints (Lemon & Verhoef, 2016) such as website information, advertisement and the actual customer-employee interaction at check-ins and whilst on board. The response theory postulates that consumer feelings of market offerings depend on what they learn/experience (stimulus) which leads to intended action (organism and response) (Jacoby, 2002; Mehrabian & Russell, 1974). Building a strong brand passes through the step of response hierarchy (Buil et al., 2013a; Konecnik & Gartner, 2007), which is similar to the Stimulus-Organism-Response (S-O-R) hierarchy in Mehrabian and Russell (1974) and Jacoby (2002). Thus, for marketers, it is essential to understand consumer's perception of brand touchpoints (i.e., stimuli) for the development of a strong brand.

Although the inter-constructs relationship of airline brand equity model in C.-F. Chen and Tseng (2010) was based on standard learning theory, conceptualising brand awareness at the first stage would be questionable. Since brand awareness is defined as the ability to recall and recognise the brand under different conditions (Aaker, 1991; Keller, 1993), without undergoing any stimulus, human minds would be unable to retain (organise) the meaning of what they have experienced (van Osselaer & Alba, 2000; van Osselaer & Janiszewski, 2001). Hence, experience dimensions (stimulus) should be included before the organismic components in the CBBE model specifically for services. Furthermore, contemporary service brand equity research follows only the "Organism-Response" sequence, which implies the effects of perceptual dimensions of brand equity to the behavioural dimension. The model explaining the relationship of service experience components/touchpoints (stimulus) with perceptual (organism) and behavioural (response) dimensions is still limited. Therefore, an integrated approach to developing a consumer-based service brand equity model for airline service is evident in which service experience components will be incorporated along with other brand equity constructs.

1.5 Theoretical Gaps

The service branding model of Berry (2000) is generally well suited to branding services when viewed from the lens of Vargo and Lusch's (2004) Service-Dominant Logic (SDL) of marketing (Brodie, 2009a; Brodie, Glynn, & Little, 2006). The SDL view of branding explicates a collaborative, value co-creation activity of all the stakeholders in the entire marketing system. As Berry (2000) notes that the inter-construct relationships are disproportionate to the experienced and inexperienced consumers, the model, therefore, complies with the SDL view. Berry illuminates that brand awareness plays a central role for consumers who have little or no direct experience with services. Whereas for experienced consumers, experience-based assessment of brand meaning is dominant in creating brand equity for services as compared to brand awareness. He further notes that a company is the primary brand of service organisations while a product is the primary brand of manufacturing companies that consumers experience. Hence, brand equity constructs such as *brand awareness* and *brand meaning* will disproportionately influence brand equity regardless of goods or service brands (see Figure 1.4).

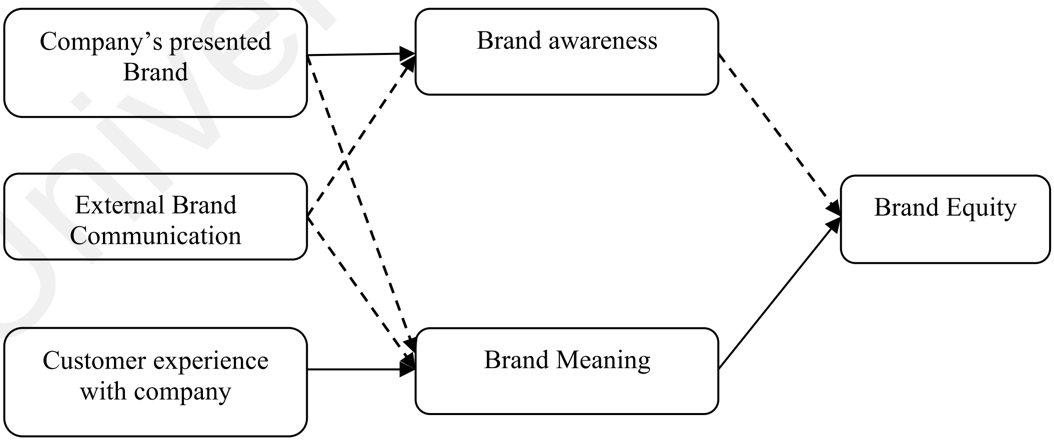

Figure 1.4: Service branding model [Source: Berry (2000)]

Note*: Solid arrows indicate primary impact while dotted arrows provide secondary impact*

Even though Berry's (2000) service branding model is well-acknowledged among scholars, the inter-construct relationships of this theory can be improved further.

Specifically, direct experience with the company is conceptualised only with brand meaning, while the relationships with other constructs are disregarded. In other studies, Grace and O'Cass (2005) and Krystallis and Chrysochou (2014) stress that interaction with *employees* is one of the core components of service experience which has not been distinctly introduced in the service-branding theory. Although Berry (2016) revisits his model and suggests the essential role of *service convenience* as a direct experience component, he did not empirically test the interrelationships among the constructs in his model [i.e., Berry (2000, 2016)]. It was noticed that García, Gómez, and Molina (2012) have tested Berry's model in a destination brand setting using *indirect service experience* component only (i.e., the effect of "presented brand" on brand equity constructs). Similarly, So and King (2010) have tested the inter-construct relationships of Berry's model in a hotel brand setting, nevertheless, a unidimensional approach of measuring *direct service experience* in their study offer incomprehensive understanding in creating a strong service brand equity. Thus, it is argued that the existing service branding models require more empirical testing with quantitative approach (Brodie et al., 2009b; H.-b. Kim & Kim, 2005; Krystallis & Chrysochou, 2014; Pinar et al., 2016).

In addition, *brand consistency* is conceptualised as one of the important constructs of brand equity (Aaker, 1996; Beverland, Wilner, & Micheli, 2015; H. Cooper, Merrilees, & Miller, 2015; de Chernatony & Cottam, 2006; Erdem & Swait, 1998; Keller, 2012; Polonsky & Jevons, 2009; Schallehn, Burmann, & Riley, 2014), but there is little empirical evidence available. Likewise, *perceived value* is stated as one of the strong CBBE constructs, but previous studies of Buil et al. (2013a), Boo, Busser, and Baloglu (2009), C.-F. Chen and Tseng (2010), W. G. Kim, Jin-Sun, and Kim (2008) and Hyun (2009) have either overlooked or found mixed relationships among the brand equity components (Brodie et al., 2009b; Lassar, Mittal, & Sharma, 1995; C.-R. Liu, Liu, & Lin, 2015).

Berry’s model encompasses both indirect (presented brand and uncontrolled communication) and direct experience. However, this research considers only the direct experience dimension associated with airline service. The effect of indirect experience such as communication experience on branding is well recognised among scholars and its effect on brand equity has also been found to be symmetrical across product and service categories (Buil, de Chernatony, & Martínez, 2013b; Cervera-Taulet et al., 2013; S. Kim et al., 2016; Yoo et al., 2000). As a promotional strategy, marketing communications (i.e., indirect experiences) generally aim to promote, inform and persuade the consumer regardless of whether products or services are being offered (Belch & Belch, 2018). For example, communication appeals such as dramatisation, slice-of-life, fear and humour are used by both products and services advertisers and are executed through the same media such as print, broadcast and/or social media. The consumer receives various types of information from the indirect touchpoints which evoke similar experiences across products or services. Moreover, Berry, Wall, and Carbone (2006) advocate that consumers evaluate the services based on the various clues rooted in service performance rather than objects. Hence, there is reason to believe that consumers do not deduce any differences between products and services through indirect experiences. This study also acknowledges the effect of communication experience on brand equity as uniform in relation to product and service brands and narrows the scope only to the direct service experience. Besides, the study of direct service experience with brand equity is scarce even in the context of airline service. Hence, the conceptualisation of an alternative service branding model based on direct service experience, brand consistency and perceived value along with other brand equity components would advance the existing brand equity literature while providing useful insights to airline service practitioners.

In summary, extant CBBE models have encountered the following challenges: 1) poor adaptability in service brand setting due to the absence of direct service experience components which are necessary especially in a high-contact service like airlines; 2) several important brand equity constructs (i.e., brand asset components) have been ignored such as brand consistency and perceived value; 3) less evidence is found in explaining the interrelationship among the constructs aligned with the "Stimulus-Organism-Response (S-O-R)" sequence; and finally 4) there is a paucity of quantitative research to operationalise and validate the existing service branding model. Therefore, this research intends to mitigate these problems by developing a consumer-based service brand equity model in the context of airline. It will extend Berry's (2000) service-branding theory by adding *brand consistency* and *perceived value* as brand equity constructs while investigating the interrelationship among *airline service direct experience components with brand equity constructs* and *service brand equity*.

1.6 Research Questions

Taking the highlighted challenges and research gaps into consideration, this research aims at proposing an alternative service branding theory known as consumer-based service brand equity (CBSBE) model and investigating the inter-construct relationships in the context of airlines. Therefore, the following research questions are addressed:

1) What is the role of airline service direct experience in developing a CBSBE model?
2) How does the brand consistency of an airline influence its brand asset components (i.e., brand awareness, brand meaning and perceived value)?
3) What is the role of brand asset components in creating a positive differential response (i.e., service brand equity) towards the airline?

4) Does brand consistency mediate the relationship between airline service direct experience and brand asset components?

1.7 Research Objectives

A reformulation of the above research questions results in the following research objectives:

1) To study the role of airline service direct experience in developing a CBSBE model.
2) To examine the impact of brand consistency on brand asset components (i.e., brand awareness, brand meaning and perceived value) in building an airline brand.
3) To evaluate the effect of brand asset components in creating a positive differential response (i.e., service brand equity) towards the airline.
4) To assess the mediating role of brand consistency between airline service direct experience and brand asset components.
5) To propose a service branding theory called the consumer-based service brand equity (CBSBE) model as a strategic guideline for the airline industry.

1.8 Thesis Overview

The thesis is organised into six chapters as follows:

Chapter 1 discusses the research background and problem of this study. The chapter explores the challenges facing the airline industry and argues that there is a salient need to develop a strong airline brand in order to survive in the competitive market. However, an adaptable service branding theory which can be applied specifically in the airline service context is lacking. Discussions on the significance of the research and the theoretical gaps in the literature lead to the formulation of research questions and research objectives.

Chapter 2 begins by reviewing the concepts and variables related to consumer-based brand equity and its relevance to the context of service branding. This is followed by a systematic analysis of the relevant literature. Based on this review, the components of the CBSBE are finalised and conceptual definitions are provided for each construct. Besides, some empirical findings are presented to highlight the nature of the relationships between the identified CBSBE constructs.

Chapter 3 presents the theoretical foundation of the study and formulates the research hypotheses along with the proposed theoretical framework named as consumer-based service brand equity (CBSBE) model. The chapter ends by highlighting the theoretical and managerial significance of the study.

Chapter 4 engages with the research methodology which is designed on the basis of research approach deemed suitable to address the research objectives. This chapter also discusses the detailed procedures of conducting a quantitative research as the main research approach. Hence, the study population, sampling technique and data collection method and survey administration are discussed in the research design section. The suitable data analysis approach is also presented in this chapter.

Chapter 5 presents the data analysis and findings of the research. Initially, data screening, distributional assumption and common method biases (CMB) are thoroughly investigated, followed by descriptive statistics of the data. Following the partial least squares structured equation modelling (PLS-SEM) techniques, the research investigates the measurement properties of the proposed CBSBE model. After confirming the quality criteria of the measurement model, the structural properties of the model is evaluated. All hypotheses are accepted based on the structural model analysis.

Chapter 6 begins by reiterating the research problems, questions, objectives, hypotheses and results, followed by the discussion of research findings. Each research objective is discussed based on the results of the hypotheses testing. The underlying theoretical assumptions of each hypothesis is explained by aligning them with previous evidence. The chapter also highlights the research contributions to theory, methodology and practice. This chapter ends with the limitations of the study, suggestions for future research and an overall conclusion.

1.9 Chapter Summary

Chapter 1 has discussed an overview of the current research which includes the study background, contemporary challenges in the airline industry, the research problems and research gaps. The initial assessment of existing literature demands an effort to develop an alternative service branding model that is more suitable to address the current competitive challenges facing the airline industry. The research questions and research objectives are formulated based on the problems and gaps discussed. A brief description of each chapter is also presented. The next chapter presents a detailed review of the literature.

CHAPTER 2: LITERATURE REVIEW

2.1 Chapter Introduction

This chapter reviews the literature on consumer-based brand equity (CBBE) theories and finalises the brand equity constructs for branding services. It begins by defining brand equity from a consumer perspective and outlines the discrepancies of branding strategies between a product brand and a service brand. It also reviews the applicability of existing CBBE models to branding services and justifies the selection of suitable constructs in the proposed consumer-based service brand equity (CBSBE) model for airline service. This chapter also explains the conceptual definition of each construct and reviews the empirical findings from previous studies.

2.2 Consumer-Based Brand Equity (CBBE)

Product or service branding typifies an organisation's effort of creating brand equity (Keller, 1993). This idea has attracted widespread attention from marketing scientists since the 1990s until now and is considered one of the important areas in brand management. Generally, there are three aspects of brand equity research in the marketing literature: (a) financial aspect, (b) customer-based aspect and (c) both financial and customer-based aspects (Bailey & Ball, 2006; H.-b. Kim & Kim, 2005; Xu & Chan, 2010). Regarding the financial aspect, marketers observe the performance indicator of a brand through cash flow statement or balance sheet of any fiscal year (Simon & Sullivan, 1993). The customer-based aspect, on the other hand, measures the consumer's viewpoint about different value-creating activities associated with the presented brand. This aspect is important to marketers as it is essential to develop an effective marketing strategy for their brand (Aaker, 1991; Keller, 1993; Y. Sun, Kim, & Kim, 2014; Yoo & Donthu, 2001). Finally, the combined aspect evolves from both the market and financial value of the brand (Motameni & Shahrokhi, 1998). Among these three aspects of brand equity, more focus is given to customer-based brand equity (CBBE) research (Buil et al., 2013a;

Çifci et al., 2016; Kyulim Kim, Ko, Lee, Mattila, & Kim, 2014). Evidently, using the keywords of "Customer-based brand equity"/ "Consumer-focused measures of brand equity" and "Financial measures of brand equity" in the Web of Science (WoS) database in July 2017, the present researcher searched for relevant publications available in the database. The search results showed that the number of published articles on "customer-based brand equity" were about 295/85 compared to 37 yields with the word "Financial measures of brand equity". Similarly, in Scopus database, there were 332/526 articles published with the term "customer-based brand equity" compared to 52 articles with "Financial measures of brand equity". Google Scholar search yielded 231,000/137,000 articles whereas only 17,000 articles were published with the keyword "financial measures of brand equity". So and King (2010) also remark that the financial aspect of brand equity might have little significance until customer-based brand equity is determined. Therefore, the study on customer perspective of brand equity is considered as top priority among marketing scholars.

Aaker (1991) and Keller (1993) are the pioneers in CBBE research. Although the conceptual definition of brand equity across product-dominant brand and service-dominant brand is similar, their CBBE models are assumed to be less adaptable in the service-dominant brand setting. An attempt began by reviewing the literature to explore the definition of brand equity (BE). Considering the study scope as 'branding services', it is observed that Berry's (2000) service branding model is the most cited work. Hence, this study evaluates the definition of BE by these three authors (Aaker, Keller and Berry) in order to adapt it to a branding services setting. From a service-dominant perspective, Berry's (2000) conceptualisation of BE as a distinctive variable in the service branding model is similar to Keller's (1993) customer-based brand equity (CBBE) definition; however, the theoretical models of these two prominent scholars are different. On the other hand, Aaker's definition of BE does not imply a single construct, rather it is a concept representing the brand asset and liability components of brand equity. Hence, this research adopts the definition of BE offered by Keller. Keller (1993) defines CBBE as *"the differential effect of brand knowledge on consumer response to the marketing of the brand"* (p. 8).

2.3 Product Branding versus Service Branding

The traditional debate on the difference between goods/product and services still persists among marketing academics and practitioners due to the fact that consumers themselves differentiate the market offerings on a tangibility-intangibility continuum (Leong, Hibbert, & Ennew, 2018; Rosenzweig & Gilovich, 2012). As services are highly diverse and heterogeneous based on time, consumers and producers, consumer assessments between product performance and service performance are largely varied (Alavi, Habel, Schwenke, & Schmitz, 2020; Gao, Melero-Polo, & Sese, 2020). Due to the fundamental characteristics of services, the perceived risk associated with purchasing services is higher than buying a product (Mitchell, 1998). Hence, this notion inevitably necessitates a more adaptable branding strategy for services (Çifci et al., 2016; de Chernatony & Segal-Horn, 2003; Krystallis & Chrysochou, 2014). For example, de Chernatony and Segal-Horn (2001) posit that the classical characteristics of services as being *intangible*, *heterogeneous*, *inseparable* and *perishable* (IHIP) (Zeithaml, Parasuraman, and Berry (1985) suggest the need for a different approach in executing a strategy for service branding. Lovelock and Wirtz (2011) also differentiate products and services based on non-ownership and intangible elements. It is imperative to note that *service branding* or *branding services* is dissimilar to the notion of *service brand*. According to the Service-Dominant Logic (SDL) perspective, *service brand* is a philosophical notion of defining services applicable to both tangible and intangible market offerings (Vargo & Lusch, 2004, 2016). Whereas, *branding services* or *service branding* denotes a strategic course of action implemented by decision makers in order to brand a service (Brodie et al., 2009b; H.-b. Kim & Kim, 2005). The SDL view also advocates that an adaptable branding strategy is required due to the variations existing among service attributes (Brodie et al., 2006; Brodie et al., 2009b). According to the scholars, although the conceptual notion of creating a brand does not vary much between a product and a service, both goods-dominant brands and service-dominant brands still differ when it comes to strategy at the execution level (Çifci et al., 2016; de Chernatony & Dall'Olmo Riley, 1999). Additionally, 1) product-dominant brand experiences are simpler than service-dominant brand experiences (Mosley, 2007); 2) services involve more interpersonal complexity and relationship quality (Nysveen et al., 2013); and 3) branding of services is more complex than product branding (Moin, Devlin, & McKechnie, 2016). Heinonen et al. (2010) also assert that customer's evaluation of services varies in terms of value-in-use, the customer's own context and the customer's experience with the service. Thus, service-dominant brands require a more adaptable branding model that addresses the differences at the execution level.

2.4 Theoretical Assumptions and Limitations of CBBE Models in the Service Context

In order to explore the extent to which existing brand equity models are adaptable in developing a CBSBE model, the study followed a critical and systematic literature review approach in S. Baron, Warnaby, and Hunter-Jones (2014). All publications related to CBBE in the area of general marketing and services marketing were identified from Web of Science (WoS), Science Direct, EBSCOhost and Google Scholar – being the most popular academic databases and online search engines (Buhalis & Law, 2008). The publication search in the area of Business Management, Economics and Social Science was conducted between 3 September 2017 and 30 September 2017. In order to derive all the possible materials to review, year of publication was not specified. As a result, articles, conference papers and books related to CBBE and branding of airline service were critically reviewed. Although the conceptual notion of creating a brand does not vary much between a product and a service, both still differ in terms of strategy execution (Berry, 2000; Brodie et al., 2009b; Çifci et al., 2016; de Chernatony & Dall'Olmo Riley, 1999; Krystallis & Chrysochou, 2014). Hence, the commonly referenced keywords in brand equity related publications were used in the search option. Table 2.1 outlines the search results of words available in the title, abstract and keywords of the databases. Although the results were grouped based on different keywords and databases, a substantial amount of articles overlapped between the keywords as well as between the databases. The majority of the articles were published with the keywords: "Brand equity", "Service branding", "Branding services", "Customer-based brand equity", "CBBE"; whereas the total number of publications specific to "Customer-based brand equity model" "Service branding model and/or "Branding airline service" were very few. As the current study focuses on developing a service brand equity model for airline, only publications addressing this theme were examined.

Table 2.1: No. of publications based on search words*

Search words	WoS**	Science Direct	EBSCOhost	Google Scholar
Brand equity	483	376	625	828,000
Customer-based brand equity	73	58	102	28,300
CBBE	65	103	41	4,690
Customer-based brand equity model	4	24	14	25,000
Service branding	234	191	31	399,000
Branding services	234	191	31	323,000
Service branding model	14	38	3	240,000
Branding airline service	5	35	3	32,800

*Note: *Search period was from 3 September 2017 to 30 September 2017; **WoS = Web of Science*

Initially, 63 articles/publications were found relevant to the broader scope of the study. During this process, the researcher reviewed the title, abstract and contribution of the publications and checked the ranking of the journals against the list in WoS, Scopus, the

Australian Business Deans Council (ABDC) and Excellence in Research in Australia (ERA) (Gómez, Pratt, & Molina, 2018) as well as the Chartered Association of Business Schools (Chartered ABS) UK (Tadajewski, 2016). Based on this initial screening, 66 publications were found to be relevant. Ninety-seven other publications were discarded as they were either not listed in the mentioned indexed databases or were duplication. The 66 publications were then grouped into three categories, namely: 1) conceptualisation of CBBE, 2) operationalisation and application of CBBE model and 3) airline service branding model. In order to ensure that the selected publications represent the study scope and objective, all information was independently reviewed by the academic experts to confirm the three categorisations (H. H. Kim & Law, 2015).

From the 66 articles, eight were found to conceptualise the CBBE model [i.e., Aaker (1991, 1996); Berry (2000); Blackston (1992); Burmann et al. (2009); de Chernatony and Dall'Olmo Riley (1998); Kapferer (2008); Keller (1993); Sharp (1996)]. Among these publications, the models of Aaker and Keller were found to be the most referenced. Other publications, with the exception of Berry's, were not considered as they conceptualise brand equity either as a combination of firm and customer-based or a relationship equity. For example, de Chernatony and Dall'Olmo Riley (1998) and Kapferer (2008) conceptualise brand equity as the integration of firm and customer-based models, while others focus on relationship equity. Furthermore, their definition of brand equity differs from that of Aaker, Keller and Berry. Aaker (1991) defines CBBE as a set of assets and liability associated with the brand, whereas both Keller (1993) and Berry (2000) define CBBE as the differential effect of consumer response. These definitions of brand equity are widely accepted when conceptualised from a consumer perspective. Hence, of the eight publications, five were discarded.

Focusing more on branding services, it is worth indicating here that the service branding model was conceptualised by Berry (2000) and is consistently the most cited related work. However, from the 58 remaining articles, Çifci et al.'s (2016) CBBE model emerged in this process because the authors argued that their model is adaptable to service brands which prompted the inclusion for review. In another vein, C.-F. Chen and Tseng (2010) and Uslu et al. (2013) developed a brand equity model for airline. However, they adopted the same constructs as Aaker's; therefore, these articles were not considered separately. Brodie et al. (2009b) also examined service brand, however, they developed the model based on customer value perspective only. The other 54 articles were kept aside as they either operationalise the existing models or validate the relationships among the CBBE constructs. For example, Yoo et al. (2000), Šerić, Gil-Saura, and Mikulić (2017); Šerić, Mikulić, and Gil-Saura (2018) and Christodoulides et al. (2015) operationalised the CBBE model based on the conceptualisation of Aaker or Keller. Table 2.2 contains a summary of 56 publications that have adopted one or more of the five CBBE constructs namely: brand awareness, brand association, brand image, brand loyalty and overall brand equity across different products and services. It is apparent that although previous research operationalises brand equity model using service brands, service experience components were not considered distinctively. Here, overall brand equity is considered as a dependent variable that defines behavioural response towards a brand. Although a few studies [i.e., Atilgan, Akinci, Aksoy, and Kaynak (2009); Šerić et al. (2017); Šerić et al. (2018)] have introduced a variable called brand trust, it is, in fact, a dominant perception of a brand that signifies the brand meaning/image (García et al., 2012). Therefore, those studies that included brand trust as a CBBE construct were also considered as similar to Aaker or Keller's CBBE model.

Table 2.2: Operationalisation of existing CBBE model across products and services context

Constructs	Context	Sources
Brand Awareness/ Brand Association/Brand Image/ Brand Loyalty/ Overall Brand Equity	Retail/Company	Arnett, Laverie, and Meiers (2003); Asamoah (2014); Atilgan et al. (2009); Davis, Golicic, and Marquardt (2009); El Hedhli and Chebat (2009); Girard, Trapp, Pinar, Gulsoy, and Boyt (2017); Ha, Janda, and Muthaly (2010); Jara and Cliquet (2012); Juntunen, Juntunen, and Juga (2011); H.-b. Kim, Kim, and Jeong (2003); Rajh and Ozretić Došen (2009); C.-H. Wang, Hsu, and Fang (2009)
	Telecom/Financial Service/Museum/ Internet brands/Casino/Movie theatre)	H. H. Chang and Liu (2009); Christodoulides et al. (2015); Krishnan and Hartline (2001); C.-R. Liu et al. (2015); Pinar et al. (2016); Tsai, Lo, and Cheung (2013)
	Hotel/Tourism channels	Bailey and Ball (2006); Bian and Liu (2011); Cobb-Walgren, Ruble, and Donthu (1995); Hsu et al. (2012); Kayaman and Arasli (2007); H.-b. Kim and Kim (2005); W. G. Kim et al. (2008); Šerić et al. (2017); Šerić et al. (2018); Shen, Yuan, Zhang, and Zhao (2014); Woodward (2000); Xu and Chan (2010)
	Sports team	Bauer, Sauer, and Schmitt (2005); Bodet and Chanavat (2010)
	Destination	Bianchi, Pike, and Lings (2014); Boo et al. (2009); Im, Kim, Elliot, and Han (2012); Pike and Bianchi (2016); San Martín, Herrero, and García de los Salmones (2018)
	Sportswear/Apparel/ Consumer Electronics/Car/Soft drinks/Consumer goods	Atilgan, Aksoy, and Akinci (2005); Buil, de Chernatony, and Martínez (2008); Buil et al. (2013a); Jung and Sung (2008); Lassar et al. (1995); Lee, Lee, and Wu (2011); Oliveira-Castro et al. (2008); Pappu, Quester, and Cooksey (2005, 2006); Tong and Hawley (2009); Vukasović (2016); L. Wang and Finn (2014); Washburn and Plank (2002); Yoo and Donthu (2001); Yoo et al. (2000)

Table 2.2: (*Continued*)

Constructs	Context	Sources
	Healthcare/Hospital service	Chahal and Bala (2010); Y.-C. Wang, Hsu, Hsu, and Hsieh (2011)
	Airline brand equity	C.-F. Chen and Tseng (2010); Uslu et al. (2013)

Thus, only four publications related to the study objective were identified from top-ranked journals listed in WoS (see Table 2.3). The critical aspects of these four publications (i.e., CBBE models) were then analysed based on their strengths and weaknesses through the lens of service branding. Figure 2.1 outlines the flowchart of publication selection process in S. Baron et al. (2014) which was adhered to in this study. The following section discusses the critical aspects of the four selected publications.

Table 2.3: The authors' number of citations, type of publication, name of journal and ranking

Authors	No. of citation	Type	Journal	Ranking (WoS)
Keller (1993)	15,887	Conceptualisation of the model	Journal of Marketing	Q1**
Aaker (1991)	14,050	Conceptualisation of the model	-	N/A*
Berry (2000)	2,214	Conceptualisation of the model	Journal of the Academy of Marketing Science	Q1**
Çifci, et al. (2016)	19	Conceptualisation and validation of the model	Journal of Business Research	Q1**

**Aaker (1991) is a book publication; **Based on the Web of Science citation index, journals are ranked according to Q1, Q2, Q3, & Q4 in each discipline such as Science, Social Science etc. Q1 refers to the top-ranked journals in the Social Science category.*

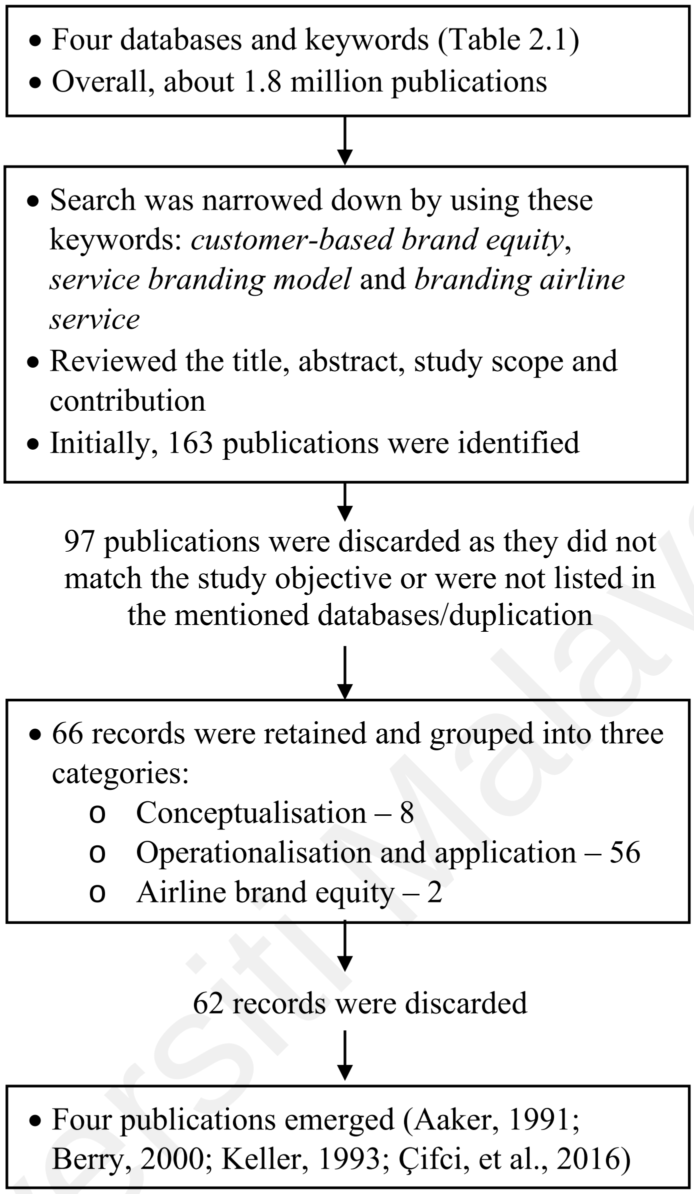

Figure 2.1: Flowchart of publication selection process

2.4.1 Aaker's (1991) CBBE Model

Brand equity is a set of brand assets and liabilities linked to a brand, its name and symbol (Aaker, 1991). Aaker conceptualises five dimensions of CBBE, namely: a) brand loyalty, b) perceived quality, c) brand associations, d) brand awareness and e) other proprietary brand assets (comprising patents, trademarks and channel relationships). Yoo and Donthu (2001) later operationalised these dimensions through a consumer survey and substantiated CBBE as the perceptual and behavioural aspect of a brand. For this reason, the fifth dimension (i.e. other proprietary brand assets) in Aaker is not relevant to consumer aspect of brand equity (Yoo & Donthu, 2001). Yoo and Donthu (2001) also suggested another construct in the model called overall brand equity (OBE) which in the end comprises of: (a) brand loyalty, (b) perceived quality, (c) brand awareness/associations and (d) overall brand equity (see Figure 2.2). However, their measures have three major limitations. Firstly, the conceptualisation of brand awareness/associations as a unidimensional measure fails to achieve the discriminant validity between awareness and association (Çifci et al., 2016; Washburn & Plank, 2002). Secondly, the measures (or items) in brand loyalty and overall brand equity seem alike since both explain the consumer's intended action towards the brand (Baalbaki & Guzmán, 2016; Chaudhuri & Holbrook, 2001). The authors also argue that the items which are loaded in brand loyalty and overall brand equity are the same, hence should be considered as one construct. Thirdly, brand loyalty - as a specific component of brand equity - is one of the notable weaknesses in Aaker's model. Yoo and Donthu (2001) advocated that brand loyalty positively related to overall brand equity. C.-F. Chen and Tseng (2010) further explained that the first three components of CBBE (awareness, association and quality) are conceptualised as perceptual components of brand equity which influence brand loyalty as a behavioural domain and subsequently, brand loyalty influences overall brand equity. However, there is a strong argument on the role of brand loyalty in the brand equity model. Loyalty refers to the consumer response through time and frequency of purchase and/or commitment and preferences toward the brand (Oliver, 1999). Keller (1993) did not consider brand loyalty as a discrete brand equity component of brand knowledge. Na et al. (1999) assert that strong brand equity drives toward building brand loyalty, brand extention and customer satisfaction. Ou, Verhoef, and Wiesel (2017) investigated loyalty intention of service organisations and reported that brand equity has a significant positive effect on loyalty across industry categories such as innovative markets and complex purchase situation. Many scholars [i.e., Adam, Susan, and Donna (2011); Bauer, Stokburger-Sauer, and Exler (2008); C.-F. Chen and Myagmarsuren (2011); Juntunen et al. (2011)] also found a positive effect of brand equity on loyalty and recognised that brand loyalty is an outcome variable of brand equity. Hence, is it assumed that instead of treating it as a distinctive brand equity component, brand loyalty should be conceived as a consequence of a strong brand.

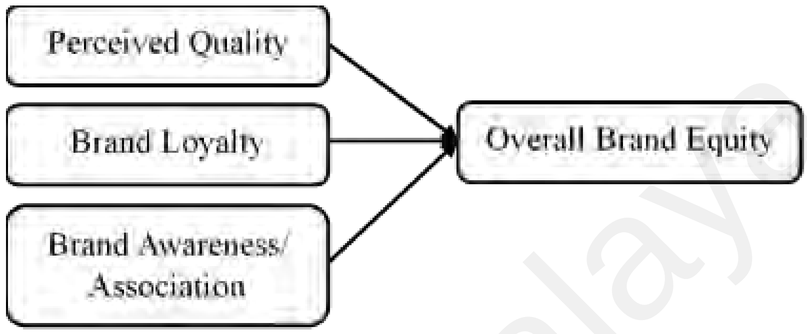

Figure 2.2: Aaker's (1991) conceptualisation of CBBE is operationalised by Yoo and Donthu (2001)

2.4.2 Keller's (1993) CBBE Model

Keller (1993) defines brand equity as how customers react and differentiate their response to the different marketing mix elements of the named and unnamed versions of products or services. He proposes two dimensions that affect brand equity: a) brand awareness and b) brand image (see Figure 2.3). Furthermore, Keller (1993) deconstructed CBBE as associative network memory model that consists of nodes and its connecting links, in which nodes represent stored information or concepts, while links represent the strength of association between the nodes. Nodes help to retain information from memory which is strongly associated with other internal information. Thus, the consumer's understanding of the marketing efforts (as nodes) is vital to elicit positive response toward that brand. Based on this conceptualisation, Keller explains that brand equity arises when consumers are aware of the brand and hold some favourable, strong and unique brand associations in their memory. However, the linear relationship between the CBBE constructs might fail to explain the causal complexity of brand equity phenomenon.

Chatzipanagiotou, Veloutsou, and Christodoulides (2016) commented that Keller's brand equity model leans towards distinctive and static explanation of relevant interrelationship among the constructs. Thus, it ignores the causal complication, asymmetry and multiple pathways that define CBBE.

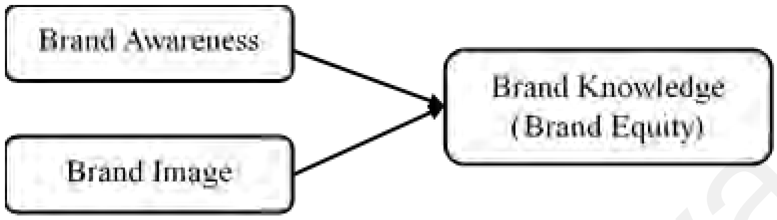

Figure 2.3: Keller's (1993) CBBE model

Furthermore, both Aaker & Keller's models ignore the effect of various touchpoints on brand equity constructs. It is evident that consumers' understanding, feelings and perception of brands arise when they come across various experience points (Lemon & Verhoef, 2016). For example, passengers experience the airline service when they come across various stimuli such as airline ticket booking, airport service, in-flight services (i.e., food, basic amenities, entertainment, atmosphere, physical layout of airline cabin, cleanliness), employee interactions throughout the journey, website information, price and deals etc. These are also regarded as the airline service attributes offered to the customers by airline companies (A. H. Chen et al., 2008; S. Kim et al., 2016; Mikulić & Prebežac, 2011). However, previous research only operationalised the interrelationship of brand equity models between the equity constructs and overall brand equity. As such, consumer aspects of experiences such as purchase decision, delivery process, employee service, consumption etc., are not included in relevant CBBE models and thus are not generalisable across the services context.

2.4.3 Berry's (2000) Service Branding Model

The service branding model by Berry (2000) is well-suited for the branding of services and/or service brands with regard to Vargo and Lusch's (2004) Service-Dominant Logic

(SDL) perspective (Brodie, 2009a; Brodie et al., 2006). SDL philosophy involves reorienting the definition of services as the outcome of value co-creating activities of both providers and beneficiaries and is relevant to any kinds of market offerings including tangible products. Vargo and Lusch (2004) explain "services as the application of specialized competences (knowledge and skills) through deeds, processes and performances for the benefit of another entity or the entity itself" (p. 2). Hence, the core benefits derived from the value co-creation activities (market offering and consumption experience) are services applicable not only to intangible outputs (service), but also tangible goods. The SDL view of branding also speaks to a collaborative, value co-creation activities of all the stakeholders in the entire marketing system.

In this model, Berry (2000) explains that brand awareness and brand meaning disproportionately influence brand equity despite the variation between product and service brands (see Figure 2.4). These service brand equity components (brand awareness and brand meaning) and brand equity are similar to Keller's (1993) model. For Berry (2000), brand awareness refers to the "consumer's ability to recognise and recall a brand" while brand meaning connotes "the customer's dominant perceptions of the brand. It is the customer's snapshot impression of the brand and its associations" (p. 129). Brand equity is also defined as a response variable, which is the outcome of brand equity components (Berry, 2000; Keller, 1993). Berry also proposes three additional service brand dimensions, such as consumer direct experience with service brand, presented brand (namely visual stimuli like name, terms and packaging in advertisements) and uncontrolled communication by publicity and word-of-mouth (WOM) communication along with other constructs. He further notes that consumer experience with the service is the primary determinant of brand meaning. Besides, tangible and intangible stimuli during service consumption contribute more to create brand meaning for experienced consumers. In a similar vein, communication plays the most influential role to the new consumer who has little or no direct service consumption experience to form an opinion. Further, it plays a secondary role to create the brand meaning to such consumers, since presented brand through controlled communication (advertising, promotions) and uncontrolled communication (publicity and word-of-mouth communication) are the only evidence of what the service stands for (Berry, 2000).

Although Berry (2000) offers a fundamental model of service branding theory, several conceptual limitations can be revisited which might strengthen the depth of service branding model from the practitioners' standpoint as well as theoretical richness. *Firstly*, Berry (2000) identifies customer experience with companies (i.e., direct service experience) as the most influential components in constituting favourable meaning of service brand only (i.e., brand meaning) and subsequently build service brand equity. Whereas, the role of direct service experience in influencing brand awareness is disregarded. It is worthy to note that brand awareness evolves through various touchpoints encountered (both direct and indirect) over the consumer experience journey (Cowley, 2007; Kotler & Armstrong, 2017). Also, consumer's understanding, feelings and perception of a brand arise when they come across various brand-related stimuli or touchpoints (Lemon & Verhoef, 2016) such as website information, advertisement and the actual customer-employee interaction at check-ins and whilst on board. Hence, it is deduced that a widespread role of direct service experience in influencing brand equity components will increase the deepness of service branding theory. *Secondly*, despite the rich conceptualisation and multiple components of direct service experience echoed in extant literature, Berry (2000) provides little evidence about what are the specific components that constitute customer experience with companies. Service experience is one of the vital aspects of marketing of services which comprises of multiple encounters and touchpoints over the service experience journey (Cronin, 2016; Helkkula, Kelleher, & Pihlström, 2012; Zomerdijk & Voss, 2010). For example, employee service, service process, servicescapes, other consumers in the servicescapes etc., are some distinctive elements of direct service experience (Grove, Fisk, & Dorsch, 1998). Defining and deconstructing the multiple components of direct service experience would be useful for operationalising the construct as well as offering managerial implications. Thirdly, perceived value is recognised as an indispensable attribute of service brand (Brodie et al., 2009b; Grewal, Levy, & Kumar, 2009; Vargo & Lusch, 2016). Nonetheless, Berry (2000) did not introduce perceived value as a distinct construct in his model. *Fourthly*, the interrelationship among the constructs in Berry's model was not empirically tested. Although some studies have tested the inter-construct relationships by modelling only the presented brand construct [see García et al. (2012)] and using a unidimensional measure of direct service experience construct [see So and King (2010)] with other brand equity components, scholars argue that existing service branding models still require extensive empirical testing with quantitative data (H.-b. Kim & Kim, 2005; Krystallis & Chrysochou, 2014; Pinar et al., 2016). Thus, the validation of a consumer-based service brand equity (CBSBE) model is still limited.

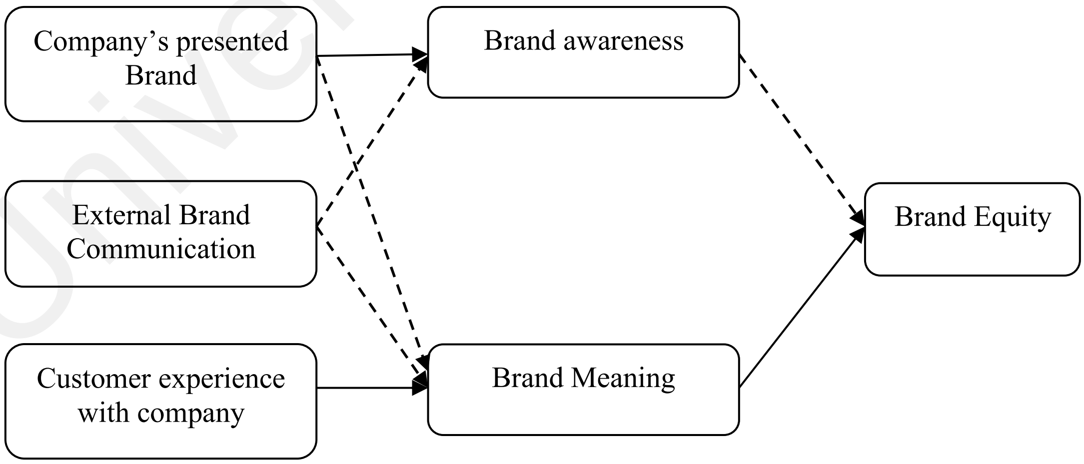

Figure 2.4: Berry's (2000) service branding model

Note*: Solid arrows indicate primary impact while dotted arrows provide secondary impact*

2.4.4 Çifci et al.'s (2016) Validation of CBBE Model for Service Brands

Çifci et al. (2016) validate the CBBE model for service brands by adding brand awareness construct to Nam et al. (2011) model; however, it is not without some drawbacks. Çifci et al. (2016) postulate that: a) brand awareness, b) physical quality, c) staff behaviours, d) ideal self-congruence, e) brand identification and f) lifestyle congruence, affect g) brand satisfaction, which contributes to h) brand loyalty (see Figure 2.4). Although they deconstruct the CBBE model with eight variables, some of the dimensions (e.g., brand awareness, ideal self-congruence, lifestyle congruence) are the cognitive/affective components of brand equity which evolve when consumers come in contact with brand touchpoints. Therefore, the interrelationship among the variables might ignore a logical causal relationship. Besides, Çifci et al. (2016) validated this model by conducting empirical tests in the context of global fashion brands in Turkey and private label brands in Spain and argued that the model applies to service brands setting; still, it lacks generalisability and may not be suitable for other services contexts. Moreover, all services are not equal to the degree of their attributes. For example, retail shopping experience and airline travel experience differ in terms of the degree of tangibility, human touch, processing and delivery. Thus, this CBBE model may also not be a good fit for airline service setting.

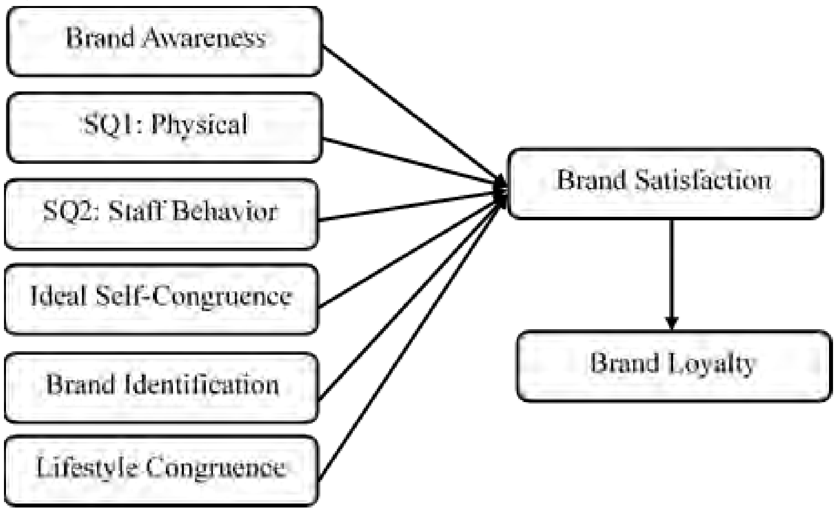

Figure 2.5: Çifci et al.'s (2016) CBBE model for service brands

2.5 Summary of Gaps in the Research Model

Section 2.4 critically analyses the better-known brand equity models and outlines the following drawbacks. **Firstly,** Berry's (2000) service branding model is highly relevant to the current branding context of airline service. However, the relationships between direct service experience and brand asset components in Berry should be revisited. Berry explains that the model functions disproportionately to the experienced/inexperienced consumers. To the experienced consumers, direct experiences play a dominant role in creating service brand equity, whereas indirect encounters of services (i.e., indirect experiences) plays a central role for the inexperienced consumer in building a strong service brand. Although the theoretical assumption suggests that the effect of direct service experience is not only confined to brand meaning creation, Berry (2000) ignores the effect of direct service experience in creating brand awareness in the model. Brand awareness is defined as the degree to which a brand is recalled and recognised (Aaker, 1991; Keller, 1993). Consumers' ability to retrieve brand-related information from their memory depends on the past experience they have with the brand (Cowley, 2007). Furthermore, they are inclined to remember and retain part of the information they have previously encountered directly or indirectly (Kotler & Armstrong, 2017). Therefore, all the direct and indirect experience components of service may have impacts on brand asset components which are overlooked in past studies.

Secondly, the significane of brand consistency in building a strong brand implies a need to investigate its impact on brand equity components. Keller (1993) urges that consistency across the numerous means of brand touchpoints (brand consistency) is crucial, because, marketers offer value to consumers through various direct and indirect hosts of consumer touchpoints. Erdem and Swait (1998) refer to brand consistency as the degree to which each component or decision reflects the intended whole. This current study conceptualises brand consistency according to Erdem and Swait (1998) and Keller

(1993). Although Cifci et al. (2016) outline two constructs related to consistency called *ideal self-congruence* and *lifestyle congruence* in their service branding model for retail fashion, the current conceptualisation of brand consistency clearly differs from them. Whilst ideal self-congruence refers to the similarity between brand image and individual's ideal self-concept, lifestyle congruence refers to the cohesiveness between brand consumption and the consumers' unique pattern of living (Cifci et al., 2016). Although previous studies echo the importance of brand consistency in building brand equity [see Aaker (1996); H. Cooper et al. (2015); de Chernatony and Cottam (2006); Keller (1993)], studies investigating the antecedent and consequences of brand consistency are still limited.

Third, perceived value has a unique standing in the marketing of services (Cronin, 2016; Helkkula et al., 2012; Kumar & Reinartz, 2016; Merz, He, & Vargo, 2009) which is acknowledged as a prominent construct in building a strong brand (Brodie et al., 2009b; Kotsi, Pike, & Gottlieb, 2018; Lassar et al., 1995; C.-R. Liu et al., 2015). Value is defined as subjective and objective assessments of the brand based on the derived experience (Kumar & Reinartz, 2016). However, previous branding studies including service branding have disregarded the impact of perceived value in their models [such as, Aaker (1991); Berry (2000, 2016); Buil et al. (2013a); C.-F. Chen and Tseng (2010); Çifci et al. (2016); Keller (1993)]. Therefore, there is a need to further explore the role of perceived value in branding services and validate its role in developing a service branding model.

Fourth, as the investigation of airline brand equity has been carried out by C.-F. Chen and Tseng (2010) using Aaker's conceptualisation of CBBE, direct service experience has received little attention in the airline service setting. Even though Berry's (2000) service branding model has been adopted by some researchers in services setting, a unidimensional approach has been followed to measure direct service experience. For instance, García et al. (2012) operationalised only indirect experience components to investigate destination brand, whereas, So and King (2010) examined direct service experience of hotel brand using a unidimensional approach. A comprehensive investigation using a multidimensional scale is needed to measure direct service experience of the airline, because utilising a multidimensional scale to measure a construct provides a richer meaning than a unidimensional scale (K.-H. Kim & Park, 2017; Mohd-Any, Winklhofer, & Ennew, 2015; Sweeney & Soutar, 2001).

Therefore, this research attempts to mitigate these limitations by conceptualising and validating a consumer-based service brand equity (CBSBE) model which can be applicable to branding services in the context of airline.

2.6 Brand Equity Components for Developing Consumer-Based Service Brand Equity (CBSBE) Model

Based on the above discussion, it is evident that Berry's (2000) service branding model is more adaptable to the services setting. He argues that the inter-construct relationships are disproportionate to the experienced/inexperienced consumers. This model also complies with the SDL view of marketing (Brodie et al., 2006). For example, customer experience with the company varies between service brands and product brands. Thus, the conceptualisation of this construct will depend on various experience dimensions across the service/product-dominant brands of services marketing. Berry (2000), in this regard, clarifies that companies represent the primary brand of service organisations while the product is the primary brand that consumers experience. Therefore, this research considers Berry's service branding theory as the foundation of the CBSBE model and adopts his conceptualisation of BE constructs. As presented in Section 1.4 and 1.5 (p. 8 - 15), this research considers only the direct service experience construct to fulfil the stated research objectives. Overall, along with brand awareness, brand meaning and brand equity in Berry (2000), two brand equity constructs (brand consistency and perceived value) are adopted from Erdem and Swait (1998) and W. G. Kim et al. (2008) and discussed in Section 1.4 and 1.5. Table 2.4 summarises the components of the CBSBE model.

Table 2.4: Constructs of the proposed CBSBE model for airline service

Constructs for CBSBE model	**Conceptualised in previous CBBE/service branding models**	**Remarks**
Airline Service Direct Experience (ASDE)	Berry (2000, 2016)	*Although Berry (2000) has included this variable in his model, it was not operationalised in the airline service branding context. Besides, a comprehensive measure of direct service experience is still absent.*
Brand Consistency	Erdem and Swait (1998, 2016)	*Previous research indicates the importance of this variable, nonetheless, it is not incorporated in the CBBE model.*
Brand Awareness	Aaker (1991); Keller (1993); Berry (2000, 2016)	*It is widely adopted in the existing CBBE model.*
Brand Meaning	Aaker (1991); Keller (1993); Berry (2000, 2016)	*It is widely adopted in the existing CBBE model.*
Perceived Value	Baldauf, Cravens, and Binder (2003); W. G. Kim et al. (2008)	*A few research includes this variable, however, it is not widely accounted in CBBE context.*
Service Brand Equity	Keller (1993); Berry (2000, 2016)	*The conceptual definition of service brand equity is similar to brand equity definition and is widely available in the existing CBBE models.*

2.7 Defining the Variables of Proposed CBSBE Model

This section elaborates the underlying concept and definition of each variable which is adopted from previous literature. The CBSBE model contains airline service direct experience (ASDE) components and five other brand equity constructs namely brand consistency (BC), brand awareness (BA), brand meaning (BM), perceived value (PV) and service brand equity (SBE).

2.7.1 Airline Service Direct Experience (ASDE)

Service experience is a vital concept in SDL which was introduced by Pine and Gilmore (1999) and popularised by several other authors (Helkkula et al., 2012; Lusch & Vargo, 2011; Merz et al., 2009; Olsson, Friman, Pareigis, & Edvardsson, 2012; Vargo & Lusch, 2017). The SDL view suggests that value emerges and is realised from the interaction between providers and beneficiaries rather than just what is offered by the providers. Companies in this regard act only as value providers but it is the customers (beneficiaries) who define the value based on their experience – otherwise referred to as value-in-use (Grewal et al., 2009; Holbrook & Hirschman, 1982; Prahalad & Ramaswamy, 2004; Vargo & Lusch, 2008). Thus, consumer experience with organisations is the essential source of cultivating the value of services (Prahalad & Ramaswamy, 2004).

Berry (2000) argues that customer experience with providers is also regarded as service experience. In the marketing literature, service experience is construed in differing ways by scholars. Meyer and Schwager (2007) provide a holistic definition of service experience. In their words, *"Customer experience is the internal and subjective response customers have to any direct or indirect contact with a company"* (p. 117). Within this conceptualisation, consumers experience direct contact with the providers during the purchase process which is initiated by themselves. After defining their needs, the consumers go through the stage of information search, deciding, initiating service delivery process, consumption etc., representing the direct contacts that consumers experience. Indirect experiences derived from unplanned encounters with the brand include that of advertisements, publicity, reviews, criticisms, word-of-mouth from physical and digital sources etc. This definition of service experience challenges the SDL concept of value co-creation. Within the current definition of service experience, value is not only co-created with collaborative efforts of actors (providers and beneficiaries), but also emerges through direct and indirect consumer experiences as well (Cronin, 2016). Gentile, Spiller, and Noci (2007) also explain service experience as a multidimensional concept that derives from the personal interaction with all the brand touchpoints (such as, direct or indirect interaction with product, organisation, or part of the organisation etc.). This view also supports the conceptualisation of consumer experience as being holistic in nature (Helkkula et al., 2012; Verhoef et al., 2009).

In particular, Berry, Carbone, and Haeckel (2002) illuminate the definition of service experience by noting that: *"the composite of all the clues makes up the customer's total experience. Clues are combined of functional which is related to the logical performance of product/services and emotional clues which are related to sound sight, smell, taste and the environment where the product/service is offered"* (p. 85). They note that service experience includes information search (decision making), service delivery process (access), physical setting and interaction with service employees during the consumer buying process. This research assesses the effect of service experience with the brand equity components by adopting the conceptual definition of Berry, Carbone, et al. (2002). According to the service branding model, consumer experience with the company plays a dominant role in creating service brand equity that is mostly associated with the direct interaction with the service provider during the service delivery process. Advertisements, publicity and word-of-mouth communication are the indirect components of service experience which also constitute an important service branding consideration for those who have no previous consumption experience of that service (Berry, 2000). Moreover, the effect of communication experience on branding has been well accepted among scholars (Buil et al., 2013b; Huang & Sarigöllü, 2014; Villarejo-Ramos & Sánchez-

Franco, 2005; Yoo et al., 2000). It is also widely recognised that communication (advertisements, publicity, WOM, news etc.) plays a vital role in increasing brand awareness, creating brand meaning and increasing brand equity (Aaker, 1991; Berry, 2000, 2016; de Chernatony & Dall'Olmo Riley, 1999; Duncan & Moriarty, 1998; Keller, 1993; Reid, Luxton, & Mavondo, 2005; Yoo et al., 2000). Therefore, this research considers only the direct consumer experience with services which calls for more empirical research from a service branding perspective.

Among the previous research, Pine and Gilmore (1999) conceptualise service experience through four dimensions namely: entertainment, escapism, aesthetic and education, which was later operationalised by Oh, Fiore, and Jeoung (2007). Generally, service experience is a process which evolves over a certain time period (Heinonen et al., 2010; Verhoef et al., 2009) and starts from the interaction with the organisation's servicescapes or physical surrounding, employees and other customers during the service consumption (Ali, Amin, & Cobanoglu, 2016; Gil, Berenguer, & Cervera, 2008; C. H.-J. Wu & Liang, 2009). In the services marketing domain, service experience is considered as drama, hence theatrical concepts and philosophies would be appropriate to define the components of service experience (Grove, Fisk, & Bitner, 1992; Grove et al., 1998). Four key service experience elements consisting of the actors (service employees), the audiences (final consumers), the physical setting (servicescapes) and the process (access to service) have been identified in Grove et al. (1992) and Grove et al. (1998). Zomerdijk and Voss (2010) also postulate that service design should include the physical environment, service employees, service delivery process and fellow customers. Besides, Berry, Seiders, and Grewal (2002) explicate that five service convenience dimensions are crucial to providing value to the consumers which include decision, access, transaction, benefit and post-benefit convenience. Among these five service convenience dimensions, decision convenience and access convenience are relevant to the current conceptualisation of direct service experience as explained in Berry, Carbone, et al. (2002). Decision convenience is defined as consumers' views on the ease of making purchase decisions during experiencing various information related to the service brands, while access convenience explains the efforts of originating service delivery (Berry, Seiders, et al., 2002).

Few studies such as Grace and O'Cass (2005) and Krystallis and Chrysochou (2014) operationalised service experience construct which was conceptualised by Berry (2000). These authors operationalised service experience as a higher order construct named brand evidence that consists of all the meaningful touchpoints of service brand such as price, brand name, servicescapes, core service, self-image congruence, employee service and feelings. They found a positive effect of the brand evidence on satisfaction and brand attitude. Nevertheless, all the dimensions of brand evidence do not portray the direct service experience components specifically brand name, self-image congruence and feelings. Besides, the items which measure self-image congruence and feelings, seem to reflect the affective emotion about the brand which signals brand meaning (C.-R. Liu et al., 2015). The items adopted to measure price in their study also appears similar to the measure of perceived value in Brodie et al. (2009b); Buil et al. (2013b); Han, Kim, and Kim (2011); C.-R. Liu et al. (2015). In addition, I. A. Wong (2013) outlines four constructs of consumer service experience in casino service setting such as service environment (servicescapes), employee service, service convenience and hedonic service. Hedonic service refers to an emotional assessment of overall service experience such as fun, excitement, pleasure, thrill, sensual, adventuresome and entertainment, which originate from customer touchpoints over the service experience journey (Bigné, Mattila, & Andreu, 2008). As hedonic service is embodied in service experience touchpoints, it may not be essential to consider it as a distinctive construct when conceptualising the airline service direct experience. Therefore, this study acknowledges the broader conceptualisation of the direct service experience of Berry, Carbone, et al. (2002) and Grove et al. (1998) in the context of airline services that starts from the decision making stage to consumption stage. Based on the definition, five components of airline service experience are considered as the ASDE. Specifically, ASDE includes purchase decision experience (decision convenience) and airport service experience (access convenience) based on service convenience of Berry, Carbone, et al. (2002) & Berry, Seiders, et al. (2002) and employee service (interaction with employee), in-flight core service (servicescapes) and interaction with other passengers (audiences) based on theatrical service components of Grove et al. (1998). Table 2.5 and Table 2.6 summarises the name of airline service direct experience dimensions and operational definition.

Table 2.5: ASDE components and its sources

Direct service experience components	ASDE Context	Adapted from
Purchase Decision (Decision Convenience)	Purchase Decision Experience	Berry, Carbone, et al. (2002); Berry, Seiders, et al. (2002)
The Process (Access Convenience)	Airport Service Experience	Berry, Carbone, et al. (2002); Berry, Seiders, et al. (2002); Grove et al. (1998)
Interaction with Employee	Employee Service	Grove et al. (1998)
Audiences	Interaction with other Passengers	Grove et al. (1998)
Servicescapes	In-flight Core Service	Grove et al. (1998)

Table 2.6: Operational definition of ASDE components

ASDE Components	Operational definition	References
Purchase Decision Experience	*Purchase decision experience in airline service refers to the passengers' perception on time and effort they make based on the accessibility and availability of information about flight plan, cost, accessible choices and earlier flying experience before booking an airline ticket.*	Thuy (2011)
Airport Service Experience	*Airport service experience refers to the passengers' perceived time and effort they make during the check-in services (including baggage dealing) at airline service counters until reaching the destination airport.*	Thuy (2011)
Employee Service	*Employee service refers to the behaviour or performance of the airline staff in the delivery of airline services*.	Grace and O'Cass (2005)
Interaction with other Passengers	*Interaction with other Passengers refers to the passenger's perception of other passengers' behaviour during the journey that is suitable for the setting.*	Brocato, Voorhees, and Baker (2012)
In-flight Core Service	*In-flight core service defines as the passenger's evaluation of the core elements of airline services which take place once passengers board on the cabin.*	Han, Hyun, and Kim (2014)

2.7.2 Brand Consistency (BC)

"Brand Consistency refers to the degree to which each mix component or decision reflects the intended whole" (Erdem & Swait, 1998, p. 137). Hence, it is conceptualised as sharing a unique theme of consumer experience derived through the brand touchpoints. It measures the extent to which brand touchpoints are similar to each encounter during the experience of a service brand. According to the signalling theory, consistent experience of brand touchpoints is perceived as the capability of a brand to perform in future (Erdem & Swait, 2016). Thus, it signals the competence of a brand to deliver at the desired level of performance.

Consumers in the marketing system act as the receiver of what marketers offer. In more concrete terms, marketers offer value to the consumer through the marketing mix elements which are consumed by the end user (Kotler & Armstrong, 2017). Thus, consumer experience encompasses all the direct and indirect touchpoints through which consumers perceive value as being offered to them. In a service experience journey such as airlines, passengers' experience with the airline is not confined to the airport and onboard service only, rather it begins from the moment they purchase the ticket until they leave the destination airport (Grönroos, 1984; Mikulić & Prebežac, 2011). Consistency in delivering promised services in each encounter signals the ability of a brand to perform optimally in future (Erdem & Swait, 2016). Due to the inherent nature of services being heterogeneous (Zeithaml et al., 1985), ensuring consistent performance in each service encounter is certainly a challenge for service marketers. Thus, brand consistency is acknowledged as an important measure to influence brand asset perceptions (Kapferer, 2008; Keller, 2012; Keller, Sternthal, & Tybout, 2002).

From a consumer behaviour point of view, consistency across the experience encounter reduces the tension and discomfort in the consumer's mind, which exert a positive evaluation toward an object (Erdem & Swait, 1998; Srull & Wyer, 1989). This clarifies the findings in Delgado-Ballester, Navarro, and Sicilia (2012) which explains congruence between communications and brand performance as positively influencing brand equity by strengthening brand asset elements such as brand awareness, brand image and brand attitudes. Mitchell (2015) notes that consumers try to reduce the perceived risk in foods by seeking information from multiple sources. Thus, a high level of airline brand consistency will be perceived when the passenger's assessment of gained experience is similar to the service promises made by airline companies. Further, Erdem and Swait (1998, 2016) conceive brand consistency as the similarity between brand performance and previously defined perceived brand image along with what is guaranteed by the companies through the indirect encounters such as commercials, price and deals. Similarly, the perceived brand consistency of an airline brand will be high when passengers experience the promised level of service in each airline service direct experience (ASDE) encounter. The high level of consistency across the airline service is expected to increase the brand equity of the airline.

2.7.3 Brand Awareness (BA)

"Brand awareness is the ability of the consumer to recall and recognise the brand under a given condition. In particular, brand name awareness relates to the likelihood that a brand name will come to mind and the ease with which it does so" (Aaker, 1991; Berry, 2000; Keller, 1993). Thus, brand awareness is conceptualised as the consumer's ability to recall and recognise a brand with ease. Brand recall arises when consumers are able to remember specific brand-related information when presented with the cues of the product/service category. Brand recognition arises when consumers are able to detect a brand based on experience, such that the brand itself is presented as a cue. High level of brand awareness occurs when the consumer retrieves brand-related information with ease and dominance. Keller (1993) elaborates that brand recognition plays an effective role at the point of purchase whereas brand recall is important when consumers take purchase decision while absent from the purchase situation. Overall, consumers form their consideration set based on the awareness level they hold which affect consumer decision making.

It is evident that the human brain is unable to learn or memorise if the stimuli fall outside of the set of exposures (Anderson, 1983). Thus, it is important for the marketer to increase the exposure of the brand so that the target consumers intentionally and unintentionally get encountered with the brand touchpoints. In the context of intangible-dominant service brands like an airline, it is quite challenging for the airline companies to tangibilise the actual service experience before someone consumes the airline service. Although marketers use some tangible cues like brand name, service features, price deals through the indirect service encounters (i.e., advertisement, publicity word-of-mouth communication), it is quite challenging to bring the existence of actual airline service without experiencing it. Hence, during the service consumption encounters, airline passengers get exposed to the airline's real experience which is the element of passengers' awareness of airline brand. Having encountered the actual experience of airline service, passengers will be able to recall the nature of airline service experience (i.e., counter service, ticket booking service, meals, hospitality) along with the tangible cues like airline name, logo, colour, service feature etc.

In general, brand awareness is acknowledged as integral to building a strong brand despite the variance existing between product and service experience. This is because, a brand with high awareness presents the consumer with a set of brand options when making a purchase decision (Aaker, 1991; Berry, 2000; Keller, 1993). For the experienced consumer in the service branding context, experienced-based perceived assessment of value and meaning is stronger than recognising and recalling the brand-related information in creating service brand equity (Berry, 2000). However, high brand awareness is necessary as it strengthens the memory associations of the consumer and functions as a dormant role in building brand equity. This is because, brand awareness of the airline encompasses the memory in each service experience components in the form of service features – for instance, convenient ticket booking, warm encounter service, meals, atmosphere, entertainments, airline name, logo, etc. would trigger the positive evaluation of airline brand. The more positive and pleasant these experiences are, the quicker, easier and more vividly the memories associated with an airline would be recalled and recognised, as consumers tend to retain the part of the previous experience they cherish for a long time (Kotler & Armstrong, 2017).

2.7.4 Brand Meaning (BM)

Brand meaning refers to *the customer's dominant perceptions of the brand. It is the customer's overall impression of the brand and its attributes* (Berry, 2000; Keller, 1993). These associations encapsulate the emotional perceptions consumers attach to a brand (Dobni & Zinkhan, 1990) and symbolic meaning attached to specific attributes of the product or service (Padgett & Allen, 1997). BM is further conceptualised as the notion and meaning that resides long-term in the mind of consumers (Berry & Seltman, 2007), feelings or attitudes about it and image dimension (Aaker, 1991). Keller (1993) argues that attributes, benefits and attitudes associated with the brand should have favourability, strength and uniqueness to trigger the brand meaning. Attributes are related to the relevant product or services association, whereas benefits describe the individual value embedded in the brand and attitudes are the individual beliefs attached to the brand.

Among the brand asset components, brand meaning is focal to the brand as it functions as the overall positioning of the brand in a consumer's mind (Aaker, 1991; Berry, 2000; Keller, 1993). Specifically in the service branding, Berry (2000, 2016) stress that for the experienced consumer, favourable brand meaning/image is central to create positive service brand equity. Successful brands are considered as a living memory of the consumer to which they develop some associations attached to the brand symbolically. As such, favourable meaning associated with a brand is perceived as a brand's credibility in meeting consumers' functional and emotional needs. Further, a belief about the brand has been developed in the consumer's mind which is retained for a long time. Thus, a distinct brand image or meaning is an asset leveraged to build a strong brand equity. Previous empirical studies (Arnett et al., 2003; C.-F. Chen & Tseng, 2010; Cobb-Walgren et al., 1995; W. G. Kim et al., 2008; Kotsi et al., 2018; C.-R. Liu et al., 2015; M. T. Liu, Wong, Tseng, Chang, & Phau, 2017; Pappu et al., 2005, 2006) also acknowledge the role of favourable brand meaning/image in creating positive differential response toward the brand. They explicate brand meaning as the symbolic and emotional association attached to the brand such as favourable belief, trust, credibility, distinctive image which make the brand stand alone among the competitors.

Associations toward a brand emerge through the overall trajectory of consumer experience as each encounter indicates the level of performance a brand can deliver (Aaker, 1991; Keller, 1993). In the airline service setting, passengers configure the meaning of the airline brand based on the service performance gained in each airline service direct encounter. Thus, favourable brand meaning emerges when consumers encounter the delightful performance of services throughout the service consumption journey. García et al. (2012) note that the meaning of a service brand consists of the believability, excitement, trust and strong personality through which a service brand/organisation can be entitled. Further, service offerings are highly rooted in the internally managed service experience activities such as purchase, process employee service and core service experience (Berry, 2000; Zeithaml, 1981). Due to the variability of service in nature, delivering a consistent level of credible and trustworthy service is always challenging. Thus, formulating a favourable brand meaning of airline service requires carefully managing each service experience touchpoints so that passengers will be able to designate their experience into meaningful associations like an exciting, credible, reliable, trustworthy etc.

2.7.5 Perceived Value (PV)

In regard to consumer assessment of service experience, previous literature has given more attention to perceived service quality than perceived value (Williams & Soutar, 2009). However, the concept of perceived value provides a more comprehensive measure of consumers' overall experience compared to the assessment of perceived quality. This is because consumers' assessment of value emerges in each and every stage of consumer experience journey (Mitchell, Schlegelmilch, & Mone, 2016; Sánchez, Callarisa, Rodríguez, & Moliner, 2006), while perceived quality is agreed to be an assessment of utilitarian perspective of product performace and is accounted as one of the elements of perceived value (Sánchez-Fernández & Iniesta-Bonillo, 2007; Sweeney & Soutar, 2001; Williams & Soutar, 2009). Moreover, due to the complexity of service experience compared to product performance (Mosley, 2007), perceived value is accepted as an indispensable attribute of service brand (Brodie et al., 2009b; Ruiz, Gremler, Washburn, & Carrión, 2008; Williams & Soutar, 2009).

Zeithaml (1988) defines perceived value *as the consumer evaluation of a brand based on what is received (perception about the utility of service features) and what is sacrificed (perception about momentary and non-monetary costs)* (p. 14). She emphasises value as a low price, what is expected, what is received and quality of the products/services, indicating a unidimensional approach to measuring perceived value. It is a resulted difference between 'what is given up' and 'what is received' components of consumer experience (W. G. Kim et al., 2008; Sweeney, Soutar, & Johnson, 1999). However, Kumar and Reinartz (2016) postulate the overall assessment of perceived benefits and costs which are based on objective and experiential attributes of product/services. Therefore, *perceived value is defined as the consumer's evaluation of perceived total benefits and total costs based on the objective and experiential attributes of product/services.*

Kumar and Reinartz (2016) assert that an assessment of value is based on objective and experiential attributes of product/services. It involves three aspects – measuring overall perceived value, measuring benefits and attributes associated with products/services and perceiving the relative importance of the benefits/attributes. In the service experience of airline, passengers invest their time, money, efforts, while taking functional, financial and socio-psychological risks. Thus, the perceived value of airline becomes positive when passengers' derived experiences match the sacrifices made throughout the journey. According to the SDL view, customer value emerges from collaborative efforts based on interaction with resources which is determined by the beneficiary (Merz et al., 2009; Prahalad & Ramaswamy, 2004; Vargo & Lusch, 2017). However, Cronin (2016) argues that SDL minimally addresses the extent of sacrifices as the input. He stresses that value can be created by reducing the search time for better quality solutions. In fact, value co-creation should encompass the broad aspects of consumer touch points through which consumers can enjoy more benefits than sacrifices. For instance, the consumer assessment of value derives from experience during website search, counter service, employees interaction etc (Helkkula et al., 2012; Holbrook & Hirschman, 1982; Karpen, Bove, Lukas, & Zyphur, 2015). Therefore, passengers materialise the value of an airline based on the experience gained from all the encounters starting from ticket purchase to leaving the destination airport.

Creating value of market offering is the key to branding which is related to positive outcomes in consumer response (Brodie et al., 2009b; Gummerus, 2013; Kotsi et al., 2018; C.-R. Liu et al., 2015). In the marketing literature, perceived value is argued to be the emotional, social, economic and functional value of a brand and is measured as a multidimensional construct (K.-H. Kim & Park, 2017; C. H. Lin, Sher, & Shih, 2005; Mohd-Any et al., 2015; Ruiz et al., 2008; Sánchez et al., 2006; Sweeney & Soutar, 2001). Although, the components of perceived value are widely acknowledged, many authors [i.e., Alves (2011); Bajs (2015); Boo et al. (2009); C.-F. Chen and Chen (2010); Dodds, Monroe, and Grewal (1991); Grewal, Monroe, and Krishnan (1998); Iniesta-Bonillo, Sánchez-Fernández, and Jiménez-Castillo (2016); Keh and Sun (2008); Netemeyer et al. (2004)] nevertheless offer an alternative unidimensional approach to measure it. It is evident that the multidimentional approach holds richer content than the unidimensional one as each component is measured separately with multiple indicators. However, both approaches reliably measure the phenomenon of perceived value and the choice of methods in measuring perceived value depends on the researcher (Leroi-Werelds, Streukens, Brady, & Swinnen, 2014; Zauner, Koller, & Hatak, 2015). In this study, passenger assessment of airline brand value is operationalised as the perception of what they receive (through interacting with the airline service direct encounters over time such as ticket purchase experience, on-board service, employee service, airport service and experience with airline passengers) and what they sacrifice (including both monetary and non-monetary costs such as physical, time, mental and search costs).

2.7.6 Service Brand Equity (SBE)

Brand equity is considered as the incremental value embodied in a brand (Farquhar, 1989; Kamakura & Russell, 1993; C. S. Park & Srinivasan, 1994). Although there is no universally accepted definition of brand equity (Baalbaki & Guzmán, 2016), most researchers follow the definition of Aaker (1991) and Keller (1993). Aaker (1991) defines brand equity as a blend of actual or perceived assets and liabilities aligned with a brand and outlines five dimensions. He further posits brand equity as a source of competitive advantage from a behavioural view. Keller (1993) defines it as *"the differential effect of brand knowledge on consumer response to the marketing of the brand"* (p. 8). Berry (2000, 2016) also conceptualises brand equity as a behavioural response to the value-creating activities of the offered brand. This study thus defines service brand equity *as the consumer's differential response to the value co-creation activities of the presented brand based on the experience gained* (Berry, 2000; Keller, 1993).

Pioneered by Yoo et al. (2000), overall brand equity as a distinct construct is conceptualised as a behavioural outcome indicating the incremental response of consumers. In other words, a favourable assessment of brand equity components leads to a positive behavioural response of consumers (i.e., overall brand equity). By adopting Aaker's (1991) conceptualisation of brand equity constructs, Yoo, Donthu and Lee developed a four-item scale which measures the incremental preference of using the brand. The measurement of brand loyalty and overall brand equity in their study opens up some serious criticisms among marketing scholars. For instance, the measurement items of loyalty and overall brand equity which express a similar meaning as the incremental behavioural outcome has been heavily criticised (Baalbaki & Guzmán, 2016; Christodoulides et al., 2015). It is also argued that brand loyalty is the outcome variable of overall brand equity, instead of the consequences of brand equity components (Erdem & Swait, 1998; Na et al., 1999). Therefore, service brand equity as a variable is conceived as the differential behavioural response of the consumer when a similar category of service brand is available to purchase. This incremental positive differential response to a specific service brand is regarded as the service brand equity.

In the airline setting, passengers have a number of options to purchase airline tickets. A strong airline brand enjoys an incremental preference compared to other airlines when it comes to booking an airline ticket; largely because having some delightful previous travel experiences and/or favourable brand position in the current market, passengers might have a strong preference for an airline over others. Berry (2000) postulates that the purchase of a service brand by consumers depends on a favourable brand meaning and a higher level of brand awareness. Eventually, a higher level of brand equity results in a positive response as well (Buil et al., 2013a; Na et al., 1999). Thus, positive service brand equity of the airline will emerge when passengers' preference for flying with that airline will incrementally be higher than other airlines. That is why creating a positive service brand equity is essential for airlines to survive in a competitive market. Table 2.7 summarises the definition of the five brand equity constructs discussed above.

Table 2.7: Conceptual definition of brand equity constructs of CBSBE model

BE Constructs	Operational definition	References
Brand Consistency	*Brand Consistency refers to the degree to which each brand touchpoint reflects a unique theme or meaning.*	Erdem and Swait (1998)
Brand Awareness	*Brand awareness is the ability of the consumer to recall and recognize the brand under given condition. In particular, brand name awareness relates to the likelihood that a brand name will come to mind and the ease with which it does so.*	Aaker (1991); Berry (2000); Keller (1993)
Brand Meaning	*Brand meaning refers to the customer's dominant perceptions of the brand. It is the customer's overall impression of the brand and its attributes.*	Berry (2000); Keller (1993)
Perceived Value	*Perceived value is defined as the consumer's evaluation of perceived total benefits and total costs based on the objective and experiential attributes of product/services.*	Kumar and Reinartz (2016)
Service Brand Equity	*Service brand equity characterises as the consumer's differential response to the value co-creation activities of the presented brand based on the experience gained.*	Berry (2000); Keller (1993)

As section 2.7 provides a detail discussion about the selected constructs of CBSBE model, it is further useful to review some empirical findings of previous studies before formulating the hypotheses in Chapter 3. The next section demonstrates the empirical results of previous studies which operationalise CBBE models in both products and services settings. Hence, Section 2.8 is organised to gain some understanding about the exogenous and endogenous constructs in measuring brand equity, and the significance and nature of the relationships in the model (i.e., positive, or negative).

2.8 Empirical Findings on Measuring Consumer-Based Brand Equity (CBBE)

To reiterate, the commonly referenced brand equity constructs in the literature are brand awareness, brand association/brand image, perceived quality and loyalty. These constructs are the exogenous variables in the CBBE model whereas consumer response as brand equity (BE) or overall brand equity (OBE) is an endogenous construct. Several authors also include trust and commitment as distinct CBBE constructs in their models [see Atilgan et al. (2009); Šerić et al. (2017); Šerić et al. (2018)]. However, trust is one of the salient components of brand association or brand meaning (García et al., 2012), which explicates a credible and reliable performance of a brand. Similarly, commitment is a salient attribute of loyalty which indicates the attitude or psychological attachment with a brand. Oliver (1999) defines loyalty as *"deeply held commitment to rebuy or repatronise"* (p. 34), which is of three types such as cognitive, affective and conative loyalty. Commitment is conceptualised as affective loyalty indicating likeness or attitudes prevailing in the consumer's mind. Therefore, not only does commitment share a similar feature with loyalty, it is also one of the related dimensions of loyalty (Keiningham, Frennea, Aksoy, Buoye, & Mittal, 2015). This research argues that loyalty is an outcome of BE (Adam et al., 2011; Mourad et al., 2011; Na et al., 1999) (see Section 2.4.1, p. 28). As service brand equity (SBE) or BE is defined as the differential response of consumers toward a brand, a deeply held commitment would develop when consumers could marginally differentiate their gains out of experiencing a brand. Higher brand equity will result in a higher level of loyalty. Although there is scarce evidence, perceived value is also described as a crucial brand equity component.

As illustrated in Table 2.2 (p. 26), previous studies adopt either Aaker and/or Keller's brand equity components to measure brand equity for a product or service and further evidence is presented in Table 2.8. Empirically, individual brand equity components are hypothesised as a positive direct effect on overall BE and findings also support this. Theoretically, brand equity is assumed to be strong when consumers' assessment of brand equity components is at a higher level. The following table (Table 2.8) summarises a few examples of empirical studies and report their findings.

Table 2.8: Published empirical studies measuring CBBE

<table>
<tr><th rowspan="2">No.</th><th rowspan="2">Studies</th><th colspan="2">CBBE Constructs</th><th rowspan="2">Study context</th></tr>
<tr><th>Independent variables</th><th>Dependent variable</th></tr>
<tr><td>1</td><td>Martin and Brown (1990)</td><td>Associations/Image [ns]
Perceived Quality [ns]
Trust [ns]
Commitment
Perceived Value</td><td>BE</td><td>Consumer goods brand</td></tr>
<tr><td>2</td><td>Cobb-Walgren et al. (1995)</td><td>Awareness
Associations/Image
Perceived Quality</td><td>N/A</td><td>Consumer goods brand</td></tr>
<tr><td>3</td><td>Lassar et al. (1995)</td><td>Associations/Image
Trust
Commitment</td><td>N/A</td><td>Consumer goods brand</td></tr>
<tr><td>4</td><td>Yoo et al. (2000)</td><td>Awareness & Associations/Image
Perceived Quality
Loyalty</td><td>OBE</td><td>Consumer goods brand</td></tr>
<tr><td>5</td><td>Washburn and Plank (2002)</td><td>Awareness/Associations
Perceived Quality
Loyalty</td><td>BE</td><td>Consumer goods brand</td></tr>
<tr><td>6</td><td>Arnett et al. (2003)</td><td>Awareness
Associations/Image
Perceived Quality
Loyalty</td><td>BE</td><td>Retailer brand</td></tr>
<tr><td>7</td><td>Atilgan et al. (2005)</td><td>Awareness [ns]
Perceived Quality [ns]
Loyalty</td><td>BE</td><td>Beverage brand</td></tr>
<tr><td>8</td><td>Bauer et al. (2005)</td><td>Awareness
Associations/Image</td><td>N/A</td><td>Sports brand</td></tr>
<tr><td>9</td><td>Pappu et al. (2005, 2006)</td><td>Awareness
Associations/Image
Perceived Quality
Loyalty</td><td>N/A</td><td>Product brand</td></tr>
<tr><td>10</td><td>Y. Wang, Kandampully, Lo, and Shi (2006)</td><td>Awareness/Associations
Perceived Quality [ns]
Loyalty</td><td>BE</td><td>Financial services brand</td></tr>
<tr><td>11</td><td>Bravo Gil, Fraj Andrés, and Martínez Salinas (2007)</td><td>Awareness/Association [ns]
Perceived Quality [ns]
Loyalty</td><td>BE</td><td>Consumer goods brand</td></tr>
</table>

Table 2.8: (*Continued*)

No.	Studies	CBBE Constructs		Study context
		Independent variables	Dependent variable	
12	W. G. Kim et al. (2008)	Brand Awareness [ns] Brand Association [ns] Perceived Quality [ns] Loyalty Perceived Value	Revisit Intention as BE	Hotel brand
13	Jung and Sung (2008)	Awareness & Associations/Image Perceived Quality Loyalty	BE	Clothing brand
14	H. H. Chang and Liu (2009)	Brand Attitude Brand Image	Awareness/Associations, Perceived Quality and Loyalty as BE	Service brand
15	Davis et al. (2009)	Awareness Image	BE	Logistic service brand
16	C.-H. Wang et al. (2009)	Service encounter components	Brand Associations and Brand Loyalty as BE	Service brand
17	C.-F. Chen and Tseng (2010)	Awareness Brand Image [ns] Perceived Quality [ns] Loyalty	BE	Airline brand
18	Ha et al. (2010)	Awareness [ns] Perceived Quality Loyalty	BE	Financial service brand
19	Y.-C. Wang et al. (2011)	Awareness Associations/Image Perceived Quality Loyalty	BE	Hospital brand
20	Lee et al. (2011)	Brand Image	Brand Associations, Perceived Quality, Loyalty as BE	Computer brand
21	C.-R. Liu et al. (2015)	Awareness [ns] Image [ns] Perceived Quality [ns] Brand Value	Loyalty as BE	Museum brand

Table 2.8: (*Continued*)

No.	Studies	CBBE Constructs		Study context
		Independent variables	**Dependent variable**	
22	Christodoulides et al. (2015)	Awareness Associations Perceived Quality Loyalty	N/A	Product, services and Internet brands in cross nations
23	Šerić et al. (2017)	Awareness [ns] Image Perceived Quality [ns] Loyalty (Trust, Affective Commitment)	BE	Hotel brand
24	Pinar et al. (2016)	Brand Image Brand Associations Perceived Quality Loyalty	OBE	Financial service brand
25	Rodrigues, Martins, and Hayes (2016)	Brand Awareness [ns] Perceived Quality Brand Personality	BE	Clothing brand
26	M. T. Liu et al. (2017)	Brand Loyalty Brand Awareness [ns] Perceived Quality Brand Image	Purchase Intention as BE	Hotel brand
27	Bianchi et al. (2014); Kotsi et al. (2018); Pike and Bianchi (2016)	Brand Awareness Brand Image Brand Quality Brand Value *(all these variables were significant, but, mixed results were observed between different sample groups)*	Loyalty as BE	Destination brand

**ns = Not Significant; N/A = Not Available; BE = Brand Equity; OBE = Overall Brand Equity*

2.9 Chapter Summary

Chapter 2 has outlined the conceptualisation of consumer-based service brand equity (CBSBE) components in the airline service setting. Although the conceptual notion of building a product brand does not vary much with building a service brand, differences still exist in terms of strategy execution. Following a systematic literature review approach suggested in S. Baron et al. (2014), this study has critically analysed the existing literature related to the theoretical model of branding products and services. This process reveals that the service branding model in Berry (2000) provides a suitable foundation for the proposed CBSBE model. However, it lacks two important brand equity constructs (brand consistency and perceived value) and some missing links in the path relationships still exist. Based on the research gaps reported in Chapter 1 and Chapter 2, the components of CBSBE model are finalised. A few empirical studies are also reported to indicate the extent to which each brand equity construct affects the response variable. The following chapter discusses the underlying theory which guides the direction of the conceptual relationship, hypotheses development and introduces a theoretical model called the consumer-based service brand equity (CBSBE) model.

CHAPTER 3: THEORETICAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

3.1 Chapter Introduction

This chapter outlines the underlying relationships between the selected constructs in Chapter 2 and develops a theoretical framework. The discussion is advanced by presenting the theoretical foundation of brand equity (BE) and the relevant underlying theory(ies) to explicate the theoretical assumption of the proposed CBSBE model. Next, based on the discussions and empirical evidences, research hypotheses are formulated and the significance of the study is duly highlighted.

3.2 Theoretical Foundation

Theoretical foundation helps to organise, conceptualise and indicate the relationships between variables in a model. Corley and Gioia (2011) assert that *"theory is a statement of concepts and their interrelationships that shows how and why a phenomenon occurs" (p. 12)*. Brodie and Peters (2020) further illuminate that theory is a logical explanation of concepts in abstract level (general theory), a framework or model of explaining a phenomenon which is undertaken for empirical investigation in a setting (midrange theory) and a context-specific tacit mental model embedded in practical research (applied theory). As this research aims to develop and operationalise a theoretical model of branding airline service, the variables specified in Chapter 2 (i.e., airline service direct experience, brand consistency, brand awareness, brand meaning, perceived value and service branding equity) are required to be organised and conceptualised in a meaningful way. The following sections discuss the logical sequence and interrelationships between the selected constructs of CBSBE model through the theoretical foundation.

Previous brand equity (BE) research, as shown in Table 3.1, adopts the traditional cognitive response hierarchy reported by Lavidge and Steiner (1961) to explain the causal relationship between brand equity constructs. Past studies indicated that brand awareness, as a cognitive component affects brand image and perceived quality positively (affective components), which subsequently affect brand loyalty and brand equity (conative components).

Table 3.1: Conceptualisation of brand equity model in previous studies

Cognitive component ➡	Affective component ➡	Conative component	Examples of previous research adopting this sequence
Brand Awareness	Brand Image/Association; Perceived Quality	Brand Loyalty Brand Equity (Overall Brand Equity)	Buil et al. (2013a); C.-F. Chen and Tseng (2010); Konecnik and Gartner (2007)

However, the conceptualised relationship of brand awareness with other BE constructs during the initial stage leaves room for argument. As brand awareness is defined as the ability to recall and recognise brand stimuli (Aaker, 1991; Keller, 1993), without experiencing/consuming the brand, someone would not be able to recall or remember the brands' attribute (van Osselaer & Alba, 2000; van Osselaer & Janiszewski, 2001). Therefore, consumption experience elements should precede brand awareness. Buil et al. (2013a), C.-F. Chen and Tseng (2010) and Konecnik and Gartner (2007) report a positive significant linear effect of brand awareness upon perceived quality. They posit that high brand awareness results in a high-perceived quality. However, high brand awareness does not continually indicate high-perceived quality, where in some cases, brands are remembered for their low perceived quality. For example, AirAsia (a low-cost airline) and Malaysia Airlines (a fully-fledged national carrier) are ranked 26th and 31st, respectively, in the Skytrax 'Top 100 Airlines of 2017' list. Although Malaysia Airlines has a good reputation for service quality relative to AirAsia (Adapa & Roy, 2017), there was ~38% increase in complaints against Malaysia Airlines in 2018, which was the highest amongst airlines in Malaysia (FMT Reporter, 2018). This research contends that brand awareness, as an antecedent of perceived quality, does not always indicate a positive linear relationship. Hence, the conceptualised relationship of brand awareness as an antecedent of perceived quality requires further in-depth review. Brand awareness can be attributed to consumer experience, with a myriad of brand touchpoints. Lemon and Verhoef (2016) supported this argument by stating that consumers' understanding, feelings and perception about brands can be retrieved via various experience points. It can be explained that without prior contact with any direct and indirect stimuli of an object, people will not be able to learn or store any information (van Osselaer & Janiszewski, 2001). Kotler and Armstrong (2017) stress that human beings learn via the interaction of stimuli, drives and cues when experiencing an object. Without learning about the object, the consumer will not be able to recall/recognise it. Hence, the consumer must go through the brand touchpoints of either direct and/or indirect experience, which helps them learn and store information. Generally, a high level of awareness arises when consumers have strong and frequent exposure to the brand via the learning process (Keller, 1993; Kotler & Armstrong, 2017). However, high brand awareness does not always mean that the brand is of high quality. As awareness is influenced by experience, awful experience related to the brand could trigger higher recall and recognition abilities on the part of consumers. This research, therefore, accounts for the current arguments and suggests a refined BE model where experience touchpoints are advocated in the beginning stages. This study also accounts for the conceptualisation of BE model as a response hierarchy and further suggests that the Stimulus-Organism-Response (S-O-R) hierarchy of Mehrabian and Russell (1974) and Jacoby (2002) would be more suitable for explaining the causal relationship of the proposed CBSBE model for airline service. The S-O-R paradigm is recognised as a psychological theory that is widely applied in the field of consumer behaviour [refer to H.-J. Chang, Eckman, and Yan (2011); Fiore and Kim (2007); Kamboj, Sarmah, Gupta, and Dwivedi (2018); Luqman, Cao, Ali, Masood, and

Yu (2017); Peng and Kim (2014); Thomas, Baral, and Dey (2019); Y.-L. Wu and Li (2018)]. This study regards the service branding theory by Berry (2000) as the theoretical foundation where the S-O-R paradigm and theory of cognitive consistency delineate the role of brand asset components (i.e., brand consistency and perceived value) and direct service experience in developing the proposed CBSBE model for airlines. In particular, the role of brand awareness and brand meaning in building brand equity is already explained in Berry (2000). Nonetheless, the comprehensive role of airline service direct experience as well as the significance of brand consistency and perceived value in building service brand equity are disregarded in previous research including Berry's model. Hence, the S-O-R paradigm and theory of cognitive consistency are employed to describe the extended relationships of airline service direct experience, brand consistency and perceived value in conceptualising the CBSBE model in this research.

3.2.1 Service Branding Model of Berry (2000)

Berry (2000) explicates that service experience is key to creating brand equity for service organisations. He suggests direct and indirect experiences disproportionately influence brand awareness and meaning, which in turn affect brand equity. Berry's service branding theory is detailed in Section 1.4 (p. 8) and 2.4.3 (p. 31). Overall, this research aims to develop an alternative service branding theory called CBSBE model by extending the theoretical model in Berry (2000). Hence, this study adapts service branding model in Berry (2000) as its theoretical foundation by addressing the gaps and proposing the CBSBE model. As Berry disregarded some essential components and their relationships in the service branding model, it would be meaningful to portray his model through the lens of a general theory. It will assist in integrating the extensive role of airline service direct experience, brand consistency and perceived value in conceptualising the CBSBE model. This research argues that Berry's conceptualisation can also be viewed via the lens of stimulus-organism-response (S-O-R) sequence shown in Figure 3.1.

Service experience components in Berry (2000) such as the company's presented brand, external brand communication and customer experience with company are external to consumers in a service experience journey. These are all controlled and uncontrolled consumer touchpoints through which consumers assess their service consumption experience. Brand awareness and brand meaning are the long-term impressions of a service brand in the form of recall and recognition (brand awareness) and favourable meaningful associations (brand meaning), respectively. Brand equity is a response variable in the service branding model as it is referred to as a differential response of consumers about a service brand (Berry, 2000). According to Berry, service experience components are the external cues of consumers (S) that create a lasting impression about brands such as brand awareness and meaning (O). Finally, differential response (brand equity) is dictated by the level of lasting impression in the consumer's mind (R). The following section explains the S-O-R paradigm and how it is applied towards conceptualising the CBSBE model.

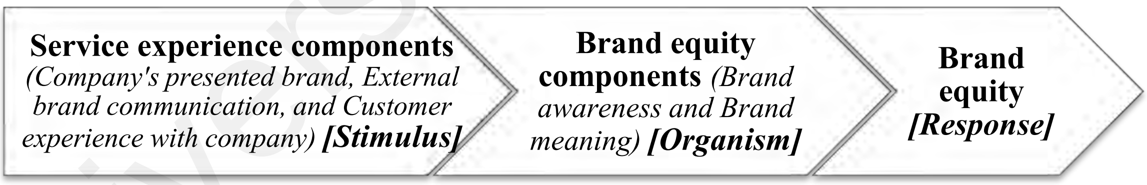

Figure 3.1: Conceptual representation of Berry's service branding theory using S-O-R paradigm

3.2.2 Stimulus-Organism-Response (S-O-R) Paradigm

S-O-R model in Mehrabian and Russell (1974) is widely adopted in the area of environmental psychology under consumer behaviour domain. It explains that the environment contains stimuli (S) that arouse a person's internal organismic states (O), which in turn influence one's response of either acceptance or avoidance (R) (Mehrabian & Russell, 1974). According to their model, stimuli are the external cues or touchpoints to an individual, organism is the internal process of how people perceive and form the meaning of stimuli and response is the action based on these process (Mehrabian & Russell, 1974). Initially, their conceptualisation of S-O-R model was limited to servicescapes of the retail environment only. Later, Houston and Rothschild (1977, 1978) extend this conceptualisation to the different types of buying situation and consumption involvement which is validated in Arora (1982). The S-O-R paradigm of Mehrabian and Russell (1974) takes its lead when Jacoby (2002) reconceptualises the components and generalises it into consumer behaviour domain. One of the fundamental limitations in previously defined S-O-R conceptualisation is that there was a lack of clarity in accommodating certain phenomena under the domain of stimulus, organism and response. For example, some variables such as attitudes, belief, satisfaction, intention can be categorised into two or all three domains. Jacoby (2002) delineates that stimuli are external factors to the individual as well as some implicit learning without awareness which form individual's cognitive and emotive assessment in the long-term memory (organism) and drive an explicit response such as verbal, nonverbal and behavioural. This framework is widely utilised to conceptualise a theoretical model in the diverge areas of consumer behaviour such as computer experience, advertising, website experience, restaurant experience, retail store experience, brand experience etc. (Peng & Kim, 2014; Ul Islam & Rahman, 2017; Y.-L. Wu & Li, 2018). For instance, Y.-L. Wu and Li (2018) developed and examined an integrated model of social commerce loyalty in which social commerce marketing mix components were considered as stimuli, consumer value as organism and loyalty as response factor. Refer to Section 3.2.1, S-O-R paradigm fits well in explaining the relationships between service experience components, brand awareness, brand meaning and brand equity in Berry's (2000) service branding theory. Hence, this research adopts the S-O-R framework to explain the causal relationships between the variables in developing CBSBE model of airline service.

According to the current conceptualisation, stimuli (S) are the cues of consumer touchpoints that are understood to be external to individuals, encompassing *"products, brands, logos, ads, packages, prices, stores and store environments, word-of-mouth communications, newspapers, television and countless of other impinging factors"* and *"implicit learning and learning without awareness"* (Jacoby, 2002, p. 54). Product/service attributes and usage occasion are also regarded as stimuli (Arora, 1982) and can be defined as the combination of various experiences offered by the marketer. An individual's short-term assessment (implicit learning) about stimuli is regarded as input (stimuli) of long-term assessment (organism) (Jacoby, 2002). In the current study, the components of ASDE are external to the airline passengers and are under the control of service providers in the form of value offerings. Brand consistency, in a similar vein, is a consumer's short-term assessment of the experience components. Therefore, airline service direct experience (ASDE) and brand consistency are perceived as the stimuli of airline service experience.

Organism (O) is the assessment of stimuli understood to be internal to the individual (Arora, 1982; Bagozzi, 1986; Jang & Namkung, 2009). It is *"the storehouse of the individual's emotive and cognitive systems, including all retained prior experiences and is generally referred to as 'long-term memory'. This sector includes prior experiences, knowledge, beliefs, attitudes, predispositions, intentions, values, cognitive networks, schema, scripts, motives, the individual's personality, feelings, impressions, images, expectations and so forth, involving brands, companies, services, logos and so forth"* (Jacoby, 2002, p. 54). The operational definition of each variable supports the underlying meaning of the organismic state of brand stimuli. Hence, this research regards brand equity components i.e., brand awareness, brand meaning and perceived value as the organismic elements of the proposed CBSBE model of airline service.

Response (R) is characterised by the individual decision of acceptance or avoidance based on the stimulus-response process (Arora, 1982; Bagozzi, 1986; Jang & Namkung, 2009). According to Jacoby (2002), the response in the S-O-R paradigm is *"the physical and physiological responses, smiles, communicative acts, as well as the acquisition, usage, storage and disposal of products, services, time and ideas"* (p. 55). Response behaviour includes the consumer's positive and negative responses in the form of buying, future buying intention and sharing the brand experience (Ul Islam & Rahman, 2017). Service brand equity in this research is defined as the consumers' differential response vis-à-vis the presented brand stimuli. Thus, service brand equity is perceived as the response component of the anticipated CBSBE model.

In summary, the components of CBSBE model are detailed in accordance with the response hierarchy of S-O-R paradigm. In the proposed model, ASDE and brand consistency are regarded as stimuli (S); brand awareness, brand meaning and perceived value are considered as organismic elements (O); and service brand equity as response component (R). Therefore, it is proposed that ASDE affects brand consistency, brand awareness, brand meaning and perceived value, which in turn influence the service brand equity. Figure 3.2 shows how the CBSBE components for airline service are aligned with the S-O-R paradigm.

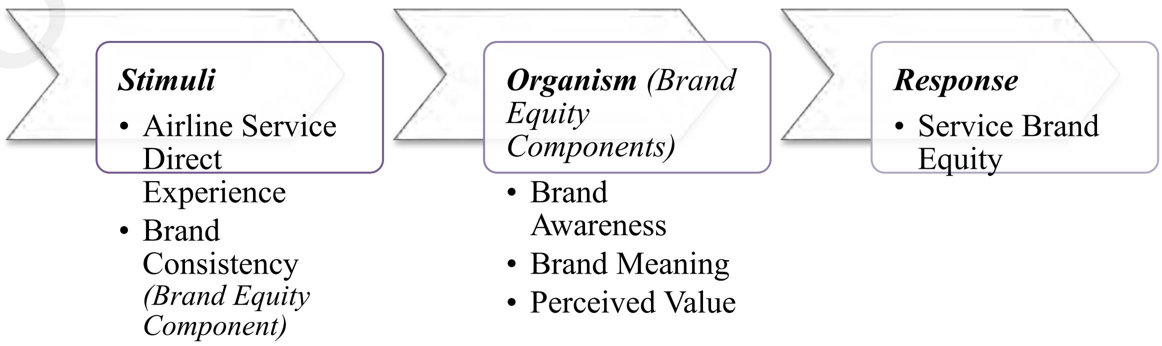

Figure 3.2: CBSBE components based on the S-O-R paradigm

3.2.3 Theory of Cognitive Consistency

In order to formulate the relationship between brand consistency as a newly proposed construct in the model and other brand equity components, there needs to be another theoretical foundation to support its inclusion, in line with the S-O-R paradigm. The literature review has lead this study to the "Theory of Cognitive Consistency", also known as the "Theory of Cognitive Dissonance" (Aronson, 1969; Festinger, 1957). According to this theory, individuals are doubtful in the context of their beliefs and opinions when encountering an inconsistent piece of information or experiences (Aronson, 1969). This doubt is regarded as negative outcomes of the experience. Inconsistent experience across various brand touchpoints would demean the brand equity, similarly to the fact that brand consistency positive affect its equity components. Srull and Wyer (1989) postulate that individuals validate the idea about a person being reliable (or not) based on (consistency of) past behaviour. This process strengthens the association between the idea about a person and behaviour in a favourable/unfavourable manner depending on the stimulus initially perceived and afterwards, it remains consistent with the primary concept over time. Therefore, consistency (short-term assessment) among the stimuli is crucial to validate an individuals' long-term cognitive and affective knowledge (organism).

The "Theory of Cognitive Consistency" substantiates that the role of consistency is essential in constituting a positive impression of an effort to the receiver. From the perspective of consumer behaviour, consistency in the delivery of market offerings, messages and communications is important, as consumers assess brands based on what marketers offer and what they actually receive. Thus, managing the consumer touchpoints aligned effectively, with what is promised to deliver, affirms the image or meaning of a brand. This research argues that developing a strong service brand follows the sequence of S-O-R in Jacoby (2002); Mehrabian and Russell (1974). Companies act as the provider of services to consumers, while the consumer constitutes the perception of service brand

(Brodie et al., 2006; Vargo & Lusch, 2016). Consistency across the service experience is essential, as each encounter delivers the message, performance and impression about services expected to be unique and favourable (Erdem & Swait, 1998, 2016). Therefore, the presence of brand consistency in service branding theory is evident.

In line with the cognitive consistency theory, this research also posits that brand consistency (stimuli) positively affects the brand equity components (organism) and subsequently, service brand equity (response). Moreover, the brand is perceived as consistent when consumers experience similar stimuli across the various brand touchpoints. Hence, brand consistency is influenced by experience components. Figure 3.3 shows the conceptualisation of CBSBE model for airline service delineating the *"Berry's service branding theory", "S-O-R paradigm"* and *"Cognitive Consistency Theory".*

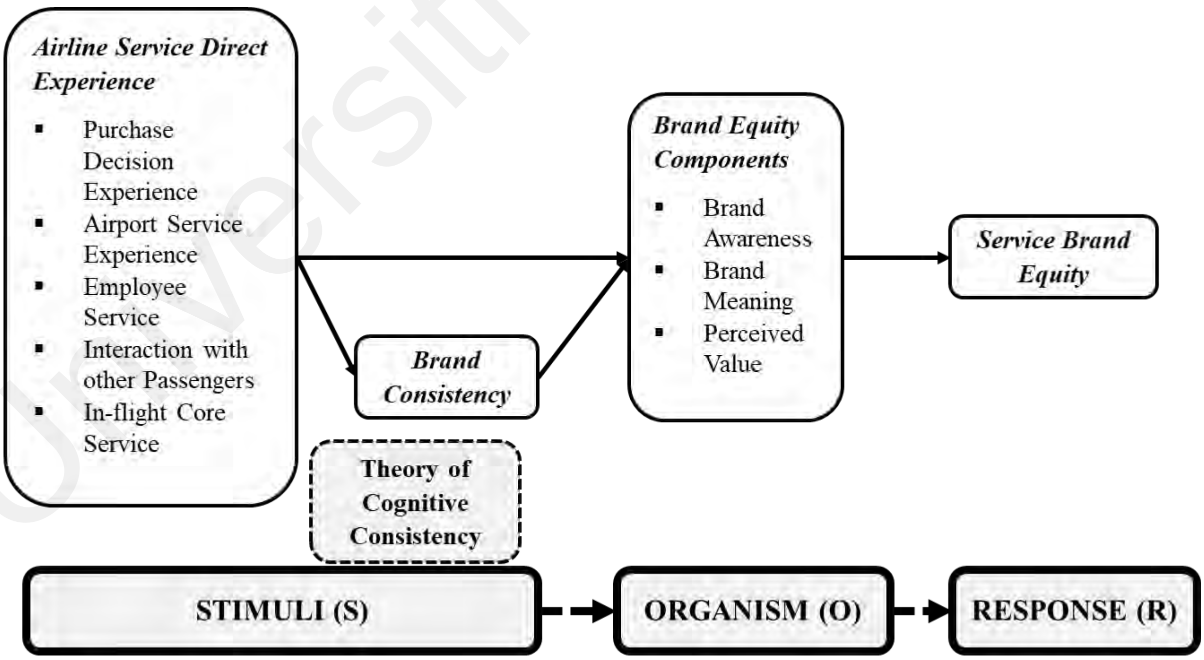

Figure 3.3: CBSBE components based on Berry's service branding theory, S-O-R paradigm and Cognitive Consistency Theory

3.3 Hypotheses Development

After conceptualising an overall framework (see Figure 3.3) based on underlying theories, it is necessary to formulate the nature and direction of relationships between the constructs of CBSBE model. This section hypothesises the inter-construct relationships of CBSBE model and explains how those hypotheses will be examined.

3.3.1 Airline Service Direct Experience (ASDE) and Brand Equity Components

Consumer service experience is mostly associated with interactions with the service provider during the service delivery process and plays a dominant role in creating service brand equity (Berry, 2000; I. A. Wong, 2013). Empirical studies show that service experience components are positively related to consumers' cognitive and emotional responses (Ali, Amin, et al., 2016; Bitner, 1992; Gil et al., 2008; Grace & O'Cass, 2005). Thus, the components of airline service direct experience (ASDE) – purchase decision experience, airport service experience, employee service, interaction with other passengers and in-flight core service are considered to have a positive effect on brand equity constructs.

3.3.1.1 Relationship between Airline Service Direct Experience (ASDE) and Brand Consistency (BC)

Direct service experience of the airline is referred to as the airline service experience encounters from which passengers receive airline service. Berry (2000) highlights the fact that direct service experience is key to branding services and that ASDE is conceived as an antecedent of BC. Brand consistency (BC) is defined as the congruence of service experience throughout the consumption journey, which is one of the brand asset components. Therefore, a pleasant service experience across the airline service encounters signals the level of the BC of the airline. The synergy between ASDE and BC works by delivering the promised level of airline service in each ASDE encounters, ensuring that the BC perception of the airline brand is indicative of a positive association between ASDE and BC.

Although there is a lack of empirical investigation on the relationship between ASDE and BC, the stimulus-organism-response (S-O-R) conceptualisation in Jacoby (2002); Mehrabian and Russell (1974) suggest a link between these variables. Jacoby (2002) stresses that consumers' assessment of a brand holds a perception in the short-term derives from the external stimuli, which subsequently influences the organismic components of consumer evaluation in the end. As BC is the perception of brand performance internal to the consumer, ASDE encounters are the primary source for validating the passengers' evaluation of the airline brand in the short-term. Hence, the consistency in delivering pleasant airline service in each touchpoint suggests that ASDE is positively connected with the BC perception of the airline(s). Current research acknowledges the extensive role of direct service experience in branding service and suggests a positive association between ASDE and BC of the airline. Following the discussion, the relationship between ASDE and BC is hypothesised to be:

H1a: ASDE positively influences brand consistency.

3.3.1.2 Relationship between Airline Service Direct Experience (ASDE) and Brand Awareness (BA)

Brand awareness (BA) is an essential brand asset component defined as the ability of a consumer to recall and recognise a brand (Aaker, 1991; Keller, 1993). Consumer ability to recognise and recall a brand would only be possible when consumers come across the various touchpoints, direct and indirect. Without contact with any external stimuli such as tangible and intangible cues of a brand, consumers will not be able to know and understand what it represents. Lemon and Verhoef (2016) assert that consumers' understanding, knowledge, feeling and perception are dictated by encounters during the consumption experience journey. Furthermore, previous experience forms the source of awareness amongst consumers (Cowley, 2007). In branding services such as airlines, direct service experience encounters i.e., employee service, in-flight core service, airport service, ticket purchase decision and interaction with other passengers are evidence of what airline brands represent to consumers. Thus, the level of airline service direct experience (ASDE) influences the magnitude of brand awareness (BA) of the airline.

Berry (2000, 2016) postulates that BA of the service is positively influenced by indirect encounters of the service brand only, while brand meaning is positively associated with both direct and indirect encounters. So and King (2010) empirically examine the service branding theory of Berry (2000) in the hotel service setting and suggest that the direct service experience should be regarded as an antecedent of BA. This study proposes that an enjoyable airline service experience forms the input to the passengers' airline brand awareness, as consumers remember and retain the information or experience they enjoy the most (Kotler & Armstrong, 2017). Huang and Sarigöllü (2014) report a significant positive effect of marketing mix elements, such as advertising, price promotion and price and distribution of packaged goods with brand awareness. They indicate that along with indirect touchpoints, direct touchpoints of product consumption such as distribution experience also positively influence BA. Although previous service research ignores the relationship between direct service experience and BA [with an exception in Biedenbach and Marell (2010)], this research advocates that ASDE positively influence airline BA. Thus, the following hypothesis is formed:

H1b: ASDE positively influences brand awareness.

3.3.1.3 Relationship between Airline Service Direct Experience (ASDE) and Brand Meaning (BM)

Berry (2000, 2016) depicts that consumer experience with the service is the primary determinant of brand meaning, which explains the direct experience during service consumption journey contributing more in creating brand meaning (BM) to experienced consumers. Direct service experience is the core of creating strong brand equity for service organisation because consumer assessment of service brands is rooted in the direct encounter with service companies (Berry et al., 2006). The creation of a favourable BM of service brand strongly depends on pleasant direct service experience. Similarly, passengers' encounters with airline service begin from the moment they decide to purchase an airline ticket until they leave the destination airport. The overall assessment of airline service direct experience (ASDE) evolves by encountering each direct touchpoint in the airline service experience journey. An enjoyable airline service helps constitute a favourable BM of the airline in the passengers' minds.

Verhoef et al. (2009) stress the rational and emotional assessment of brand results in customer consumption experience and in line with this argument, Bravo, Martinez, and Pina (2019) explicate that a pleasant service experience leads to the constitution of a favourable meaning to the hotel's brand. Iglesias, Markovic, and Rialp (2019) also recommend that brand experience, which is similar to service experience, is positively associated with the brand equity of the banking service. In the B2B service context, Biedenbach and Marell (2010) investigate the effect of service experience with brand association and report a significant positive effect. In measuring hotel brand equity, So and King (2010) remark that direct service experience acts positively towards the creation of BM of the hotel. As per these findings, the following hypothesis is formulated:

H1c: ASDE positively influences brand meaning.

3.3.1.4 Relationship between Airline Service Direct Experience (ASDE) and Perceived Value (PV)

Marketers deliver promises to the consumer via value co-creating activities, which is deeply rooted in consumers' experience with the brand (Vargo & Lusch, 2016, 2017). Customer experience with a brand is central towards creating value, which evolves via interactions with multiple encounters between consumers and providers (Cronin, 2016; Kumar & Reinartz, 2016; Merz et al., 2009; Mitchell et al., 2016). For this reason, direct service experience is regarded as the nucleus of branding services (Berry, 2000, 2016).

Although Berry (2016) revisits his service branding theory in Berry (2000) by emphasising the importance of customer value, the explicit role of perceived value (PV) in creating service brand equity remained missing in his 2016's conceptualisation. Kumar and Reinartz (2016) assert that PV is the rational and emotional assessment of the brand based on perceived benefits and costs derived from experiential attributes of products/services. Also, Cronin (2016); Kumar and Reinartz (2016); Merz et al. (2009); Vargo and Lusch (2017) indicate a strong positive association between customer experience and PV. Interactions with multiple service encounters will allow consumers to assess the perceived value based on how enjoyable or miserable the experience was (Mitchell et al., 2016). Verhoef et al. (2009) advocate that direct service experience is positively related to the creation of value of service as consumer experience constitutes the rational and emotional attitude toward the brand. Therefore, ASDE is proposed to have a positive effect on PV:

H1d: ASDE positively influences perceived value.

3.3.2 Brand Consistency (BC) and Brand Equity Components (BA, BM and PV)

When a brand fulfils its promise at every touchpoint, the consistency results in authenticity (brand meaning) and perceived importance (perceived value) (Schallehn et al., 2014). Interbrand (2016) remarks that consistency across the channel and touchpoints are among key drivers of external brand growth. However, with the exception of Erdem and Swait (1998, 2016), previous studies failed to address the essential role of brand consistency (BC) in the development of brand equity models. Hence, this research suggests the existence of relationships between BC and brand asset components.

3.3.2.1 Relationship between Brand Consistency (BC) and Brand Awareness (BA)

The role of brand awareness (BA) in building strong brand equity is evident, despite the magnitude effect of BA in brand equity varying as per consumers across the nature of service experience (Berry, 2000, 2016). Berry (2000); García et al. (2012); So and King (2010) suggest that creating a high-level BA is predicated upon the exposure of the service to indirect encounters. Consumers' ability to recall and recognise brands is strengthened when a number of indirect encounters with the service are high, which means that there is a positive relationship between indirect experience encounters and BA.

Srull and Wyer (1989) postulate that consistency across various exposures (both direct and indirect) to objects facilitates consumers to remember and recall them. BC of the airline denotes the consistency of service performance across the airline service direct encounters. Therefore, a higher level of airline BC will help airline passengers recall and recognise airline brand-related information quickly and easily. Based on the consumer response hierarchy, it was argued that BC is the internal assessment of consumers in the short-run, while it influences the cognitive, affective and behavioural assessment of consumers in the long-run (Jacoby, 2002). Kapferer (2008); Keller (1993); Keller et al. (2002) advocate that higher level BC confirms the importance of creating the highest brand awareness. Delgado-Ballester et al. (2012) investigate the effectiveness of communication message consistency in creating brand equity in the case soft drinks and explicate that BC improves the BA. Y. Liu, Li, Chen, and Balachander (2017) also experiment on the BC of luxury car brand to explain the consumers' ability to recognise brands and report similar outcomes. Following these arguments, the BC of an airline is surmised to positively affect the BA, which leads to the following hypothesis:

H2a: Brand consistency positively influences brand awareness.

3.3.2.2 Relationship between Brand Consistency (BC) and Brand Meaning (BM)

Brand meaning (BM) implies the position of the brand in the form of a meaningful long-term association in consumers' minds (Aaker, 1991; Berry, 2000; Keller, 1993). It evolves via the consumer experience journey, where each touchpoint is indicative of brand performance. In the case of airlines, passengers encounter the direct experience touchpoints starting from deciding to buy the ticket to leaving the destination airports. Thus, the BC of the airline is the signal of what an airline brand means to passengers.

Although Kapferer (2008); Keller (1993); Keller et al. (2002) remark that BC is positively related to creating favourable brand associations, previous brand equity models such as service branding ignore the impact of BC on the brand assets components. Erdem and Swait (1998, 2016) report a significant and positive relationship of BC with brand clarity and credibility of consumer goods. Schallehn et al. (2014) explicate the impact of BC on brand authenticity and outline a significant positive effect in the context of manufactured goods. Similarly, Delgado-Ballester et al. (2012) investigate the role of communication consistency in the development of soft drink's brand familiarity and report a significant positive relationship between both variables. Other studies, such as that of Bengtsson, Bardhi and Venkatraman (2010); H. Cooper et al. (2015); Duncan and Moriarty (1998) describe only the significance of market offering consistency in the development of a strong brand. These previously mentioned suppositions lead to the following hypothesis:

H2b: Brand consistency positively influences brand meaning.

3.3.2.3 Relationship between Brand Consistency (BC) and Perceived Value (PV)

Consumers' perception of value can be subjective and objective and can be shaped by their overall experience with a brand (Helkkula et al., 2012; Kumar & Reinartz, 2016; Sweeney et al., 1999). The perception of consistency (i.e., brand consistency) assures that the brand performs well enough to reduce the perception of risk by consumers (Erdem & Swait, 1998, 2016). Mitchell (2015) explicates that perceived food risk can be decreased when multiple sources of information are found to be consistent. Due to the variable nature of services (Zeithaml et al., 1985), maintaining consistency across the direct service experience encounters is challenging. A strong service brand cultivates the level of brand performance by carefully projecting consistency between promises and service delivery across the direct and indirect encounters. Thus, brand consistency (BC) is argued to increase the perceived value (PV) of a service brand such as that of an airline.

Although there is a lack of empirical investigation between BC and PV, conceptualising the outcomes of BC in Delgado-Ballester et al. (2012); Duncan and Moriarty (1998); Erdem and Swait (1998, 2016) suggest that BC is positively related to strengthening the PV of the brand. This argument can be further authenticated based on the consumer response model described in Jacoby (2002). Perceived BC is the passenger internal evaluation of the airline brand in a short-run, which is the antecedent of passengers' evaluation in the long-run. Consistency across the ASDE encounters increases the passengers' perceived risks and increases the psychological confidence towards using the airline. Such a trade-off between gains and risks results in an increased value of the brand (Kumar & Reinartz, 2016; Sweeney & Soutar, 2001). It is therefore argued that a higher BC perception of the airline increases its PV. Therefore, based on

Duncan and Moriarty (1998); Erdem and Swait (1998); Kapferer (2008); Keller (1993); Keller et al. (2002), this research suggests the following hypothesis:

H2c: Brand consistency positively influences perceived value.

3.3.3 Brand Equity Components (BA, BM and PV) and Service Brand Equity (SBE)

Service brand equity (SBE) is conceptualised as the differential response of consumers to service offerings by the companies (Berry, 2000; Keller, 1993). The theoretical framework of the service branding theory also called as the consumer-based service brand equity (CBSBE) model, is constructed following the stimulus-organism-response (S-O-R) in Jacoby (2002); Mehrabian and Russell (1974). According to this conceptualisation, brand awareness (BA), brand meaning (BM), perceived value (PV) and the organismic components of brand equity affect SBE of the airline.

3.3.3.1 Relationship between Brand Awareness (BA) and Service Brand Equity (SBE)

Brand awareness is defined as the ability of the consumer to recall and recognise the brand under a given condition (Aaker, 1991; Keller, 1993). Specifically, awareness is related to the likelihood that consumers remember brands (Berry, 2000). Buil et al. (2013a); C.-F. Chen and Tseng (2010); Konecnik and Gartner (2007) claim that brand awareness affects perceived quality and brand image positively, leading to the creation of brand equity. Nonetheless, this conceptualisation (i.e., the positive effect of brand awareness on perceived quality) leaves room for arguments. A highly recalled and recognised brand name does not guarantee the quality of a brand, rather, the higher quality of the brand performance is what would be remembered by consumers for long periods. Cowley (2007) asserts that BA is consumers' memory that is affected by their previous experience with a brand.

Brands with a higher level of awareness are what come to mind first when consumers are making purchasing decisions (Aaker, 1991; Keller, 1993). Berry (2000, 2016) posits that BA is positively associated with brand equity. However, the effect of BA in creating SBE varies between experienced and inexperienced consumers. Berry (2000, 2016) stresses that in the case of the experienced consumer, BA functions as a secondary (weak) role in persuading consumer response. So and King (2010) investigate the relationship between BA and hotel brand equity following Berry's service branding conceptualisation and reveal a positive and small, but an insignificant effect of BA on brand equity. C.-F. Chen and Tseng (2010) report a significant positive effect of BA on brand equity of airlines as per Aaker's conceptualisation. Studies such as those of Bianchi et al. (2014); Kotsi et al. (2018); Pike and Bianchi (2016) suggest a significant positive relationship between BA and brand equity, while others such as C.-R. Liu et al. (2015); M. T. Liu et al. (2017); Rodrigues et al. (2016); Šerić et al. (2017) describe a positive but insignificant path relationship between BA and brand equity. Therefore, this study also considers the positive effect of BA on SBE of the airline and formulates the following hypothesis:

H3: Brand awareness positively influences service brand equity.

3.3.3.2 Relationship between Brand Meaning (BM) and Service Brand Equity (SBE)

Brand meaning refers to the consumers' dominant perceptions vis-à-vis a brand, or the consumers' overall impression of the brands' positioning and its associations (Berry, 2000), similar to that of Keller (1993). These associations encapsulate the emotional perceptions consumers attach to a brand (Dobni & Zinkhan, 1990) and the symbolic meaning attached to specific attributes of a product/service (Padgett & Allen, 1997). Keller (1993) asserts that attributes, benefits and attitudes associated with brands should possess favourability, strength and uniqueness, which trigger brand meaning (BM). Berry

(2000, 2016) postulates that for experienced consumers, BM plays a dominant role in building service brand equity. The aforementioned argument indicates, an experienced-based belief is key to branding services. For example, in a service setting such as an airline, consumers have few to no clues through which the airline service can be experienced before coming into contact with the ASDE. Thus, passengers' experienced-based belief triggers most in eliciting a positive differential response to the airline brand relative to others.

According to Berry (2000, 2016), BM has a positive influence on building strong service brands. He points out that functional and psychological impressions (i.e., brand meaning) of service brands influence consumers' future response. García et al. (2012) and So and King (2010) operationalise the service branding model in Berry (2000) and advocate that BM has the highest positive and significant effect on destination and hotel brand equity. Šerić et al. (2017) also report similar findings in the context of hotel brand equity. Similar to many studies, BM or brand association has a positive and significant effect on financial service brand equity (Pinar et al., 2016), destination brand loyalty (Kotsi et al., 2018) and hospital brand equity (Y.-C. Wang et al., 2011), while C.-F. Chen and Tseng (2010) discover a positive but insignificant relationship between brand image and airline brand equity. The aforementioned discussion indicates that the relationship between BM and SBE is positive in a service branding setting, such as that of an airline, which leads to the following hypothesis:

H4: Brand meaning positively influences service brand equity.

3.3.3.3 Relationship between Perceived Value (PV) and Service Brand Equity (SBE)

Previous research claims that perceived value (PV) is central to consumers' preference and behaviour (Grönroos & Gummerus, 2014; Gummerus, 2013; Leong et al., 2018) and is regarded as an essential component of brand equity and an antecedent of loyalty (Boo et al., 2009; Lam, Ahearne, Hu, & Schillewaert, 2010; Lassar et al., 1995). However, very little research [i.e., KH Kim, Kim, Kim, Kim, and Kang (2008b); C.-R. Liu et al. (2015)] reports the mixed causal relationship among constructs. PV is defined as the consumer affective evaluation of a brand based on what is received (perception about the utility of service features) and what is sacrificed (perception about momentary and non-monetary costs) (Zeithaml, 1988). Kumar and Reinartz (2016) assert three aspects of perceived value – overall value, benefits and attributes and the relative standing of the benefits/attributes. Thus, the conceptualisation of perceived value as consumers' evaluation of perceived total benefits and total costs based on the objective and experiential attributes of product/services denotes as an organismic component.

In literature, value (i.e., PV) is central to the marketing of services, which evolves and materialises through consumers' overall experience with service companies (Berry, 2016; Cronin, 2016; Vargo & Lusch, 2017). Previous studies investigating the consequences of PV affirm a positive and significant effect on consumer behavioural response as being that of loyalty. W. G. Kim et al. (2008) elucidate the relationships between brand equity components in a hotel brand setting and note that PV has the largest positive influence on behavioural response vis-à-vis consumers. Similarly, Brodie et al. (2009b) suggest a strong and positive significant effect of PV on consumer response. Other studies explain the effect of PV on museum brand loyalty (C.-R. Liu et al., 2015), destination brand equity (Kotsi et al., 2018; Pike & Bianchi, 2016) and purchase intention to private level brand (Walsh & Mitchell, 2010) as positively significant and the largest. Despite the relative importance of PV in building brand equity, the service branding model in Berry (2000, 2016) ignores the relationship between PV and service brand equity (SBE). This work addresses this gap and recommends a positive relationship between PV and SBE of the airline, suggesting that the experience-based perception of value is central to branding services in the case of airline. Therefore, the following hypothesis is formulated:

H5: Perceived value positively influences service brand equity.

3.3.4 Brand Consistency (BC) as a Mediator between ASDE and Brand Equity Components (BA, BM and PV)

A mediator refers to an intervening variable that plays a significant role in explaining the relationship between a predictor and a criteria variable (R. M. Baron & Kenny, 1986; Hair, Hult, Ringle, & Sarstedt, 2017). R. M. Baron and Kenny (1986) depict that *"a given variable may be said to function as a mediator to the extent that it accounts for the relation between the predictor and the criterion. Mediators explain how external physical events take on internal psychological significance"* (p. 1176). S-O-R paradigm specifies brand consistency as a short-term internal assessment of brand experience, which is attributed to the external stimuli of airline service direct experience (ASDE). Also, the cognitive consistency theory explains that the short-term internal assessment of brand experience acts as a mediator between ASDE (stimuli) and the organismic component of BE constructs [brand awareness (BA), brand meaning (BM) and perceived value (PV)]. In line with this theory, brand consistency (BC) is internal to the consumer's short-term evaluation of a brand guided by the external stimuli (service experience). Thus, the service experience components are argued to have a strong association with BC. Aronson (1969) asserts that individuals hold distorted perceptions and beliefs about an object when inconsistencies across the touchpoints are experienced. As BA, BM and PV are the long-term evaluation of the airline brand (organismic components), consistency among the experience touchpoints (short-term evaluation) will link the direct service experience and brand equity components. Hence, this research proposes that brand consistency plays an important mediating role between ASDE and the organismic component of the BE constructs.

In a service branding setting such as that of an airline, the argument in Lemon and Verhoef (2016) can be taken into consideration, which describes that consumer experience with the service companies constitutes the understanding and attitude to the service brand. Cowley (2007) also asserts that the previously encountered enjoyable experience remains active in the consumers' memory in the long-run. For this reason, ASDE is suggested to have a positive and direct relationship with and BA. Moreover, consistency (i.e., BC) across the direct encounters of airline service (i.e., ASDE) is argued to easily recall the airline experience related information (Delgado-Ballester et al., 2012). Hence, the current service branding model proposes that passengers' ability to recall and recognise an airline brand will be affected by the ASDE.

Similarly, the BM of airlines is expected to be credible, reliable and pleasant for the passengers through a positive internal evaluation in the short-run. Consumers may not always constitute perceptions/attitudes towards an object based on the stimuli that are external to the consumer. Jacoby (2002) postulates that some stimuli pass through an internal evaluation process to the consumer in a short-run, the results of which influence the outcome of their long-term evaluation of the stimuli. Also, the indirect route could supersede the direct route vis-à-vis the development of consumers' feelings, attitudes, perceptions in the long-run when they are unsure about the stimuli they come across during their interaction with the airlines (Aronson, 1969; Jacoby, 2002). Therefore, passengers' evaluation of airline service (i.e., ASDE) is favourable towards the airline (i.e., BM) when the assessment process operates via the perception of BC.

Value perception is also derived from service experience encounters (Cronin, 2016; Helkkula et al., 2012). Consistency in delivering service promises during each airline encounter will decrease passenger tension and lower risk perceptions vis-à-vis time, money, effort and emotion. Thus, when the passengers' assessment of the airline brand between promises and experiences is consistent (i.e., BC), the PV of the airline materialises. As per the argument in Aronson (1969); Jacoby (2002), this study suggests that BC intervenes in the relationship between ASDE and PV towards the development of a service branding theory for airlines.

Previous research has neglected the empirical testing of the mediating effect of brand consistency between ASDE and the organismic component of BE constructs. However, ASDE is posited as an antecedent of brand equity constructs (Ali, Amin, et al., 2016; Berry, 2000, 2016; Gil et al., 2008; So & King, 2010), while BC influences the brand equity components (Delgado-Ballester et al., 2012; Erdem & Swait, 1998, 2016; Keller, 1993). The aforementioned discussions suggest the following hypotheses:

H6a: Brand consistency mediates the relationship between ASDE and brand awareness.

H6b: Brand consistency mediates the relationship between ASDE and brand meaning.

H6c: Brand consistency mediates the relationship between ASDE and perceived value.

3.4 The Proposed Theoretical Framework

The consumer-based service brand equity (CBSBE) model for airline service is shown in Figure 3.4. The airline service direct experience (ASDE) in this model is designated as a second-order formative construct, as per Ali, Amin, et al. (2016). Brand consistency, brand awareness, brand meaning and perceived value are the brand asset/equity components, while service brand equity is the response variable of the proposed service branding theory.

According to the theoretical conceptualisation in the CBSBE model, direct service experience is key towards building a strong service brand. As this study intends to recommend a service branding model for airlines, the direct service experience is regarded as the ASDE in the proposed CBSBE model. The proposed theory stipulates that ASDE influences the perception of brand consistency, creates brand awareness, constitutes favourable brand meaning and creates a perceived value of the airline brand. Moreover, brand consistency has an essential role in strengthening brand asset components such as brand awareness, brand meaning and perceived value. This theory also argues that although ASDE is central towards influencing brand asset components relative to brand consistency, the indirect effect of ASDE via brand consistency is also indispensable, as consistency across the direct service experience encounters deliver a favourable impression of the brand's capability. Finally, consumer differential response to service brand evolves based on the level of brand awareness, brand meaning and perceived value prevalent in consumer assessment of the airline. Among the brand asset components (i.e., brand awareness, brand meaning and perceived value) influencing consumer response, perceived value is recommended to dominate the creation of positive service brand equity of the airline. Thus, consumer experience-based perception of value is deemed to be the nucleus of branding services in airlines. Overall, this research offers an alternative theoretical model of service branding known as CBSBE in the case of airline services, as shown in Figure 3.4. *(Please note that constructs that are bold and italics indicate the possible theoretical contributions of this study)*

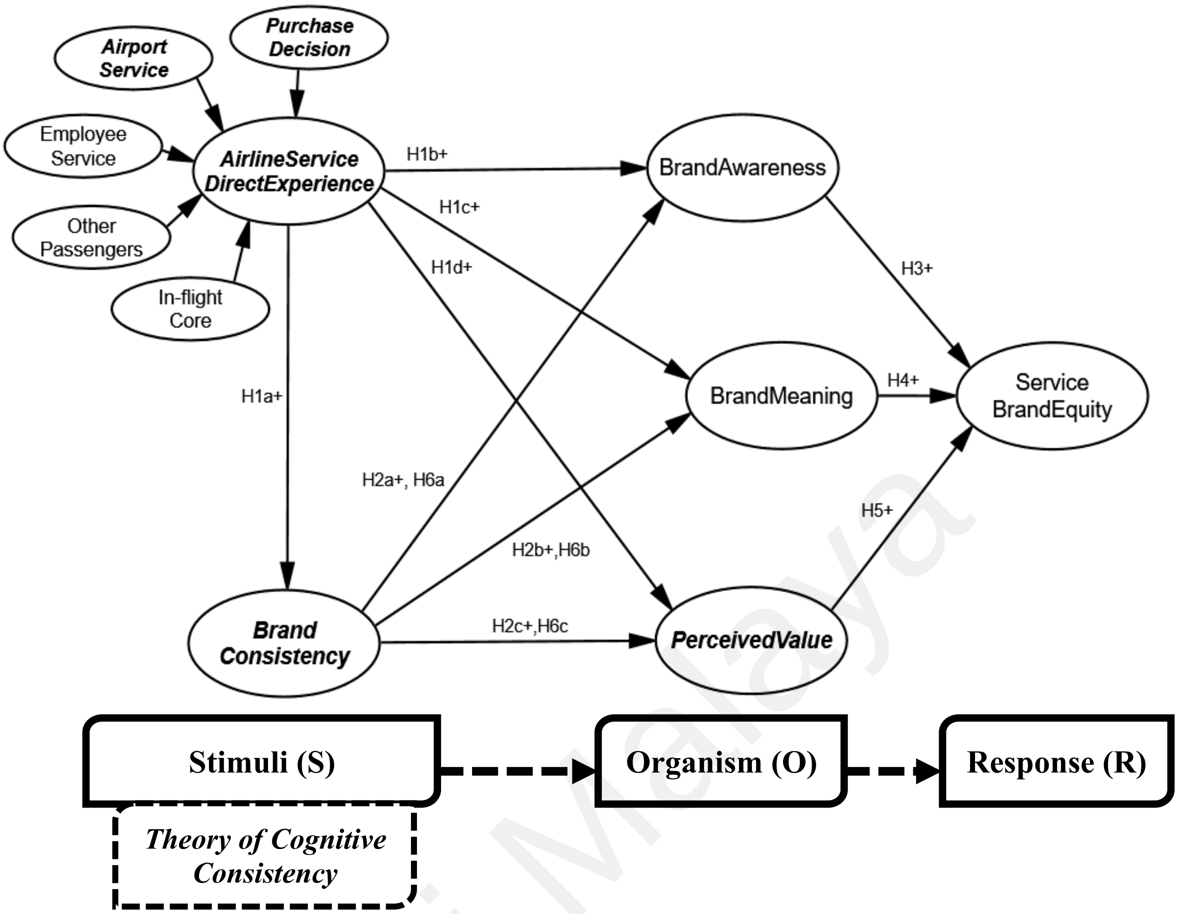

Figure 3.4: Proposed theoretical framework and hypotheses of the consumer-based service brand equity (CBSBE) model for airline service

The above-mentioned model contains a total of thirteen hypotheses, which are formulated based on theoretical and empirical evidence. Table 3.2 summarises the list of hypotheses based on the research objectives.

Table 3.2: Summary of research objectives and hypotheses

Research objectives	Research hypotheses	Statistical direction
RO1: To study the role of airline service direct experience in developing a CBSBE model.	H1a: ASDE positively influences brand consistency.	One-tailed
	H1b: ASDE positively influences brand awareness.	
	H1c: ASDE positively influences brand meaning.	
	H1d: ASDE positively influences perceived value.	
RO2: To examine the impact of brand consistency on brand asset components (i.e., brand awareness, brand meaning and perceived value) in building an airline brand.	H2a: Brand consistency positively influences brand awareness.	One-tailed
	H2b: Brand consistency positively influences brand meaning.	
	H2c: Brand consistency positively influences perceived value.	
RO3: To evaluate the effect of brand asset components in creating a positive differential response (i.e., service brand equity) towards the airline.	H3: Brand awareness positively influences service brand equity.	One-tailed
	H4: Brand meaning positively influences service brand equity.	
	H5: Perceived value positively influences service brand equity.	
RO4: To assess the mediating role of brand consistency between airline service direct experience and brand asset components.	H6a: Brand consistency mediates the relationship between ASDE and brand awareness.	Two-tailed
	H6b: Brand consistency mediates the relationship between ASDE and brand meaning.	
	H6c: Brand consistency mediates the relationship between ASDE and perceived value.	
RO5: To propose a service branding theory called the consumer-based service brand equity (CBSBE) model as a strategic guideline for the airline industry.	N/A	N/A

Note: ASDE = Airline service direct experience; N/A = Not applicable

3.5 Significance of the Study

With the overall aim of developing a consumer-based service brand equity (CBSBE) model for airline service, this study contributes in three ways - to theory and knowledge, methodology and practice – the details of which are described in the following subsections:

3.5.1 Contributions to Theory and Knowledge

Fisher and Aguinis (2017) posit that the development of new theories takes place when existing theoretical ideas/models are expanded, tightened and/or examined in a new research setting, which resulted in the term *theory elaboration*. This study contributes to the service branding theory by extending/elaborating Berry's (2000) model via the addition of *brand consistency* and *perceived value*. Although current literature highlights the importance of both variables in the context of branding, little evidence has, however, been adduced to demonstrate the presence of both variables in the contemporary service branding model. Keller (1993) and Kapferer (2008) explain that the degree of *brand consistency* would significantly affect the level of brand awareness and brand meaning, which in turn affect the overall brand equity. Moreover, *perceived value* is regarded as one of the important components of brand equity and the antecedent of consumer response (Brodie et al., 2009b; Lam et al., 2010; Lassar et al., 1995; C.-R. Liu et al., 2015; Williams & Soutar, 2009). Nevertheless, literature has prioritised *perceived quality* of brands over *perceived value* (Williams & Soutar, 2009; Woodruff, 1997). In fact, *perceived value* elucidates a wider concept of overall consumer assessment of experience where perceived quality forms one of the components of value assessment (Sweeney & Soutar, 2001; Williams & Soutar, 2009). Besides, the role of direct service experience is proposed to have a crucial effect with all brand equity components which was disregarded in previous studies. Therefore, the inclusion of both variables (i.e., brand consistency and perceived value) and the extensive role of direct service experience enhance the theoretical foundation of service brand equity model.

Contemporary CBBE models which have designed mainly for product-dominant brands further necessitate the need for a more adaptable model, especially for services. This study addresses this gap by proposing an alternative theoretical framework called the CBSBE model. According to Shostack (1982), the intangible nature of airline service creates a high consumer perceived differences among brands and high purchase involvement. Due to this fact, direct experience is acknowledged as a key component of airline service (A. H. Chen et al., 2008; S. Kim et al., 2016; Mikulić & Prebežac, 2011). Hence, this model appeals to the airline service branding by highlighting the role of the direct service experience, which includes purchase decision experience, airport service experience, employee service, in-flight core service and interactions with other passengers. These components are integral to the service experience journey and require high involvement of consumers such as that of airline service. The current effort in developing the CBSBE model is expected to shed light on airline service branding by indicating the role of the ASDE, brand consistency and perceived value on other brand equity components. This study also contributes to the service experience literature by including two essential dimensions of the direct service experience which were overlooked previously (i.e., purchase decision experience and airport service experience). Table 3.3 and Table 3.4 highlight the possible contributions of this research vis-à-vis the development of a theoretical model called the CBSBE for airline service.

Table 3.3: Proposed theoretical contributions in conceptualising the ASDE construct

No.	ASDE Components	Conceptualised by Berry (2000)	Conceptualised by Grove et al. (1992) & Grove et al. (1998)	Operationalised by Ali, Amin, et al. (2016) in the hotel service context	Possible theoretical contributions
1	***Purchase decision experience*** (Purchase Decision)	Berry (2000) conceptualised this variable as "Customer Experience with the Company", but he did not specify the components in detail.	*Not Available*	*Not Available*	*(✔)*
2	***Airport Service Experience*** (The Process)		The Process	*Not Available*	*(✔)*
3	***Employee Service*** (Interaction with Employee)		Interaction with Employee	Interaction with Staff	—
4	***Interaction with other Passengers*** (The Audiences)		The Audiences	Interaction with other Customers	—
5	***In-flight Core Service*** (Servicescapes)		Servicescapes	Physical Environment	—

Note: (✔) = a probable contribution; (—) = not a contribution

Table 3.4: Proposed constructs of CBSBE model and theoretical contributions

Constructs	Berry (2000)	Çifci et al. (2016)	Proposed CBSBE model	Possible theoretical contributions	
				Constructs	**Hypotheses**
Direct Service Experience	Customer experience with company *[not statistically tested]*	*Not Available*	***Airline Service Direct Experience (ASDE)***	Contributes through operationalising this construct *(✔)*	***H1a+, H1b+. H1c+, H1d+ (RO1)***
Brand Consistency	*Not Available*	*Not Available*	***Brand Consistency***	*(✔)*	***H2a+, H2b+. H2c+, H6a, H6b. H6c (RO2 & RO4)***
Brand Awareness	Brand Awareness	Brand Awareness	Brand Awareness	—	
Brand Meaning	Brand Meaning	*Not Available*	Brand Meaning	—	
Perceived Value	*Not Available*	*Not Available*	***Perceived Value***	*(✔)*	***H5+ (RO3)***
Service Brand Equity	Brand Equity	Brand Loyalty	Service Brand Equity	—	

Note: (✔) = a probable contribution; (—) = not a contribution

3.5.2 Managerial Significance

The proposed model is expected to mitigate managerial difficulties by looking at the service branding strategy from "inside-out view" (organization perspective) and "outside-in view" (consumer perspective). As the airline industry is global in nature, marketing and/or brand manager of any airline company might benefit from understanding the direct service experience dimensions and its corresponding role in building a strong airline brand. Services offered to passengers include ticketing via online and physical agents [convenience/place], airport counter service (i.e., check-in, luggage handling) [process], employee service [people], onboard services (meals, seats, cleanliness, atmosphere, entertainment materials) [core service] and physical layout of airplane cabin and waiting lounge [physical evidence]. Passengers usually evaluate airline services based on the nature of services offered and the CBSBE model is expected to assist managers in designing their service elements. It is also expected to provide a new understanding of how consistency across various touchpoints (brand consistency) play salient roles when implementing branding strategies for airline service. In fact, this study is expected to help managers identify the incremental effect of passengers' responses to service offerings. This incremental response would be considered as a source of customer loyalty to airline companies.

3.6 Chapter Summary

Chapter 3 has presented the theoretical foundation of the proposed model. This chapter concludes that Berry's (2000) service branding model forms the foundation of the CBSBE model, which can be conceptualised via the S-O-R paradigm alongside the theory of cognitive consistency. Based on the theoretical foundation and empirical evidence, a total of thirteen hypotheses are formulated. The CBSBE model is then explained with a graphical representation of the hypothesised relationships. Besides, the theoretical and managerial significance are presented at the end of the chapter. The next chapter discusses the methodology undertaken in this research.

CHAPTER 4: METHODOLOGY

4.1 Chapter Introduction

This chapter discusses the methodology of the study. It begins with the philosophical arguments related to adopting a research method, research process and research design to achieve the research objectives. The research design section starts with a discussion on the nature of information required, followed by data collection method and sampling procedures. As the study follows the structural equation modelling (SEM) techniques, the next section specifies the nature of the measurement model, discusses which SEM technique is more suitable and outlines the guidelines of analysing the proposed framework. Then, the detailed procedures are discussed in designing the survey instrument, followed by the final survey administration. The final section summarises the chapter.

4.2 Research Approach

Scientific research holds the concept of systematic examination or investigation of a subject matter to be in the hands of the researchers, which also covers how the data will be collected, analysed and interpreted (Bunge, 2012; Martens, 2005). Researchers are guided by a fundamental belief system or worldview when investigating a social phenomenon called the research paradigm (Guba & Lincoln, 1994). It is also regarded as the researcher's guiding philosophy throughout the advancement of the research (Denzin & Lincoln, 2011; N. Mackenzie & Knipe, 2006). Thus, adopting an appropriate research paradigm is essential for solving research issues.

Among the five categories of research philosophy (Creswell, 2014), positivism and interpretivism are the most referred to by scholars (Creswell & Clark, 2017; Teddlie & Tashakkori, 2009; Yvonne Feilzer, 2009). Research philosophy is the guiding principle that addresses the research questions/objectives in a study. The philosophical stance does not merely advocate the selection of an appropriate methodology, rather, it is the researchers' belief about scientific research approach that guides them throughout an investigation. Based on the three core elements of the research paradigm; ontology, epistemology and methodology, a researcher has to select a paradigm most suitable for their research (Morgan, 2007; Perry, Riege, & Brown, 1999; Sobh & Perry, 2006). According to scholars, ontology is the understanding of social reality, epistemology refers to researchers' belief about the process of generating and validating knowledge derived from reality and the procedures or techniques used by researchers to discover social reality is defined as a methodology. Empirically, marketing and consumer behaviour research are dominated by the adoption of the positivism research paradigm (Davis, Golicic, & Boerstler, 2011; Deshpande, 1983; Harrison, 2013; Harrison & Reilly, 2011). In consumer behaviour research, those who adhere to the positivist stance believe that social reality is objective, unchangeable and a single external to the researcher (ontology). Thus, the phenomenon of social reality can be explained via theory. Epistemologically, an independent investigation should be carried out by adhering to the scientific protocol to generate accurate and reliable knowledge. As researchers are distinct from reality, the results can be generalised to the real world (Deshpande, 1983; Ozanne & Hudson, 1989). Hence, researchers utilise quantitative research methods (methodology) such as surveys and experiments to elucidate the causal relationship between variables statistically. Based on this paradigm, the researchers position themselves as neutral/unbiased to the research investigation and ensure that the findings will not be influenced by personal beliefs, values and biases during data collection and analyses (Bryman & Bell, 2011; Creswell, 2014). The interpretivist research stance assumes that social reality is subjective and evolves from a single individual, hence, an in-depth qualitative investigation is necessary to comprehend and interpret the reality. A new theoretical explanation emerges via this process where researchers' personal beliefs and values reflect the meaning of a certain phenomenon (Bryman & Bell, 2011; Creswell, 2014). Table 4.1 outlines the differences between these research paradigms.

Table 4.1: Considerations between positivism and interpretivism research paradigm

Assumptions	Positivism	Interpretivism
Ontology (understanding of reality)	• Objective, unchangeable and single external reality • Researcher and reality are separable • Reality is generalisable	• Subjective, evolving and diverse external reality • Researcher and reality are dependable • Multiple and diverse reality
Epistemology (validation/grounds of knowledge)	• Knowledge is administered through verifying hypotheses and theories	• Knowledge is instituted based on individual perceptions, beliefs, values and experiences
Methodology (the process of deriving knowledge)	• Researchers follow a structured research protocol • Focus on objective/rational explanations, descriptions and predictions about research phenomenon • Apply statistical and mathematical analysis	• Research protocol is unstructured • Emphasis on subjective understanding and interpretation of the study phenomenon • Researcher is the analytical instrument within the investigation • Adopt phenomenological or hermeneutical technique
Role of theory in a study	• Test the theories with derived data • Deductive	• Construct the theories • Inductive

Source: Adapted from Bryman and Bell (2011), Levy (2006) and R. Weber (2004)

Generally, this research intends to develop an alternative service branding theory (i.e., CBSBE model) following the approach of *"theory elaboration"* in Fisher and Aguinis (2017). Fisher and Aguinis (2017) articulate that *theory elaboration* is a systematic approach of knowledge creation mechanism, which refers to *"the process of conceptualizing and executing empirical research using preexisting conceptual ideas or a preliminary model as a basis for developing new theoretical insights by contrasting, specifying, or structuring theoretical constructs and relations to account for and explain* *empirical observations" (p. 441)*. Thus, positivism is a suitable philosophical approach in this research. As the paucity of quantitative method is evident in developing a CBSBE model that takes the direct service experience into account, this research will examine the relationship between the six constructs, including service brand equity (SBE). Furthermore, the directional relationship among the constructs is conceptualised deductively via "service branding model" by Berry (2000), "S-O-R paradigm" by Jacoby (2002) and Mehrabian and Russell (1974) and "Theory of Cognitive Consistency" by Aronson (1969) and Srull and Wyer (1989). Positivism suggests that reality is objective and can be verified via examining hypotheses. This study also proposes a service branding model called CBSBE, which will be validated through hypotheses testing.

4.3 Research Method

A research method refers to the specific research design that guides researchers on how the data will be collected, analysed and interpreted while addressing the research questions or objectives (Creswell, 2014). Specifically, research questions/objectives help the researcher decide which research method is best for addressing the research questions. For example, a research question exploring the causal relationship between two variables indicate that the research should be based on survey or experiment for data collection from which the relationship between the variable needs to be examined using inferential statistics. Focus group discussion (FGD) or in-depth interview (DI) is used to gain/explore an in-depth understanding of the research phenomenon. Data derived from these techniques (FGD/DI) are in the forms of opinions, statements and/or discussions, which calls for subjective or thematic analyses and interpretation of the findings (Creswell, 2014).

Since the current research adopts a positivism approach, a quantitative research method is utilised. Literature also suggests a quantitative approach for the validation of the service brand equity model. Bryman and Bell (2011) explicate that the quantitative research method addresses the following key issues in research design: (a) survey instruments, (b) numeric data, (c) statistical techniques to analyse these data and (d) validation of theory through deductive reasoning.

This study identifies a total of six key variables including one endogenous construct. To test the formulated hypotheses and validate the proposed model, passengers' opinion on airline service experience is required. Hence, a survey design with structured questionnaires is deemed suitable, as it allows the researcher to draw target samples in a single point of time and generalise the findings back to the target population as well as validate a theory (Creswell, 2014; Fowler Jr, 2014). Hair, Black, Babin, and Anderson (2010) postulate that multi-item scales are a reliable and valid measure of unobserved/latent variables for quantifying respondents' opinions. The collected data were then analysed using various univariate and multivariate statistical techniques.

In the area of behavioural and social sciences, the use of the SEM technique is dominant where relationships between independent and dependent variables are examined based on survey data (Bollen, Harden, Ray, & Zavisca, 2014). SEM is also recognised as an advanced multivariate statistical technique that can be used to examine a structural theory containing multiple variables and the relationships between the variables (Byrne, 2016; Hair, Hult, Ringle, & Sarstedt, 2014). Thus, the SEM technique was used to test the hypotheses and validate the model. The statistical package for social science (SPSS) was used to analyse descriptive statistics related to demographic and usage-related information of airline passengers. Table 4.2 summarises the methodological issues and approaches related to the research design in this study.

Table 4.2: Summary of research approach and methods

Methodological issues	Approach
Research philosophy	Positivism
Research approach	Deductive
Research method	Quantitative
Research strategy	Survey
Survey instrument	Self-administered structured questionnaire
Time horizon	Cross-sectional
Statistical technique	Descriptive and Structural Equation Modelling (SEM)

4.4 Research Process

According to the positivist view of the world, reality is objective and based on the cause-and-effect rules via a scientific research process. This scientific approach is reflected in every stage of the research process, which includes identifying the research problems, framing research questions/objectives, developing a theoretical framework, formulating research hypotheses, designing research strategies, data collection, preparation and analyses, making inferences and discussing findings (Babbie, 2012; Malhotra & Das, 2010). Figure 4.1 summarises the overall research process in this study, with **Phase 4** as the main topic of this chapter.

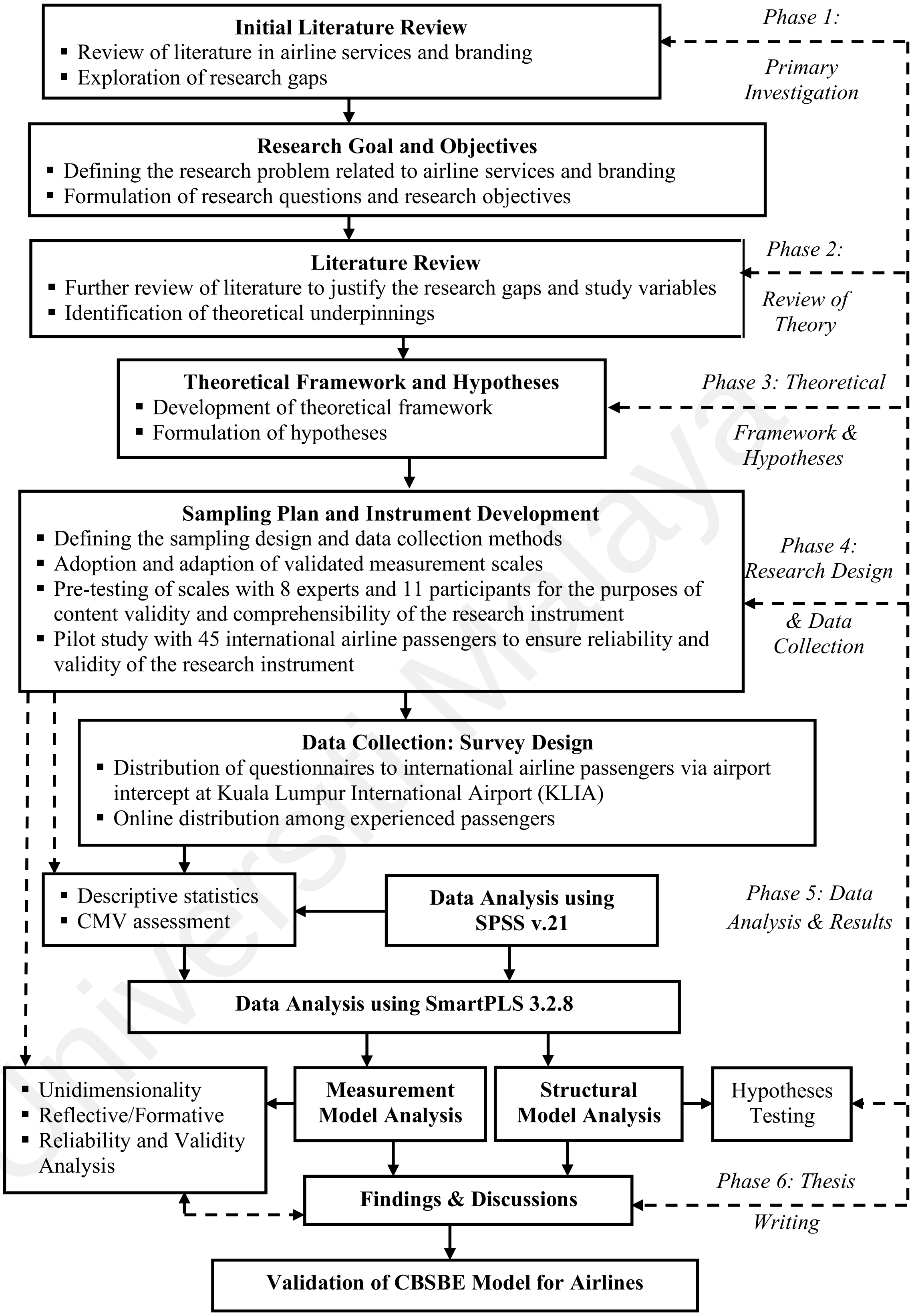

Figure 4.1: An overview of the research process

In **Phase 1**, the literature and empirical findings were reviewed to understand the research scope, areas, issues and practical significance, as well as identify the research gap(s). The primary investigation concludes that a contemporary effort is evident in understanding the service branding phenomenon in the airline industry. In **Phase 2**, attention was paid to the research gaps and underlying concepts and theories related to service branding. Based on these processes, the theoretical framework and hypotheses were developed in **Phase 3**. The details of **Phase 4**, i.e., the research design, are outlined below. During this phase, data were collected using multiple modes of survey administration. The collected data were then analysed using SPSS version 21 and partial least squares structural equation modelling (PLS-SEM) technique with SmartPLS 3.2.8 (**Phase 5**). Based on the findings and discussions, the proposed CBSBE model was validated by addressing the research questions and objectives in **Phase 6**. The next section explains the research design of this study.

4.5 Research Design

This section presents the research design, which includes defining the study population, specifying the unit of analysis, executing the sampling plan and data collection methods.

4.5.1 Study Population

To test the proposed model in the context of airline services, passengers with international flight experience are the target population. Airline companies operate throughout the world by offering similar service provisions in multiple destinations (Jun, Vogt, & MacKay, 2010). Thus, any international airport would be a suitable location for data collection. According to the UN World Tourism Organization (2019), Asia and the Pacific (APAC) regions had the second highest inflow of tourists (about 343 million) after Europe and their growth percentage of arrivals was the third highest (about 6%) in 2018. Based on this report, the numbers of international travellers in China, Malaysia and Thailand were the highest in the region. The World Economic Forum (2018) reports that in 2017, Malaysia was ranked second among the South-East and Southern Asian regions for preferred destination after Singapore. MAHB (2018) record about 24.37 million international arrivals in Malaysia in 2017. This statistic implies the presence of a significant number of international tourists in Malaysia. Therefore, Malaysia is considered as the preferred and ideal location for this study. Table 4.3 outlines the airline passenger traffic in Malaysia in 2017, which shows about 51 percent international passengers and the remainder domestic. As the study aims to develop a service brand equity model for full-service airlines, international airline passengers form the target population in this research

Table 4.3: Airline passenger traffic in Malaysia in 2017

Nature of airline passengers	No. of arrivals	No. of departures	Total airline passenger traffic	Overall %
International	24,366,082	24,969,784	49,335,866	51
Domestic	23,543,293	23,519,832	47,063,125	49
Total	47,909,375	48,489,616	96,398,991	100
Overall %	49.70	50.30	100	

Source: MAHB. (2018). *Malaysia Airports: 25 Years Serving the Nation*. Retrieved from MAHB Annual Report 2017: http://annualreport2017.malaysiaairports.com.my/pdf/MAHB_AR17-chapter-6.pdf

4.5.2 Unit of Analysis

Sampling unit is the entity of research from which the required data are derived (Malhotra & Das, 2010). Traditionally, marketing research involves either investigating individual consumers or organisations (Phillips, 1981). In this research, individual airline passengers form the unit of analysis. There are two major service categories in the passenger carrier airline – the full-service airlines and limited service/low-cost carriers (LCCs). While the former offer a complete array of pre-flight, post-flight and on-board services such as lounge service, meals, entertainments and assigned seating structure, the latter provide no-frills service with a very simplified low fare structure (Bitzan & Peoples, 2016; Fageda, Suau-Sanchez, & Mason, 2015). Moreover, LCCs typically operate with a single type of aircraft on point-to-point routes, while full-service airlines utilise various types of airbuses adopting the hub-and-spoke style to connect to the global airline network (Koklic et al., 2017; O'Connell & Williams, 2005). Sai et al. (2011) report that passengers' choice between full-service and low-cost airlines differs based on prices, service quality, safety and loyalty programmes. Therefore, to validate the proposed model, individual international full-service airline passengers were selected as the sampling units of this study.

4.5.3 Sampling Plan

In social science research, where individuals are regarded as a sample element, the use of non-probability sampling methods is common and widespread as compared to probability techniques (Memon, Ting, Ramayah, Chuah, & Cheah, 2017; Rowley, 2014). Bryman and Bell (2011) stipulated the same principle vis-à-vis the survey research method. Sarstedt, Bengart, Shaltoni, and Lehmann (2018) report that about 70.2% of publications in marketing have utilised non-probability sampling, where 59.7% adopt the convenience method, while only 8.2% publications have utilised probability sampling, which indicates that despite the conceptual support in the application of probability method in survey research, a proper and scientific application of non-probability sampling methods can also be used to ensure valid and meaningful findings. Selecting one sampling method over the others is not directly related to the quality of the findings (Memon et al., 2017), but it might affect the attainment of the research objectives. Similar to this research, where the objective is to examine a specific theory, non-probability sampling is more suitable as compared to sample generalisation using probability sampling (Calder, Phillips, & Tybout, 1981; Hulland, Baumgartner, & Smith, 2017; Memon et al., 2017; Rowley, 2014; Sarstedt et al., 2018). Hence, a two-stage purposive sampling procedure (Cao, Chen, Tian, & Diao, 2016; Jaffery & Farooq, 2015; Subhashini & Preetha, 2018) was used to collect the data.

4.5.3.1 Sample Selection Procedures

The two-stage sampling process in data collection is shown in Figure 4.2. It involves first selecting the airport and airlines, then the airline passengers as the respondents.

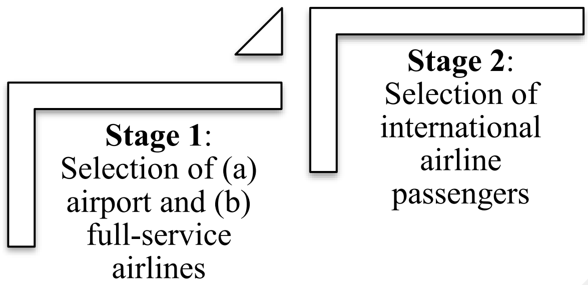

Figure 4.2: Sampling plan of the study

*(a) **Stage 1a: Selection of Airport***

Full-service airlines operate on a hub-and-spoke style, which means that the service provisions are standardised across the global airport network. Thus, any international airport or international passengers with full-service airline experience is eligible for the survey. In this case, Malaysia was selected as the location for the survey (refer to Section 4.5.1, p. 101).

Table 4.4: Number of air traffic in 2017 at international airports in Malaysia

No.	Airports	Arrivals	Departure	Total	%
1	**KLIA**	**20,907,646**	**21,443,027**	**42,350,673**	**85.84**
2	Penang	1,546,741	1,570,220	3,116,961	6.32
3	Kota Kinabalu	1,274,043	1,296,944	2,570,987	5.21
4	Kuching	182,252	188,921	371,173	0.75
5	Langkawi	141,913	142,040	283,953	0.58

Source: MAHB. (2018). *Malaysia Airports: 25 Years Serving the Nation*. Retrieved from Malaysia: http://annualreport2017.malaysiaairports.com.my/pdf/MAHB_AR17-chapter-6.pdf

As Malaysia's main international airport, Kuala Lumpur International Airport (KLIA) is not only the busiest in the country, as per Table 4.4 with about 86% air traffic in 2017 but also the world's 12th busiest airport in 2018 (MAHB, 2018). Since all full-service international airlines use this airport terminal, access to passengers was not an issue, which makes KLIA the best location for an airport intercept survey in the country.

(b) ***Stage 1b: Selection of Airlines***

Further considerations were devoted towards selecting the airlines through which the passengers travelled on in their last flight. As this research aims to develop and validate a service branding theory using the airline as a context, the top-ranked and well-reputed (Craig & Douglas, 2005) airlines operating in KLIA were included in the list. The proposed theoretical model is designed to offer strategic guidelines for airline companies who require rejuvenating their existing strategy to become a strong airline brand. Hence to validate the CBSBE model, it is imperative to explore how leading airline brands are strategising in strengthening their service brand equity. Previous studies [such as Buil et al. (2013a); Netemeyer et al. (2004); Yoo et al. (2000)] also considered the strong and familiar brands from the Best Global Brands list to validate their model. This research selected 17 airlines from top 50th in the "Skytrax's top global 100 airlines in 2017" which are the available airlines at KLIA (MAHB, 2017) [see Table 4.5].

Table 4.5: List of branded airlines by Skytrax 2017

No	Name	Originating nation	Skytrax 2017 ranking
1	Qatar Airways	Qatar	1
2	Singapore Airlines	Singapore	2
3	ANA All Nippon Airways	Japan	3
4	Emirates	Middle East	4
5	Cathay Pacific	Hong Kong	5
6	EVA Air	Taiwan	6
7	Lufthansa	German	7
8	Etihad Airways	UAE	8
9	Garuda Indonesia	Indonesia	10
10	Thai Airways	Thailand	11
11	Turkish Airlines	Turkey	12
12	Japan Airlines	Japan	16

Table 4.5: (*Continued*)

No	Name	Originating nation	Skytrax 2017 ranking
13	Air France	France	18
14	KLM	Holland/Dutch	22
15	China Southern	China	23
16	Malaysia Airlines	Malaysia	31
17	British Airways	England	40

Source: SKYTRAX. (2017). The World's Top 100 Airlines in 2017. Retrieved 12 December 2017 https://www.worldairlineawards.com/the-worlds-top-100-airlines-2017/

(c) ***Stage 2: Selection of International Airline Passengers as Respondents***

To select the international full-service airline passengers as respondents, the purposive sampling technique was applied. To ensure that only eligible subjects were selected, two essential criteria (i.e., purposes) were stipulated: (a) they must have travel experience in the last six months and (b) they must use the selected airlines listed in Table 4.5. In the KLIA intercept survey, the potential respondents were passengers in the international arrival and/or international departure halls and they were approached based on their availability and willingness to participate. Moreover, to overcome possible threats of low response rate in the airport intercept survey, the same questionnaire was produced in the google form and sent out to potential respondents via E-mail, WhatsApp and Facebook Messenger.

4.5.3.2 Sample Size

Sample size determination is an important aspect of survey research. Accurate sample size would minimise the probability of Type I or Type II error associated with rejecting/not rejecting the null hypothesis in regression and correlation tests (Green, 1991). Among the contemporary sample size calculation techniques, Kline (2016) suggests a minimum of 200 samples for SEM technique, while Bagozzi (2010) indicates at least 100, but a sample size of more than 200 is preferred. To obtain a reliable result in SEM, scholars suggest a number between 200 - 400 (Hair et al., 2010; Oke, Ogunsami, & Ogunlana, 2012). However, Schumacker and Lomax (2016) used a larger sample size (i.e., n = 503, p. 175; n = 723, p. 180; n = 600, p. 192) in their study. M. Lin, Lucas Jr, and Shmueli (2013) explain that although a large sample of more than 700 observations would yield consistency in the magnitude of significance level (p-value), the level of p-value tends to remain low when it is over 500. A large sample is, however, recommended when a researcher wants to check the robustness of the measurement model properties and structural validation by splitting the whole sample into sub-samples (Byrne, 2016; M. Lin et al., 2013; Shmueli & Koppius, 2011). Another way of calculating the sample size is based on the number of indicators or the "10 times rule", but it has been criticised for its lack of robustness [see Hair, Hult, et al. (2017); Hair, Sarstedt, Hopkins, and Kuppelwieser (2014)]

Therefore, scholars suggest that statistical power is a more suitable method to determine the minimum sample size in SEM techniques (Chin, 1998a; Chin & Newsted, 1999; Green, 1991; Hair, Risher, Sarstedt, & Ringle, 2019). In 1996, Erdfelder, Faul and Buchner developed a statistical software called the *G*Power* programme to calculate sample size, which, since then, has been widely used in SEM (Hair, Hult, et al., 2017; Ringle, Da Silva, & Bido, 2015). Recently, two new techniques of estimating minimum sample size – *inverse square root method* and *gamma-exponential method* in Kock and Hadaya (2018) are getting recognised among SEM users. Hence, G*Power version 3.1.9.2 (Faul, Erdfelder, Buchner, & Lang, 2009) as well as Kock and Hadaya's approaches were used to calculate the minimum sample size required for this study.

Table 4.6: Criteria to assess minimum sample size in SEM using G*Power 3.1.9.2 software

No.	Criteria	Reference points	Sources	Minimum criteria (set by literature)	Criteria used in this study
1	The highest number of indicators pointing at a construct in the PLS path model	Based on the model complexity	Chin (1998a); Chin and Newsted (1999); Cohen (1992); Green (1991); Hair, Hult, et al. (2017); Ringle et al. (2015)	5	**5**
2	The Alpha error probability (Level of Significance)	Traditional level of 0.10, 0.05, or 0.01		0.05	**0.01**
3	Power of the test (1-β error probability)	At least 0.80 power is recommended		0.80	**0.99**
4	Effect Size (f^2)	If unknown, the medium effect of 0.15 is suggested		0.15	**0.15**
The calculated minimum sample size using G*Power 3.1.9.2 software for this study (please refer to Figure 4.3)				92	**231**

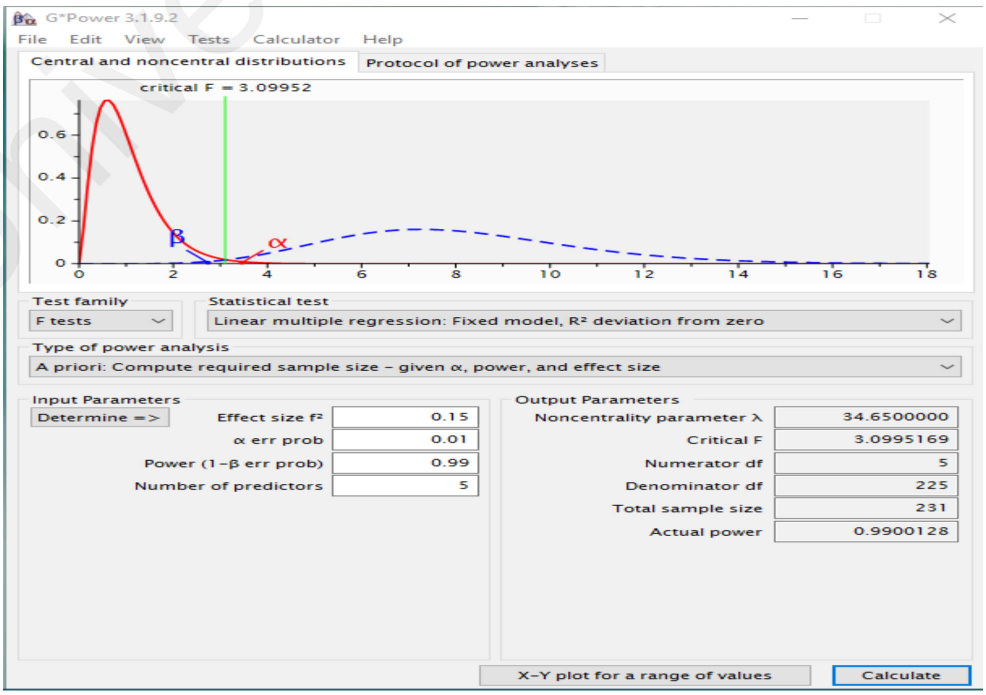

Figure 4.3: Calculation of minimum sample size using G*Power 3.1.9.2

Based on the standard criteria set by the literature, the minimum sample size required following power analysis is 92 (Table 4.6). According to Kock and Hadaya's approach, a minimum path coefficient of 0.197 ($i.e.,\ parallel\ to\ an\ effect\ size\ of$ 0.04) in the model can be considered as a rule of thumb. Taking this path coefficient and power level of 0.80 as standard, the minimum sample size has resulted as 160 [inverse square root method] and 146 [gamma-exponential method] (Kock, 2018; Kock & Hadaya, 2018). However, a more stringent criterion following power analysis was used in this research, which resulted in 231 samples as shown in Table 4.6 and Figure 4.3. To validate the CBSBE model using a quantitative approach, there needs to be a sizeable sample to represent airline passengers from which meaningful conclusions can be drawn. The figures in Table 4.6 were used as reference. As this study aimed at examining the robustness of measurement model properties using measurement invariance test as advised in Byrne (2016), it needs a large sample to carry out analyses. Similarly, to test the predictive strength of the proposed model as suggested in Shmueli, Ray, Velasquez Estrada, and Chatla (2016), the sample size plays a crucial role. Overall, two estimated sample sizes according to Kock and Hadaya's approach are lower than the minimum sample calculated as 231 by setting a stringent criterion in *G*Power*. This study collected a total of 652 usable responses from international airline passengers via airport intercept of personal and online survey from April 2018 to June 2018, which met the minimum sample size requirement based on both approaches. About 2,000 airline passengers were approached at KLIA, from which 664 questionnaires were received, while the Google form link was sent out to 875 contacts, with 214 responses recorded. The detailed information about response rate is presented in Chapter 5, under section 5.2 (p. 149).

4.5.4 Data Collection: Survey Method

The use of a hybrid mode of survey administration compared to a single-mode is assumed to be advantageous for generating a large number of data. Generally, the response rate via personal mode is comparatively higher than other survey modes (such as email, mail and online), but, its associated cost is high (Dixon & Turner, 2007; Klausch & Schouten, 2016; Krysan, Schuman, Scott, & Beatty, 1994). Whereas, due to the extensive geographical coverage, the low cost and available access to the internet among the current generation, online survey is also gaining widespread acceptance among researchers (Couper, 2000; Dillman et al., 2009). However, non-response error and low response rate remain as its potential weaknesses. Hulland et al. (2017) suggest using a mixed-mode survey administration to overcome this problem. Therefore, this study adopted both personal and online modes of survey administration.

A hybrid mode of survey administration technique consisting of airport intercept and online distribution was used to collect responses from international airline passengers. This survey technique ensures greater coverage, high response rate and representative sample elements, which would result in lower non-response error relative to a single-mode survey (Börkan, 2010; Dillman et al., 2009; Greenlaw & Brown-Welty, 2009; Klausch & Schouten, 2016). A self-administered structured questionnaire was designed in both paper-based and google form formats for this purpose.

4.6 Questionnaire Design

The questionnaire was kept simple and straightforward so that the respondents can complete it without assistance. In this case, a close-ended response format was used to allow for quick and easy response (Rowley (2014). Scholars suggest that the language used, the sequence of questions and the response format are critical considerations when designing a survey questionnaire (Bryman & Bell, 2011; Gray, 2014; Rowley, 2014). This research adhered to the aforementioned requirements. The questionnaire was designed in simple English as the study population consisted of international airline passengers. After the initial design, the survey instrument was pre-tested with experts and participants to ensure content validity and comprehensibility (see Section 4.6.2, p. 121). A pilot survey was then conducted to establish preliminary reliability and validity of the measures before developing the final version of the questionnaire.

The questionnaire consisted of six main sections, starting with a cover letter stating the purpose of the survey:

- The first section presented six preliminary questions about usage information specific to the selected airline. Specifically, preliminary question 1 (P1) and 2 (P2) were asked to screen the respondents' eligibility for the survey. Respondents with travel experience not within the past six months when the survey was conducted (P1) and were not using a fully-fledged airline (P2) were ineligible.
- Section A consisted of items to measure airline service experience components, such as purchase decision experience, in-flight core service, airport service experience and interaction with other passengers, along with brand consistency.
- Section B is comprised of general usage-related information about airline services as well as questions related to service brand equity.
- Section C listed the items to measure the brand equity constructs, such as perceived value, brand meaning and brand awareness
- And finally, demographic information was asked in Section D. This section also included the *marker variable* items suggested in Chin, Thatcher, Wright, and Steel (2013) for the purpose of controlling common method biases (CMB).

Variables in the questionnaire were measured using nominal, ordinal and interval scales. Specifically, demographic and usage related questions were measured using a nominal and ordinal scale, while the study variables (independent and dependent) were measured using a 7-point Likert scale format. D. R. Cooper and Schindler (2014) advise that a 9- or 7-point scale provides wider choices and better estimation of normally distributed responses relative to a 5-point scale. All the variables were anchored, ranging from low to high, such as “1 = Strongly Disagree (SD)” to “7 = Strongly Agree (SA)”. Moreover, all the items were adapted from previously validated scales (details in Section 4.6.1 and Appendix D).

4.6.1 Selection of Measurement Items

Adopting and adapting existing scales is always preferred as their reliability and validity have been established (Bryman & Bell, 2011; Straub, 1989). However, based on the pre-test feedback and pilot survey, the wording had to be adjusted to suit the context of this study. The proposed CBSBE model contains 10 latent variables and the following section details the refined measurement scales from previous studies.

4.6.1.1 Airline Service Direct Experience (ASDE)

As pointed out earlier, ASDE is the sum of all the direct contact points through which passengers experience airline service. Previous research conceptualises direct service experience as a higher-order construct measured through its underlying components (Ali, Amin, et al., 2016; Grace & O’Cass, 2005; Krystallis & Chrysochou, 2014). Thus, this study measured ASDE using five latent constructs derived from literature: ***purchase decision experience*** (decision convenience) was adapted from Thuy (2011), ***inflight core services*** from Han et al. (2014), ***employee service*** from Grace and O’Cass (2005), ***airport service experience*** (access convenience) from Thuy (2011) and ***interaction with other passengers*** from Brocato et al. (2012).

(a) ***Purchase Decision Experience (PD)***

According to Thuy (2011), purchase decision experience refers to the facets of information availability, time, convenience and easiness when buying airline tickets. She suggested four items to measure the variable originating from the *decision convenience* scale in Berry, Seiders, et al. (2002) and Colwell, Aung, Kanetkar, and Holden (2008). Based on the pre-test and pilot survey findings, this research adapted the four items from Thuy (2011), which supports its operational definition (see Table 4.7).

Table 4.7: Measurement items of purchase decision experience

No.	Items	Coding	Source
1	I spent less time collecting information about the airline to make booking decision.	PD1	Thuy (2011) [$CR = 0.69$, $AVE = 0.53$] [original scale from Berry, Seiders, et al. (2002) and later revised by Colwell et al. (2008)].
2	It was easy collecting information about the airline to make booking decision.	PD2	
3	The information I received about the airline was clear.	PD3	
4	The information I received about this airline made it convenient for me to make reservation.	PD4	

(b) ***In-flight Core Service (CS)***

An eight-item scale was adapted from Han et al. (2014) to measure in-flight core service. Inflight-core components include basic facilities/amenities, the atmosphere inside a cabin, food and beverage, entertainment materials, seat layout, cabin announcement and overall cleanliness. Han et al. (2014) used seven items to measure this variable. However, based on the pre-test, the item – "*In-flight basic facilities/amenities (e.g., air-conditioning nozzle, reading light, call button, power ports, TV screen, other comfort items etc.) were well equipped and of high quality*" was divided into two items (refer to CS1 and CS2) because the experts believed that *well-equipped* and *quality* measure two aspects of experience. Therefore, they are measured separately, as shown in Table 4.8.

Table 4.8: Measurement items of in-flight core service

No.	Items	Coding	Source
1	In-flight basic facilities/amenities (e.g., air-conditioning nozzle, reading light, call button, power ports, TV screen, other comfort items etc.) were well equipped.	CS1	Han et al. (2014). [$CR = 0.64$, $AVE = 0.58$]
2	In-flight basic facilities/amenities (e.g., air-conditioning nozzle, reading light, call button, power ports, TV screen, other comfort items etc.) were of quality.	CS2	
3	In-flight atmosphere/ambience was pleasant.	CS3	
4	The airline meals/foods and beverages served were of quality.	CS4	
5	In-flight entertainment materials (e.g., reading materials, audio/video programs etc.) were impressive.	CS5	
6	The cabin announcements were clear.	CS6	
7	Overall, the seat in this aircraft was comfortable.	CS7	
8	Overall, the aircraft cabin was clean.	CS8	

(c) ***Employee Service (ES)***

Employee service is one of the key components of direct service experience. In a service organisation, consumers are in direct contact with service employees, whose presence, attitude and behaviour influence the experience of the consumers (Grove et al., 1998). In the airline context, services are delivered by cabin crews and ground staff. Grace and O'Cass (2005) developed a valid and reliable seven-item scale to measure employee service for airlines, which includes aspects such as promptness, willingness to help, trustworthiness and politeness. This research adapted this scale as outlined in Table 4.9.

Table 4.9: Measurement items of employee service

No.	Items	Coding	Source
1	I received prompt attention from this airline staff.	ES1	Grace and O'Cass (2005). [Cronbach's $\alpha = 0.69$, $AVE > 0.50$]
2	This airline staff were always willing to help me.	ES2	
3	This airline staff were never too busy to respond to my requests.	ES3	
4	I trust this airline staff.	ES4	
5	I felt safe making transactions with this airline staff.	ES5	
6	This airline staff were polite.	ES6	
7	This airline staff gave me personal attention.	ES7	

(d) Airport Service Experience (AS)

Airport service experience includes activities in the airport such as counter service at both departure and arrival airports (Thuy, 2011). This service component is similar to service delivery experience, which refers to consumer's access convenience (Berry, Seiders, et al. (2002). Thuy (2011) measured airport service experience using a four-item scale, but was slightly modified to fit in this study, as shown in Table 4.10.

Table 4.10: Measurement items of airport service experience

No.	Items	Coding	Source
1	I had easy access to this airline service counters at any airports.	AS1	Thuy (2011) [$CR = 0.68$, $AVE = 0.42$]* [original scale from Berry, Seiders, et al. (2002) and later revised by Colwell et al. (2008)].
2	I went through the services provided by this airline with little effort at any airports.	AS2	
3	I did not wait a long time at this airline counters at any airports.	AS3	
4	It was easy to contact this airline staff at any airports.	AS4	

**Although AVE was lower than 0.50, CR was above 0.60 which confirmed the construct's convergent validity in an exploratory study (Fornell & Larcker, 1981)*

(e) Interaction with Other Passengers (OP)

In a high-touch service industry like the airlines, passengers present in the servicescapes also play an important role when evaluating the overall experience (Brocato et al., 2012; Grove et al., 1992; Grove et al., 1998). Passengers' overall service experience evolve from their interaction with other airline passengers during the whole journey. Brocato et al. (2012) note that the behaviour of other consumers in the servicescapes will largely affect the overall experience of individual consumers. Hence, this research conceptualises interaction with other passengers as the appropriateness of other passengers' behaviours. Brocato et al. (2012) developed a four-item scale to measure the behaviour of other customers in a service setting. The items shown in Table 4.11 was adapted with minor adjustments to suit the context of this study.

Table 4.11: Measurement items of interaction with other passengers

No.	Items	Coding	Source
1	The behaviour of other passengers of this airline was appropriate.	OP1	Brocato et al. (2012). $[CR = 0.86, AVE = 0.61]$
2	Other passengers were friendly towards me.	OP2	
3	I found that other passengers behaved well.	OP3	
4	The behaviour of other passengers of this airline was pleasant.	OP4	

4.6.1.2 Brand Consistency (BC)

Brand consistency refers to the degree of similar experience assured by a brand over the journey of consumer touchpoints (Erdem & Swait, 1998, 2016). A powerful brand provides consistency of experience over the consumption journey of a customer. Specifically, all the contact points through which consumers shape their own story about a brand must exert similar meaning to prevent the formation of a misleading image. Hence, consistency among the touchpoints is necessary to create a strong brand. Erdem and Swait (1998) developed a five-item scale to measure brand consistency, which was adapted with major modifications from the pre-test feedback. First, the reversely coded item "This brand doesn't pretend to be something it isn't" was revised as a positively-worded statement (refer to BC3). Second, the item "This brand's ads, prices, specials and products match its overall image", loaded with several distinct marketing mix elements (such as advertisement and prices and specials), was modified into two separate items (refer to BC2, BC5). As a result, brand consistency was measured with a six-item scale, as exhibited in Table 4.12.

Table 4.12: Measurement items of brand consistency

No.	Items	Coding	Source
1	The service quality of this airline was consistent with what it promised.	BC1	Erdem and Swait (1998). *[Measurement scale's reliability was assessed using R^2. The authors stated that "R^2x ranges from 0.90 to 0.98 and R^2y ranges from 0.83 to 0.99" which represent a reliable and valid construct, (p. 148)]*
2	The price and deals of this airline matched its overall image.	BC2	
3	This airline delivered the services according to what it promised.	BC3	
4	The service experience I gained from this airline matches its overall image.	BC4	
5	The brand image of this airline in commercials was consistent with its services.	BC5	
6	Everything I experienced about this airline was consistent with what it promised.	BC6	

Note: R^2 is a better alternative measure of reliability than traditional metrics (Bollen, 1989). Erdem and Swait (1998) used R^2 to assess the reliability of brand consistency.

4.6.1.3 Perceived Value (PV)

Zeithaml (1988) refers to value as 1) low price, 2) assessment of what are received and what are sacrificed, 3) what customer wants and/or 4) the quality of products/services. Based on this definition, perceived value is seen as a utilitarian assessment only between benefits and sacrifices. However, the meaning of value is not only confined to objective judgement. Kumar and Reinartz (2016) define perceived value as consumers' evaluation of perceived total benefits and total costs based on the objective and experiential attributes of product/services. Cronin (2016) also emphasises that value evolves from the broad aspect of consumer experience touchpoints instead of being associated with product/services consumption only. Value is the overall assessment of experience attributes derived from both subjective and objective evaluations. Thus, perceived value refers to the overall assessment of consumer experience components based on what is given and what is received, which signals that the conceptualisation of perceived value has shifted from price and benefit trade-off towards more of experience-based benefits and sacrifices trade-off. This study followed this conceptualisation of perceived value and adapted the measurement scale from Karpen et al. (2015).

Although some methodological arguments persist in the context of measuring perceived value either as multidimensional or unidimensional, both approaches are regarded as reliable and valid (Leroi-Werelds et al., 2014; Zauner et al., 2015). Choosing an appropriate measurement approach depends on the research objectives. When the focal point of the study is to explore perceived value phenomenon, the multidimensional approach should be used, otherwise, the unidimensional measure is appropriate when the objective is to examine the relationships of perceived value and other variables with endogenous variables (C. H. Lin et al., 2005; S. B. MacKenzie, Podsakoff, & Jarvis, 2005; Ruiz et al., 2008). As this research explored the effect of service experience components and brand equity constructs with service brand equity, a unidimensional measure of perceived value was selected. Table 4.13 presents the six modified items measuring perceived value from Karpen et al. (2015).

Table 4.13: Measurement items of perceived value

No.	Items	Coding	Source
1	The services I have experienced with this airline worth the time I have invested.	PV1	Karpen et al. (2015). [Cronbach's α = 0.90, $AVE = 0.78$]
2	The services I have experienced with this airline worth the effort I have made.	PV2	
3	The services I have experienced with this airline worth the money I have spent.	PV3	
4	This airline provides experiences that make me feel good.	PV4	
5	This airline's service offerings are reasonably priced.	PV5	
6	My overall experience with this airline is… *(Please rate between "1 = extremely poor" to "7 = extremely good")*	PV6	

4.6.1.4 Brand Meaning (BM)

Every successful brand has its own story to communicate, which is stored in the consumers' minds. Berry (2000) and Keller (1993) define brand meaning as the overall impression of a brand's attributes that resides in the consumers' long-term memory.

Specifically, the meaning of a brand is related to consumers' emotional perceptions of a brand (Dobni & Zinkhan, 1990), symbolic meaning attached to specific attributes (Padgett & Allen, 1997), feelings, attitudes and/or image dimensions (Aaker, 1991). Pappu et al. (2006) operationalised brand meaning into two components: *brand personality* (sincerity or excitement) and *brand associations* (liking, trust, etc.). In many research, brand associations are designated as credibility [trust] (Beltramini & Evans, 1985); trust, confidence, status and distinctiveness (Aaker, 1996; Keller, 1993). Thus, brand meaning measures the emotional and symbolic associations attached to a brand that reside in the consumers' memories. In this study, brand meaning was measured using four items that represent trust, believability, strong personality and sensations, as per García et al. (2012) (see Table 4.14).

Table 4.14: Measurement items of brand meaning

No.	Items	Coding	Source
1	This airline is credible.	BM1	García et al. (2012). $[CR = 0.94,$ $AVE = 0.78]$
2	This airline evokes pleasant feelings in me.	BM2	
3	This airline has a strong personality.	BM3	
4	This airline represents a reliable airline service.	BM4	

4.6.1.5 Brand Awareness (BA)

Brand awareness is conceptualised as the ability to recall and recognise a brand in a given condition (Aaker, 1991; Berry, 2000; Keller, 1993). It is also one of the important assets of a brand, which is positively associated with consumers' behavioural outcomes. It occurs when consumers can recall brand-related information, such as product/service features, symbolic associations, functional and emotional benefits, unique experience, symbol, logo, name and recognise the brand among its competitors (Aaker, 1991; Berry, 2000; Keller, 1993). In marketing literature, the study of Yoo et al. (2000) is highly referenced and utilised in operationalising this variable. Hence, the six-item scale by Yoo et al. (2000) was adapted to measure brand awareness in this study. The scale was further revised to echo brand awareness in the context of airline service. Specifically, BA6 was worded as "I have difficulty in imagining this airline in my mind" during the pilot study. Due to the poor factor loading from the pilot study, BA6 was revised as a positively worded item in the final survey. Table 4.15 shows the measurement scale of brand awareness.

Table 4.15: Measurement items of brand awareness

No.	Items	Coding	Source
1	I know what this airline logo looks like.	BA1	Yoo et al. (2000). $[CR = 0.94, AVE = 0.72]$
2	I can recognise this airline among other competing airlines.	BA2	
3	I am aware of this airline.	BA3	
4	Some characteristics of this airline (e.g., services, meals) come to my mind quickly.	BA4	
5	I can quickly recall the symbol or logo of this airline.	BA5	
6	I can easily imagine this airline services in my mind.	BA6	

4.6.1.6 Service Brand Equity (SBE)

Service brand equity is conceptualised as a behavioural response variable in the CBSBE model. It is regarded as the differential response of consumers when it comes to future purchase decisions (Berry, 2000; Keller, 1993). Aaker (1991) elucidated that high brand equity signifies an incremental response in purchase decision making. Similar to the brand awareness scale, the measure of overall brand equity by Yoo et al. (2000) is also widely referenced in marketing literature. Thus, this study adapted a four-item scale by Yoo et al. (2000) to measure the service brand equity of airlines. This scale represents the incremental response toward a selected brand vis-à-vis its features, quality, emotional gain and the overall preference relative to other competing brands. C.-F. Chen and Tseng (2010) used Yoo et al.'s overall brand equity scale and revised it to five items by adding the price criteria (refer to SBE3) in an airline setting. Initially, this study also used Yoo et al.'s four items in the pilot survey, which resulted in satisfactory reliability and validity.

However, the experts suggested that the five-item scale of measuring brand equity exhibits better abstraction than the four-item scale. Hence, the current study adapted the revised validated scale of C.-F. Chen and Tseng (2010) to measure service brand equity of airline, with minimal modification (see Table 4.16).

Table 4.16: Measurement items of service brand equity

No.	Items	Coding	Source
1	If I have to choose among brands of airline, this airline is my choice.	SBE1	The original scale of Yoo et al. (2000) is later revised by C.-F. Chen and Tseng (2010) $[CR = 0.93,$ $AVE = 0.78]$
2	Even if another brand has same features (e.g., services, meals, flight duration, flight schedule etc.) as this airline, I still prefer to fly with this airline.	SBE2	
3	Even if another brand has the same price as this airline, I still prefer to choose this airline.	SBE3*	
4	If there is another brand as good as this airline, I still prefer to fly with this airline.	SBE4	
5	If another brand is the same as this airline in every way, it seems smarter to fly with this airline.	SBE5	

**Pilot study was conducted using SBE1, SBE2, SBE4 and SBE5. SBE3 was added in the final survey*

4.6.2 Questionnaire Pre-testing

Questionnaire pre-testing is necessary, which takes place before a pilot survey. Sekaran and Bougie (2016) suggest that pre-testing is essential before going for a pilot/final survey to ensure the item validity as well as the clarity of overall questionnaire. This research followed both de-briefing and protocol approaches outlined in Hunt, Sparkman, and Wilcox (1982) to pre-test the questionnaire with eight experts and eleven participants. Among the experts, three were from the industry – Airline Marketing Officer, Online Travel and Tourism Marketing Officer and Brand Consultant, while the other five were academic researchers who are experts in the area of Services Marketing and Brand Management. The participants were international students of University of Malaya (UM) from the faculties of Business, Economics, Sciences and Social Sciences.

Initially, the wording of the adapted items in the questionnaire was adjusted to fit into the context of airline service. During the pre-testing process with the experts (10th July 2017 to 28th July 2017), they were requested to comment on the questionnaire design and relevancy to airline service. Also, at the end of each measurement scale, an additional statement was added to rate their opinion on the extent to which the mentioned items measure the variables. There were four concerns raised in the initial questionnaire and modifications were made based on their recommendations (Table 4.17). Also, their rating confirmed that the measurement items and overall questionnaire demonstrate content validity (Table 4.18).

Table 4.17: Experts' feedback on measurement scales and adjustments

Item No*	Primarily as	Revised as
CS1 & CS2	In-flight basic facilities/amenities (e.g., air-conditioning nozzle, reading light, call button, power ports, TV screen, other comfort items etc.) were well equipped and of high quality	• CS1: In-flight basic facilities/amenities (e.g., air-conditioning nozzle, reading light, call button, power ports, TV screen, other comfort items etc.) were well equipped. • CS2: In-flight basic facilities/amenities (e.g., air-conditioning nozzle, reading light, call button, power ports, TV screen, other comfort items etc.) were of quality.
BC3	This brand doesn't pretend to be something it isn't	This airline delivered the services according to what it promised.
BC2 & BC5	This brand's ads, prices, specials and products match its overall image	• BC2: The price and deals of this airline matched its overall image. • BC5: The brand image of this airline in commercials was consistent with its services.
D7 (Income in USD)	▪ Less than $20,000 ▪ $20,000 – $39,999 ▪ $40,000 – $59,999 ▪ $60,000 – $79,999 ▪ $80,000 – $119,999 ▪ $120,000 and above	▪ Less than $10,000 ▪ $10,000 – $29,999 ▪ $30,000 – $49,999 ▪ $50,000 – $69,999 ▪ $70,000 – $99,999 ▪ $100,000 and above

**Note: PD = Purchase decision experience; CS = In-flight core service; AS = Airport Service Experience; BC = Brand consistency; D7 = Yearly Household Income in USD in Section D*

Table 4.18: Content validity score from experts

Constructs	Min	Max	Mean Score (out of 5)
Purchase Decision Experience	3.50	5.00	**4.50**
Airport Service Experience	4.00	4.00	**4.00**
Employee Service	5.00	5.00	**5.00**
Interaction with Other Passengers	4.00	5.00	**4.67**
In-flight Core Service	4.00	5.00	**4.67**
Brand Consistency	3.50	5.00	**4.17**
Brand Awareness	4.00	5.00	**4.67**
Brand Meaning	4.00	5.00	**4.67**
Perceived Value	5.00	5.00	**5.00**
Service Brand Equity	3.00	5.00	**4.17**
Overall Rating	**3.75**	**5.00**	**4.25**

After consulting the experts, the refined questionnaire was tested with eleven participants from 29th July 2017 to 11th August 2017. These participants were selected based on their international travel experience. It was done to ensure that the questionnaire's wording was easy to understand. During this process, the participants were also requested to clarify any difficulties they might have encountered. At the end of the questionnaire, a separate four statements were added to score how easy and comprehensible the questionnaire was while responding. The participants raised two concerns and adjustments were made to the questionnaire (Table 4.19). The mean scores indicated that the overall questionnaire was easy to follow and comprehend (Table 4.20).

Table 4.19: Respondents' feedback on measurement scales and adjustments

Item No.	Primarily as	Revised as
SBE4	If another airline brand is not different from this airline in any way, it seems smarter to fly with this airline	If another brand is the same as this airline in every way, it seems smarter to fly with this airline.
D4	▪ African ▪ Asian ▪ Australasian/Oceanian ▪ European ▪ Gulf Cooperation Council (GCC) / Arab States of the Gulf ▪ North American ▪ South American	▪ African ▪ Asian ▪ Australasian/Oceanian ▪ European ▪ Middle Eastern ▪ North American ▪ South American

**Note: SBE = Service brand equity; D4 = Region of the Origin in Section D*

Table 4.20: Respondents' scores on the clarity and understanding of the questionnaire

SL	Statements	Min	Max	Mean Score (out of 7)
1	I am familiar with the language (*e.g. words*) used in this questionnaire	6.00	7.00	**6.55**
2	I was comfortable while responding to this questionnaire	5.00	7.00	**6.55**
3	I didn't feel any difficulties while responding to this questionnaire	5.00	7.00	**6.36**
4	The overall questionnaire was easy to response	6.00	7.00	**6.64**
5	Time Taken (Minutes)	12.00	27.18	**15.75**

4.6.3 Pilot Study

A pilot study is a trial version of the main study, which is conducted to check for the constructs' reliability, validity, as well as feasibility of the central survey (Lankau & Scandura, 2002; Memon et al., 2017; van Teijlingen & Hundley, 2002). It is similar to a dress rehearsal before conducting the main event. Sekaran and Bougie (2016) postulate that a pilot survey is necessary before initiating a final survey to check for the reliability and validity of the measurement scales and rectify any potential problems. Hence, after pre-testing, the refined questionnaire was pilot tested from September 2017 to November 2017. The comments from pre-testing were adjusted and the *procedural remedies* to control common method bias (CMB) were considered when designing the survey instrument (see Section 4.6.2 and 5.5 in page 160). After finalising the items based on the pre-test, a complete questionnaire was designed in Google form for the pilot survey. The form was sent via email and the WhatsApp group of international students in UM. During this process, it was also ensured that the Google link functioned correctly by asking a few respondents with whom the researcher knows personally.

Generally, a pilot study is conducted on a small sample group. Although there is no statistical procedure to calculate the required sample size for a pilot survey, D. R. Cooper and Schindler (2014) suggest 25 to 100 individuals, while Memon et al. (2017) recommend following the central limit theorem of a minimum of 30 samples. In this pilot study, a total of 56 responses were collected. However, 11 responses were discarded due to the respondents' lack of flight experience in the past six months. Therefore, a total of 45 responses were retained for analysis. Table 4.21 shows the profile of the respondents who took part in the pilot survey.

The pilot survey consisted of 53.3% female and 46.7% male. The majority of the respondents were between 18 to 39 years old (86.7%) and single (64.4%). Asians (77.8%) dominated the respondents relative to other nationalities. 40 percent of the respondents were professionals, followed by students (26.7%), management staff (13.3%) and some are self-employed (13.3%). The majority were also educated to a Bachelor's or Master's Degree (86.7%). The largest cohort's (62.2%) yearly household income was under $30,000, followed by $30,000 to $49,000 (15.6%) and $50,000 to $69,000 (11.1%). The results also revealed that in the last six months, 22.2% of the respondents travelled using Malaysia Airlines, followed by AirAsia (11.1%), Etihad Airways (8.9%), Garuda

Indonesia (8.9%) and Emirates, Qatar Airways, KLM, China Southern, Thai Airways and Turkish Airways (4% each). Most (93.3%) travelled in economy class and about 73.4 percent travelled between 2 - 6 times in the last year. Although this research considers only full-service airline passengers as respondents in the final data collection, the inclusion of respondents of a low-cost carrier (i.e., AirAsia) in the pilot study is not an issue based on the following reasons: 1) the objective of a pilot study is to check (not to confirm) reliability and validity of the measurement scales (Lankau & Scandura, 2002; Memon et al., 2017) and 2) the number of AirAsia respondents in the pilot study is negligible (i.e., only 5 out of the 45 responses). Previous studies also conduct pilot surveys with sample elements that are not exactly similar to the population element of their main study. For instance, L.-Y. Sun, Aryee, and Law (2007) conduct a study with sample elements consisting of hotel human resource managers and supervisors, but used undergraduate hospitality students who had internship experience in hotel as their pilot study participants [see also Hult, Ketchen, and Slater (2004); C. S. Kim and Aggarwal (2016); Lankau and Scandura (2002); Zhang, Gino, and Margolis (2018)].

Table 4.21: Respondent's profile of the pilot survey ($n = 45$)

Demographic characteristics	Criteria	Frequencies	Percentage
Gender	Male	21	46.7
	Female	24	53.3
Age	18-29	21	46.7
	30-39	18	40
	40-49	6	13.3
Marital Status	Single	29	64.4
	Married	16	35.6
Nationality by Region	African	4	8.9
	Asian	35	77.8
	European	2	4.4
	Middle Eastern	4	8.9

Table 4.21: (*Continued*)

Demographic characteristics	Criteria	Frequencies	Percentage
Educational Qualification	Diploma/Certificate	2	4.4
	Bachelor's Degree	16	35.6
	Master's Degree	23	51.1
	PhD	4	8.9
Occupational Category	Supervisory/Executive	1	2.2
	Management	6	13.3
	Professional (e.g., Doctor, Engineer, Teacher)	18	40
	Self-Employed/Own Business	6	13.3
	Not Working/Retired	1	2.2
	Student	12	26.7
	Homemaker	1	2.2
Annual Household Income	$9,999 or Lower	14	31.1
	$10,000 - $29,999	14	31.1
	$30,000 - $49,999	7	15.6
	$50,000 - $69,999	5	11.1
	$70,000 - $99,999	3	6.7
	$100,000 or Above	2	4.4
No of Flying	Once	4	8.9
	2 - 3	17	37.8
	4 - 6	16	35.6
	7 or Above	8	17.8
Travel Class	Economy Class	42	93.3
	Business Class	2	4.4
	First Class	1	2.2

SmartPLS 3.2.7 version was used to examine the scales' reliability and validity, as PLS-SEM can efficiently handle small sample sizes (Hair, Hult, et al., 2017). The reliability and validity were inspected based on the guidelines, as per Section 4.9.1.2 (p. 142). Table 4.22 and Table 4.23 represent the constructs' reliability and validity metrics based on the pilot study.

Table 4.22: Reliability and convergent validity of the first-order constructs in the pilot study

First-order reflective constructs	No. of items	Cronbach's Alpha	CR	AVE
Airport Service Experience (AS)	4	0.75	0.84	0.57
Brand Awareness (BA)	6	0.85	0.91	0.64
Brand Consistency (BC)	6	0.96	0.97	0.83
Brand Meaning (BM)	4	0.87	0.91	0.72
In-flight Core Service (CS)	8	0.94	0.95	0.70
Employee Service (ES)	7	0.94	0.95	0.75
Interaction with Other Passengers (OP)	4	0.93	0.95	0.83
Purchase Decision Experience (PD)	4	0.84	0.90	0.70
Perceived Value (PV)	6	0.93	0.95	0.75
Service Brand Equity (SBE)*	4	0.78	0.86	0.61

**Four-items scale of SBE was used in the pilot study; CR = Composite reliability; AVE = Average variance extracted; Total no. of items = 53*

The results show that the CR values of all first-order reflective constructs (FORC) are above 0.70 and its AVE is higher than 0.50. Hence, all the FORCs fulfil the requirement of internal consistency reliability and convergent validity (Hair, Hult, et al., 2017). Out of a total of 53 items, 49 indicators' loadings ranged between 0.73 - 0.95 and the other four were as follows: AS2 – 0.56, PD1 – 0.50, SBE1 – 0.52 and BA6 – 0.15. None of the four items were deleted, as the AVE of the corresponding constructs were all above 0.50. The HTMT table (see Table 4.23) shows that the discriminant validity was satisfied at $HTMT_{0.90}$, as all the correlation values of the latent variables (LVs) were below or equal to 0.90; except a slight above this threshold (i.e., 0.91) was observed between brand consistency and brand meaning. However, HTMT Inference also ensured that at a 90% confidence interval (CI), the lower and upper range of the corresponding correlation values were below one, which indicated the presence of discriminant validity between the LVs (Henseler, Ringle, & Sarstedt, 2015). Therefore, the reliability and validity of FORCs were regarded to be at a satisfactory level in the pilot study.

Table 4.23: Discriminant validity (HTMT ratio) of first-order reflective constructs in the pilot study

Reflective constructs	AS	BA	BC	BM	CS	ES	OP	PD	PV	SBE
1. AS										
2. BA	0.70 (0.52, 0.84)									
3. BC	0.75 (0.59, 0.86)	0.67 (0.41, 0.83)								
4. BM	0.78 (0.63, 0.88)	0.87 (0.70, 0.96)	0.91 (0.84, 0.95)							
5. CS	0.69 (0.51, 0.81)	0.64 (0.41, 0.79)	0.89 (0.81, 0.93)	0.88 (0.76, 0.96)						
6. ES	0.88 (0.74, 0.97)	0.68 (0.48, 0.82)	0.82 (0.73, 0.89)	0.86 (0.77, 0.92)	0.77 (0.58, 0.89)					
7. OP	0.67 (0.46, 0.80)	0.57 (0.40, 0.72)	0.68 (0.56, 0.78)	0.65 (0.47, 0.77)	0.70 (0.56, 0.80)	0.72 (0.56, 0.87)				
8. PD	0.85 (0.71, 0.96)	0.75 (0.58, 0.87)	0.73 (0.62, 0.82)	0.69 (0.56, 0.80)	0.65 (0.42, 0.77)	0.59 (0.36, 0.79)	0.70 (0.51, 0.81)			
9. PV	0.71 (0.54, 0.81)	0.78 (0.65, 0.89)	0.80 (0.70, 0.88)	0.88 (0.79, 0.94)	0.81 (0.70, 0.88)	0.66 (0.48, 0.80)	0.61 (0.44, 0.72)	0.64 (0.46, 0.75)		
10. SBE	0.58 (0.37, 0.73)	0.73 (0.59, 0.89)	0.52 (0.37, 0.65)	0.73 (0.58, 0.85)	0.60 (0.38, 0.76)	0.41 (0.22, 0.55)	0.39 (0.25, 0.53)	0.49 (0.36, 0.63)	0.48 (0.33, 0.62)	

Due to the poor indicator reliability of AS2, PD1, SBE1 and BA6, these items were further simplified and used in the main survey. The modified measurement scales were also revalidated by two academic experts in Marketing. Specifically, BA6 was reversely coded in the pilot survey, which yielded a very low indicator loading of 0.15. This item was later revised as a positive statement. N. Wong, Rindfleisch, and Burroughs (2003) also recommend using positively worded items, as reversely coded indicators may not yield reliable responses. The other three items were slightly revised, keeping the meaning similar to its previous statements. Along with the four items' revision, SBE2 was separated into two items (refer to SBE2 & SBE3) following the measurement of brand equity in C.-F. Chen and Tseng (2010). Thus, a total of five items of service brand equity were retained in the final survey. Table 4.24 shows the changes in the measurement items that were revised in the final survey.

Table 4.24: Modification of measurement items as in the final survey

Item No.	Pilot survey	Final survey
PD1	I spent just a little time to collect information about my decision to book this airline.	I spent less time collecting information about the airline to make booking decision.
AS2	I went through this airline services at any airport lounges with little effort	I went through the services provided by this airline with little effort at any airports.
BA6	I have difficulty in imagining this airline in my mind.	I can easily imagine this airline services in my mind.
SBE2 & SBE3	Even if another airline brand has same features as this airline, I would prefer to fly with this airline.	• SBE2: Even if another brand has same features (e.g. services, meals, flight duration, flight schedule etc.) as this airline, I still prefer to fly with this airline. • SBE3: Even if another brand has the same price as this airline, I still prefer to choose this airline.

Finally, with these revisions, the final survey was carried out. The questionnaire is attached in Appendix E. The next section explains the survey administration process of the final data collection.

4.7 Final Survey Administration

The survey was administered via both airport intercept and online. A paper-based questionnaire was used for the face-to-face survey at the airport, while the Google form was distributed via WhatsApp, WeChat and Facebook Messenger for the online survey.

4.7.1 Airport Intercept Survey

Before the intercept survey at the Kuala Lumpur International Airport (KLIA), an application was sent to the airport authority requesting access to conduct the survey. The management allowed a total of five days (5^{th}, 6^{th}, 8^{th}, 9^{th} and 10^{th} May 2018) from 9:00 am to 7:00 pm each day and only five enumerators were permitted in a day to conduct the survey. A total of seven enumerators were listed in the application, who were doctoral students at the University of Malaya (UM) and University Utara Malaysia (UUM). During the survey, the rules and regulations specified by the KLIA management were also adhered carefully. Thus, only the international departure hall (level 5) and international arrival hall (level 3) were accessible for the distribution of the survey questionnaire. A letter of approval from KLIA authority is attached in Appendix F.

The survey process was conducted in a highly professional manner. Survey team members were fully equipped with formal attire, student ID card and a small handbag. Each handbag contained an authorisation letter from the university, the survey questionnaires, pens, pencils, sharpeners, writing board and the authorisation letter from KLIA authority. The survey team was also trained by the researcher for carrying out an intercept survey. As all the team members were international post-graduate students (doctoral candidates), they were comfortable communicating in English.

The survey team was divided into two groups at the international arrival and departure halls in KLIA. The survey was administered in the public area of both levels, encompassing the waiting, walking and resting places of both levels. Each member mutually decided to cover specific areas to approach travellers who seemed available. The enumerators first asked for permission to talk to passengers and introduced themselves. After that, they briefly explained the purpose of conducting survey. Moreover, in the front page of questionnaire, a formal cover letter was written in which the research purpose, expected time to fill out the survey, a complete address of PhD candidate and his supervisors were included. During this phase, travellers were asked with some introductory questions such as - *Where are you travelling to/from? Which airline did you travel during your last trip? Have you travelled with any full-service airline in the last six months?* Some passengers were not aware of what is a full-service airline. Those who enquired this fact, enumerators explained to them the difference between full-service airlines and low-cost airlines. Data collectors also verbally mentioned the expected time of completing the survey before finally requesting airline passengers to complete the survey questionnaire. This initial process took around one to two minutes to decide on acceptance or rejection of their participation. The participation in this research was completely voluntary and there were no incentives provided in this regard. A self-administered questionnaire was distributed only to passengers who agreed to complete the survey form, otherwise, enumerators conveyed gratitude for their time.

The respondents filled out the survey form on their own as the questionnaire was self-administered. After distributing the questionnaires, the enumerators repeated the same process and approached another traveller while the first respondent was filling out the survey form. Respondents were also requested to leave the questionnaire in the designated place where they were available, in case, if they did not see the surveyors to return the questionnaire. Following this strategy, not more than five questionnaires were distributed at a given time frame. This process was repeated throughout the five days of the survey at KLIA. Overall, about 2000 respondents were approached, from which 664 questionnaires were returned.

4.7.2 Online Survey

A Google form was generated similar to the paper-based questionnaire with the same sequence. To confirm the content validity for the google form, two participants were requested to check and recheck the contents, sequence and the total number of questions as presented in the paper-based. There were no dissimilarities found in the google form via this process. After confirming the content validity of the online survey form, it was distributed to all familiar contacts via WhatsApp, WeChat, Facebook Messenger and Email. On the inviting message, the receiver was also requested to share this google form with their acquaintances who might have airline travel experience in the past six months.

On the first page of google form, a cover letter and six preliminary questions were included. The first preliminary question asked whether they had any travel experience in the last six months. Those respondents who answered 'No' in the preliminary question 1 (P1) were not able to complete the other five preliminary questions. This was done through setting an option in the google form link to question P1. Only those who answered 'Yes' in the preliminary question were able to complete the other parts of the questionnaire. Around 875 contacts had been invited to participate in the survey from April 2018 to June 2018, from which 214 responses were received. It was also confirmed that the invited link for the Google form could be accessed by any computers and smart devices (mobile phone, tab etc.) with internet connection. Section 5.2 in Chapter 5 (p. 149) explains the overall response rate and usable sample size of this research.

4.8 Measurement Model Specification

Based on the formulated hypotheses, the CBSBE model is structured to inspect the relationships using the SEM techniques. This technique suggests that each model contains both structural and measurement models (Byrne, 2016; Hair, Hult, et al., 2017). The former represents the relationships among the latent constructs as indicated by the hypotheses, while the latter contains the relationships between the measured and latent variables (Ramayah, Cheah, Chuah, Ting, & Memon, 2018). Following the specification, the proposed theory contains six unobserved variables in the structural model, while there are ten latent constructs in the measurement model. All of the unobserved/latent variables are measured with multiple indicators or items in this research. As the structural model contains six unobserved variables, one of the six variables is measured with five latent constructs in the measurement model. Specifically, purchase decision experience (PD), employee service (ES), in-flight core service (CS), airport service experience (AS) and interaction with other passengers (OP) are the elements of ASDE. Along with ASDE, five latent constructs in the structural model include brand consistency (BC), brand awareness (BA), brand meaning (BM), perceived value (PV) and service brand equity (SBE).

Due to the variation in the direction of causation and estimation method, there is a need to define whether the measurement model is of a reflective or formative nature (Arnett et al., 2003; Coltman, Devinney, Midgley, & Venaik, 2008; Diamantopoulos & Winklhofer, 2001). Misspecification between a reflective and a formative model may cause estimation biases when latent variables are measured (Jarvis, MacKenzie, & Podsakoff, 2003; S. B. MacKenzie et al., 2005; S. B. MacKenzie et al., 2011; Petter, Straub, & Rai, 2007). Coltman et al. (2008) suggest some guidelines for selecting between reflective and formative route of measuring latent variables (see Table 4.25), while Baxter (2009); W. Chang, Franke, and Lee (2016); Wilcox, Howell, and Breivik (2008) suggest that the choice of measurement option should be guided by operational definition of the constructs of a study.

Table 4.25: Theoretical assumptions of choosing the measurement model

Considerations	Reflective model	Formative model	References
Nature of construct	Latent construct exists ▪ Latent construct exists independent of the measures used	Latent construct is formed ▪ Latent construct is a combination of its indicators	Borsboom, Mellenbergh, and van Heerden (2003, 2004)
Direction of causality between items and latent construct	Causality from construct to items ▪ Variation in the construct causes variation in the item measures ▪ Variation in item measures does not cause variation in the construct	Causality from items to construct ▪ Variation in the construct does not cause variation in the item measures ▪ Variation in item measures causes variation in the construct	Bollen and Lennox (1991), Edwards and Bagozzi (2000), Jarvis et al. (2003), Rossiter (2002)
Characteristics of items used to measure the construct	Items are manifested by the construct ▪ Items share a common theme ▪ Items are interchangeable Adding or dropping an item does not change the conceptual domain of the construct	Items define the construct ▪ Items need not share a common theme ▪ Items are not interchangeable Adding or dropping an item may change the conceptual domain of the construct	Jarvis et al. (2003), Rossiter (2002)

Source: Coltman, T., Devinney, T. M., Midgley, D. F., & Venaik, S. (2008). Formative versus reflective measurement models: Two applications of formative measurement. *Journal of Business Research, 61*(12), 1250-1262.

In the proposed CBSBE model, ASDE is conceptualised as a second-order formative construct with five first-order reflective variables, as per Ali, Amin, et al. (2016). Ali, Amin, et al., measure service experience components by the first-order reflective and second-order formative style and report it as reliable and valid. The five dimensions of ASDE (i.e., PD, ES, CS, AS and OP), along with other constructs in the model such as BC, BA, BM, PV and SBE are conceived as the first-order reflective measure. These variables are also unidimensional in nature, as reported in past studies. This conceptualisation is also in accordance with the guidelines outlined in Coltman et al.

(2008). For example, the items measuring PD are highly correlated and interchangeable with each other. Similarly, at the first-order level, the measurement items of ES, CS, AS, OP, BC, BA, BM, PV and SBE hold a similar conceptualisation while measuring each variable separately. However, in the context of the second-order construct - ASDE, the five first-order dimensions (i.e., PD, ES, CS, AS and OP) are not conceptually similar to each other. These variables measure five different aspects of the airline service experience. Therefore, ASDE is designated as a second-order formative route in the CBSBE model. Table 4.26 summarises the measurement model specification as conceived in the CBSBE model.

Table 4.26: Summary of measurement specification in the CBSBE model

No.	**Second-order latent variable**	**Measurement specification**	**First-order latent variables/Dimensions**	**Measurement specification**
1	Airline service direct experience (ASDE)	Formative	Purchase decision experience (PD)	Reflective
			Employee service (ES)	Reflective
			In-flight core service (CS)	Reflective
			Airport service experience (AS)	Reflective
			Interaction with other passengers (OP)	Reflective
2			Brand consistency (BC)	Reflective
3			Brand awareness (BA)	Reflective
4			Brand meaning (BM)	Reflective
5			Perceived value (PV)	Reflective
6			Service brand equity (SBE)	Reflective

4.9 Data Analysis using SEM: PLS-SEM

As explicated in the research method, this study utilised the SEM technique to analyse the data. SEM is a popular multivariate statistical technique for analysing a structural theory. A structural theory contains multiple variables and relationships between the variables are outlined according to the hypotheses (Byrne, 2016; Hair, Hult, et al., 2014). There are two streams of methods in SEM – Covariance-based SEM (CB-SEM) and

Variance-based SEM (VB-SEM) which is also called the Partial least squares SEM (PLS-SEM). Wold (1980) suggests that both SEM techniques are accurate in analysing structural models. However, the choice between both methods is dictated by the research objectives. Hair, Ringle, and Sarstedt (2011) postulate that the research objectives, nature of measurement model, model complexity, data characteristics and model fit evaluation are criteria taken into account when deciding which SEM technique would be suitable. Scholars advocate that due to the difference in statistical calculations, the PLS-SEM technique is useful vis-à-vis the explanatory, exploratory and/or predictive modelling, while CB-SEM is more suitable in explanatory modelling (Hair, Hollingsworth, Randolph, & Chong, 2017; Hair, Matthews, Matthews, & Sarstedt, 2017; Hair, Sarstedt, Ringle, & Mena, 2012; Shmueli & Koppius, 2011). For example, CB-SEM follows the common variance matrix in the measurement theory while minimising the biases between the theoretical model and sample data to explain a model, while PLS-SEM calculates the total variance scores in the measurement theory to maximise the explained variances of endogenous unobserved constructs by the predictors minimising the biases (Dijkstra, 2010; Hair et al., 2012; Jöreskog & Wold, 1982). There were academic debates among scholars pertaining to the SEM techniques until 2013, where Rönkkö and Evermann (2013) argued that the PLS-SEM is biased. Henseler et al. (2014) replied to the criticisms and re-emphasised that PLS-SEM is a more robust approximation in exploratory and predictive modelling, while CB-SEM is more rigorous in confirming the theoretical model. Practically, both techniques are on somewhat similar footing. PLS-SEM technique is robust when CB-SEM is less accurate and vice versa (Hair et al., 2012; Jöreskog & Wold, 1982; Sosik, Kahai, & Piovoso, 2009). The use of the appropriate method between PLS-SEM and CB-SEM in data analyses must be guided by the research objective, model complexity and data distribution. Hair, Hollingsworth, et al. (2017) provided some guidelines on selecting suitable SEM methods under specific conditions. Table 4.27 illustrates the assumptions made when selecting SEM techniques.

As per the aforementioned specifications, the PLS-SEM is suitable for analysing the CBSBE model in this research. This research is exploratory in nature and intending to predict key variables in order to develop a theory by explaining the relationships between latent constructs. Furthermore, the proposed model is complex, as it contains both formative and reflective indicators. ASDE is conceptualised as a second-order formative with five first-order reflective latent variables (i.e., PD, ES, CS, AS and OP), along with five other reflective latent constructs (i.e., BC, BA, BM, PV and SBE). A model is said to be complex when it comprises of six or more latent constructs and/or more than 50 items (Hair, Hollingsworth, et al., 2017; Sarstedt, Ringle, & Hair, 2017). The CBSBE model holds a total of ten latent variables, which have 54 indicators. Hence, this research used the PLS-SEM method to analyse the CBSBE model. The next section explains the specific techniques for analysing theoretical models using the PLS-SEM approach.

Table 4.27: Criteria for choosing between PLS-SEM and CB-SEM

PLS-SEM	No.	CB-SEM
▪ The research objective is exploratory or confirmation of theory based on total variance ▪ The objective of the analysis is prediction	1	The research objective is confirmation of well-developed structural and measurement theory based on common variance
The measurement philosophy is estimation with the composite factor model using total variance	2	The measurement philosophy is estimation with the common factor model using only common variance (covariances)
The research objective is to explain the relationships between exogenous and endogenous constructs	3	▪ The research requires a global goodness-of-fit criterion The error terms require additional specification, such as covariation.

Table 4.27: (*Continued*)

PLS-SEM	No.	CB-SEM
The structural and/or measurement models are complex (many constructs = 6+ and many indicators = 50+)	4	The structural and/or measurement models are simple (5 or fewer constructs and 50 or fewer indicators)
Formatively measured constructs are specified in the research	5	The structural model specifies non-recursive relationships
Preferred method when sample size is small (n < 100). But PLS is also an excellent method for larger samples.	6	
The data are not normally distributed	7	
The scaling of responses is ordinal or nominal	8	
The data is secondary/archival, particularly single-item measures	9	
The research objective is to use latent variable scores in subsequent analyses	10	
The structural model will be estimated with a higher order construct that has only two first-order constructs	11	
The analysis involves a continuous moderator	12	
The investigation will examine the model for unobserved heterogeneity	13	

Source: Hair, Hollingsworth, Randolph, & Chong. (2017). An updated and expanded assessment of PLS-SEM in information systems research. *Industrial Management & Data Systems, 117*(3), 442-458.

4.9.1 Assessment of CBSBE Model Using PLS-SEM Techniques

The evaluation of SEM involves a two-stage process – first, assessing the measurement model, followed by evaluating the structural model (Hair, Hult, et al., 2017; Sarstedt et al., 2017). At the initial stage, the measurement model's properties should conform to specific benchmarks indicating the quality of measurement theory. Once the quality of measurement theory is ensured, the proposed hypotheses are examined through the structural theory analysis. However, before evaluating the overall measurement quality of latent variables in the study, the researcher argues that the assessment of measurement and path relationships invariance is necessary. Hult et al. (2008) postulate that measurement error in the overall dataset could inflate the estimations and decrease the precision of results. Henseler, Ringle, and Sarstedt (2016) assert that *"By establishing measurement invariance, researchers ensure that dissimilar group-specific model estimations do not result from distinctive content and the meanings of the latent variables across groups. For example, variations in the structural relationships between latent variables could stem from different meanings that the alternative groups' respondents attribute to the phenomena, rather than the true differences in the structural relations" (p. 409)*. Hence, an investigation of measurement and path relationships invariance may provide insights into whether there are any potential variances subsist in the overall data set. Aligned with the overall study objective as validating the CBSBE model for airline industry, this study collected data without categorising any group into the data set. To examine potential variance of measurement model, the method of splitting the total sample into subsamples (i.e., calibration group and validation group) in Byrne (2016) is considered (Step 1 in Figure 4.4). Li, Hudson, and Fung So (2019) also divided the overall data set randomly into calibration and validation groups and implemented the invariance test to assess the robustness of measurement model. If there are any variances found between any two groups of sample, the data cannot be pooled into single group and multigroup analysis should be used to examine the structural model (Henseler et al., 2016; Sarstedt, Henseler, & Ringle, 2011). As the PLS-SEM method is highly suitable to analyse the proposed model in this research, in Step 2, the measurement model invariance assessment (i.e., MICOM) technique in Henseler et al. (2016) and partial least squared multigroup analysis (PLS-MGA) in Sarstedt et al. (2011) are required to be utilised. Measurement invariance of composites (MICOM) is a PLS-SEM technique that is used to determine the presence/absence of measurement variation, while PLS-MGA investigates the path relationship variance between two groups (Henseler et al., 2016; Sarstedt et al., 2011). Based on the findings in Step 2, the measurement theory (Step 3) and structural model (Step 4) analysis will be carried out. Furthermore, predictive relevance of structural theory in step 4 will be assessed by applying the PLSpredict technique. According to Shmueli et al. (2016), application of PLSpredict enables researchers to *"test or quantify the underlying causal relationship between effects that can be generalized from the sample to the population of interest" (p. 4553)*. Thus, based on the finding of PLSpredict, researchers can predict the degree to which a theoretical model is generalisable to the population of interest. Figure 4.4 illustrates the steps in analysing the CBSBE model using the PLS-SEM procedures.

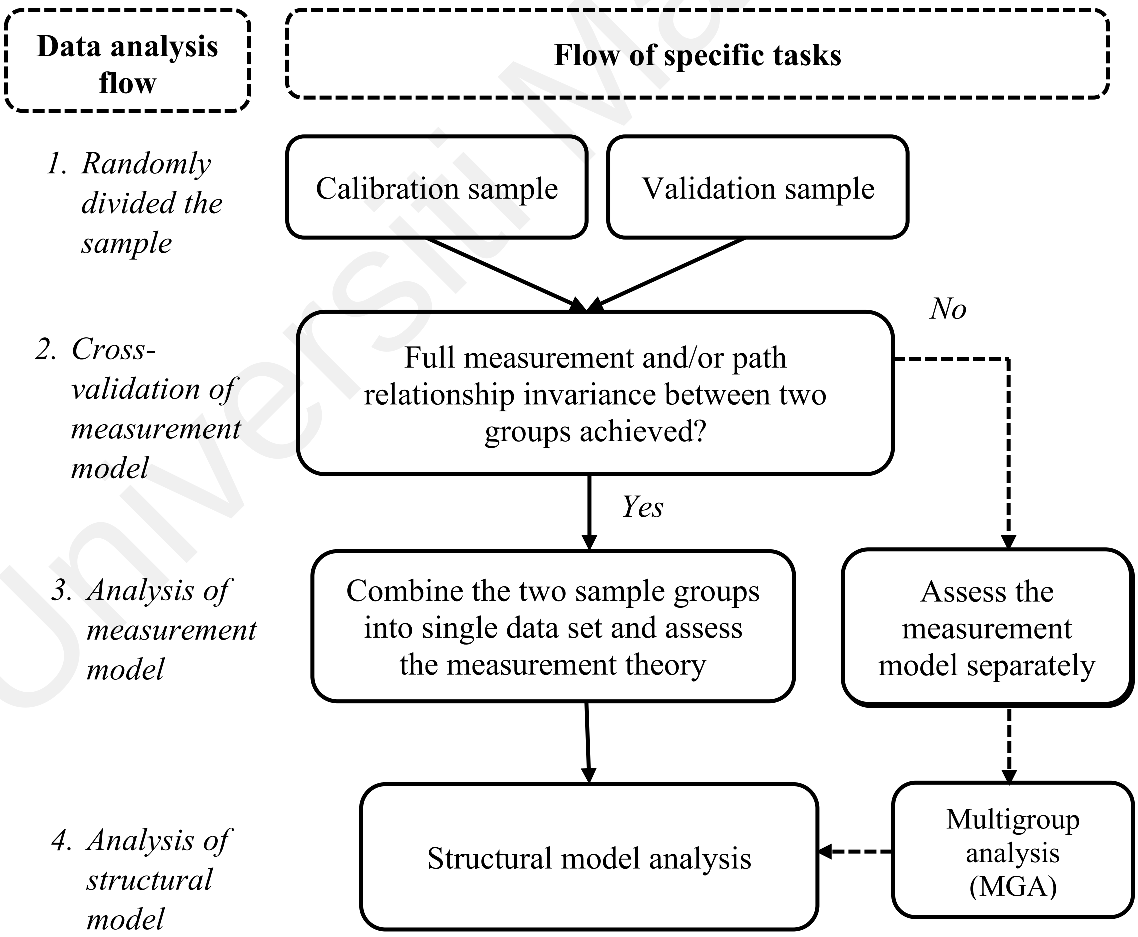

Figure 4.4: Flow of analysing a theoretical model using PLS-SEM techniques

4.9.1.1 Measurement and/or Path Relationship Invariance

Measurement invariance denotes the similarity of measurement properties between two sample groups, which is applied to assess the robustness of the overall measurement theory. Hult et al. (2008) emphasise the fact that the measurement error prevails once the data is different between the groups, which inflates the estimations and decreases the precision of results. Therefore, before evaluating the quality of measurement theory, a test of measurement model invariance needs to be made evident. As this study has adopted PLS-SEM techniques to analyse the theoretical model, the measurement invariance of composites (MICOM) in Henseler et al. (2016) is suitable to evaluate the robustness of measurement model of the study. Henseler et al. (2016) suggest three-steps criteria: (1) configural invariance, (2) compositional invariance and (3) equal means and variances. Based on these criteria, indifferent measures in assessment properties of two groups indicate full measurement invariance. PLS-MGA follows Henseler's MGA (Henseler, Ringle, & Sinkovics, 2009) or the permutation test (Chin & Dibbern, 2010) technique to examine whether significant differences exist between the two group's path coefficient (Latan, 2018; Sarstedt et al., 2011). If full measurement and/or path relationship invariance is achieved, the data sets need to be combined into one group and proceeded for assessing overall measurement model and structural model, otherwise, the measurement theory of two groups are required for separate analyses before running the PLS-MGA (Hair, Hult, et al., 2017; Henseler et al., 2016).

4.9.1.2 Measurement Theory Assessment

As the measurement model contains both higher-order formative and first-order reflective measures, different approaches are required to assess the measurement properties. Sarstedt et al. (2017); Sarstedt, Ringle, Smith, Reams, and Hair (2014) recommend the criteria for assessing both types of measurement models (see Figure 4.5).

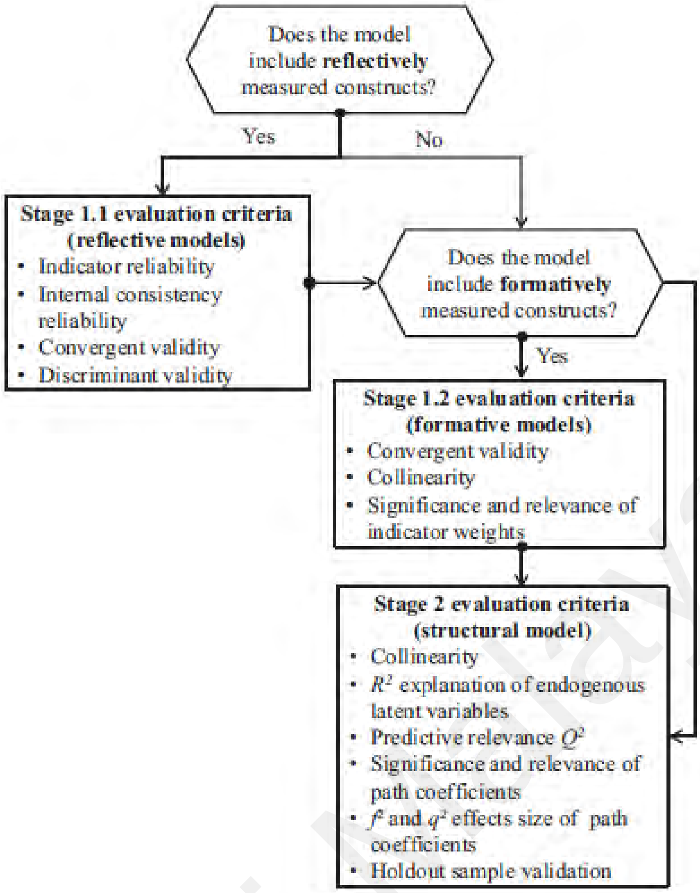

Figure 4.5: Assessment steps of PLS-SEM model [adopted from Sarstedt et al. (2017)]

Generally, the reflective model is assessed based on internal consistency reliability, indicators reliability, convergent validity and discriminant validity, while the formative model is assessed based on multicollinearity, the significance of indicators weight and convergent validity (Hair, Hult, et al., 2017; Ramayah et al., 2018). Table 4.28 and Table 4.29 summarise the benchmark values of assessing reflective measurement theory and formative measurement theory along with specifying the cut-off values referred to in this study.

Table 4.28: Reflective model measurement metrics

No.	Assessment	Metrics	Benchmark values	Referred in the study
1	Internal consistency	Composite reliability (CR) & Djikstra-Henseler's rho	> 0.95 (Not desirable) $\geq 0.70 - 0.95$ (Satisfactory to good) $\geq 0.60 - 0.70$ (Satisfactory in exploratory research) (Hair, Hult, et al., 2017; Sarstedt et al., 2017)	CR & Djikstra-Henseler's rho $\geq 0.70 - 0.95$
2	Indicator reliability	Factor Loadings	Indicator loading of ≥ 0.708 is suggested, however, ≥ 0.40 is adequate if the CR and AVE of the construct meet the threshold level. (Hair, Hult, et al., 2017; Sarstedt et al., 2017)	Followed accordingly
3	Convergent validity	Average variance extracted (AVE)	AVE > 0.50 (Hair, Hult, et al., 2017; Sarstedt et al., 2017)	Followed accordingly
4	Discriminant validity	Fornell-Larcker criteria	$\sqrt{AVE}$ of a LV should be higher than the correlations between the LV and other LVs in the model. (Fornell & Larcker, 1981; Hair, Hult, et al., 2017)	Followed accordingly
		HTMT criteria	▪ HTMT ≤ 0.85, when constructs are conceptually discrete. ▪ HTMT ≤ 0.90, when constructs are conceptually alike. ▪ $HTMT_{Inference}$, at 95% bootstrap CI, the range should be within ± 1. (Franke & Sarstedt, 2019; Hair et al., 2019; Henseler et al., 2015; Sarstedt et al., 2017)	$HTMT_{0.90}$ and $HTMT_{Inference}$ were chosen due to conceptually similar LVs exist in the model

Table 4.29: Referred metrics and cut-off values for formative measurement

No.	Assessment	Metrics	Referred benchmark values
1	Convergent validity	Redundancy analysis	Standardised path coefficient ≥ 0.70 is satisfactory, however, path coefficient of ≥ 0.60 is satisfactory only in the exploratory study (Hair, Hult, et al., 2017; Ramayah et al., 2018)
2	Collinearity	VIF	▪ VIF < 5 (Hair, Hult, et al., 2017) ▪ VIF < 3.3 (Diamantopoulos & Siguaw, 2006)
3	Significance and size of indicators' weight	t-values, p-values and standardised beta (β)	▪ β values of ± 1 indicate strong positive or strong negative relevance of the formative indictors. ▪ Indicator's weight must be significant at p-value < 0.05, t-value > 1.96 (two-tailed). ▪ Insignificant weight but indicator's loading of ≥ 0.50 should be retained. ▪ Insignificant weight and indicator's loading of < 0.50 still can be retained once content validity is ensured, otherwise, the indicator should be deleted. (Hair, Sarstedt, Ringle, & Gudergan, 2018; Sarstedt et al., 2017; Sarstedt et al., 2014)

4.9.1.3 Structural Theory Assessment

After evaluating the measurement theory in the initial phase, the structural theory can be analysed. The structural theory contains the hypotheses formulated based on the theoretical background. Unlike CB-SEM, traditional goodness-of-fit indices are inappropriate for assessing the quality of structural theory in PLS-SEM techniques (Henseler & Sarstedt, 2013), instead, the strength of exogenous variables in predicting the criteria variables is seen as evidence of as the quality of a structural model (Hair, Hult, et al., 2017; Sarstedt et al., 2014). Literature [i.e., Ali, Rasoolimanesh, Sarstedt, Ringle, and Ryu (2018), Hair, Hult, et al. (2017), Hair, Hollingsworth, et al. (2017), Ramayah et al. (2018), Sarstedt et al. (2017)] suggest the following metrics and cut-off values (see Table 4.30) for the evaluation of the strength of a structural theory.

Table 4.30: Metrics and benchmark values for structural model assessment*

No.	Assessment	Metrics	Benchmark values	References
1	Lateral collinearity	Variance inflation factor (VIF)	VIF < 5	Hair, Hult, et al. (2017)
			VIF < 3.3	Diamantopoulos and Siguaw (2006)
2	Path coefficient	t-values, p-values	p-value < 0.01 t-value > 2.58 (two-tailed) t-value > 2.33 (one-tailed)	Hair, Hult, et al. (2017)
			p-value < 0.05 t-value > 1.96 (two-tailed) t-value > 1.645 (one-tailed)	
		Bias-corrected and accelerated confidence interval (BCa-CI)	Zero must not fall between lower and upper values into the 95% CI	Aguirre-Urreta and Rönkkö (2018)
3	Coefficient of variation	R^2	0.75 – Substantial 0.50 – Moderate 0.25 – Weak	Hair, Hult, et al. (2017)
			0.67 – Substantial 0.33 – Moderate 0.19 – Weak	Chin (1998b)
4	Effect size	f^2	0.35 – Large 0.15 – Medium 0.02 – Small	Chin (2010); Cohen (1988)
5	Stone-Geisser predictive relevance	Q^2	Q^2 value > 0 indicates that exogenous constructs have predictive relevance for endogenous constructs	Hair, Hult, et al. (2017); Geisser (1974); M. Stone (1974)
6	Relative effect to Q^2	q^2	0.35 – Large 0.15 – Medium 0.02 – Small	Chin (2010); Hair, Hult, et al. (2017)

Table 4.30: (*Continued*)

No.	Assessment	Metrics	Benchmark values	References
7	Out-of-sample prediction	PLSpredict procedures [Q^2 & RMSE of PLS model and LM]	• Q^2 value > 0 at construct level • RMSE_PLS<RMSE_LM/ Q^2_PLS> Q^2_LM at indicator level	Shmueli et al. (2016); Hair et al. (2019)

** This table is adapted from Ramayah et al. (2018)*

4.9.1.4 Mediation Analysis

A mediator is an intervening variable that links the relationship between predictor and criterion variables (MacKinnon, Fairchild, & Fritz, 2007; Nitzl, Roldan, & Cepeda, 2016). The traditional approach of mediation analysis in R. M. Baron and Kenny (1986) has been criticised, as this procedure leads to the Type I error (i.e., false conclusion) when statistically testing the mediation hypotheses (Nitzl et al., 2016; Zhao, Lynch, & Chen, 2010). Currently, an alternative method, namely - 'bootstrapping the indirect effect' in Hayes (2009) and Preacher and Hayes (2008) is suggested as a reliable and powerful technique for analysing the mediation hypotheses (Ali et al., 2018; Ghazali, Mutum, & Woon, 2019; Hair, Hollingsworth, et al., 2017; Nitzl et al., 2016; Sarstedt et al., 2017; Zhao et al., 2010). This study thus used the bootstrapping technique as per Hayes (2009) and Preacher and Hayes (2008) to assess the mediating hypotheses.

4.10 Ethical Considerations

This study adhered to the ethical guidelines by the UM Research Ethics Committee (UMREC) throughout the data collection, analyses and reporting. An application was submitted to the UMREC via the Faculty of Business and Accountancy on 14th March 2018. UMREC granted ethical approval on 7th September 2018 for a term of three years [UMREC reference number: UM.TNC2/UMREC – 329] (see Appendix G). However, due to the lengthy process of obtaining approval from UMREC, a temporary approval of ethical clearance was sought from the faculty on 15th March 2018 before the actual survey was conducted (see Appendix H).

4.11 Chapter Summary

This chapter has explained the philosophical approach of this research, which is guided by a scientific process indicated in the research methods. Overall, the research has argued that the positivist stance is appropriate for solving the current research problems. Hence, this study is designed and implemented according to the quantitative research method. It elaborates on the definition of the study population and sampling unit, survey technique for data collection, designing survey instruments, sample selection procedure and sample size. Using the purposive sampling technique, data have been collected from international airline passengers at KLIA (airport intercept survey) and online. As the measurement scales are adapted from literature, the survey instrument is finalised based on feedbacks from the questionnaire's pre-testing and pilot study. The complexity in the theoretical framework signposts that the PLS-SEM techniques are suitable for data analyses. Finally, this chapter ends with a description of the survey administration process. The next chapter presents the results of data analysis and the corresponding findings.

CHAPTER 5: DATA ANALYSIS AND FINDINGS

5.1 Chapter Introduction

Chapter 5 presents a detailed discussion of data analyses and subsequent findings. The data is analysed following the partial least squared structural equation modelling (PLS-SEM) techniques, divided into two phases. In the first phase, the data is checked for missing response, distributional assumptions and common method biases, while in the second phase, the respondents' profile and descriptive statistics are reported and the model is analysed using the PLS-SEM methods. The chapter ends with a summary of the major findings of this research.

5.2 Response Rate

Survey research has a long-standing reputation based on response rate or successful return of the completed questionnaire from respondents. Deutskens, de Ruyter, Wetzels, and Oosterveld (2004) describe the response rate as one of the indicators that can be used to speculate the quality of survey data. The following section assesses the response rate from the airport intercept and online surveys.

5.2.1 Airport Intercept Survey

Conducting an airport intercept survey is always challenging, as travellers rush to catch connecting flights or leave the airport after a long journey. Hence, the rate of rejection is much higher compared to other types of surveys (Denstadli, 2000). In this research, two out of every three possible passengers refused to complete the questionnaire, resulting in an overall response rate of 33 percent, which is similar to that of previous studies [see Denstadli (2000); Smahel (2017)].

After five days of survey administration in KLIA, a total of 664 questionnaires were collected. Out of this number, 428 were collected from the international departure hall and 236 from the international arrival hall. A total of 47 questionnaires with more than

40 percent missing responses were discarded (Ghazali, 2011; Sekaran & Bougie, 2016). A total of 66 respondents were found to have named low-cost airlines (i.e., Malindo Air and Air Asia) (42 respondents) or low-ranked airlines (based on Skytrax ranking) such as Oman Air, Air India, Sri Lankan Airline and Vietnam Airlines (24 respondents) in their questionnaires. Since the study targets only passengers of fully-fledged airlines from Skytrax's ranking list, they were also discarded, leaving a final usable response of 551 for analysis.

5.2.2 Online Survey

A Google form was sent out online via WhatsApp, WeChat, Facebook Messenger and Emails. Out of 875 questionnaires distributed, 214 responses were returned, which was around 24.46% response rate. From this number, 61 were eliminated as they lacked airline travel experience in the last six months, which was a pre-requisite for eligibility in this study. Another 52 responses were discarded, as 43 respondents chose AirAsia and Malindo Air and 9 respondents rated their experience based on low-ranked airlines such as Air Astana, Jetstar Airways and Air Mauritius. Therefore, 101 usable responses were obtained from the online survey conducted from April 2018 to June 2018 (see Table 5.1). The response rate in online media is reported to be between 10 and 58 percent, depending on various survey administration techniques, such as with or without incentives, the length of the questionnaire, area of research and the nature of the respondents. Deutskens et al. (2004) reported a 9.4% response rate with a lengthy questionnaire, while Schaefer and Dillman (1998) achieved a 58% response rate via email survey. Therefore, a response rate of about 25% was considered low, but still acceptable. Table 5.1 tabulates the details pertaining to the response rate.

Table 5.1: Response rate of the study

Particulars		Survey mode		Grand Total
		KLIA_Total	Online_Total	
Number of passengers/respondents approached		About 2,000	875	
Total number of questionnaires returned/received		***664***	***214***	
Questionnaires returned from KLIA	**Number**			
Day 1 (5 May 2018)	114			
Day 2 (6 May 2018)	158			
Day 3 (8 May 2018)	154			
Day 4 (9 May 2018)	118			
Day 5 (10 May 2018)	120			
Total returned from KLIA	***664***			
Response rate		**About 33%**	**24.46%**	
Less: Incomplete questionnaires (completely and/or partially incomplete)		47	61	108
Less: Low-cost & low-ranked airlines		66	52	118
Total usable questionnaires		***551***	***101***	***652***

5.2.3 Homogeneity of Samples

Following the response rate calculation, a total of 652 usable responses were obtained, of which 551 came from the KLIA intercept survey and 101 from the online survey. In order to ascertain whether the population means of the two groups were statistically similar/different, an independent samples' t-test was executed, as the data came from two different independent sources (Armstrong & Overton, 1977; Sax, Gilmartin, & Bryant, 2003). Only if the two data sources were found to be homogeneous, they could be considered as one (Clottey & Grawe, 2014; Collier & Bienstock, 2007; Ghazali, 2011; Wagner & Kemmerling, 2010), otherwise, separate analyses are required. The results in Table 5.2 show that differences of the group means are statistically insignificant as the t-value is lower than $\pm 1.96\ or\ p > 0.05$, which indicates that the two sample groups are homogeneous and combining them is valid.

Table 5.2: Group mean comparison of KLIA intercept and online survey

Variables	Mean Score			t-value	Decision	Implication
	KLIA Intercept	***Online***	***Differences***			
ASDE	147.258	148.327	-1.069	-0.508	NS*	Group means are equal
BE Constructs	121.897	124.158	-2.262	-1.273	NS*	Group means are equal
SBE	26.702	26.762	-0.060	-0.112	NS*	Group means are equal

*Note: ASDE = Airport service direct experience; BE Constructs = Brand equity constructs; SBE = Service brand equity; *NS = Not significant, [Significance level $t = \pm 1.96$ ($p < 0.05$)]*

5.3 Non-response Bias Assessment

Non-response bias might be a possible threat in the present survey as response rate of the survey is estimated to be between 25% to 40%. It is also acknowledged as a potential danger in survey research, which prevents the generalisability of the results to the target population (Clottey & Grawe, 2014; Collier & Bienstock, 2007; de Winter et al., 2005; Lahaut et al., 2003). Non-response bias exists when the findings derived from a group of participant samples are heterogeneous with a non-participant group of respondents who are also the target population of the study (Clottey & Grawe, 2014; Collier & Bienstock, 2007; Sax et al., 2003). In this research, a large portion of airline passengers who did not participate in the survey could influence the findings. Therefore, it is necessary to assess non-response bias to confirm that the current responses do not differ with that of the potential responses of non-respondents. The literature suggests various methods for detecting the presence of this bias in survey research. According to Armstrong and Overton (1977), there are three methods through which the effect of non-response bias can be determined - *first*, direct comparison of known population parameter (i.e., demographic profile) with calculated sample statistics; *second*, subjective assessment of the researcher about the respondents and non-respondents; and *third*, extrapolation or wave analysis through which mean values of two groups, such as early and late responses are compared. Among these methods, the extrapolation or wave analysis is the most frequently used technique in marketing research (Clottey & Grawe, 2014; Collier & Bienstock, 2007). In order to adopt the first and/or second method, information on the total population parameter is required, which is often difficult or impossible to obtain, especially in consumer behaviour research. Hence, the extrapolation method is accepted as a suitable technique for the assessment of nonresponse bias in this research (Collier & Bienstock, 2007; Zou, Andrus, & Norvell, 1997).

The extrapolation method suggests that those who responded at the late phase of the survey is deemed as a proxy to non-respondents and the mean differences of study variables between early and late response were compared using independent samples' t-test (Armstrong & Overton, 1977; Clottey & Grawe, 2014; Collier & Bienstock, 2007; de Winter et al., 2005; Hultman, Katsikeas, & Robson, 2011; Sax et al., 2003). Collier and Bienstock (2007) further emphasise that invariance of the demographic variables between early and late respondents does not, by itself, confirm the absence/presence of nonresponse bias, hence all of the variables, including demographic information, should be incorporated while investigating nonresponse bias. In this method, the number of samples in the late response group should be at least 25 - 50 percent of total the response (Armstrong & Overton, 1977; Lindner, Murphy, & Briers, 2001).

In this research, two blank boxes were included at the top-hand corner of the questionnaire to record the date of survey completion and a reference number. As the intercept survey was conducted for five days in KLIA, the first three and last two days were designated as early response and late response, respectively. Out of the 551 usable responses, 313 were designated as an early response and 238 late response. In the case of the online survey, out of 101 usable responses, the 58 collected between April 2018 and May 2018 were counted as early response and the remaining 43 were late response gathered between May 2018 and June 2018. Thus, a total of 371 (57%) and 281 (43%) responses were grouped as early and late responses, respectively (see Table 5.3).

Table 5.3: Response rate based on the continuum of early and late response

Response type	KLIA intercept survey	Online survey	Total	Percentage
Early response	313	58	371	56.90%
Late response	238	43	281	43.10%
Total	551	101	652	100%

To compare the means between early and late responses, an independent samples' t-test (a parametric procedure) was conducted on all of the study variables with a 7-point Likert-scale (see Table 5.4) and a Mann-Whitney U test (a non-parametric procedure) for all of the nominal/ordinal scale such as demographic and usage variables (see Table 5.5).

Table 5.4: Nonresponse bias test of study variables

Study variables*	Mean scores			t-value	Decision**
	Early response	Late response	Differences		
PD	5.416	5.529	-0.114	-1.593	NS
ES	5.533	5.609	-0.076	-1.119	NS
CS	5.566	5.635	-0.069	-0.985	NS
AS	5.241	5.338	-0.098	-1.330	NS
OP	5.131	5.248	-0.117	-1.626	NS
BC	5.519	5.579	-0.061	-0.910	NS
PV	5.389	5.413	-0.024	-0.351	NS
BM	5.474	5.520	-0.047	-0.660	NS
BA	5.762	5.775	-0.013	-0.185	NS
SBE	5.324	5.367	-0.043	-0.544	NS

**PD = Purchase Decision Experience; ES = Employee Service; CS = In-flight Core Service; AS = Airport Service Experience; OP = Interaction with Other Passengers; BC = Brand Consistency; PV = Perceived Value; BM = Brand Meaning; BA = Brand Awareness; SBE = Service Brand Equity. **NS = Not Significant; Significance level* $t = \pm 1.96$ $(p < 0.05)$

Based on the t-test analysis, all of the study variables were insignificant at a 5% level, as the calculated t-values were less than ± 1.96 or p-values were more than 0.05, which indicates homogeneity between the early and late responses. Therefore, the nonresponse bias was not a concern in this study (Armstrong & Overton, 1977; Clottey & Grawe, 2014; Collier & Bienstock, 2007; de Winter et al., 2005; Hultman et al., 2011; Sax et al., 2003).

Table 5.5: Nonresponse bias test of usage and demographic variables

Variables	Mean rank		Mann-Whitney U test	p-values	Decision*
	Early response	Late response			
No of air travel in the last six months	322.85	331.23	53,479.50	0.528	NS
Travel class in last flight	322.90	331.25	53,461.00	0.356	NS
Purpose of travel in last flight	322.96	331.18	53,439.50	0.530	NS
Who did you travel with on last flight?	332.77	318.22	49,799.00	0.303	NS
No. of air travel in 2017	*342.21*	*305.76*	*46,296.50*	*0.011*	*S*
How do you book airline tickets?	317.48	338.41	55,472.50	0.133	NS
Travel search frequency	330.08	321.77	50,797.50	0.512	NS
Travel purchase frequency	327.59	325.07	51,722.50	0.850	NS
Frequent flyer member?	329.07	323.11	51,173.00	0.584	NS
Loyal to an airline?	328.67	323.63	51,319.00	0.649	NS
Gender	*344.70*	*302.47*	*45,374.50*	*0.001*	*S*
Age	318.06	337.64	55,257.00	0.169	NS
Marital status	*313.77*	*343.30*	*56,847.00*	*0.022*	*S*
Region of origin	*302.90*	*357.66*	*60,880.50*	*0.000*	*S*
Educational qualification	318.94	336.48	54,930.00	0.213	NS
Occupational category	*298.20*	*363.86*	*62,623.50*	*0.000*	*S*
Annual household income	325.15	328.29	52,628.00	0.830	NS

**NS = Not Significant; S = Significant. Significance level* $p < 0.05$

The results in Table 5.5 indicate that, from the 17 variables, the mean rank of 12 variables are significantly similar (i.e., the calculated p-values were above 0.05) and only 5 are significantly different (i.e., the calculated p-values were lower than 0.05). Specifically, the number of air travel in 2017, gender, marital status, region of origin and occupational category are different compared to the late respondents. Despite these differences, all of the study variables along with majority of the usage and demographic variables are homogeneous between the groups. Thus, it can be concluded that non-response biases will not affect the findings of this research (Armstrong & Overton, 1977;

Clottey & Grawe, 2014; Collier & Bienstock, 2007; de Winter et al., 2005; Hultman et al., 2011; Sax et al., 2003).

5.4 Data Screening and Distributional Assessment

Once the data is pooled for analysis, it is necessary to determine whether any missing responses remain present in the data set before assessing data distribution. Data might be missing due to factors such as respondent error or researcher error (Fowler Jr, 2014; Malhotra & Das, 2010; Sekaran & Bougie, 2016). Moreover, the assessment of both univariate and multivariate normalities are important vis-à-vis multivariate analysis (Byrne, 2016; Hair et al., 2010; Hair et al., 2019). The following section diagnoses the missing value and normality in the data set.

5.4.1 Missing Value Analysis

Missing values can weaken the findings of a research (Baraldi & Enders, 2010; Myers, 2011), thus, it is essential to determine the presence of missing values and perform imputation where necessary before proceeding with further analysis. Sekaran and Bougie (2016) suggest that when more than 25% of the responses are missing in a questionnaire, it should be discarded, or the missing data imputation should be applied. As discussed in Section 5.2.1, 29 questionnaires had about 40% missing values and 18 questionnaires were completed up to the preliminary questions only. Hence, a total of 47 questionnaires were discarded from the airport intercept survey. Similarly, 61 responses were eliminated from the online survey, as they were ineligible for taking part in the survey (see Table 5.1). The initial pool of data with all of the variables was analysed for missing values using SPSS version 21. The results in Table 5.6 show only 16 missing cases (or 0.031%) from the items/questions, which indicates minimal cause for concern.

Table 5.6: Summary of missing responses and imputed values in the data

No.	Items/Questions*	Number of missing cases	Imputed values**
1	ES1	1	6
2	BA4	1	6
3	MV1	1	6
4	MV2	1	5
5	MV3	1	5
6	MV4	1	5
7	D5	2	3
8	D7	8	3
	Total	**16**	

**Note: ES = Employee Service, BA = Brand Awareness, MV = Marker Variable, D5 = Highest Educational Achievement, D7 = Annual Household Income; **Imputed values for scale variables were generated using expectation maximisation (EM) method, whereas multiple imputation (MI) method was used to replace missing values in D5 and D7*

The missing cases were further examined using Little's MCAR test to check for patterns of missing responses. The results in Table 5.7 suggest a pattern of missing responses completely at random (MCAR) (Little & Rubin, 2002), as the t-value is statistically insignificant at $p < 0.05$ level.

Table 5.7: Little's MCAR test results

Test statistics	Values
Chi-Square	26.707
Degrees of freedom	32
Sig.	0.732

Significance level $p < 0.05$

Although missing data is not a concern in the current research, the missing cases were imputed using expectation maximisation (EM) and multiple imputation (MI) methods. Both methods provide an unbiased estimation of missing data if the data is MCAR and missing at random (MAR) (Baraldi & Enders, 2010; Myers, 2011). However, the EM method is more suitable for Likert-scale measure, while MI is applicable to any type of measure. Therefore, the EM technique was used for scale variables and the MI technique for categorical variables in the questionnaire. Following the EM technique, the first six missing cases earlier (see Table 5.6) are imputed as 6 for ES1 and BA4 and 5 for all the MVs (MV1, MV2, MV3, & MV4), while the multiple imputation (MI) method was applied using a random number generator in the case of categorical variables (i.e., D5 and D7). The results indicated that using any value within the given range in each question can be imputed, which resulted in no significant differences between two randomly generated groups. The study selected an imputed value of 3 in D5 and D7 (see Table 5.6), as the similar distribution of responses in D5 and D7 was observed in the data set. With this completed data set, subsequent statistical analyses were performed.

5.4.2 Data Distributional Assessment

There might be some misconception when examining the distributional assumption in PLS-SEM technique. Specifically, the PLS-SEM provides accurate estimation in both types of distributional assumptions between normality and nonnormality (Hair, Hult, et al., 2017; Hair, Matthews, et al., 2017). Nonnormality of distributional assumption is an advantage but is not a sufficient argument for the usage of PLS-SEM (Hair, Hult, et al., 2017; Hair et al., 2019; Rigdon, 2016). Even an extremely nonnormal data produces bias estimation in statistical significance, as it inflates the standard error estimation calculated using the bootstrap process (Hair, Hult, et al., 2017; Henseler et al., 2009). Hence, it is important to assess the normality of data distribution. Assessment of data distribution, whether it is univariate normality or multivariate normality, provides a better estimation of data distribution and indicates the choice of an appropriate SEM technique (Cain, Zhang, & Yuan, 2017; Hair et al., 2019; Sharma & Kim, 2013).

As recommended by Cain et al. (2017) and Hair, Hult, et al. (2017), the distributional assumption of the collected data was assessed using a web application software called 'WebPower' (available at - https://webpower.psychstat.org/models/kurtosis/). The univariate skewness and kurtosis results (see Table 5.8) indicate that the skewness values of ES and BA are slightly outside the range of ± 1 and the kurtosis values of PD, ES, CS, OP, BM and BA are outside the range of ± 1. Therefore, based on the univariate normality assumption, the collected data is not normally distributed (Cain et al., 2017; Hair, Hult, et al., 2017). Moreover, the multivariate skewness and kurtosis results in Table 5.9 show that the Mardia's coefficient of skewness and kurtosis are significant at $p < 0.05$, which imply that the collected data is also multivariate nonnormal (Cain et al., 2017). Therefore, the data distributional assumption along with the research goals presented earlier in Section 4.9 (p. 136) suggest that PLS-SEM is an appropriate technique for data analyses, as it follows a nonparametric procedure with bootstrapping to calculate statistical significance (Hair, Hult, et al., 2017; Hair et al., 2019; Nitzl, 2016; Rigdon, 2016).

Table 5.8: Univariate skewness and kurtosis of study variables

No.	Constructs	Skewness	SE_Skewness	Kurtosis	SE_Kurtosis
1	PD	-0.805	0.096	1.061	0.191
2	ES	-1.138	0.096	2.641	0.191
3	CS	-0.953	0.096	1.108	0.191
4	AS	-0.754	0.096	0.760	0.191
5	OP	-0.872	0.096	1.150	0.191
6	BC	-0.783	0.096	0.964	0.191
7	PV	-0.604	0.096	0.268	0.191
8	BM	-0.838	0.096	1.635	0.191
9	BA	-1.043	0.096	1.537	0.191
10	SBE	-0.577	0.096	0.791	0.191

Note: PD = Purchase Decision Experience; ES = Employee Service; CS = In-flight Core Service; AS = Airport Service Experience; OP = Interaction with Other Passengers; BC = Brand Consistency; PV = Perceived Value; BM = Brand Meaning; BA = Brand Awareness; SBE = Service Brand Equity.

Table 5.9: Mardia's multivariate skewness and kurtosis of the data set

	b	z	p-value
Skewness	9.428	1024.480	0.000
Kurtosis	159.887	32.872	0.000

Significance level $p < 0.05$

5.5 Common Method Biases (CMB)

Common method bias (CMB) is defined as the discrepancy caused by using a similar method for measuring predictor and criteria variables rather than the items used in constructs (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). In a behavioural study, a certain level of variance might be present in the findings, but CMB would not be a problem once the common method variance (CMV) remains at an acceptable level (Babin, Griffin, & Hair, 2016; Fuller, Simmering, Atinc, Atinc, & Babin, 2016; Kudaravalli, Faraj, & Johnson, 2017; Malhotra, Kim, & Patil, 2006). CMV is a systematic measurement error attributed to method variance, which can mislead the empirical results of a survey (Bagozzi & Yi, 1988; Campbell & Fiske, 1959; Podsakoff et al., 2003). Therefore, this study took the necessary steps to control CMB in the results, as data were collected from a single source using similar measurement method for both the exogenous and endogenous variables. There are two types of approaches to do so, i.e., the *procedural* and *statistical* remedies; however, the former is preferred, or emphasised, over the latter (Podsakoff et al., 2003). This research applied both remedies to control for CMB.

5.5.1 Procedural Remedies

The procedural remedies start with questionnaire design. *Firstly,* at the beginning of the questionnaire, it is clearly stated that the respondents' identity will remain anonymous and the results will be reported in an aggregate manner, which serves to make them feel comfortable when completing the questionnaire. *Secondly*, a series of cognitive interviews were conducted during the pre-test stage with eleven participants, one at a time and the questionnaire's wording was found to be easy to comprehend. The ratings in Table 4.20 in Section 4.6.2 (p. 124) confirmed this supposition. *Thirdly*, psychological/temporal separation between exogenous and endogenous variables was done by designing the questionnaire layout where the dependent variable items were not placed immediately after the items measuring the independent variables. These items were separated using the general usage variables. These steps were adopted as the technique of procedural remedies in survey research [see Baumgartner and Weijters (2012); Podsakoff et al. (2003)].

5.5.2 Statistical Control

As part of the *statistical procedure*, this research used two methods for determining the presence of CMV, namely: 1) Harman's single-factor test (Fuller et al. (2016) and 2) the measured latent marker variable (MLMV) with a four-item scale measuring compensation attitudes, which was included at the end of the questionnaire (Chin et al., 2013). Scholars indicate that Harman's single-factor test is an acceptable statistical technique for the detection of CMV (Babin et al., 2016; Fuller et al., 2016; Hair, Hollingsworth, et al., 2017), while MLMV approach of using a marker variable with at least four-items can detect and control 70% of the variance (i.e., CMV) in the data (Chin et al., 2013).

5.5.2.1 Harman's Single-Factor Test

Harman's single-factor test was performed using SPSS version 21.0. As recommended, a fixed number of factors designated as '1' and 'without rotation' were set to derive the amount of variance explained by a single factor (Lindell & Whitney, 2001). The results in Table 5.10 indicate that 43.75% variance was explained by a single factor in the model (see Table 5.10). As the total variance explained by one factor is less than 50%, CMB is not a major concern in this research (Babin et al., 2016; Fuller et al., 2016; Kudaravalli et al., 2017; Podsakoff & Organ, 1986).

Table 5.10: Findings of CMB using Harman's single-factor test

Component	Initial eigenvalues			Extraction sums of squared loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	**23.622**	**43.745**	**43.745**	**23.622**	**43.745**	**43.745**
2	2.669	4.943	48.688			
3	1.996	3.695	52.383			
4	1.906	3.530	55.913			

5.5.2.2 Measured Latent Marker Variable (MLMV) Approach

Chin et al. (2013) posit that there is no specific scale that can be considered as a marker variable (MV), instead, MV should be conceptually different from the study undertaken by the researcher. Also, MV should consist of at least four items. Following these guidelines, this research adopted a four-item scale of measuring how people act when they slack in their capabilities in the workplace, which is called 'compensation' in Bal, Kooij, and De Jong (2013) (see Table 5.11). Conceptually, this scale is unrelated to this study's scope of airline service experience, as the unit of analysis for measuring compensation (as MV) is the employee in an organisational study.

Table 5.11: Four-items scale of marker variable

No.	Items	Coding	Source
1	I try to *let others know* about my special knowledge and skills.	MV1	Bal et al. (2013)
2	I am more careful about how I *present* myself to others.	MV2	
3	I try to make my accomplishments *visible* to my networks.	MV3	
4	I take advantage of opportunities to *demonstrate* my special skills and abilities to others.	MV4	

The study employed construct level correction (CLC) approach to detect and control CMV. According to this technique, if there is a change of 10% (i.e, 0.10) in R^2 of endogenous constructs and standardised path coefficient of CLC estimates compared to original PLS estimates, it indicates a concern about CMB. CMB is not problematic providing the inclusion of MV in the original PLS model does not change in significance of the standardised path estimates (Chin et al., 2013; Tehseen, Ramayah, & Sajilan, 2017). Table 5.12 and Table 5.13 demonstrate the path coefficient and R^2 results garnered from the CLC approach.

Table 5.12: Comparison of path coefficients and t-values

Relationships	CLC estimates (Std. Beta)	Original PLS estimates (Std. Beta)	Difference	CLC estimates (t-values)	Original PLS estimates (t-values)
ASDE → BA	***0.399	***0.437	-0.038	6.441	7.176
ASDE → BC	***0.801	***0.810	-0.009	43.898	52.126
ASDE → BM	***0.392	***0.409	-0.017	7.852	8.132
ASDE → PV	***0.410	***0.430	-0.020	9.352	9.777
BA → SBE	***0.099	***0.113	-0.014	3.265	3.585
BC → BA	**0.180	***0.190	-0.010	3.039	3.136
BC → BM	***0.374	***0.379	-0.005	7.814	7.673
BC → PV	***0.413	***0.419	-0.006	8.820	8.854
BM → SBE	***0.285	***0.288	-0.003	6.047	6.068
PV → SBE	***0.483	***0.497	-0.014	11.060	11.254

*Note: Critical t value *1.645 ($p < 0.05$), **2.33 ($p < 0.01$) ***3.090 ($p < 0.001$) [One-tailed]*

Table 5.13: Comparison of R^2

Endogenous variables	CLC estimates (R^2)	Original PLS estimates (R^2)	Difference
BA	0.380	0.361	0.019
BC	0.657	0.656	0.001
BM	0.565	0.561	0.004
PV	0.658	0.652	0.006
SBE	0.670	0.665	0.005

The results in Table 5.12 show that the maximum difference in the path coefficient of 0.038 (3.8%) between CLC estimates and original PLS estimates are calculated in ASDE → BA, followed by a 2% variation in ASDE → PV. The differences in other relationships are also more or less than 1%. Moreover, the highest variation of 0.019, or 1.9% (i.e., changes of R^2), is reported for the endogenous variable of BA, while differences of R^2 in other dependent constructs are less than 1%. The results of MLMV approach signal that CMV in the study is minimal, hence, CMB is not an issue in the current research findings (Chin et al., 2013; Kudaravalli et al., 2017; Malhotra et al., 2006).

Overall, the study has employed extensive procedural remedies while designing the survey instrument. Also, none of the statistical techniques (i.e., Harman's single-factor test and construct level correction using MLMV approach) has found any method variances that could form potential biases in the findings.

5.6 Profile of Respondents

5.6.1 Demographic Information

Table 5.14 indicates that the sample consists of around 55% male relative to 45% female. The majority of the airline passengers are between 18 to 39 years old (67%), while only 4% of passengers are above 60 years old. Among the airline passengers visiting Malaysia in the last six months, half of them (51%) are married. An influx of airline passengers participated in this survey were Asian (44%) and European (31%), followed by Middle Eastern and African. Tourism Malaysia data also indicated similar findings in 2017, where the highest number of tourists arrival in Malaysia were from Asian countries, followed by European nations (Tourism Malaysia, 2018). Most airline passengers are highly educated, as data show that the highest number of respondents (about 43%) possess a Bachelor's Degree, followed by 27% reports having a Master's Degree and 21% Diploma/Certificates. In terms of occupation, 31% airline passengers have reported being professionals, such as doctors, engineers and teachers. About 21% of the passengers are employed at management levels, while 14% are self-employed. The largest cohort's (around 45%) of yearly household income, in USD, is below \$30,000, followed by \$30,000 - \$49,000 (20%) and \$50,000 to \$69,000 (12%), while 22% of the respondents' annual household income is \$70,000 or more. Table 5.14 shows the demographic summary of the respondents.

Table 5.14: Demographic profile of the study ($N = 652$)

Variables	Options	Frequency	Percentage (%)
Gender	Male	358	55
	Female	294	45
Age	18-29	243	37
	30-39	197	30
	40-49	107	16
	50-59	77	12
	60-69	19	3
	70 or above	9	1
Marital status	Single	319	49
	Married	333	51
Region of origin	African	49	8
	Asian	284	44
	Australasian/Oceanian	26	4
	European	202	31
	Middle Eastern	54	8
	North American	34	5
	South American	3	1
Highest educational qualification	Secondary School and lower	29	4
	Diploma/Certificate	139	21
	Bachelor's Degree	278	43
	Master's Degree	175	27
	PhD	31	5
Occupational category	Clerical	33	5
	Supervisory/Executive	112	17
	Management	139	21
	Professional (e.g., Doctor, Engineer, Teacher etc.)	199	31
	Self-Employed/ Own Business	91	14
	Not Working/Retired	17	3
	Student	45	7
	Homemaker	16	3

Table 5.14: (*Continued*)

Variables	Options	Frequency	Percentage (%)
Annual household income (USD)	Less than $10,000	144	22
	$10,000-$29,999	151	23
	$30,000-$49,999	131	20
	$50,000-$69,999	81	12
	$70,000-$99,999	71	11
	$100,000 or above	74	11

5.6.2 Usage Experience

This section uncovers the usage experience of international airline passengers. Respondents were initially screened based on their recent (in the last six months) airline travel experience (see Table 5.15). Out of 652 airline passengers, about 77% travelled by air in the last 3 months, while the rest travelled between the past 4 to 6 months when the survey was conducted. The respondents all have recent airline travel experience, which is a prerequisite for participating in this research. Most passengers travelled with top airline brands, as per Skytrax's ranking. The results' reported about 10% passengers rated their airline service experience in this research based on Emirates, followed by Qatar Airways (10%), Turkish Airlines (8%), Singapore Airlines (8%), Thai Airways (8%), Etihad Airways (7%), Garuda Indonesia (6%), ANA All Nippon Airways (6%).

Table 5.15: Specific usage experience of airline passengers ($N = 652$)

Variables	Options	Frequency	Percentage (%)
How long ago in last six month?	Last month	358	55
	2 - 3 months ago	146	22
	4 - 6 months ago	148	23
Name the airline that you travelled	Emirates	66	10
	Qatar Airways	65	10
	Turkish Airlines	52	8
	Singapore Airlines	50	8
	Thai Airways	49	8
	Etihad Airways	44	7
	Garuda Indonesia	41	6
	ANA All Nippon Airways	38	6
	KLM	38	6
	Lufthansa	38	6
	Cathay Pacific	34	5
	Malaysia Airlines	32	5
	Air France	31	5
	Japan Airlines	30	5
	China Southern	20	3
	British Airways	12	2
	EVA Air	12	2

The respondents were also asked to provide usage information about their air travel experience on their last trip (see Table 5.16). About 49% passengers have travelled once in the last six months, while 41% have travelled 2 - 3 times and only 10% have travelled at least 4 times or more. During their latest air journey, around 86% passengers travelled in economy class, followed by 8% in business class, 5% in premium economy class, while around 1% were on first class in their last trip. 59% of the passengers reported their purpose of travel was for holidays, followed by 26% professional/business visit, 11% visiting friends and relatives (VFR) and only 4% respondents visited for study purposes. Only 37% passengers travelled alone, while the rest with either family, friends, or business associates. Respondents were also asked about the number of travels by air in 2017 (i.e., annually). The results indicated that the passengers were entirely experienced, as around 55% respondents travelled at least 4 times or more annually, while 34% of the respondents travelled 2 - 3 times and the rest travelled only once.

It is found that airline passengers prefer to book their airline tickets online, such as via the airline's website and/or online travel portal. Data showed that 42% of the passengers usually booked their air tickets through the airline's website, while 33% passengers used an online travel portal, followed by physical outlets (25%). Moreover, 82% of the passengers stated that they frequently searched travel related information using the internet in at least 70 percent of the cases, while only 5% of the passengers rarely or never searched travel related information on the internet. Similarly, 77% of the passengers purchased travel services using the internet in at least 70 percent of the cases, while only 4% passenger never purchased travel services via the internet.

Table 5.16: Respondents' travel information ($N = 652$)

Variables	Options	Frequency	Percentage (%)
No. of flying during the last six months	Once	322	49
	2 - 3 times	268	41
	4 - 6 times	50	8
	7 or more	12	2
Travel class on the last trip	Economy Class	559	86
	Premium Economy Class	35	5
	Business Class	53	8
	First Class	5	1
Purpose of travel in the last trip	Holiday	387	59
	Professional/Business visit	168	26
	Visiting Friends and Relatives (VFR)	72	11
	Study	25	4
With whom travelled in the last trip	Alone	244	37
	Family members	227	35
	Friends	118	18
	Business Associates/Colleagues	63	10

Table 5.16: (*Continued*)

Variables	Options	Frequency	Percentage (%)
No of flying in 2017 (i.e., in a year)	Once	70	11
	2 - 3	219	34
	4 - 6	171	26
	7 or more	192	29
How do you normally book airline tickets?	Through the airline's website	276	42
	Through the online travel portal	216	33
	Through the travel agent who has a physical outlet	160	25
How often do you use the internet to search for travel services?	Always	423	65
	Very frequently (about 90% of the cases)	71	11
	Frequently (about 70% of the cases)	39	6
	Sometimes (about 50% of the cases)	38	6
	Occasionally (about 30% of the cases)	53	8
	Rarely (about 10% of the cases)	17	3
	Never	11	2
How frequently do you use the internet to purchase travel services?	Always	378	58
	Very frequently (about 90% of the cases)	84	13
	Frequently (about 70% of the cases)	38	6
	Sometimes (about 50% of the cases)	57	9
	Occasionally (about 30% of the cases)	44	7
	Rarely (about 10% of the cases)	24	4
	Never	27	4

5.7 Descriptive Analysis of Study Variables

This section elaborates on the descriptive statistics of the study variables. There are ten latent variables in this study namely purchase decision experience (PD), employee service (ES), in-flight core service (CS), airport service experience (AS), interaction with other passengers (OP), brand consistency (BC), brand awareness (BA), brand meaning (BM), perceived value (PV) and service brand equity (SBE). Among these variables, PD, ES, CS, AS and OP are conceived as ASDE, while BC, BA, BM and PV are referred to as brand equity constructs and service brand equity (SBE) is the final outcome variable in the CBSBE model. All the variables were measured with multiple items using a 7-point Likert scale. Descriptive statistics of the measurement scales are presented in the following subsections.

5.7.1 Airline Service Direct Experience (ASDE)

International airline passengers rated their airline service experience based on the adapted measurement scale. Descriptive statistics (see Table 5.17) indicate that the passengers reported excellent airline service during their latest travel as the lowest mean value out of the five ASDE constructs being 5.18 out of 7 ($SD = 0.91$). Accurately, the highest mean score of 5.60 ($SD = 0.88$) was reported on in-flight core service, followed by employee service ($Mean = 5.57; SD = 0.86$), purchase decision experience ($Mean = 5.47; SD = 0.90$), airport service experience ($Mean = 5.28; SD = 0.93$) and interaction with other passengers ($Mean = 5.18; SD = 0.91$). Moreover, all the mean scores of respected variables fall between the range of 'Somewhat Agree' to 'Agree', which means that the airline service was excellent in all of the mentioned aspects in their last trip. Appendix I outlines the item-wise descriptive statistics results of the ASDE components.

Table 5.17: Descriptive statistics of ASDE constructs ($N = 652$)

Rank	ASDE Constructs	No. of items	Mean (7-point scale)	Std. Deviation	Min	Max
1st	In-flight Core Service (CS)	8	5.60	0.88	1.88	7.00
2nd	Employee Service (ES)	7	5.57	0.86	1.00	7.00
3rd	Purchase Decision Experience (PD)	4	5.47	0.90	1.50	7.00
4th	Airport Service Experience (AS)	4	5.28	0.93	1.75	7.00
5th	Interaction with Other Passengers (OP)	4	5.18	0.91	1.00	7.00

5.7.2 Brand Equity (BE) Constructs and Service Brand Equity (SBE)

This research suggests four brand equity constructs affecting consumers' responses to service brands. In particular, brand consistency (BC), brand awareness (BA), brand meaning (BM) and perceived value (PV) are the four BE constructs in the CBSBE model and the antecedent of service brand equity (SBE). Descriptive analysis of these variables indicates that brand equity of airline companies is strong to the passengers, as the mean scores of BE constructs are between 5.77 ($SD = 0.89$) to 5.40 ($SD = 0.85$). These scores delineate that the passenger's assessments concerning BE components fall within the range of 'Somewhat Agree' and 'Agree' on the measurement scale. Among the variables, BA scored highest ($Mean = 5.77; SD = 0.89$) followed by BC ($Mean = 5.55; SD = 0.84$), BM ($Mean = 5.49; SD = 0.89$) and PV ($Mean = 5.40; SD = 0.85$). Table 5.18 enlightens the descriptive analysis of BE constructs and Appendix J represents the item-wise descriptive statistics results.

Table 5.18: Construct-wise descriptive statistics of BE ($N = 652$)

Rank	Brand Equity (BE) Constructs	No. of items	Mean (7-point scale)	Std. Deviation	Min	Max
1st	Brand Awareness (BA)	6	5.77	0.89	1.67	7.00
2nd	Brand Consistency (BC)	6	5.55	0.84	1.83	7.00
3rd	Brand Meaning (BM)	4	5.49	0.89	1.00	7.00
4th	Perceived Value (PV)	6	5.40	0.85	2.17	7.00

Service brand equity (SBE) is the final endogenous variable measured using five items. This scale measures the respondents' incremental response to the presented brand based on five aspects. Descriptive analysis of the SBE scale (7-point) shows the mean score of SBE is calculated as 5.34 ($SD = 0.99$), which explains the incremental response falling between 'Somewhat Agree' and 'Agree'. Appendix K exhibits the item-wise descriptive statistics results of the SBE construct.

5.8 CBSBE Model Assessment Procedures

The CBSBE model has been assessed following the procedures presented in Section 4.9.1 (p. 139). Specifically, this study contends that it is necessary to investigate the measurement and path relationships invariance of the current data set. Henseler et al. (2016) advocate that full measurement and path relationships invariance between sample groups indicate no potential variation being present in the data set, hence the overall data can be pooled into a single set for the PLS-SEM analysis. Therefore, before analysing the measurement model of this study with a pooled data set, it is essential to explore whether any variances are apparent in the collected data. This process also assures the robustness of the existing measurement model analysis using a single group of data. The data analysis flow of this study is presented in Figure 5.1.

As the current data set lacks any predefined groups, the total sample of 652 was divided equally into two groups (Step 1 in Figure 5.1). Using the random selection (about 50%

cases in each group) process in SPSS, a sample group of 324 responses was used as a calibration sample, while the remaining 328 responses were used as a validation sample. After splitting the total sample into two groups, the measurement invariance of composites (MICOM) and PLS multigroup analysis (PLS-MGA) were performed and carried out as per Step 2. This process allows the researcher to detect any potential variance in the overall data set (Henseler et al., 2016; Svensson et al., 2018). Based on the findings in Step 2, following steps were carried out to analyse the CBSBE model, as indicated in Figure 5.1 (i.e., Step 3, & 4).

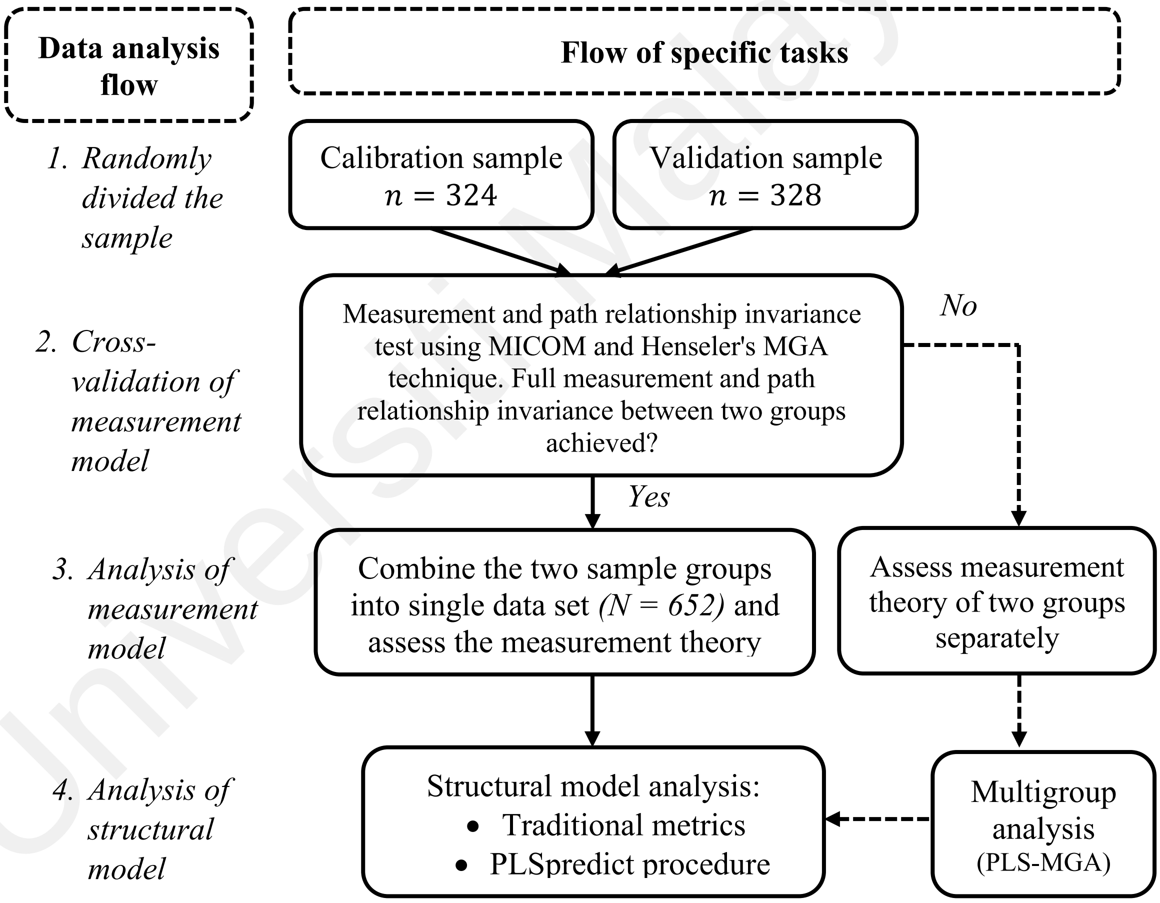

Figure 5.1: Procedural considerations of analysing CBSBE model using PLS-SEM techniques

5.8.1 Measurement and/or Path Relationship Invariance Analysis

The variance in measurement estimation is a potential threat, as Hult et al. (2008) postulate that the variations between what is measured and what is supposed to be measured results in biased statistical estimations. Hence, data is divided randomly into two groups, namely, calibration [$n = 324$] and validation [$n = 328$] (Byrne, 2016; Li et al., 2019) and analysed following the multigroup analysis technique in Henseler et al. (2009). **First,** the measurement invariance assessment was undertaken to determine to what extent the measurement variances exist in the data set. As PLS-SEM is a composite model technique, measurement invariance of composites (MICOM) method is an appropriate technique, as suggested in Henseler et al. (2016). According to the MICOM procedure, the measurement invariance is investigated based on three criteria: (1) configural invariance, (2) compositional invariance and (3) equal means and variances. If there is a single or full variance present in any of the three steps, partial invariance or complete variance is established, while the lack of a single variance between two groups across these three criteria indicates full measurement invariance (Hair, Hult, et al., 2017; Henseler et al., 2016). **Second**, the PLS-MGA technique substantiates the presence of invariance if none of the path relationship differences between two groups remain insignificant based on Henseler's MGA (Henseler et al., 2009) and/or permutation test (Chin & Dibbern, 2010). Following these procedures, data can be pooled as a single data set when full measurement and/or path relationship invariance is established (Henseler et al., 2016; Svensson et al., 2018).

The MICOM procedure was investigated using SmartPLS 3.2.8. As shown in Figure 5.2, the CBSBE model was sketched for both groups (calibration and validation) and analysed for measurement invariance. The ASDE in CBSBE model is conceptualised as the higher-order formative construct, which is measured by five first-order reflective variables, such as purchase decision experience (PD), employee service (ES), in-flight core service (CS), airport service experience (AS) and interaction with other passengers (OP). Besides, brand consistency (BC), brand awareness (BA), brand meaning (BM), perceived value (PV) and service brand equity (SBE) are conceived as the first-order reflective constructs. Section 4.8 (p. 134) specifies the measurement model specification.

According to the guideline, configural invariance is required to establish (criteria 1). As the researcher followed the same model and algorithm set-up for two groups calibration and validation, configural invariance is established. Based on criteria 2, original correlation scores were compared with the empirical correlation scores using 5000 permutations. The results in Table 5.19 confirm that the original composite scores (original correlations) are higher than the empirical composite scores (5% quantile) in all ten constructs, implying the presence of partial invariance (Henseler et al., 2016; Svensson et al., 2018). Full measurement invariance is assumed to be established when the invariance is presumed in all the three steps of the MICOM process (Henseler et al., 2016). Hence, the researcher further investigated the full measurement invariance by examining the equality of mean and variance, as suggested in criteria 3.

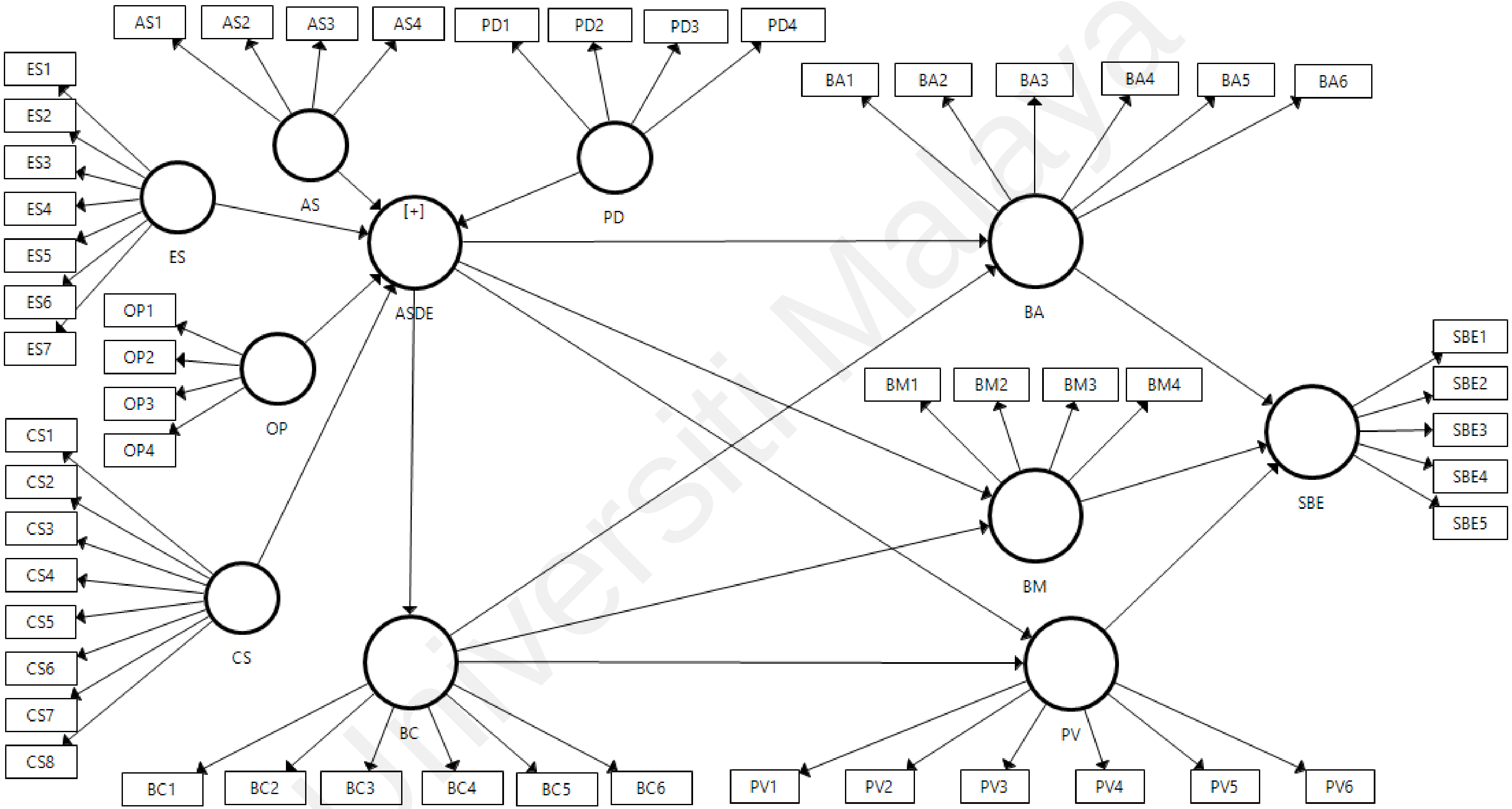

Figure 5.2: CBSBE model in SmartPLS

Henseler et al. (2016) recommend a step for comparing the composite means and variances of two groups using 5000 permutations (criteria 3). The results in Table 5.19 shows that the differences in composite means and variances between the two groups are statically insignificant. The mean differences between calibration and validation groups using 5000 permutations produced a p-value higher than 0.05. Also, 'zero' remains present within the lower and upper limit in BCa CIs of the constructs (i.e., the mean difference of AS is insignificant at $p < 0.05$; 95% BCa CI: [-0.152, 0.156]). Therefore, it is assumed that there are no significant differences in composite mean variations between both sample groups. Similarly, none of the differences in the composite variances between calibration and validation groups were significant. As per Table 5.19, the composite variance difference of AS is insignificant at $p < 0.05$, as the calculated p-value is 0.777 and 95% BCa confidence interval [-0.261, 0.263] contains a zero between the lower and upper limits. Hence, measurement invariance is also confirmed according to criteria 3 of the MICOM procedure.

The results of three steps in Table 5.19 illustrate that there are no variances found in the (1) configural invariance, (2) compositional invariance and (3) equal means and equal variances between the two randomly divided sample groups [calibration ($n = 324$) and validation ($n = 328$)]. Therefore, full measurement invariance is established. Now the next phase in Step 2 of data analysis flow (see Figure 5.1) is to run a multi-group (PLS-MGA) analysis. PLS-MGA provides additional insights on whether the data can be pooled into a single group for measurement and structural model analyses.

Table 5.19: Measurement invariance assessment using permutation

Constructs	Configural invariance (Same algorithm for both groups)?	Compositional invariance (Correlation = 1)		Partial measurement invariance established?	Equal Mean Assessment				Equal Variance Assessment				Full measurement invariance established?
		Original correlation	5.0% quantile		Diff.	95% *BCa CI	Sig	Equal ?	Diff.	95% BCa CI	Sig	Equal ?	
AS	Yes	0.9997	0.9989	**Yes**	0.028	[-0.152, 0.156]	0.729	Yes	0.039	[-0.261, 0.263]	0.777	Yes	**Yes**
BA	Yes	0.9992	0.9988	**Yes**	0.024	[-0.153, 0.156]	0.762	Yes	-0.115	[-0.291, 0.291]	0.434	Yes	**Yes**
BC	Yes	0.9999	0.9996	**Yes**	0.074	[-0.152, 0.152]	0.348	Yes	-0.068	[-0.267, 0.274]	0.629	Yes	**Yes**
BM	Yes	0.9998	0.9997	**Yes**	0.083	[-0.157, 0.154]	0.299	Yes	-0.019	[-0.286, 0.297]	0.905	Yes	**Yes**
CS	Yes	0.9998	0.9996	**Yes**	0.055	[-0.149, 0.153]	0.486	Yes	-0.116	[-0.282, 0.275]	0.419	Yes	**Yes**
ES	Yes	1.0000	0.9996	**Yes**	0.048	[-0.151, 0.158]	0.546	Yes	-0.159	[-0.322, 0.326]	0.358	Yes	**Yes**
OP	Yes	1.0000	0.9993	**Yes**	0.079	[-0.158, 0.154]	0.314	Yes	-0.063	[-0.268, 0.275]	0.652	Yes	**Yes**
PD	Yes	0.9995	0.9982	**Yes**	0.072	[-0.151, 0.149]	0.36	Yes	-0.033	[-0.267, 0.271]	0.812	Yes	**Yes**
PV	Yes	1.0000	0.9996	**Yes**	0.058	[-0.154, 0.149]	0.477	Yes	0.026	[-0.231, 0.236]	0.829	Yes	**Yes**
SBE	Yes	0.9999	0.9998	**Yes**	0.116	[-0.152, 0.151]	0.144	Yes	0.049	[-0.254, 0.259]	0.708	Yes	**Yes**

Note: AS = Airport service experience; BA = Brand awareness; BC = Brand consistency; BM = Brand meaning; CS = In-flight core service; ES = Employee service; OP = Interaction with other passengers; PD = Purchase decision experience; PV = Perceived value; SBE = Service brand equity. Significant at $*p < 0.10$, $**p < 0.05$, $***p < 0.01$. *BCa CI = Bias-corrected and accelerated confidence interval*

Having observed full measurement invariance in the data sets, the researcher performed the multigroup (PLS-MGA) analysis to determine the path relationship differences between the two sub-groups (Latan, 2018; Sarstedt et al., 2011). As exhibited in Table 5.20, the results of Henseler's MGA with 5000 bootstrapping and permutation test using 5000 permutations demonstrating no significant differences have appeared in any of the path relationships between two groups. All of the p-values of Henseleler's MGA are either ≥ 0.05 or ≤ 0.95. Moreover, the p-values of permutation test (Chin & Dibbern, 2010) are all ≥ 0.05, indicating path relationship estimates are invariant across the sample between calibration $(n = 324)$ and validation $(n = 328)$ group. The PLS-MGA further validates the fact that the measurement models are completely invariant across the randomly divided two groups, thus, the data has been pooled in a single set $(N = 652)$ to carry out subsequent analyses in the research (Henseler et al., 2016; Svensson et al., 2018).

Table 5.20: Results of PLS-MGA assessment between calibration and validation sample in CBSBE

Path relationships	Path coefficient of calibration group	Path coefficient of validation group	95% BCa CI of calibration group	95% BCa CI of validation group	Path coefficient differences	p-values of Henseler's MGA	p-values of Permutation test	Path coefficients are indifferent?
ASDE → BA	***0.509	***0.366	[0.332; 0.683]	[0.207; 0.518]	0.143	0.115	0.260	Yes
ASDE → BC	***0.792	***0.828	[0.741; 0.834]	[0.784; 0.862]	0.036	0.877	0.264	Yes
ASDE → BM	***0.468	***0.356	[0.345; 0.589]	[0.205; 0.500]	0.111	0.127	0.273	Yes
ASDE → PV	***0.449	***0.417	[0.316; 0.575]	[0.301; 0.531]	0.032	0.352	0.707	Yes
BA → SBE	*0.075	***0.153	[-0.014; 0.162]	[0.060; 0.236]	0.078	0.892	0.209	Yes
BC → BA	0.094	***0.285	[-0.086; 0.265]	[0.140; 0.430]	0.192	0.950	0.117	Yes
BC → BM	***0.361	***0.394	[0.238; 0.477]	[0.244; 0.547]	0.033	0.632	0.742	Yes
BC → PV	***0.387	***0.446	[0.243; 0.525]	[0.322; 0.561]	0.059	0.737	0.531	Yes
BM → SBE	***0.312	***0.269	[0.167; 0.453]	[0.148; 0.387]	0.043	0.323	0.650	Yes
PV → SBE	***0.502	***0.485	[0.379; 0.632]	[0.378; 0.597]	0.018	0.422	0.838	Yes

Note: ASDE = Airline service direct experience; BA = Brand awareness; BC = Brand consistency; BM = Brand meaning; PV = Perceived value; SBE = Service brand equity. Significant at *$p < 0.10$, **$p < 0.05$, ***$p < 0.01$. *BCa CI = Bias-corrected and accelerated confidence interval*

5.8.2 Measurement Theory Assessment

The assessment of the measurement theory begins with exploring the types of measurement being conceptualised in the model (Hair, Hult, et al., 2017; Hair et al., 2019; Sarstedt et al., 2014). As indicated in Section 4.8 (p. 134), the CBSBE model contains both the reflective and formative measurement models. Hence, the model was analysed based on the criteria suggested in Hair, Hult, et al. (2017); Ramayah et al. (2018); Sarstedt et al. (2017). Figure 5.2 shows the graphical representation of the proposed theory called the CBSBE model, where ASDE is a higher-order formative construct with five underlying first-order reflective variables—purchase decision experience (PD), employee service (ES), in-flight core service (CS), airport service experience (AS) and interaction with other passengers (OP). Brand consistency (BC), brand awareness (BA), brand meaning (BM), perceived value (PV) and service brand equity (SBE) are the first-order reflective constructs in CBSBE model. Therefore, the CBSBE model contains ten reflectively and one formatively measured variables. The next sections detail the assessment of both reflective and formative measurement models in this research.

5.8.2.1 Reflective Models

Reflectively specified variables in the CBSBE model were evaluated following PLS-SEM guidelines. As explained in Section 4.9.1.2 (p. 142), the reliability and validity of reflective constructs were assessed based on internal consistency, indicator reliability, convergent validity and discriminant validity (Hair, Hollingsworth, et al., 2017; Hair, Hult, et al., 2017; Hair et al., 2019; Ramayah et al., 2018; Sarstedt et al., 2017; Sarstedt et al., 2014). The theoretical model was assessed using the SmartPLS 3.2.8 version to confirm the quality of reflectively measurement constructs. The SmartPLS output of reliability and convergent validity of the measurement model is demonstrated in Appendices L and M.

*(a) **Internal Consistency***

The evaluation of reflective measurement models starts with assessing the internal consistency of the latent variables. Internal consistency indicates how consistently the items measure a latent variable (Hair, Hult, et al., 2017). Conventionally, Cronbach's alpha (CA) has been used to measure the level of reliability. However, the estimation of CA has been highly criticised as it is affected by the number of items and sample size, which yields lower measures of internal consistency (Hair, Hult, et al., 2017; Sarstedt et al., 2017). In PLS-SEM literature, composite reliability (CR) is widely reported due to its exhibiting higher values in measuring internal consistency of the variables (Ali et al., 2018; Hair, Hult, et al., 2017; Ramayah et al., 2018; Sarstedt et al., 2017). Along with these two indicators, the Djikstra-Henseler rho in Dijkstra and Henseler (2015) also suggested regarding the estimation of a true reliability score between the lower and upper estimates (Ali et al., 2018; Hair, Hult, et al., 2017; Ramayah et al., 2018; Sarstedt et al., 2017). Therefore, this study considered the cut-off values of CR as the standard estimates for confirming the internal consistency reliability of reflective models, while Djikstra-Henseler rho and CA were also reported for results comparison. Internal consistency is satisfactory when CR and the Djikstra-Henseler rho values are between 0.70 to 0.95, or 0.60 is also acceptable if the study is exploratory in nature (Hair, Hult, et al., 2017; Sarstedt et al., 2017; Sarstedt et al., 2014).

As per Table 5.21, the CR of the ten reflective constructs ranges between 0.883 and 0.940, while the CA ranges between 0.823 and 0.921. Finally, the Djikstra-Henseler rho scores range from 0.845 to 0.921. The internal consistency values are within the cut-off range of 0.70 - 0.95. Therefore, the indicators have good level of internal consistency reliability in measuring the respective constructs (Hair, Hult, et al., 2017; Hair et al., 2019; Ramayah et al., 2018; Sarstedt et al., 2017). Appendix L shows the internal consistency reliability output from SmartPLS.

Table 5.21: Internal consistency reliability assessment of first-order reflective constructs in CBSBE model

First-order reflective constructs	No. of items	CA	rho_A	CR
		0.70 – 0.95		
Airport Service Experience (AS)	4	0.832	0.847	0.888
In-flight Core Service (CS)	8	0.904	0.906	0.923
Employee Service (ES)	7	0.905	0.907	0.925
Interaction with Other Passengers (OP)	4	0.883	0.886	0.920
Purchase Decision Experience (PD)	4	0.823	0.845	0.883
Brand Awareness (BA)	6	0.895	0.896	0.919
Brand Consistency (BC)	6	0.917	0.920	0.935
Brand Meaning (BM)	4	0.879	0.880	0.917
Perceived Value (PV)	6	0.910	0.914	0.931
Service Brand Equity (SBE)	5	0.921	0.921	0.940

Note: CA = Cronbach's alpha; rho_A = Djikstra-Henseler rho; CR = Composite reliability

*(b) **Indicator Reliability and Convergent Validity***

Indicator reliability refers to the extent an item measures a certain level of variance in its construct (Hair, Hult, et al., 2017; Hair et al., 2011), where the assessment is based on the factor loadings of the reflective constructs. Each item should explain at least 50% of the variance in measuring the latent variable (LV), indicating a factor loading of ≥ 0.70 (Chin, 1998b; Hair, Hult, et al., 2017; Sarstedt et al., 2017). Generally, a factor loading of at least 0.708 indicates a satisfactory benchmark. However, the item with loadings between 0.40 and 0.70 can be retained if the LV explains an average variance extracted (AVE) of more than 50%, otherwise, the item needs to be deleted from the construct (Hair, Hult, et al., 2017; Hair et al., 2011).

AVE is the assessment metric of convergent validity of the construct, which is defined as the level to which an LV converges in its items by explaining the common variance of indicators (Hair, Hult, et al., 2017; Sarstedt et al., 2017). It is calculated by averaging the variance extracted of each indicator, which is why it is referred to as the average variance extracted (AVE). According to scholars, AVE should be at least 0.50 to achieve a satisfactory level of convergent validity (Ali et al., 2018; Hair, Hult, et al., 2017; Ramayah et al., 2018; Sarstedt et al., 2017). As the estimation of AVE results comes from indicator loadings/reliability, Henseler et al. (2009) remind researchers to be more cautious when deciding to drop an indicator/item from a scale based on low loading. The elimination of an indicator is only acceptable when the drop of any indicator increases the average variance extracted of LV at a minimum benchmark of 50% level (Hair, Hult, et al., 2017; Hair et al., 2011; Henseler et al., 2009).

Table 5.22 reports the assessment of reflectively measured constructs based on the indicators' reliability and convergent validity. According to the threshold level of each measurement metric, all of the first-order reflective constructs exhibit an acceptable level of indicator reliability and convergent validity. Out of a total of 54 indicators in the CBSBE model, the lowest loading of 0.681 resulted in PD1, while the highest loading of 0.899 is observed in OP4. Although the indicator loading of PD1 is lower than the threshold level of > 0.70, the resulting AVE of purchase decision experience (PD) exceeds the minimum level of > 0.50. Hence, it is unnecessary to discard PD1 from the corresponding construct (Hair, Hult, et al., 2017; Ramayah et al., 2018). This evidence substantiates that indicator reliability is assured in the case of each measurement item. The AVE scores of all of the reflective constructs are also higher than 0.50. Precisely, the AVE values of the measurement model range from 0.599 to 0.759 and an acceptable level of indicator loadings support the satisfactory level of indicator reliability and convergent validity of the reflectively measured constructs in the CBSBE model (Hair, Hult, et al., 2017; Ramayah et al., 2018; Sarstedt et al., 2017). Appendix M shows the SmartPLS output of indicator reliability and convergent validity of this study.

Table 5.22: Assessment of indicator reliability and convergent validity of first-order reflective constructs in CBSBE model

First-order reflective constructs	Items	Factor loadings	Indicator reliability	AVE
		> 0.70	≥ 0.50	≥ 0.50
Airport Service Experience (AS)	AS1	0.851	0.724	0.666
	AS2	0.865	0.748	
	AS3	0.704	0.495	
	AS4	0.836	0.698	
In-flight Core Service (CS)	CS1	0.795	0.632	0.599
	CS2	0.812	0.659	
	CS3	0.838	0.702	
	CS4	0.725	0.525	
	CS5	0.764	0.584	
	CS6	0.725	0.526	
	CS7	0.765	0.585	
	CS8	0.764	0.583	
Employee Service (ES)	ES1	0.777	0.604	0.637
	ES2	0.828	0.686	
	ES3	0.798	0.636	
	ES4	0.849	0.721	
	ES5	0.792	0.628	
	ES6	0.787	0.619	
	ES7	0.751	0.564	
Interaction with Other Passengers (OP)	OP1	0.831	0.691	0.742
	OP2	0.813	0.661	
	OP3	0.897	0.805	
	OP4	0.899	0.809	
Purchase Decision Experience (PD)	PD1	0.681	0.463	0.655
	PD2	0.814	0.662	
	PD3	0.871	0.759	
	PD4	0.858	0.737	
Brand Awareness (BA)	BA1	0.804	0.646	0.655
	BA2	0.825	0.681	
	BA3	0.787	0.619	
	BA4	0.774	0.598	
	BA5	0.843	0.710	
	BA6	0.823	0.677	

Table 5.22: (*Continued*)

First-order reflective constructs	Items	Factor loadings	Indicator reliability	AVE
		> 0.70	≥ 0.50	≥ 0.50
Brand Consistency (BC)	BC1	0.857	0.735	0.707
	BC2	0.785	0.616	
	BC3	0.878	0.771	
	BC4	0.836	0.698	
	BC5	0.806	0.649	
	BC6	0.878	0.771	
Brand Meaning BM)	BM1	0.837	0.700	0.735
	BM2	0.859	0.737	
	BM3	0.846	0.715	
	BM4	0.887	0.786	
Perceived Value (PV)	PV1	0.883	0.779	0.691
	PV2	0.863	0.745	
	PV3	0.837	0.700	
	PV4	0.821	0.674	
	PV5	0.735	0.540	
	PV6	0.842	0.710	
Service Brand Equity (SBE)	SBE1	0.873	0.763	0.759
	SBE2	0.849	0.721	
	SBE3	0.860	0.740	
	SBE4	0.897	0.804	
	SBE5	0.876	0.767	

Note: AVE = Average variance extracted

(c) Discriminant Validity

Discriminant validity is defined as the distinctness of measuring LVs in a study (Hair, Hult, et al., 2017). The assessment of discriminant validity is necessary to confirm whether the empirical measure of an LV in a study is truly discrete to another LV. Traditionally, the Fornell-Larcker (FL) criteria in Fornell and Larcker (1981) and cross-loading assessment in Chin (1998b) are widely reported in survey research (Henseler et al., 2015). Based on the FL criteria, discriminant validity is achieved when the square root of AVE of an LV in a correlation table is higher than all the off-diagonal correlation values of other LVs in the corresponding rows and columns (Fornell & Larcker, 1981).

Whereas, in a cross-loading table, indicators' loadings of a designated LV should be higher than other cross-loaded indicators' score to achieve discriminant validity (Chin, 1998b). Both approaches fail to detect discriminant validity properly in a composite-based SEM context, nonetheless, the FL criteria can still be referred to in covariance-based SEM (Franke & Sarstedt, 2019; Henseler et al., 2015; Voorhees, Brady, Calantone, & Ramirez, 2016). As a substitute, Henseler et al. (2015) offer a more robust correlation method, namely – Heterotrait-Monotrait (HTMT) ratio to assess the discriminant validity of a measurement model.

The HTMT ratio of correlation considers *'within the constructs'* and *'between the constructs'* correlation scores. According to Henseler et al. (2015), the HTMT ratio of $\leq HTMT_{0.85}$ in Kline (2016), or $\leq HTMT_{0.90}$ in Gold, Malhotra, and Segars (2001) and/or $HTMT_{Inference}$ [confidence interval (CI) < 1] confirm that discriminant validity is achieved. Specifically, the $HTMT_{Inference}$ approach confirms the accuracy of the other two HTMT benchmarks by indicating that the CI of HTMT ratio using 95% bootstrap is < 1 (Franke & Sarstedt, 2019; Hair et al., 2019; Sarstedt et al., 2017). Henseler et al. (2015) report the accuracy of the three HTMT benchmarks as 99.90% of $HTMT_{0.85}$, 99.45% of $HTMT_{0.90}$ and 97.01% of $HTMT_{Inference}$ relative to 20.82% of FL and 0.00% of cross-loading in confirming discriminant validity. Franke and Sarstedt (2019) further emphasise the efficacy of all three HTMT ratios while suggesting that the selection of the HTMT benchmark should not be heuristic. As opposed to the heuristic recommendation of $HTMT_{0.85}$ in Voorhees et al. (2016), $HTMT_{0.90}$ is preferable when the LVs are conceptually close, or $HTMT_{0.85}$ should be selected based on conceptually distinct constructs (Franke & Sarstedt, 2019; Henseler et al., 2015). As this study deals with service experience components and brand equity constructs, the measures of a few variables in this study (i.e., service experience components, brand meaning and brand consistency) were expected to be perceived conceptually as a little bit similar by the respondents. Hence, $HTMT_{0.90}$ and $HTMT_{Inference}$ were adopted in this research.

In this research, discriminant validity was checked using both the criteria of FL and HTMT. As seen in Table 5.23 (i.e., FL criteria), the diagonal value of each variable (the square root of corresponding construct's AVE) exceeds the correlations of other constructs in the corresponding rows and columns, which indicated that each LV explains better variance by its own indicators than other LVs. Therefore, it can be concluded that all of the reflective constructs sufficiently discriminate among each other in measurement by their indicators (Fornell & Larcker, 1981). As the FL criteria have been highly challenged in checking discriminant validity of LVs, a more robust method, namely – HTMT ration, is suggested (Franke & Sarstedt, 2019; Henseler et al., 2015; Voorhees et al., 2016). Hence, the measurement theory of the CBSBE model was also investigated using the HTMT ratio (see Table 5.24).

Table 5.23: Discriminant validity based on Fornell-Larcker (FL) criteria

Reflective constructs	1	2	3	4	5	6	7	8	9	10
1. AS	**0.816**									
2. BA	0.475	**0.809**								
3. BC	0.627	0.544	**0.841**							
4. BM	0.556	0.619	0.710	**0.857**						
5. CS	0.654	0.544	0.751	0.653	**0.774**					
6. ES	0.596	0.465	0.683	0.610	0.655	**0.798**				
7. OP	0.518	0.396	0.557	0.443	0.546	0.498	**0.861**			
8. PD	0.516	0.468	0.557	0.551	0.523	0.552	0.376	**0.809**		
9. PV	0.598	0.600	0.767	0.752	0.714	0.646	0.513	0.545	**0.831**	
10. SBE	0.535	0.589	0.692	0.731	0.638	0.594	0.458	0.536	0.781	**0.871**

Note: Diagonal values (Bold) are the square root of AVE and off-diagonals are the correlations; AS = Airport service experience; BA = Brand awareness; BC = Brand consistency; BM = Brand meaning; CS = In-flight core service; ES = Employee service; OP = Interaction with other passengers; PD = Purchase decision experience; PV = Perceived value; SBE = Service brand equity.

Table 5.24: Discriminant validity based on Heterotrait-Monotrait (HTMT) values

Reflective constructs	1	2	3	4	5	6	7	8	9	10
1. AS										
2. BA	0.54 [0.46; 0.61]									
3. BC	0.71 [0.64; 0.77]	0.60 [0.52; 0.66]								
4. BM	0.64 [0.57; 0.71]	0.69 [0.63; 0.75]	0.79 [0.74; 0.83]							
5. CS	0.75 [0.69; 0.80]	0.60 [0.52; 0.68]	0.82 [0.78; 0.86]	0.73 [0.67; 0.78]						
6. ES	0.68 [0.60; 0.75]	0.51 [0.42; 0.60]	0.75 [0.68; 0.80]	0.68 [0.61; 0.74]	0.72 [0.66; 0.77]					
7. OP	0.60 [0.52; 0.68]	0.44 [0.35; 0.53]	0.62 [0.54; 0.69]	0.50 [0.41; 0.59]	0.61 [0.54; 0.68]	0.56 [0.47; 0.63]				
8. PD	0.61 [0.53; 0.68]	0.53 [0.44; 0.61]	0.63 [0.55; 0.70]	0.64 [0.56; 0.70]	0.59 [0.51; 0.67]	0.63 [0.54; 0.71]	0.44 [0.33; 0.54]			
9. PV	0.68 [0.61; 0.74]	0.66 [0.59; 0.71]	0.84 [0.79; 0.88]	0.84 [0.79; 0.88]	0.79 [0.74; 0.83]	0.71 [0.64; 0.76]	0.57 [0.50; 0.64]	0.61 [0.54; 0.68]		
10. SBE	0.60 [0.53; 0.67]	0.64 [0.58; 0.70]	0.75 [0.70; 0.80]	0.81 [0.77; 0.85]	0.70 [0.64; 0.75]	0.65 [0.58; 0.70]	0.51 [0.42; 0.59]	0.61 [0.53; 0.68]	0.85 [0.81; 0.88]	

Note: The values in the brackets represent the lower and the upper bounds at 95% BCa confidence interval. AS = Airport service experience; BA = Brand awareness; BC = Brand consistency; BM = Brand meaning; CS = In-flight core service; ES = Employee service; OP = Interaction with other passengers; PD = Purchase decision experience; PV = Perceived value; SBE = Service brand equity.

Discriminant validity using the HTMT criteria shows that the highest correlation value of 0.85 is associated with SBE and PV. Overall, the correlations are below $HTMT_{0.90}$, even all of the correlation values have clearly satisfied the stringent criteria of $HTMT_{0.85}$ (Franke & Sarstedt, 2019; Voorhees et al., 2016). Furthermore, the correlations were examined using the $HTMT_{Inference}$. Following the guidelines stipulated in Hair et al. (2019); Sarstedt et al. (2017), the researcher set a 95% bias-corrected and accelerated confidence interval (BCa CI) and 5% significance level at two-tailed testing to estimate the lower and upper values. The results indicated that all of the HTMT values are below 1, which confirmed that the resulting HTMT values are significantly dissimilar from 1. Thus, the discriminant validity of the first-order reflective constructs in the CBSBE model has been well established in this research (Franke & Sarstedt, 2019; Hair et al., 2019; Henseler et al., 2015; Sarstedt et al., 2017).

5.8.2.2 Formative Models

The CBSBE model specifies ASDE as a higher-order formative latent variable which was measured by five first-order reflective LVs (i.e., PD, ES, CS, AS and OP). Due to the measurement theory of the higher-order formative and lower-order reflective, the repeated indicator technique was used to measure the ADSE construct, as suggested in Ali et al. (2018); Hair et al. (2018). Cheah, Ting, et al. (2018) identify that the indicators' weight resulting from the repeated indicator technique is consistent with the two-stage approach. As ASDE is an exogenous construct in the structural model, the repeated indicator approach is deemed appropriate in this research. The reliability and validity of five lower-order reflective constructs have already been assessed in Section 5.8.2.1, which reveals that these five reflective constructs satisfy the criteria of reliability and validity. Nonetheless, the evaluation criteria of formatively measured variables are different from the reflective constructs. As per Hair et al. (2018); Sarstedt et al. (2017), ASDE was assessed based on convergent validity, collinearity and significance test and size of the indicators' weight. The following subsection elaborates on the findings.

(a) ***Convergent Validity***

The evaluation of formative theory starts with assessing the ***convergent validity*** of the formative latent variable (LV). It is done by evaluating the path coefficient and significance of the relationship between the formative indicators and the formative construct with a single global item (Cheah, Sarstedt, Ringle, Ramayah, & Ting, 2018; Hair et al., 2018). This technique is referred to as a redundancy analysis. It is estimated by a correlation score between formative LV and another LV. Cheah, Sarstedt, et al. (2018) stress the global item technique of assessing the convergent validity of formative construct is a preferred option in PLS-SEM. This validity is achieved if the path coefficient is ≥ 0.70 at 5% significance level, otherwise, the value of ≥ 0.60 is also accepted in an exploratory study (Hair, Hult, et al., 2017; Ramayah et al., 2018).

This research adopted a single item technique to investigate the convergent validity of the ASDE construct. A single item to measure the overall experience of airline service, such as - "My overall experience with this airline is… *("1 = extremely poor" to "7 = extremely good")*" in Brodie et al. (2009b) was adapted into the survey questionnaire. Following the procedure, a new path model was constructed between the ASDE construct and the single global item to assess the convergent validity, as presented in Figure 5.3.

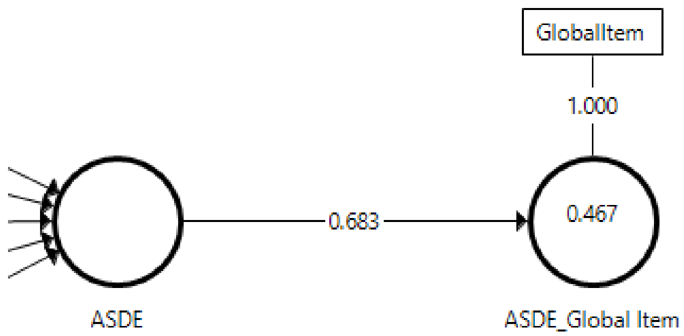

Figure 5.3: Convergent validity assessment of ASDE using a single global item

Using SmartPLS, the results indicated (see Table 5.25) that the path coefficient between the ASDE construct and the single global item is estimated to be 0.683 which is slightly lower than 0.70 but exceeded the desirable cut-off level of 0.60. Moreover, the BCa confidence interval [95% bootstrap BCa CI: (0.640; 0.718)] does not have a zero between the lower and upper limit of values, indicating that the path is statistically significant at a 5% error level. Ramayah et al. (2018) suggest that the convergent validity of a formatively measured variable is achieved when the path relationship is ≥ 0.60 and significant. Therefore, the formative measure of ASDE variable in the research ensures convergent validity (Ramayah et al., 2018; Sarstedt, Hair, Cheah, Becker, & Ringle, 2019; Sarstedt et al., 2017).

Table 5.25: Convergent validity assessment of ASDE construct

Path relationship	Std. Beta	Std. error	t-values	95% BCa CI
ASDE → Global Item	***0.683	0.024	29.023	[0.640; 0.718]

*Note: ASDE = Airline service direct experience; Critical t value ***3.090 ($p < 0.001$) [One-tailed]; BCa CI = Bias-corrected and accelerated confidence interval*

(b) ***Collinearity, Significance Test and Size of Indicators' weight***

In the formative measurement theory, the indicators should not be highly correlated with each other (Hair et al., 2018; Sarstedt et al., 2014). High collinearity is problematic, as it affects estimation biases in outer weights and its subsequent significance. In the PLS-SEM, multicollinearity is assessed based on the variance inflation factor (VIF) score. Hair, Hult, et al. (2017) recommend that the VIF value of < 5 signifies the absence of collinearity, while Diamantopoulos and Siguaw (2006) suggest that the benchmark value of < 3.3 confirms the absence of collinearity between the indicators.

The formative measurement theory is evaluated by the significance test and size of the indicators' weight (Hair et al., 2018; Sarstedt et al., 2014). Using a resampling technique of at least 5000 bootstraps and a 5% significance level of the two-tailed test, each formative indicator is assessed. The indicators are retained in the formative model once the standardised weight of measurement item is significant or the loading is ≥ 0.50 but insignificant based on t-value estimation (Hair et al., 2018; Sarstedt et al., 2014). Otherwise, the formative indicators can be discarded. However, it is suggested that this approach should be followed carefully, as the deletion of formative indicators would violate the theoretical conceptualisation of the variable [i.e., content validity] (Hair et al., 2018; Sarstedt et al., 2017; Sarstedt et al., 2014). The standardised indicators' weight near ± 1 indicates a relatively high positive and low negative importance of the formative construct.

This study assessed the collinearity amongst the first-order constructs. As indicated in Table 5.26, the variance inflation factor (VIF) of the formative indicators ranged from 1.564 to 2.333. The highest VIF value of 2.333 is estimated with in-flight core service (CS), which is clearly below the critical value of 3.3 in Diamantopoulos and Siguaw (2006) and 5 in Hair, Hult, et al. (2017). Thus, it can be assumed that collinearity is not a problem for the formative construct (i.e., ASDE) in this research. Furthermore, the significance of indicators' weight was investigated following 5000 bootstrap and 95% bias-corrected and accelerated confidence interval (BCa CI), with a 5% significance level of the two-tailed test. The results indicated that the five indicators' weights are significant at a 5% level.

Table 5.26: Significance and collinearity assessment of ASDE construct

Second-order formative construct	First-order constructs	Indicators' weights	t-values	95% BCa CI	Significant $(p < 0.05)$?	VIF
Airline service direct experience (ASDE)	AS	***0.181	25.516	[0.168; 0.195]	Yes	2.067
	CS	***0.381	32.351	[0.359; 0.405]	Yes	2.333
	ES	***0.325	29.700	[0.305; 0.348]	Yes	2.111
	OP	***0.173	20.026	[0.156; 0.190]	Yes	1.564
	PD	***0.164	25.169	[0.151; 0.176]	Yes	1.599

*Note: AS = Airport service experience; CS = In-flight core service; ES = Employee service; OP = Interaction with other passengers; PD = Purchase decision experience. Critical t value ***3.291 ($p < 0.001$) [Two-tailed]; BCa CI = Bias-corrected and accelerated confidence interval; VIF = Variance inflation factor*

Overall, the relevant statistical indices of reliability and validity meet the cut-off values, which assure that the measurement scales (both reflective and formative) used in the CBSBE model are reliable and valid. Therefore, the study proceeds to evaluate the structural theory of the CBSBE model.

5.8.3 Structural Theory Assessment

The assessment of the structural model occurs in the second stage of the PLS-SEM technique once the quality of the measurement model is ensured. The structural paths of the CBSBE model was examined as per the guidelines established in Hair, Hollingsworth, et al. (2017); Hair, Hult, et al. (2017); Hair et al. (2019); Ramayah et al. (2018); Sarstedt et al. (2017). Path coefficients, significances of path coefficients and coefficient of determination (R^2) are usually reported in the structural model analysis. Also, BCa CI, effect size (f^2) and relative predictive relevance (q^2) are regarded as essential metrics that need to be reported (Hair, Hollingsworth, et al., 2017; Ramayah et al., 2018). Furthermore, Ali et al. (2018); Felipe, Roldán, and Leal-Rodríguez (2017); Hair et al. (2019) emphasise that the assessment of PLS-SEM models should include the predictive strength of a structural theory using a technique, namely the PLSpredict described in

Shmueli et al. (2016). Table 5.27 summarises the list of statistical metrics required to assess the structural theory of the CBSBE model.

Table 5.27: Structural model assessment criteria

No.	Statistical metrics	Issues explained by the metrics	Prediction criteria
1	Variance inflation factor (VIF)	Collinearity between predictors and criteria variables	N/A**
2	Standardised beta (β)	Estimation of path-coefficients	N/A**
3	t-value, p-value, Confidence Interval (CI)	Assessment of significance level for supporting/not supporting the hypotheses	N/A**
4	Level of R^2	Amount of variance explained by the predictors (prediction accuracy)	In-sample
5	Level of f^2	The relative effect of a predictor (effect size) in explained variance	In-sample
6	Q^2	Predictive relevance of the structural theory based on a sample group	In-sample
7	Level of q^2	Relative impact of a predictor in predictive relevance	In-sample
8	Q^2, RMSE*	Predictive strength of the structural theory (PLSpredict)	Out-of-sample

*Note: *RMSE: Root mean squared error; **N/A: Not applicable as these indices are not related to model prediction criteria*

5.8.3.1 Path Relationships Assessment and Hypotheses Testing

The path relationship refers to the connection between two latent variables in a structural model as indicated in the hypotheses. Usually, the researcher examines hypotheses based on the significance test and the size of the path coefficient, which assesses the paths' relationships. Figure 5.4 shows the path relationships of the CBSBE model, comprising of a total of 13 hypotheses, as described in Section 3.4 (p. 85).

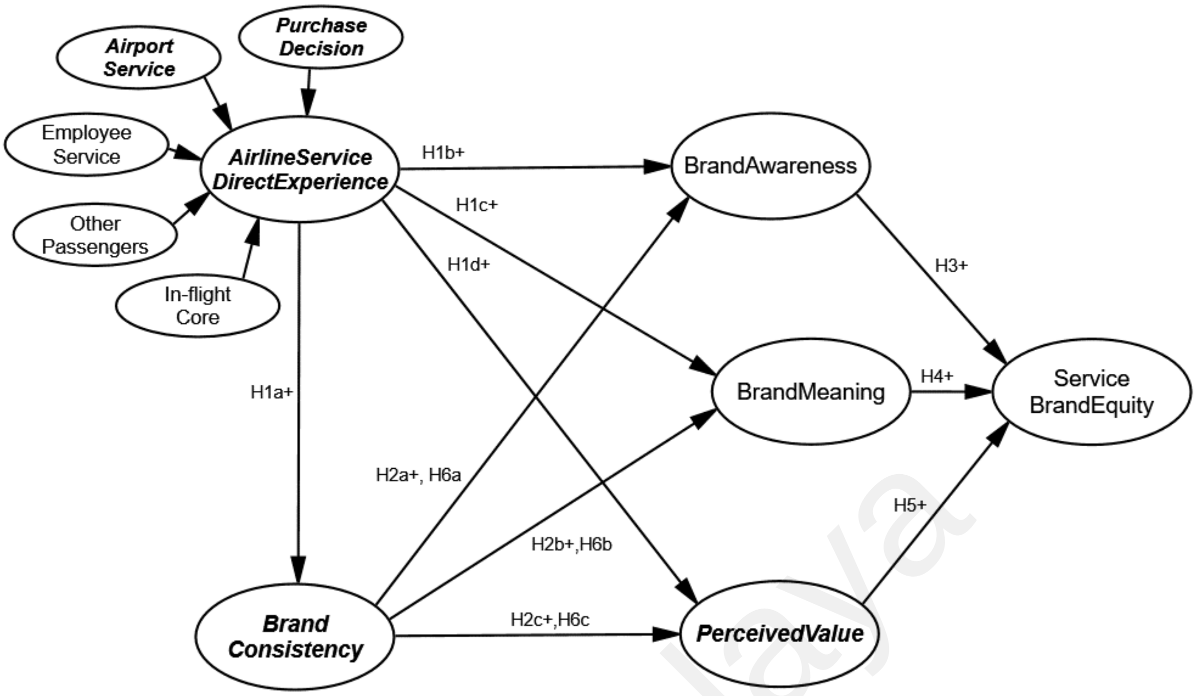

Figure 5.4: CBSBE model with path relationships

Similar to the formative model assessment, a structural model also needs to be examined for the level of collinearity that exists between predictors and criteria variables. Conceptually, collinearity should not be high between the variables in a model, which would mislead the structural model results. It would be an issue if VIF is ≥ 5 (Hair, Hult, et al., 2017), or more strictly when VIF is ≥ 3.3 (Diamantopoulos & Siguaw, 2006). After that, path coefficients are examined following the significance test alongside its direction, size of weights using t-values/p-values and standardised beta (β). Hence, the 5000 bootstrap sampling technique is recommended for the examination of the significance of path coefficients (Hair, Hult, et al., 2017; Hair et al., 2011). As the PLS-SEM follows a non-parametric assumption, the p-value calculation based on not normally distributed data is problematic. The subsampling technique (bootstrap) calculates the t-value, which are distribution free and avoid biases in calculating standard error (Hair, Hult, et al., 2017; Hair et al., 2011). Generally, the cut-off point of the t-value is decided based on the direction of the hypothesis (i.e., one-tailed or two-tailed). The bias-corrected and accelerated bootstrap confidence interval (BCa CI) in Aguirre-Urreta and Rönkkö

(2018) needs to be reported alongside the cut-off points of t-value. BCa CI denotes the significance of a path when the lower and upper values in 95% BCa CI of one-tailed or two-tailed test do not contain a zero.

Figure 5.5 illustrates the path relationships assessment of the CBSBE model, while the collinearity assessment in Table 5.28 shows the highest VIF score of 2.907 being below the stringent cut-off value of 3.3 in Diamantopoulos and Siguaw (2006). Hence, it is assured that collinearity is not an issue in this study (Diamantopoulos & Siguaw, 2006; Hair, Hult, et al., 2017).

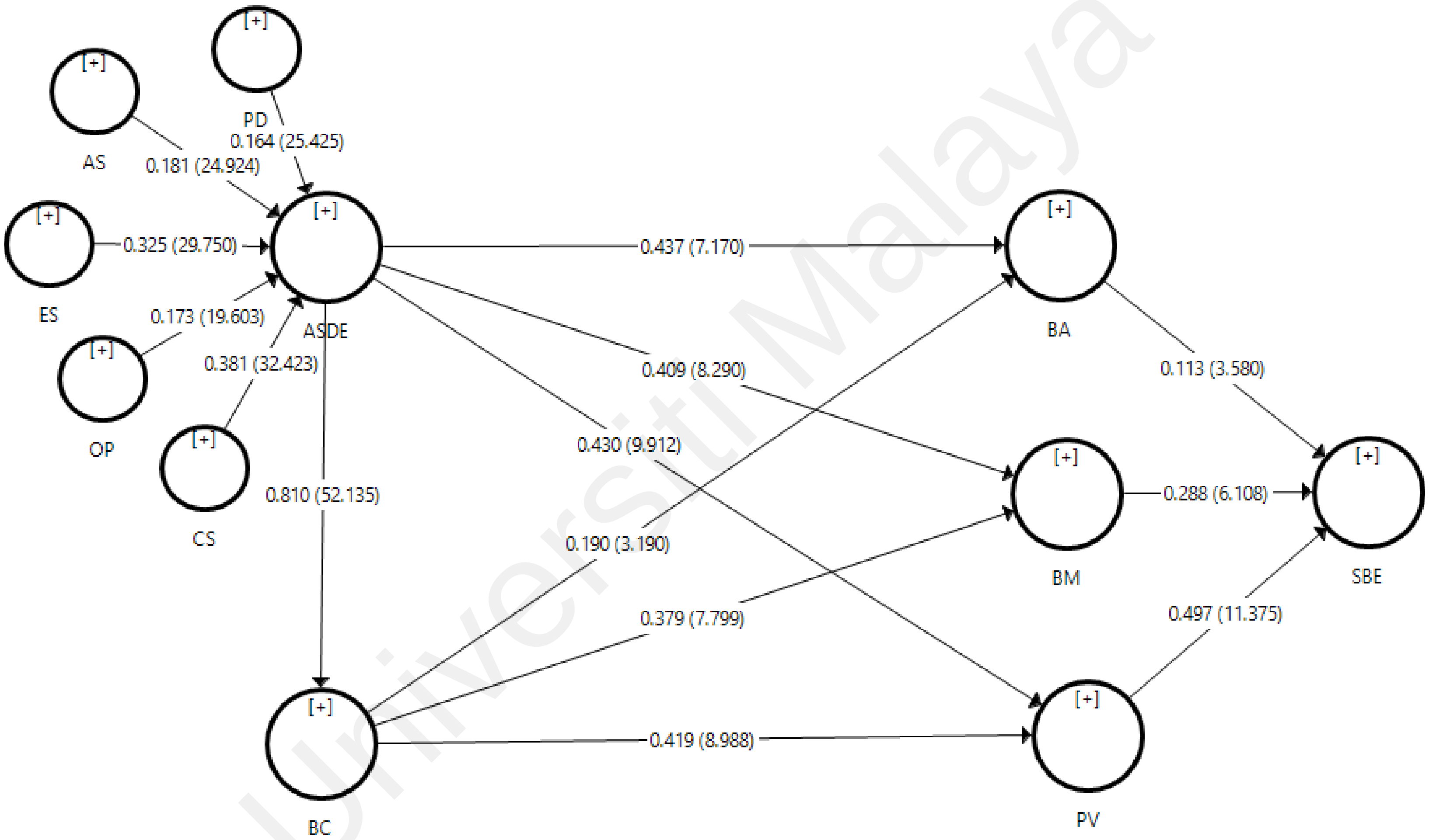

Figure 5.5: Path relationship assessment of CBSBE model

Table 5.28: Path relationships of CBSBE model and hypotheses testing

Hypotheses	Paths	Std. beta (β)	Std. error (SE)	t-values	95% BCa CI	Significant ($p < 0.05$)?	Decision	VIF
H1a	ASDE → BC	***0.810	0.016	52.135	[0.782; 0.834]	Yes	Supported	1.000
H1b	ASDE → BA	***0.437	0.061	7.170	[0.338; 0.536]	Yes	Supported	2.907
H1c	ASDE → BM	***0.409	0.049	8.290	[0.327; 0.491]	Yes	Supported	2.907
H1d	ASDE → PV	***0.430	0.043	9.912	[0.358; 0.502]	Yes	Supported	2.907
H2a	BC → BA	***0.190	0.060	3.190	[0.091; 0.286]	Yes	Supported	2.907
H2b	BC → BM	***0.379	0.049	7.799	[0.298; 0.456]	Yes	Supported	2.907
H2c	BC → PV	***0.419	0.047	8.988	[0.341; 0.493]	Yes	Supported	2.907
H3	BA → SBE	***0.113	0.031	3.580	[0.060; 0.163]	Yes	Supported	1.737
H4	BM → SBE	***0.288	0.047	6.108	[0.212; 0.367]	Yes	Supported	2.560
H5	PV → SBE	***0.497	0.044	11.375	[0.421; 0.564]	Yes	Supported	2.468

*Note: ASDE = Airline service direct experience; BA = Brand awareness; BC = Brand consistency; BM = Brand meaning; PV = Perceived value; SBE = Service brand equity. Critical t value **3.090 ($p < 0.001$) [One-tailed]; BCa CI = Bias-corrected and accelerated confidence interval; VIF = Variance inflation factor.*

The results of the hypotheses testing were calculated by setting up the PLS-SEM algorithm and bootstrap estimation as per Hair, Hult, et al. (2017); Hair et al. (2019). As shown in Table 5.28, ASDE is found to be a strong significant predictor of BC ($\beta = 0.810, t = 52.135,\ p < 0.001$). Moreover, 95% BCa CI: [0.782; 0.834] of this path relationship does not contain any zero between the lower and upper limits of the confidence interval, indicating a significant positive effect. Thus, H1a is supported. Similarly, the path relationships of ASDE and BA ($\beta = 0.437, t = 7.170,\ p < 0.001$), ASDE and BM ($\beta = 0.409, t = 8.290,\ p < 0.001$), ASDE and PV ($\beta = 0.430, t = 9.912,\ p < 0.001$) are also statistically significant, as any of these 95% BCa CI values do not have a zero between the lower and upper limits of confidence intervals. Hence, H1b, H1c and H1d are also supported, which indicate that the positive influence of ASDE on BA, BM and PV are statistically significant. Based on the size of path coefficient between direct service experience and brand equity components, it is concluded that ASDE has a stronger positive influence on BC ($\beta = 0.810, SE = 0.016$) followed by BA ($\beta = 0.437, SE = 0.061$), PV ($\beta = 0.430, SE = 0.043$) and BM ($\beta = 0.409, SE = 0.049$).

The relationships of BC with other brand equity components (i.e., BA, BM and PV) were also examined. The results indicate that the highest effect of 0.419 ($\beta = 0.419, SE = 0.047$) is estimated between BC and PV, followed by 0.379 ($\beta = 0.379, SE = 0.049$) of BC and BM; and 0.190 ($\beta = 0.190, SE = 0.060$) of BC and BA. As shown in Table 5.28, the path coefficient between BC and PV ($\beta = 0.419, t = 8.988$, $p < 0.001$); BC and BM ($\beta = 0.379, t = 7.799,\ p < 0.001$); BC and BA ($\beta = 0.190, t = 3.190,\ p < 0.001$) are statistically significant. Also, zero is not present between the lower and upper limits of 95% BCa CI of any relationship, indicating that H2a, H2b and H2c are statistically significant at a 5% probability of error level. Thus, H2a, H2b and H2c are supported, which explains that BC has positive and significant influence on PV, BM and BA, respectively.

Finally, the relationships between brand equity constructs (i.e., BA, BM and PV) and SBE were also examined. The results in Table 5.28 indicate that PV is the strongest predictor of SBE compared to BA and BM. The highest path coefficient of 0.497 ($\beta = 0.497, SE = 0.044$) is estimated between PV and SBE, followed by BM and SBE ($\beta = 0.288, SE = 0.047$); and BA and SBE ($\beta = 0.113, SE = 0.031$). Moreover, the significance test indicates that the path relationships of BA and SBE ($\beta = 0.113, t = 3.580,\ p < 0.001$); BM and SBE ($\beta = 0.288, t = 6.108,\ p < 0.001$); PV and SBE ($\beta = 0.497, t = 11.375,\ p < 0.001$) are statistically significant at a 0.1% error level. 95% BCa CI demonstrates that all of the path relationships are statistically significant at a 5% probability of error level as a zero does not straddle between any of the upper and lower limits of bootstrap confidence intervals. Therefore, H3, H4 and H5 are also supported, indicating a significant positive influence of BA, BM and PV on SBE. Also, PV has found a strong effect on SBE, followed by BM and BA.

5.8.3.2 Assessment of Mediating Hypotheses

The mediator is a connecting variable that establishes an indirect relationship between a predictor and dependent variable. This research proposes three mediating hypotheses. As explained in Section 4.9.1.4 (p. 147), mediation assessment was carried out following the bootstrapping process of Hayes (2009) and Preacher and Hayes (2008) in Nitzl et al. (2016). Zhao et al. (2010) revisit the mediation analysis and offer a revised concept for assessing the type and magnitude of mediator. Table 5.29 illustrates the revised concept of type of mediation discussed in Zhao et al. (2010).

Table 5.29: Classifying the type of mediation adapted from Zhao et al. (2010)

Issues	Direct effect	Indirect effect	Types of mediation
Significance	Yes	No	Direct-only (No mediation)
	No	Yes	Indirect-only (Mediation/Full mediation)
	Yes	Yes	Complementary/ Competitive mediation (Partial mediation)
Types of partial mediation	Sign of direct path: **Positive**/*Negative*	Sign of indirect path: **Positive**/*Negative*	Complementary (partial) mediation
	Sign of direct path: **Positive**/*Negative*	Sign of indirect path: **Negative**/*Positive*	Competitive (partial) mediation

Similarly, the assessment of variance accounted for (VAF) provides further information on mediation analysis. VAF represents the strength of a mediator in explaining variance to the effect between predictor and dependent variables (Nitzl et al., 2016). VAF values of < 0.20, $\geq 20\% - 80\%$ and $> 80\%$ indicate, respectively, no mediation, typical (partial) mediation and full mediation. However, the calculation of VAF is suggested when the standardised weight of total effect (direct + indirect effect) is at least 0.20 (Hair, Hult, et al., 2017; Nitzl et al., 2016).

Following the above guidelines, 5000 bootstrapping samples and 5% significance level with a two-tailed test were used to examine the mediation effect of BC between ASDE and BA, BM and PV (Hair, Hult, et al., 2017; Nitzl et al., 2016). The calculated results of mediation analysis are illustrated in Table 5.30, which demonstrates the support for the significant indirect effect of BC between ASDE and BA, BM and PV. The direct effects of ASDE → BA ($\beta = 0.437, t = 7.251,\ p < 0.001$), ASDE → BM ($\beta = 0.409, t = 8.207,\ p < 0.001$) and ASDE → PV ($\beta = 0.430, t = 9.936,\ p < 0.001$) are found to be significant. The indirect path relationships, such as ASDE → BC → BA ($\beta = 0.154, t = 3.249,\ p < 0.01$), ASDE → BC → BM ($\beta = 0.307, t = 7.678,\ p < 0.001$), ASDE → BC → PV ($\beta = 0.339, t = 8.845,\ p < 0.001$) are also statistically significant at a maximum of 1% error level. The upper and lower values in 95% BCa CI of two-tailed test substantiate that all the indirect path relationships are significant at a 5% probability of error, as zero is not present in the confidence interval values. Thus, hypotheses 6a, 6b and 6c are supported, which indicate that BC mediates the relationships between ASDE and BA, BM and PV.

The type and magnitude of the mediation effects of BC were further investigated. As indicated in Table 5.30, all the direct and indirect paths are statistically significant and the standardised path coefficients are in similar directions (i.e., positive sign has resulted in both direct and indirect effects), indicating complementary mediation (Zhao et al., 2010). To assess the magnitude of each mediating relationship, the variance accounted for (VAF) was calculated, as suggested in Hair, Hult, et al. (2017); Nitzl et al. (2016). The results show that the mediating path of ASDE → BC → PV explains a relatively higher amount of variance ($VAF = 44.06\%$) compared to ASDE → BC → BM ($VAF = 42.87\%$) and ASDE → BC → BA ($VAF = 26.10\%$). The VAF assessment further substantiates that each mediating path of BC between ASDE and BA, BM and PV designate complementary (partial) mediation (Hair, Hult, et al., 2017; Nitzl et al., 2016).

Table 5.30: Mediating effect of BC between ASDE and BA, BM and PV

Hypotheses	Relationships	Total effect	Direct effect	Indirect effect	t-values	95% BCa CI	Decision	VAF (%)	Type of mediation
	ASDE → BA	***0.591	-						
	ASDE → BA		***0.437						
	• ASDE → BC		0.810						
	• BC → BA		0.190						
6a	**ASDE → BC → BA**	**-**	-	**0.154	3.249	[0.057; 0.246]	Supported	26.10	Complementary (partial) mediation
	ASDE → BM	***0.715	-						
	ASDE → BM		***0.409						
	• ASDE → BC		0.810						
	• BC → BM		0.379						
6b	**ASDE → BC → BM**	**-**	-	***0.307	7.678	[0.229; 0.386]	Supported	42.87	Complementary (partial) mediation
	ASDE → PV	***0.769	-						
	ASDE → PV		***0.430						
	• ASDE → BC		0.810						
	• BC → PV		0.419						
6c	**ASDE → BC → PV**	**-**	-	***0.339	8.845	[0.262; 0.412]	Supported	44.06	Complementary (partial) mediation

*Note: ASDE = Airline service direct experience; BA = Brand awareness; BC = Brand consistency; BM = Brand meaning; PV = Perceived value. Critical t value **2.54 (p < 0.01); ***3.291 (p < 0.001) [Two-tailed]; BCa CI = Bias-corrected and accelerated confidence interval; VAF = Variance accounted for.*

5.8.3.3 Assessment of Model's Predictive Performance

The structural model was further examined for the estimation of prediction accuracy. Prediction accuracy refers to the level of power in predicting a dependent variable by the predictors in a structural model, which is useful for theory building, testing and assessing relevance (Shmueli & Koppius, 2011; Shmueli et al., 2016). Thus, it is necessary to assess the predictive performance of a structural model in regard to both in-sample and out-of-sample predictions. In-sample prediction indicates the level of prediction accuracy within the sample group of respondents, while out-of-sample prediction elucidates the ability of a theory (i.e., structural model) to be applicable in a study population, regarded as predictive validity (Felipe et al., 2017; Hair et al., 2019; Shmueli et al., 2016). Prediction accuracy was estimated using the statistical metrics shown in Table 5.27. Generally, a higher value according to benchmark in four metrics (i.e., R^2, f^2, Q^2 *and* q^2) assumes the high in-sample predictive performance of a theoretical model, however, these do not confirm/explain the model's out-of-sample predictive performance (Ali et al., 2018; Shmueli et al., 2016). To assess the predictive validity of structural theory, the model has to be analysed with a hold-out sample, as suggested in Shmueli et al. (2016). The following section discusses both the in-sample and out-of-sample prediction accuracy based on the suggested statistical metrics.

(a) In-sample Prediction Accuracy of CBSBE Model

The in-sample prediction ability of the CBSBE model is estimated using the coefficient of variation (R^2), effect size (f^2), Stone-Geisser predictive relevance (Q^2) *and* the relative effect of Q^2 (q^2). R^2 indicates the amount of variance explained by the exogenous variables, ranging from 0 to 1, while f^2 expresses the substantial effect of each relationship. Similar to these two metrics, Q^2 and q^2 measure the predictive relevance of the model and relative effect of predictive relevance, respectively. Table 4.31 presents the benchmark values for each metric to assess the in-sample prediction accuracy of the CBSBE model.

Figure 5.6 and Figure 5.7 show the results of explained variance, effect size and predictive relevance of the CBSBE model. Starting from the final endogenous variable of the CBSBE model (see Figure 5.6), SBE explains 66.5% variance ($R^2 = 0.665$) by three predictors, namely BA, BM and PV. A variance of 66.5% is regarded as a high level of prediction accuracy, demonstrating a substantial level of in-sample predictive strength (Chin, 1998b). Similarly, a variance of 65.2% in PV ($R^2 = 0.652$), 56.1% in BM ($R^2 = 0.561$), 36.1% in BA ($R^2 = 0.361$) and 65.6% in BC ($R^2 = 0.656$) indicate substantial, moderate, moderate and substantial predictive accuracy, respectively (Chin, 1998b).

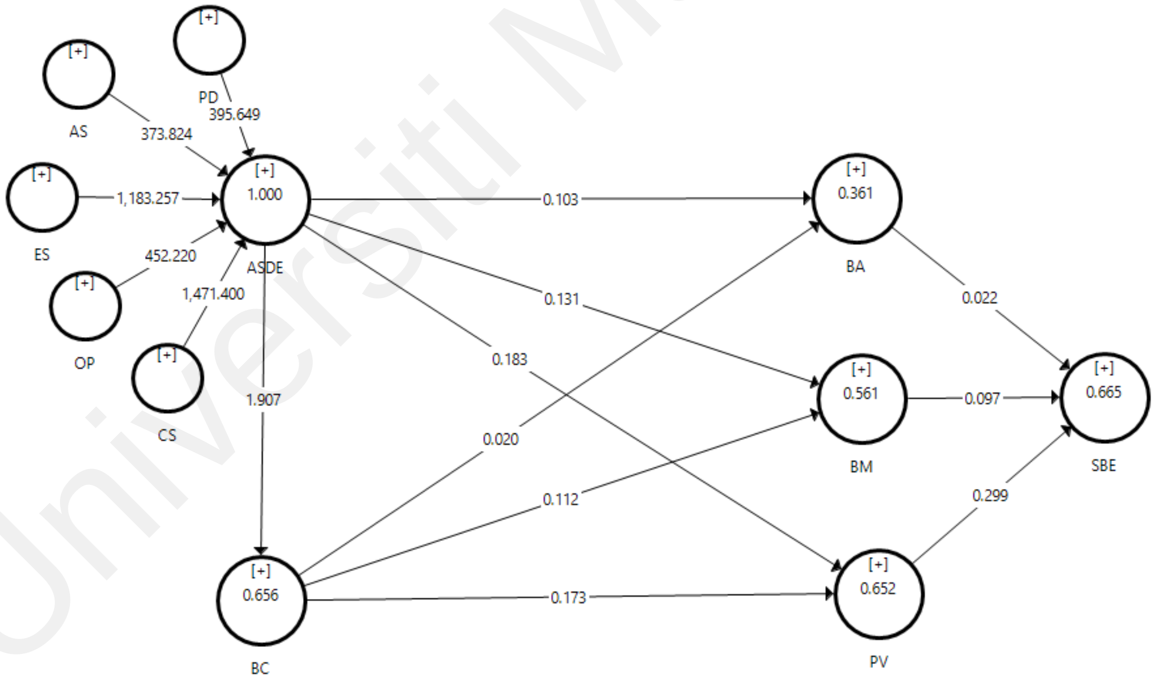

Figure 5.6: Coefficient of determination (R^2) and effect size (f^2) of CBSBE model

When evaluating the relative effect of key predictors in explaining SBE in the CBSBE model, the results in Table 5.31 demonstrate that the relationship between PV and SBE has relatively a higher effect size of 0.299 ($f^2 = 0.299$) compared to the path relationships of BM → SBE ($f^2 = 0.097$) and BA → SBE ($f^2 = 0.022$). Furthermore, an effect size of 0.299 (PV → SBE) is deemed as moderate or close to high relative effect on SBE, while BM → SBE ($f^2 = 0.097$) and BA → SBE ($f^2 = 0.022$) have small effect sizes on SBE (Chin, 2010; Cohen, 1988). This signifies that PV has a stronger relative effect, followed by BM and BA in explaining variance to SBE. In the CBSBE model, BA, BM and PV are predicted by both ASDE and BC. Among these predictors explaining the variance of BA, a relative effect of 0.103 is calculated in the relationship between ASDE and BA, while the effect size of BC → BA resulted in a value of 0.020, indicating a small effect size of both path relationships (Chin, 2010; Cohen, 1988). In predicting BM, the relative effects (f^2) resulting from two predictors, which are 0.131 (ASDE → BM) and 0.112 (BC → BM), indicate a small effect size (Chin, 2010; Cohen, 1988). Similarly, a substantial effect size (f^2) is calculated to be 0.183 in ASDE → PV and 0.178 in BC → PV, representing a medium effect size (Chin, 2010; Cohen, 1988) in explaining the variance in PV. Due to a single predictor of BC, the effect size of 1.907 (ASDE → BC) is far above the maximum f^2 value of 1. Overall, ASDE has observed as a stronger predictor than BC in explaining the variance in BA, BM and PV of the CBSBE model.

Finally, the blindfolding procedure was carried out by setting an omission distance of 7 ($D = 7$) for assessing the predictive relevance of the CBSBE model. Figure 5.7 exhibits the PLS analysis output of predictive relevance. As seen in Table 5.31, the values of cross-validated redundancy (Q^2) are above zero for all endogenous variables (i.e., BC, BA, BM, PV and SBE), supporting the model's in-sample predictive accuracy (Geisser, 1974; Hair, Hult, et al., 2017; M. Stone, 1974). SBE has the highest Q^2 value (0.470), indicating medium or close-to-large predictive accuracy. Similarly, BC (0.433), PV (0.420) and BM (0.387) have resulted in medium predictive relevance, while a Q^2 value of BA (0.218) demonstrates small or close to the medium predictive accuracy of the CBSBE model (Hair et al., 2019). Further analysis was conducted to assess the relative effect of Q^2, which is also regarded as the q^2 effect size. The results in Table 5.31 show that the highest q^2 effect size of 0.134 is calculated in the relationship of PV → SBE, which is considered as the small/close to moderate effect size of predictive relevance, while q^2 effect sizes of BM → SBE (0.042) and BA → SBE (0.008) are considered as weak and negligible, respectively. Similarly, the relative effect of Q^2 in the path of BC → BA (0.009) is regarded as negligible, while q^2 effect size of ASDE → BA (0.050), ASDE → BM (0.064), BC → BM (0.055), ASDE → PV (0.071) and BC → PV (0.067) are regarded as small relative effects of predictive relevance (Hair, Hult, et al., 2017; Sarstedt et al., 2017).

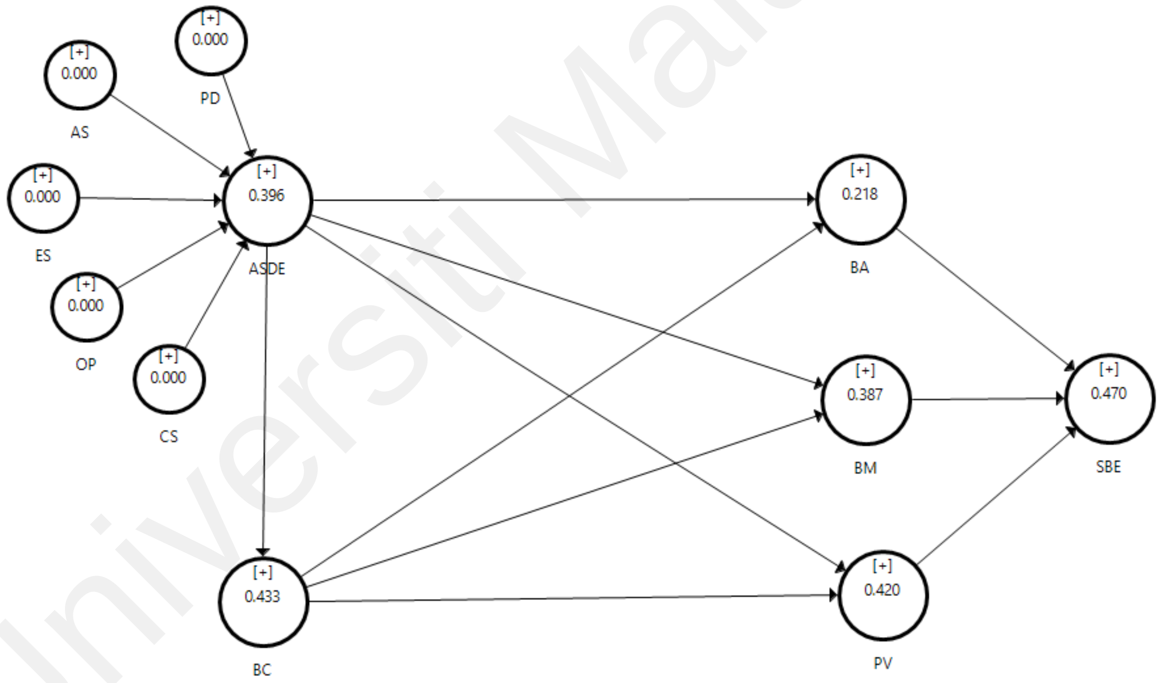

Figure 5.7: Stone-Geisser predictive relevance (Q^2) of CBSBE model

Table 5.31: In-sample prediction accuracy results of CBSBE model

Hypotheses	Paths		Std. Beta (β)	Explained variance		Effect size		Predictive relevance		Relative effect of Q^2	
	IVs	DVs		R^2	*Explanatory level	f^2	***Effect level	Q^2	**Prediction level	q^2	***Effect level
H1a	ASDE	BC	0.810	0.656	Substantial	1.907	Single predictor	0.433	Medium	0.433	Single predictor
H1b	ASDE	BA	0.437	0.361	Moderate	0.103	Small	0.218	Small/Close to medium	0.050	Small
H2a	BC		0.190			0.020	Small			0.009	Negligible
H1c	ASDE	BM	0.409	0.561	Moderate	0.131	Small	0.387	Medium	0.064	Small
H2b	BC		0.379			0.112	Small			0.055	Small
H1d	ASDE	PV	0.430	0.652	Substantial	0.183	Medium	0.420	Medium	0.071	Small
H2c	BC		0.419			0.173	Medium			0.067	Small
H3	BA	SBE	0.113	0.665	Substantial	0.022	Small	0.470	Medium/Close to large	0.008	Negligible
H4	BM		0.288			0.097	Small			0.042	Small
H5	PV		0.497			0.299	Medium/Close to large			0.134	Small/Close to medium

*Note: ASDE = Airline service direct experience; BA = Brand awareness; BC = Brand consistency; BM = Brand meaning; PV = Perceived value; SBE = Service brand equity. *Explanatory level assessment of R^2 based on Chin (1998b); **Prediction level assessment of Q^2 based on Hair et al. (2019); ***Effect level assessment of f^2 and q^2 based on Chin (2010); Cohen (1988)* *(b)* ***Out-of-sample Prediction Accuracy of CBSBE Model***

Traditionally, R^2 has been reported to explain models' prediction accuracy, which in fact demonstrates models' in-sample explanatory power instead of out-of-sample prediction estimation (Hair et al., 2019; Shmueli, 2010; Shmueli & Koppius, 2011). It is essential to evaluate a model's predictive power (i.e., out-of-sample prediction estimation), as it indicates its ability to correctly predict new observations validating a theory (Felipe et al., 2017; Shmueli & Koppius, 2011). Addressing this concern, Shmueli et al. (2016) develop a procedure called PLSpredict, where the overall sample is grouped into analysis data (PLS model) and holdout data (LM model) and compares the results based on the estimation errors (i.e., RMSEA/MAE). The lower estimated error of the PLS model compared to the linear model (LM) indicates a high level of model's predictive performance (Shmueli et al., 2016). Moreover, Q^2*predict* has been assessed for the endogenous constructs with a benchmark value as Q^2*predict* > 0 in analysing a model. Hence, this study applied the advanced technique of PLSpredict and analysed the CBSBE model to assess the out-of-sample predictive performance.

The out-of-sample predictive power of the CBSBE model was assessed following the guidelines of Shmueli et al. (2016). Setting up the PLSpredict algorithm as a cross-validation *k*-fold = 10 in SmartPLS 3.2.8, the prediction errors were obtained. Among the available naïve benchmarks to compare the estimation error between analysis (PLS) and holdout (LM) sample, the root mean squared error (RMSE) is highly recommended in business research, while the mean absolute error (MAE) can also be reported when absolute error does not contain any magnitude of error directions, such as over or under (Hair et al., 2019; Shmueli et al., 2016). This study assessed the CBSBE model based on the values of $Q^2_{predict}$ of endogenous variables and comparison of error estimation between PLS and LM at indicators level. As reported in Table 5.32, the $Q^2_{predict}$ values are above zero ($Q^2_{predict} > 0$). Specifically, $Q^2_{predict}$ values of SBE (0.430), PV (0.557), BM (0.455), BA (0.220) and BC (0.634) are positive and far above zero. A positive value of $Q^2_{predict}$ signifies that the PLS model's prediction error is below the prediction error of simple mean value (Hair et al., 2019; Shmueli et al., 2016). As all of the calculated $Q^2_{predict}$ values of the CBSBE model are positive and above zero, it is confirmed that the model has a high level of performance (Felipe et al., 2017; Hair et al., 2019; Shmueli et al., 2016).

Table 5.32: PLSpredict assessment of constructs

Endogenous constructs	$Q^2_{predict}$	$Q^2_{predict} > 0$
BA	0.220	Yes
BC	0.634	Yes
BM	0.455	Yes
PV	0.557	Yes
SBE	0.430	Yes

Note: BA = Brand awareness; BC = Brand consistency; BM = Brand meaning; PV = Perceived value; SBE = Service brand equity

The indicators' predictive accuracy was also assessed by comparing the error estimations between the analysis sample (PLS) and holdout sample (LM). The results in Table 5.33 indicate that all of the root mean squared error (RMSE) values of the exogenous indicators, except BA1 in the analysis sample (PLS), are lower than the RMSE values of the holdout sample (LM). Also, the mean absolute error (MAE) values of PLS, except for BA2, do not surpass the MAE values of LM. BA1 is observed as a marginally inflated score (0.005) based on RMSE difference, while the MAE difference of BA1 indicates an equal estimation (0.000). Similarly, MAE difference of BA2 is also slightly inflated (0.003) while RMSE's difference of the same indicator is negative (i.e., RMSE of BA2 = - 0.006), which indicate an error estimation of PLS being lower than that of LM. Furthermore, all of the $Q^2_{predict}$ values of indicators are positive ($Q^2_{predict} > 0$), with the exception of BA1 ($Q^2_{predict}$ = -0.008). Overall, the PLSpredict assessment reveals that with the exception of a single indicator (i.e., BA1), all of the other indicators in the analysis sample (PLS) resulted in lower estimation error (RMSE) than the holdout sample

(LM), demonstrating a high predictive performance of the CBSBE model (Felipe et al., 2017; Hair et al., 2019; Shmueli et al., 2016).

Table 5.33: PLSpredict assessment of indicators

Indicators	**PLS**			**LM**			**PLS – LM (Difference)**		
	RMSE	**MAE**	***Q²***	**RMSE**	**MAE**	***Q²***	**RMSE**	**MAE**	***Q²***
BA3	0.901	0.696	0.193	0.908	0.701	0.182	-0.007	-0.005	0.011
BA1	0.991	0.727	0.206	0.986	0.727	0.214	*0.005*	0.000	*-0.008*
BA5	1.036	0.786	0.212	1.047	0.789	0.195	-0.011	-0.003	0.017
BA2	0.895	0.671	0.232	0.901	0.668	0.221	-0.006	*0.003*	0.011
BA4	1.052	0.812	0.225	1.071	0.824	0.197	-0.019	-0.012	0.028
BA6	0.940	0.721	0.271	0.950	0.731	0.257	-0.010	-0.010	0.014
BC6	0.677	0.522	0.500	0.694	0.535	0.474	-0.017	-0.013	0.026
BC3	0.747	0.583	0.488	0.771	0.601	0.454	-0.024	-0.018	0.034
BC2	0.885	0.699	0.378	0.907	0.714	0.348	-0.022	-0.015	0.030
BC5	0.767	0.603	0.423	0.797	0.623	0.378	-0.030	-0.020	0.045
BC4	0.715	0.539	0.428	0.739	0.558	0.389	-0.024	-0.019	0.039
BC1	0.640	0.489	0.544	0.661	0.509	0.513	-0.021	-0.020	0.031
BM1	0.808	0.631	0.356	0.823	0.644	0.332	-0.015	-0.013	0.024
BM2	0.804	0.644	0.388	0.822	0.652	0.360	-0.018	-0.008	0.028
BM3	0.902	0.723	0.358	0.919	0.737	0.332	-0.017	-0.014	0.026
BM4	0.797	0.602	0.389	0.805	0.612	0.376	-0.008	-0.010	0.013
PV1	0.755	0.578	0.457	0.771	0.594	0.434	-0.016	-0.016	0.023
PV5	0.852	0.681	0.293	0.871	0.693	0.262	-0.019	-0.012	0.031
PV6	0.731	0.592	0.453	0.743	0.604	0.434	-0.012	-0.012	0.019
PV3	0.829	0.644	0.357	0.842	0.651	0.338	-0.013	-0.007	0.019
PV2	0.715	0.569	0.465	0.730	0.576	0.442	-0.015	-0.007	0.023
PV4	0.833	0.661	0.406	0.836	0.661	0.403	-0.003	0.000	0.003
SBE5	0.942	0.765	0.397	0.969	0.773	0.362	-0.027	-0.008	0.035
SBE3	0.896	0.704	0.340	0.909	0.718	0.320	-0.013	-0.014	0.020
SBE4	0.912	0.736	0.362	0.935	0.746	0.330	-0.023	-0.010	0.032
SBE2	0.911	0.720	0.324	0.931	0.737	0.295	-0.020	-0.017	0.029
SBE1	0.851	0.686	0.415	0.868	0.691	0.391	-0.017	-0.005	0.024

Note: BA = Brand awareness; BC = Brand consistency; BM = Brand meaning; PV = Perceived value; SBE = Service brand equity. RMSE = Root mean squared error; MAE = Mean absolute error; PLS = Partial least squares path model (Analysis sample); LM = Linear regression model (Holdout sample).

Finally, the structural model in this research has both a satisfactory level of explanatory and predictive power. In-sample prediction of the key endogenous variable (SBE) has found to be substantial ($R^2 = 0.665$), while other endogenous variables have also been estimated as moderate to substantial explanatory accuracy. The out-of-sample prediction assessment exhibits a high predictive accuracy of the structural theory, which validates and preserves the ability to explain new observations beyond the current group of respondents.

5.9 Final Research Model and Findings

Given empirical evidence, such as measurement model validation, structural model predictive accuracy, hypotheses testing, this research offers a new understanding of the service branding theory. The proposed relationships were determined to be statistically significant. Service branding theory in this research is enhanced with a model called CBSBE, which signifies that direct service experience is a predictor of brand equity components, which leads to service brand equity. Figure 5.8 depicts the final version of the model, while Table 5.34 summarises the overall findings.

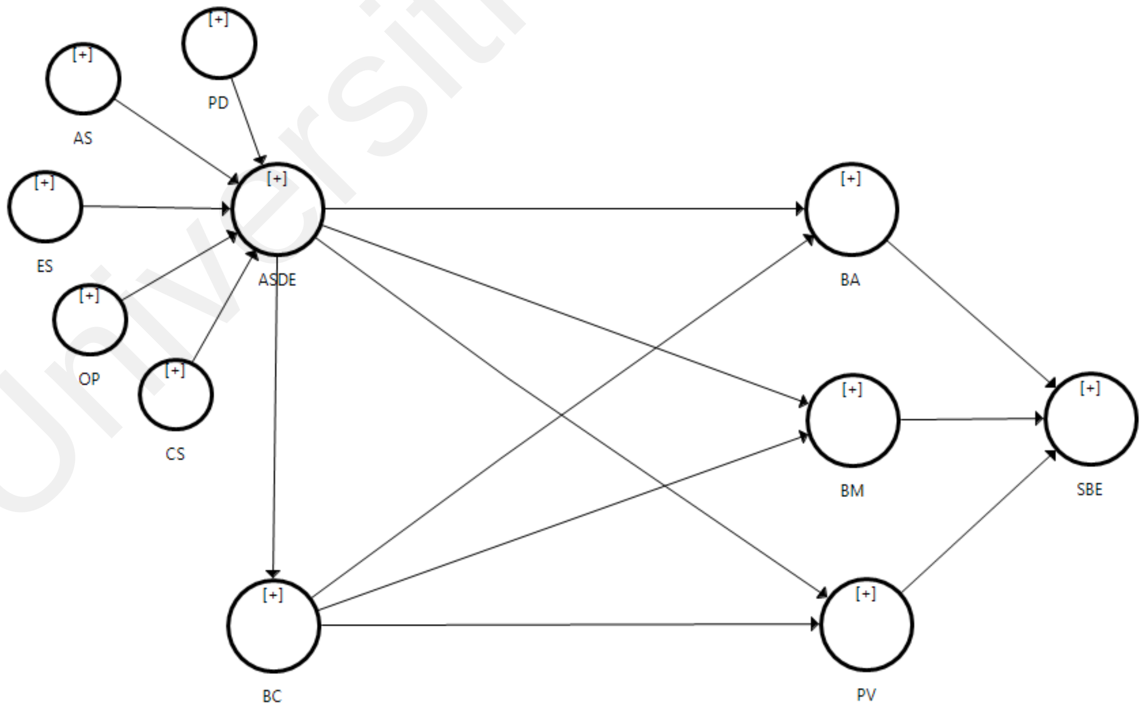

Figure 5.8: Final version of CBSBE model

Table 5.34: Summary of hypothesised relationships

Hypothesised relationships		Std. beta (β)	t-values	Effect size (f^2)	Decision
H1a	ASDE positively influences brand consistency.	***0.810	52.135	1.907	Supported
H1b	ASDE positively influences brand awareness.	***0.437	7.170	0.103	Supported
H1c	ASDE positively influences brand meaning.	***0.409	8.290	0.131	Supported
H1d	ASDE positively influences perceived value.	***0.430	9.912	0.183	Supported
H2a	Brand consistency positively influences brand awareness.	***0.190	3.190	0.02	Supported
H2b	Brand consistency positively influences brand meaning.	***0.379	7.799	0.112	Supported
H2c	Brand consistency positively influences perceived value.	***0.419	8.988	0.173	Supported
H3	Brand awareness positively influences service brand equity.	***0.113	3.580	0.022	Supported
H4	Brand meaning positively influences service brand equity.	***0.288	6.108	0.097	Supported
H5	Perceived value positively influences service brand equity.	***0.497	11.375	0.299	Supported
H6a	Brand consistency mediates the relationship between ASDE and brand awareness.	**0.154	3.249	-	Supported
H6b	Brand consistency mediates the relationship between ASDE and brand meaning.	***0.307	7.678	-	Supported
H6c	Brand consistency mediates the relationship between ASDE and perceived value.	***0.339	8.845	-	Supported

Note: ASDE = Airline service direct experience, Significant at $^{**}p < 0.01$, $^{***}p < 0.001$

5.10 Chapter Summary

This chapter has detailed the quantitative findings of this research. There are no significant differences found between the population means of two independent sources of data collection modes (i.e., KLIA = 551 and online = 101), which has resulted in a combined sample of 652 responses. A comparison between early and late responses indicates a non-response bias in the data. The study has also addressed common method biases (CMB), as the data were collected using a similar method from a single individual. Along with procedural remedies taken during survey questionnaire design, Harman's Single-Factor test and the measured latent marker variable (MLMV) methods were applied to investigate the amount of common method variances. Both statistical remedies have confirmed that CMB was not an issue in this study. After the initial stage of data preparation, the PLS-SEM technique was applied to analyse the theoretical model using SmartPLS 3.2.8. The application of measurement invariance of composites (MICOM) and PLS-Multigroup Analysis (PLS-MGA) techniques have indicated that measurement properties and path relationships of the CBSBE model between the randomly divided two groups are found to be completely invariant. This process has assured that the two data subsets can be pooled into a single data set for further analysis. Assessment of the measurement model has indicated that all of the latent variables are reliable and valid. With the structural model assessment, the CBSBE model has demonstrated a higher level of prediction accuracy in explaining service brand equity. Moreover, the hypothesised relationships are found to be statistically significant, indicating that the theoretical prediction in explaining service branding constructs is valid. The next chapter presents further in-depth discussions and concludes the research.

CHAPTER 6: DISCUSSIONS AND CONCLUSION

6.1 Chapter Introduction

This final chapter discusses the findings and implications of the study in four parts. The discussion begins by presenting the research overview, followed by the research questions and objectives. Then, the theoretical implications, methodology and practice are explained next. Finally, this chapter ends by highlighting the study limitations, suggestions for future research and overall conclusion.

6.2 Research Overview

As presented in Chapter 1, the overall objective of this research is to develop a consumer-based service brand equity (CBSBE) model for airline service. An investigation of the literature provides support for the fact that existing contemporary branding theories are not entirely applicable to airline service branding due to the absence of the crucial components in explaining an airline service brand equity, that is, airline service direct experience. Although several theories are found to be applicable for branding services, some integral constructs such as brand consistency and perceived value are absent. Considering these research gaps, the following questions are addressed:

- RQ1: What is the role of airline service direct experience in developing a CBSBE model?
- RQ2: How does the brand consistency of an airline influence its brand asset components (i.e., brand awareness, brand meaning and perceived value)?
- RQ3: What is the role of brand asset components in creating a positive differential response (i.e., service brand equity) towards the airline?
- RQ4: Does brand consistency mediate the relationship between airline service direct experience and brand asset components?

The above research questions were reformulated into the following research objectives:

- RO1: To study the role of airline service direct experience in developing a CBSBE model.
- RO2: To examine the impact of brand consistency on brand asset components (i.e., brand awareness, brand meaning and perceived value) in building an airline brand.
- RO3: To evaluate the effect of brand asset components in creating a positive differential response (i.e., service brand equity) towards the airline.
- RO4: To assess the mediating role of brand consistency between airline service direct experience and brand asset components.
- RO5: To propose a service branding theory called the consumer-based service brand equity (CBSBE) model as a strategic guideline for the airline industry.

Thirteen hypotheses were tested and found statistically significant, which indicates that the proposed CBSBE model is valid. Table 6.1 summarises the research findings.

Table 6.1: Summary of the research findings

Research questions	Research objectives	Research hypotheses	Findings
RQ1: What is the role of airline service direct experience in developing a CBSBE model?	RO1: To study the role of airline service direct experience in developing a CBSBE model.	H1a: ASDE positively influences brand consistency.	Supported
		H1b: ASDE positively influences brand awareness.	Supported
		H1c: ASDE positively influences brand meaning.	Supported
		H1d: ASDE positively influences perceived value.	Supported
RQ2: How does the brand consistency of an airline influence its brand asset components (i.e., brand awareness, brand meaning and perceived value)?	RO2: To examine the impact of brand consistency on brand asset components (i.e., brand awareness, brand meaning and perceived value) in building an airline brand.	H2a: Brand consistency positively influences brand awareness.	Supported
		H2b: Brand consistency positively influences brand meaning.	Supported
		H2c: Brand consistency positively influences perceived value.	Supported
RQ3: What is the role of brand asset components in creating a positive differential response (i.e., service brand equity) towards the airline?	RO3: To evaluate the effect of brand asset components in creating a positive differential response (i.e., service brand equity) towards the airline.	H3: Brand awareness positively influences service brand equity.	Supported
		H4: Brand meaning positively influences service brand equity.	Supported
		H5: Perceived value positively influences service brand equity.	Supported

Table 6.1: (*Continued*)

Research questions	Research objectives	Research hypotheses	Findings
RQ4: Does brand consistency mediate the relationship between airline service direct experience and brand asset components?	RO4: To assess the mediating role of brand consistency between airline service direct experience and brand asset components.	H6a: Brand consistency mediates the relationship between ASDE and brand awareness.	Supported
		H6b: Brand consistency mediates the relationship between ASDE and brand meaning.	Supported
		H6c: Brand consistency mediates the relationship between ASDE and perceived value.	Supported
	RO5: To propose a service branding theory called the consumer-based service brand equity (CBSBE) model as a strategic guideline for the airline industry.	N/A	As all the research hypotheses were supported, the proposed CBSBE model is valid.

Note: ASDE = Airline service direct experience; N/A = Not applicable

6.3 Discussion of Research Findings

This section discusses key findings of the research based on results reported in chapter 5. The findings have been interpreted in line with empirical evidences and the theoretical conceptualisation. The discussions begin with explaining the results concerning airline service direct experience (ASDE) measurement followed by the research objectives.

6.3.1 Components of Airline Service Direct Experience (ASDE)

Customer experience with providers is the topmost priority, especially in service, as the value of a brand emerges through the customer-provider interaction (Helkkula et al., 2012; Lusch & Vargo, 2011; Merz et al., 2009; Olsson et al., 2012; Vargo & Lusch, 2017). This phenomenon is intensified due to the intangible nature of services (Berry, 2000, 2016). While consumption experience of services evolves through the direct interaction between the consumer and the service companies, product consumption experience emerges from the use of the product itself. Hence, consumer direct experiences with service organisation is the nucleus of services marketing.

Overall, service experience refers to the consumer interaction with service companies over the series of touchpoints while consuming services (Grewal et al., 2009; Lemon & Verhoef, 2016) which could be direct or indirect contacts with companies (Cronin, 2016; Helkkula et al., 2012; Meyer & Schwager, 2007). This research has focused on the direct service experience in developing a service branding model, as the indirect experiences emanating from unplanned encounters exert similar impact across product and service brands (Buil et al., 2013b; Yoo et al., 2000). Moreover, the assessment of service experience is deeply rooted in the various direct touchpoints with service organisations instead of indirect service encounters (Berry et al., 2006). Thus, Berry (2000, 2016) opines that direct service experience plays a major role in devising service branding strategy. Following the conceptualisation of direct service experience in Berry, Carbone, et al. (2002) and Grove et al. (1998), airline service direct experience (ASDE) in this study is a multidimensional construct which consist of decision convenience – purchase decision experience (PD); the process – airport service experience (AS); interaction with employees – employee service (ES); audience – interaction with other passengers (OP) and servicescapes – in-flight core service (CS). According to the univariate analysis (see Section 5.7.1, p. 170), CS is the highly regarded aspect of airline service ($Mean = 5.60; SD = 0.88$) followed by ES ($Mean = 5.57; SD = 0.86$), PD ($Mean = 5.47; SD = 0.90$), AS ($Mean = 5.28; SD = 0.93$) and OP ($Mean = 5.18; SD = 0.91$).

Due to the multidimensional nature of direct service experience, ASDE is conceptualised as a higher-order formative construct with five second-order dimensions measured reflectively. This conceptualisation adheres strictly to the principles and guidelines set out in the measurement theory literature, in that of Coltman et al. (2008); Jarvis et al. (2003). PLS-SEM technique calculates the indicator's weights of the formative construct and demonstrates the most important dimension/indicator (Hair, Hult, et al., 2017; Ramayah et al., 2018). The results indicate that CS ($\beta = 0.381, t = 32.351$, $p < 0.001$) is the most important component of ASDE, followed by ES ($\beta = 0.325, t = 29.700$, $p < 0.001$), AS ($\beta = 0.181, t = 25.516$, $p < 0.001$), OP ($\beta = 0.173, t = 20.026$, $p < 0.001$) and PD ($\beta = 0.164, t = 25.169$, $p < 0.001$). The findings are consistent with past studies [see Berry, Carbone, et al. (2002); Berry et al. (2006); Cronin (2016); Grewal et al. (2009); Grove et al. (1998); Helkkula et al. (2012); Meyer and Schwager (2007); Verhoef et al. (2009); Zomerdijk and Voss (2010)]. Ali, Amin, et al. (2016) also operationalised service experience as a higher-order formative; however, only three components were proposed i.e., ES, CS and OP. This research argues that direct experience with services begins when consumers start searching for information about the service offerings and end with experiencing the service. In other words, consumers pass through five touch points when consuming a service which are purchase decision convenience, the process, interaction with service employees, servicescapes and the interaction with other consumers. Given the similar nature of airline service as a theatrical experience (Grove et al., 1992; Grove et al., 1998), passengers experience the five contact points stated above throughout their journey. This research proposed two additional components which were not identified in Ali, Amin, et al. (2016), which are, purchase decision experience (PD) and airport service experience (AS) – these two are particularly strong components of direct service experience. Thus, with the support of empirical evidence, the conceptualisation of ASDE as a multidimensional formative construct can be further substantiated.

6.3.2 Research Objective 1 (RO1)

The first research objective is to investigate the effects of airline service direct experience (ASDE) on brand asset components [i.e., brand consistency (BC), brand awareness (BA), brand meaning (BM) and perceived value (PV)] in developing a CBSBE model. Based on the objective, four research hypotheses are formulated. The findings of these hypotheses are discussed below:

6.3.2.1 Airline Service Direct Experience (ASDE) and Brand Consistency (BC) [H1a]

The result demonstrates that ASDE has a significant positive effect on BC which supports H1a. This finding is aligned with the stimulus-organism-response (S-O-R) theory in Jacoby (2002) and Mehrabian and Russell (1974) affirming that ASDE is positively associated with BC. The path coefficient of ASDE on BC is found to be very large ($\beta = 0.810$) and positive in direction, suggesting that 81% of positive changes in BC is strongly influenced by the positive changes in direct service experience. Moreover, the descriptive analysis indicates that the services experienced by the airline passengers were harmonious across the direct service touchpoints. As a result, the level of brand consistency (BC) ranked highly on a 7-point scale ($i.e., Mean = 5.55$).

According to the S-O-R theory, stimuli refer to all the touchpoints over the consumption experience, which are the external cues for consumer evaluation of an object. In the service experience domain, both direct and indirect experience touchpoints are the stimuli of consumer perception of a service brand offered by the marketer. The current research considers only direct service experience which acts as the nucleus of services marketing (Berry, 2000, 2016). In terms of indirect experience stimuli such as the different types of advertisements in various media, word-of-mouth communication, publicity, user-generated contents (UGC), etc., consumers do not sense any variation of experience between product and service brands (Belch & Belch, 2018). ASDE as the external stimuli of airline service is the primary cue of airline service evaluation which passes through the stream of short-term to long-term evaluation in internal consumer memory (Jacoby, 2002). Whereas, BC is an assessment of a brand based on how congruent the experience is across various consumer touchpoints (Erdem & Swait, 1998). It is an evaluation of a brand which is internal to the consumer assessment and is stored in the consumer's memory for a short-term before entering into the enduring assessment of that brand in the long-run. Jacoby (2002) recapitulates the S-O-R theory and suggests that some stimuli are internal to the consumer cognitive assessment and a short-term assessment of an object. These stimuli are strongly associated with the external cues and input for the long-term assessment. Therefore, the passenger's evaluation of an airline service is initially derived from the assessment of how cohesive the airline service direct encounters are across the various consumer touchpoints.

The study suggests that all the consumer touchpoints (i.e., purchase decision experience, service process, employee service, servicescapes, etc.) must be designed in a manner which provides a similar level of experiences throughout the journey. Like other services, airline passengers derive the impression about the service brand through congruency in service experience, as each touchpoint conveys a particular message/value to the consumer. A consistent experience across the various service touchpoints signals how reliable and strong the airline brand is (Erdem & Swait, 1998, 2016; Keller, 1993). On the contrary, an inconsistent experience across the service consumption journey suggests a mixed impression about the brand which diminishes the brand equity of services. For instances, if a passenger encounters a poor level of in-flight core service and employees service, but a pleasant experience during purchase decision and airport service, the passenger will perceive discrepancy in assessing the brand equity of that airline. Due to the failure in conveying a consistent level of benefits through the airline service direct experience touchpoints, airline service providers might encounter difficulties in creating a strong brand.

6.3.2.2 Airline Service Direct Experience (ASDE) and Brand Awareness (BA) [H1b]

Although service branding theory in Berry (2000) suggests that direct service experience is the core in creating service brand equity, the theory fails to indicate the importance of direct experience in brand awareness. The present study addresses this shortcoming in previous service branding studies. The finding indicates that ASDE has a significant positive effect on BA, which supports H1b. This is consistent with the theoretical and empirical evidence in past studies [such as Huang and Sarigöllü (2014); Kotler and Armstrong (2017); Lemon and Verhoef (2016)] which indicate that a higher level of direct service experience results in a better BA. As BA is a type of brand asset (Aaker, 1991), it resides in the consumer's memory for a long time (Cowley, 2007; Keller, 2001). Thus, a pleasant airline service experience induces the passenger to retain and recall the experience very vividly and quickly. The result reports a strong effect of 0.437

between ASDE and BA. However, the relative effect of ASDE on BA is small with an effect size of $f^2 = 0.103$, but still considered an important practical effect (Chin, 2010; Cohen, 1988). These clearly substantiate the importance of ASDE in creating airline brand awareness.

For service brands, direct service experience is the key to building a strong brand. The service-dominant logic of marketing emphasises service provision as the means of economic exchange for both goods and services (Vargo & Lusch, 2004, 2008). It is seen as a philosophical notion rather than strategic execution when designing a suitable marketing strategy for products and services (Çifci et al., 2016; de Chernatony & Dall'Olmo Riley, 1999). Therefore, there is still an apparent disparity between products and services when designing marketing strategies. Explicitly, intangible-dominant brands carry a limited number of physical cues which may not be available before consuming the service. With this notion, airline companies are required to focus more on the service consumption experience components (i.e., in-flight core service, employee service encounters, airport service, purchase decision convenience and interaction with other passengers) than only physical attributes such as logo, brand name, interior of airplane cabin, etc., in designing a suitable airline branding strategy.

Through the theoretical lens of S-O-R, ASDE is regarded as external *stimuli* that influence BA. BA is classified as an *organism* that carries a long-lasting memory about brand-related information in the consumer's mind. An enjoyable travel experience (i.e., ASDE) functions in such a way that it is deeply rooted in passenger's long-term memory and reinforces them to retain and recall the experience (Kotler & Armstrong, 2017; Lemon & Verhoef, 2016). Thus, pleasant experiences inside the airline cabin, at the service encounter for check-in and luggage handling, etc., (i.e., ASDE components) would trigger the passenger to remember and recall the name, logo, service nature of airline quickly and vividly. Practically, a brand with top-of-mind awareness comes quickly in the consumer's mind when thinking about a product category or purchase decision (Keller, 1993). The current study also advocates that ASDE is one of the antecedents of BA which would help create awareness of an airline brand.

6.3.2.3 Airline Service Direct Experience (ASDE) and Brand Meaning (BM) [H1c]

The relationship between ASDE and BM was positive and significant, which supports H1c. The finding is aligned with the service branding theory in Berry (2000, 2016) and Berry et al. (2006) and empirical results in Bravo et al. (2019), Iglesias et al. (2019) and So and King (2010). The result suggests that a pleasant airline service direct experience helps to create a favourable brand meaning of airline companies. Also, a large path coefficient ($\beta = 0.409$) value with an effect size of $f^2 = 0.131$ shows a small/close to medium level of practical importance of ASDE in influencing BM. Therefore, direct service experience is found to have a very significant role in creating a favourable brand meaning for the airline brand.

According to S-O-R conceptualisation, external stimuli are the source of a person's internal assessment which resides in a person's memory for a long time. BM in the study is conceptualised as the organismic component of service brand equity. It refers to the central perception or associations attached to a brand residing in the consumer's long-term memory (Berry, 2000; Keller, 1993). Over the stream of consumption experience, consumers attach some associations, feelings and meaning to the brand. Practically, every brand has some psychological meaning/image such as favourable or unfavourable, which dwells in the consumer's long-term memory (Aaker, 1991; Keller, 1993). Such meaning evolves through each touchpoint of consumer experience journey by delivering some meaningful connotations about the brand (Berry, 2000; Nyadzayo & Khajehzadeh, 2016). Like in the airline service, current results also indicate the role of ASDE in creating the brand meaning of airline service. A significant positive effect suggests that an enjoyable airline experience will create a favourable descriptive identity/meaning (BM) for an airline. The association between direct service experience (i.e., ASDE) and BM is strong, as consumer evaluation of services depends on the direct encounters with service consumption touchpoints (Lovelock & Wirtz, 2011; Zeithaml, 1981).

Airline passengers encounter a series of direct service touchpoints such as ticket purchase, employee service, on-board service, interaction with other passengers and airport access service. Every touchpoint delivers benefits to passengers through which overall image/meaning of airline service is implicitly assessed. The research finding attests to this mechanism in developing a favourable BM of airline brand. Reasonably, ASDE is crucial for branding airline, as creating a unique position in a consumer's mind is the core of branding airline service which would help the airline stay competitive (Keller, 2012; Kotler & Armstrong, 2017).

6.3.2.4 Airline Service Direct Experience (ASDE) and Perceived Value (PV) [H1d]

Berry's (2000, 2016) Service branding model does not address the effect of direct service experience in creating perceived value of service brand. Therefore, the study hypothesises a positive association between airline service direct experience (ASDE) and perceived value (PV). The result supports H1d which states that enjoyable direct service experience creates better perceived value of the airline. The path relationship explains 43% of the change in PV is accounted for by the changes in ASDE. This finding is consistent with the conceptualisation of SDL in several studies which assert that value emerges through experiences over the stream of consumer touchpoints [e.g., Cronin (2016); Helkkula et al. (2012); Kumar and Reinartz (2016); Merz et al. (2009); Olsson et al. (2012); Vargo and Lusch (2017)]. A few studies, specifically Ali, Amin, et al. (2016), Bitner (1992), Gil et al. (2008) and Grace and O'Cass (2005) also express that direct service experience is positively related to consumers' cognitive and/or emotional assessment about a brand. A relative effect size of $f^2 = 0.183$ signposts a medium practical importance of ASDE in affecting PV. This finding validates the importance of direct service experience in creating value of an airline brand (Helkkula et al., 2012; Kumar & Reinartz, 2016; Vargo & Lusch, 2017).

The finding also aligns with the S-O-R paradigm where PV, as an organismic component, is the internal assessment about a brand's functional and emotional attributes regarding benefits and sacrifices (Kumar & Reinartz, 2016), whereas ASDE is the external stimuli. Mitchell et al. (2016) argue that consumers realise value through various interactions with multiple actors and service encounters, instead of a dyadic co-creation mechanism. Over the service consumption journey, passengers encounter a series of direct touchpoints through which various types of benefits such as functional, time, efforts, emotional/psychological are experienced at the expense of monetary, time, physiological and psychological efforts. A positive trade-off value between benefits and sacrifices manifests a higher PV (Kumar & Reinartz, 2016; Sweeney et al., 1999; Zeithaml, 1988).

In the airline service setting, passengers come into contact with airline companies when they book their seats. During this initial stage, passengers evaluate purchase decision experience from which value emerges. Similarly, they encounter employee service, in-flight core service, airport access service (both departing and arriving airport service) and interaction with other airline passengers over the airline travel. Each direct touchpoint delivers value which increases or diminishes based on passengers' evaluation of ASDE components. This study explains that an enjoyable experience on each service encounter helps to strengthen the PV of the airline brand while a poor service experience degrades the value.

Overall, ASDE has a positive significant effect on the brand equity constructs (i.e., BC, BA, BM and PV), indicating that an enjoyable airline service direct experience (ASDE) increases the brand equity of the airline. In terms of practical significance, the effect of ASDE on PV was the highest, followed by BM and BA. Although a path coefficient of 0.810 between ASDE and BC implies a strong effect, the estimation of effect size is not relevant due to a single antecedent of BC.

6.3.3 Research Objective 2 (RO2)

The second research objective is to assess the impact of brand consistency (BC) on brand awareness (BA), brand meaning (BM) and perceived value (PV) in building an airline brand. Based on the objective, three research hypotheses were formulated. The findings are discussed below:

6.3.3.1 Brand Consistency (BC) and Brand Awareness (BA) [H2a]

The importance of brand consistency (BC) in branding/brand equity was echoed in Erdem and Swait (1998) and Keller (1993). However, with the exception of Erdem and Swait (1998, 2016), past studies seem to have overlooked the role of BC in developing branding theories, including service branding. This study has attempted to addresses this limitation.

The result reveals that BC has a significant positive effect on BA. Hence, H2a is supported, which explains that high consistency across the consumer touchpoints in airline service experience helps to create a higher BA. The finding is in line with existing studies e.g., Duncan and Moriarty (1998); Kapferer (2008); Keller (1993); Keller et al. (2002); Delgado-Ballester et al. (2012); Erdem and Swait (1998). Previous studies suggest that consistency among the various touchpoints induces the consumer to remember the brand quickly and easily. The descriptive statistics results (section 5.7.2, p. 171) provide evidence that BC and BA of airline service are also high i.e., mean scores are above 5 on a 7-point scale. The results exhibit a marginally small effect size ($f^2 = 0.020$) between BC and BA. Cohen (1988) claims that the practical significance of an antecedent with a small effect size might offer necessary implications for the decision maker. Thus, despite having a small effect size, the implication of managing consistency across the direct service encounters (i.e., BC) should not be disregarded in increasing airlines' BA.

Jacoby (2002) advocates that some internal evaluation of an object (stimuli) functions as an input for organisms which subsequently affect the response of consumers. Likewise, BC, as the evaluation of a brand based on congruency among the various touchpoints, is the stimuli for creating a higher level of BA. Such consistency across the direct experience touchpoints assist consumers in becoming familiar with the brand quickly and easily which reinforces comsumers' mind to store and retain experience-related information (Aronson, 1969; Srull & Wyer, 1989). On the contrary, inconsistent experiences across touchpoints exert asymmetric information which reduces the probability of getting familiar with a brand in the long run. Delgado-Ballester et al. (2012) recommend that a high level of brand consistency facilitates higher brand recall (i.e., BA). Likewise, Kapferer (2008) and Keller (1993) emphasise the importance of brand consistency in boosting brand awareness. Empirical evidence in this research also validates similar findings suggesting that higher levels of BC across the direct service experience touchpoints (i.e., ASDE) are necessary to increase the awareness of a brand (i.e., BA).

In an intangible-dominant service like airline, passengers enjoy airline service in a series of contact points starting from ticket purchase to arriving at a destination airport. Each touchpoint delivers a certain standard of airline service to the passenger that signals the nature of an airline brand. Experiencing a similar kind of subject/information (i.e., name, logo, color, service provisions, level of service standards) over the service trajectory reinforces the human mind to remember and recall experience-related information very quickly. As repeated exposure of similar subject easily gets stored into human brain for a long-time (Srull & Wyer, 1989), congruence across the airline service touchpoints would convey a unique theme (i.e., unique brand positioning) of airline brand to the passengers. Y. Liu et al. (2017) also assert that BC across the value propositions eases recognising a brand. On the contrary, with an inconsistent brand experience, passengers may fail to validate the experience derived from the last touch point. Inconsistent experiences lead to cognitive dissonance and confuse the passengers which will diminish the brand awareness (BA) of an airline. Thus, this research suggests that BC of airline service is also necessary in creating the airline's BA.

6.3.3.2 Brand Consistency (BC) and Brand Meaning (BM) [H2b]

Erdem and Swait (1998, 2016) advocate the importance of brand consistency (BC) in developing brand equity. Nonetheless, the contemporary service branding research has disregarded the significance of BC in building service brand equity of airlines. The result exhibits a standardised path coefficient of 0.379 between BC and BM which is positive and significant, thus supports H2b. It explains that high consistency across the consumer touchpoints in airline service experience journey helps to create unique and favourable brand meaning (BM) of airline companies. The result is consistent with findings from several studies including Bengtsson, Bardhi, and Venkatraman (2010); H. Cooper et al. (2015); Delgado-Ballester et al. (2012); Duncan and Moriarty (1998); Erdem and Swait (1998); Kapferer (2008); Keller (1993); Keller et al. (2002); Schallehn et al. (2014). The level of consistency across the consumer touchpoints is also vital as the study has found a strong effect on BM. Descriptive statistics results provide evidence that the BC and BM of airline service are also high e.g., mean scores are above 5 on a 7-point scale. With a standardised effect of 0.379, it is evident that 37.9% changes in airline BM account for BC across the airline service components. Moreover, a relative effect of 0.112 between

BC and BM demonstrates a small effect size signposting the practical importance of a predictor to the dependent variable (Chin, 2010; Cohen, 1988). Among the two predictors of airline BM, ASDE ($f^2 = 0.131$) and BC ($f^2 = 0.112$) both have an almost similar level of practical significance in developing a favourable meaning of an airline brand. Thus, this study advocates that BC over the airline service consumption journey plays an influential role in constituting a favourable BM of airline brand.

The theory of cognitive consistency in Aronson (1969) and Srull and Wyer (1989) postulates that inexperienced consumers confirm the credibility of an experience based on the consistency found in concurrent touchpoints. Thus, consumers become doubtful about a brand's performance when they experience inconsistent service in each encounter. Empirical evidence of this study describes that each airline service direct touchpoints deliver some meaningful associations about the airline brand such as favourable or unfavourable. A unique meaning of these associations gets validated once the gained experience remains consistent over the service experience journey. Erdem and Swait (1998, 2016) also opine that, BC signals the brand's credibility and clarity (i.e., trustworthy, reliable, pleasant, etc.) which are regarded as favourable associations of a brand. In airline service setting, when passengers encounter various touchpoints, each touchpoint experience should be harmonious and congruent with the experience derived from the last encounter. This consistency brings a subsequent effect in developing a unique favourable image of airline brand as well as ensures the credibility of service performance (i.e., BM). While Schallehn et al. (2014) noted that consistency across the various touchpoints (i.e., BC) ensure brand authenticity (i.e., BM), Delgado-Ballester et al. (2012) echoed BC as enhancing associations or image of a brand. Both studies indicate the significance of BC in developing a favourable BM. The present study thus note that BC across ASDE touchpoints plays a significant role in constituting a pleasant BM of airline service, as airline service experience is intangible-dominant in nature and derives from the interaction between passengers and ASDE touchpoints. Hence, high BC across the enjoyable direct service experience components will create a favourable brand image for airlines.

Pioneer in branding services, Berry (2000, 2016) postulate that BM is the core of service brand equity, which is dominantly influenced by direct service experience. BC in the airline service context is crucial as passengers encounter a series of airline service direct experience (ASDE) components during the journey. Hence, the brand image or meaning (i.e., BM) of the airline service dominantly depends on the consistency across the ASDE components. Consistency in delivering a promised service in each encounter signals reliability, credibility, trustworthiness, pleasant airline service experience which constitute an expressive meaning of an airline brand. Hence, high consistency (BC) across the enjoyable ASDE creates a favourable BM of the airline on the consumer's mind.

6.3.3.3 Brand Consistency (BC) and Perceived Value (PV) [H2c]

Although past research highlighted the concept of BC, such as Duncan and Moriarty (1998); Erdem and Swait (1998); Kapferer (2008); Keller (1993); Keller et al. (2002), the relationship between BC and PV has not been thoroughly investigated. This research addresses this limitation in previous service branding studies. The result shows that the relationship between BC and BM is significant and positive in a direction supporting H2c. It explains that high consistency across the consumer touchpoints in airline service experience journey helps to increase perceived value (PV). This finding is aligned with extant studies e.g., Broniarczyk and Alba (1994); Delgado-Ballester et al. (2012); Duncan and Moriarty (1998); Erdem and Swait (1998, 2016); Kapferer (2008); Keller (1993); Keller et al. (2002). Yoo et al. (2000) remark that brand equity depends on how consistent the brand experience is over the consumption journey. Descriptive statistics demonstrate that passengers have encountered a high level of BC ($i.e., Mean = 5.55$) as well as perceived value (PV) ($Mean = 5.40$) on a 7-point scale. A standardised effect of 0.419 suggests that 41.9% of the changes in PV of airline brand is accounted for by BC of airline service. Moreover, a relative effect of 0.173 between BC and PV demonstrates a medium effect size, suggesting the practical importance of a predictor to dependent variable (Chin, 2010; Cohen, 1988). Among the two predictors of airline PV, both ASDE ($f^2 = 0.183$) and BC ($f^2 = 0.173$) have an almost similar level of practical significance in facilitating the value of airline brands. Thus, it is evident that congruent experiences (i.e., BC) over the airline service consumption journey plays an influential role in strengthening the PV of airline brands.

According to the S-O-R theory, BC is the stimuli of consumer assessment in a short run which influences consumer evaluation in the long run. Mitchell (1998) argues that consumers generally tend to reduce perceived risk during a purchase compared to maximising utility. Consistency of service experience across the touchpoints reduces the perceived risks of consumers and yields confidence in purchase decision making (Erdem & Swait, 1998, 2016). Therefore, the ability to deliver consistent services at the promised level throughout the consumption journey would be advantageous to airline brands, which can be realised through a careful delivery of ASDE touchpoints. Hence, consistency across airline service encounters (i.e., BC) signals the reliability of airline service experience, which adds value to the airline brand.

Consumers encounter many promises (i.e., service provisions which are offered to consumers) from relevant companies. These promises, referred to as value propositions (Kotler & Armstrong, 2017), are delivered through each consumer touchpoint. Congruence between value propositions (promised services) and delivered services (gained experiences) in each touchpoint of service experience journey signals the consistency of service standard/service performance. High consistency (i.e., BC) across the ASDE components diminishes the perceived risks associated with airline service experience journey and strengthens the value of airline brands (i.e., PV). Therefore, the study suggests that a high BC of airline service leads to high PV of the airline brand.

Overall, BC has a significant positive effect on the brand equity constructs (i.e., BA, BM and PV). Specifically, BC is observed to be more critical for materialising PV than creating BM and BA, which shows that high level of BC across the airline service direct experience (ASDE) touchpoints influences the brand equity of airlines.

6.3.4 Research Objective 3 (RO3)

The third research objective is to evaluate the outcome of brand equity elements [i.e., brand awareness (BA), brand meaning (BM) and perceived value (PV)] in creating a positive differential response [i.e., service brand equity (SBE)] to an airline brand. Based on the objective, three research hypotheses are formulated. The findings are discussed below:

6.3.4.1 Brand Awareness (BA) and Service Brand Equity (SBE) [H3]

The results show that the relationship between BA and SBE is significant and positive which supports H3. It explains that high brand awareness (BA) helps to create a positive differential response [i.e., service brand equity (SBE)] in building airline brands. The finding is consistent with several notable studies e.g., Aaker (1991); Berry (2000); Keller (1993) and empirical evidence in studies such as Arnett et al. (2003); Jung and Sung (2008); Kotsi et al. (2018); Pike and Bianchi (2016); Pinar et al. (2016); Washburn and Plank (2002); Yoo et al. (2000)]. As SBE is conceived as the differential response of the consumer, a higher BA of airline service subsequently exerts an indication of eliciting positive behavioural response toward an airline. With a standardised effect of 0.113, a positive change of 11.3% in SBE is accounted for by airlines' BA. Moreover, a relative effect of 0.022 between BA and SBE demonstrates a marginal small effect size (Chin, 2010; Cohen, 1988). Among the previous research, García et al. (2012) and So and King (2010) investigated service branding using the theory in Berry (2000) and a low effect is observed between BA and brand equity. The current finding is consistent with these studies. Despite having a small effect size between BA and SBE, the practical implication should not be ignored (Cohen, 1988).

The finding also aligns with the S-O-R theory where BA, as an organismic component, influences response element (i.e., SBE) in the current study. In the proposed service branding model, SBE is conceived as the consumer differential response when making a purchase decision. In many ways, BA plays a salient role when making a purchase decision especially when consumers have to decide among multiple brands. A brand with top-of-the-mind awareness is likely to be rapidly recalled and recognised when consumers are thinking or searching for a product and service category (Aaker, 1991; Berry, 2000; Keller, 1993). This research reveals that passengers have very few tangible clues through which service standard can be assessed before experiencing the airline service direct encounters. Hence, for the experienced passenger, direct service experience touchpoints (i.e., ASDE) are crucial to creating higher brand awareness (refer to H1b) of airline service. However, the standardised effect between BA and SBE is small ($\beta = 0.113$) suggesting that high brand awareness alone is not sufficient to influence positive behavioural response of those passengers who have prior airline travel experience. Perhaps, other brand equity components such as brand meaning and perceived value of airline could play influential roles in eliciting positive response.

The finding reveals that the recall and recognition of airline name, logo, service experience, etc., alone do not induce experienced passengers to elicit a positive differential response in buying an airline ticket. However, the high level of BA gives a competitive advantage to the airline in securing a place in the passenger's mind.

6.3.4.2 Brand Meaning (BM) and Service Brand Equity (SBE) [H4]

Berry (2000, 2016) notes that between the brand equity components, brand meaning (BM) plays a dominant role in creating service brand equity (SBE) for experienced consumers. The result clarifies that BM has a significant positive effect on SBE which supports H4. It explicates that favourable brand meaning (BM) of airline influences differential response toward brand (i.e., service brand equity (SBE)) in creating positive airline brand equity. The finding is aligned with conceptualisations in Aaker (1991), Berry (2000) and Keller (1993) and several other empirical studies such as Arnett et al. (2003); Jung and Sung (2008); H.-b. Kim and Kim (2005); Kotsi et al. (2018); M. T. Liu et al. (2017); Pinar et al. (2016); Šerić et al. (2017); Y.-C. Wang et al. (2011). A standardised effect of 0.288 suggests that 28.8% of the change in SBE is accounted for by favourable BM of airline. Moreover, a relative effect of 0.097 between BM and SBE reveals a small effect size concerning practical significance (Chin, 2010; Cohen, 1988). The results in García et al. (2012) and So and King (2010) also comply with current findings in a way that BM has stronger effect on SBE compared to BA. This demonstrates that for the experienced airline passenger, BM is more influential than BA in creating positive airline SBE.

BM is the organismic component of brand equity which is the essence of a brand and resides in the consumer's mind over time. When it comes to taking purchase decision among the available options, consumers prefer to buy the brand which has higher brand equity. This behaviour of passengers toward the airline brand can also be abstracted by the S-O-R paradigm. This finding reveals that brand meaning has been cultivated through the market offerings. As a result, an excellent and consistent encounter at each service touchpoint (i.e., on-board service, airport service, employee service) helps in creating a favourable brand meaning of airline companies. On the contrary, poor and inconsistent experience over the service consumption journey signals negative meaning of the airline and subsequently demean the brand equity of airline service. Hence, each touchpoint in the airline service experience journey is crucial to develop a unique favourable image of the airline. At a more abstract level, BM is the overall positioning of a brand in the consumer's mind and signals a distinctive image among the competitors. Such favourable meaning of a service brand (i.e., BM) performs a dominant role in creating positive brand equity of services (Berry, 2000; García et al., 2012; So & King, 2010). Notably, in the situation of invisible purchase (i.e., intangible-dominant brand), a sense of credibility, reliability, trustworthiness, strong personality, pleasant feeling about a brand makes a consumer confident in taking purchase decision (Berry & Seltman, 2007; de Chernatony & McDonald, 2003; de Chernatony & Segal-Horn, 2003). The study has also found a strong positive association between BM and SBE in branding airline service.

Buying of airline service is acknowledged as a complex buying behaviour (Kotler & Armstrong, 2017) and characterised as high experience quality (Zeithaml, 1981). In such type of decision making, consumers remain highly involved in the purchase process. Hence, during the encounters with the airline service direct experience touchpoints, passengers evaluate the performance of airline service. A pleasant experience transforms the airline service into some meaningful associations such as credible and reliable which are regarded as the brand meaning of the airline. The associated meaning of the airline brand (BM) enforces the passenger to respond positively when future action such as positive differential response takes place.

6.3.4.3 Perceived Value (PV) and Service Brand Equity (SBE) [H5]

Although value is acknowledged as indispensable for developing a brand (Boo et al., 2009; Brodie et al., 2009b; Lam et al., 2010; Lassar et al., 1995), contemporary branding research including service branding of Berry (2000, 2016) has given less attention to the role of perceived value (PV) in creating service brand equity. This research addresses this limitation. The result reveals that PV has a significant positive effect on SBE supporting H5. The result is in line with previous studies including Boo et al. (2009); Brodie et al. (2009b); W. G. Kim et al. (2008); Kotsi et al. (2018); Lam et al. (2010); C.-R. Liu et al. (2015); Pike and Bianchi (2016); Sweeney and Soutar (2001); suggesting that the perceived value of a brand is one of the strong determinants of consumer response. Current evidence equally indicates that higher utilitarian and non-utilitarian value of airline service function as a strong predictor to increase consumer positive differential response characterised as service brand equity. A standardised effect of 0.497 implies that 49.7% changes in consumer differential response account for the PV of airline brand. Moreover, a relative effect of 0.299 between PV and SBE indicates a close to large effect size regarding practical significance (Chin, 2010; Cohen, 1988). This finding demonstrates that among the three antecedents of airline SBE, PV has the largest positive significant effect in the brand equity of airline service.

Creating a positive service brand equity is instrumental in building a strong service brand (Berry, 2000, 2016). According to Berry, for the experienced consumer, brand meaning plays a central role rather than brand awareness in creating positive service brand equity, whereas, brand awareness derived from the indirect experience touchpoints are influential in creating service brand equity for inexperienced consumers. Although this analogy in Berry (2000, 2016) is aligned with SDL view (Brodie et al., 2006; Brodie et al., 2009b), the empirical evidence of this research contradicts Berry's service branding theory concerning the expressive role of PV in creating airline SBE. This research argues that PV is the central route compared to BM and BA in creating airline brand equity for the experienced passengers, whereas BA has the least effect on SBE among these three brand equity components. Berry (2016) revisits the conceptualisation of service branding theory and express that at the abstract level, service marketers should give more attention to value instead of price in service offerings. Nonetheless, PV, as one of the identical brand equity constructs is not included in Berry's model. In services marketing, value is viewed as a central aspect of exchange between beneficiaries and providers (Vargo & Lusch, 2004, 2017) and influences the consumer response positively (Bajs, 2015; Lam et al., 2010; Sweeney & Soutar, 2001). In this research, perceived value is a dominant aspect of SBE.

According to SDL, value is the medium of exchange derived from consumer experience with services and central to services marketing (Cronin, 2016; Helkkula et al., 2012; Kumar & Reinartz, 2016; Merz et al., 2009; Vargo & Lusch, 2017). The proposed theory (i.e., CBSBE model) also suggests that the perceived value of an airline brand develops and is realised when the airline passengers encounter the direct service touchpoints. Specifically, starting from airline ticket booking to reaching the destination airport, passengers sacrifice their time, effort, money, emotions to gain functional and socio-psychological benefits. An enjoyable and pleasant service experience over the airline journey is materialised as an added value to the airline brand. A higher PV of airline service increases passengers' confidence and elicit a different positive response (i.e., SBE) toward the airline.

Finally, the study has found that brand equity components (i.e., BA, BM and PV) disproportionately influence service brand equity (SBE) of the airline. Specifically, PV is the most influential predictor followed by BM and BA in creating positive airline SBE. Although BA has a minimal effect in influencing SBE, the practical significance of creating high brand awareness cannot be ignored. Thus, maximising PV and creating favourable BM through ensuring pleasant airline service experience would be the cornerstone for branding airline service.

6.3.5 Research Objective 4 (RO4)

The fourth research objective is to assess the mediating role of brand consistency between airline service direct experience and brand asset components, i.e., brand awareness, brand meaning and perceived value. Jacoby (2002) revisits the S-O-R paradigm and explains that some stimuli permeate into consumers' internal assessment in the long run via the route of short-term internal assessment in the consumer's mind. Those internal assessments are the stimuli which influence consumers' cognitive and psychological assessment in the long run. Hence, some internal stimuli function as a connecting route between external stimuli and organisms in the consumer response theory. In the proposed theory, BC is conceived as the internal assessment of airline brand based on service experience gained by the airline passenger. Due to the nature of BC as internal and immediate evaluation of airline brand, it is conceptualised as the stimuli for other brand equity components (i.e., BA, BM and PV) in the behavioural response sequence. Despite its relevance in consumer assessment of brands, previous studies have disregarded the mediating role of BC between direct service experience and brand equity constructs. Addressing these shortcomings, this research examines three hypotheses which are highlighted below:

6.3.5.1 Airline Service Direct Experience (ASDE), Brand Consistency (BC) and Brand Awareness (BA) [H6a]

The result shows that the mediating role of BC between ASDE and BA is statistically significant with an indirect effect of 0.154. This indicates that 15.4% changes in BA account for the indirect effect of ASDE via BC. Therefore, hypothesis H6a is supported. Given the intervening effect of 0.154, the direct effect of ASDE → BA is estimated as 0.437 which is very strong compared to the indirect effect. As both direct and indirect paths are statistically significant and positive, the type of mediation effect is regarded as complementary (partial) mediation with a variance of 26.10% ($VAF = 26.10\%$) (Hair, Hult, et al., 2017; Nitzl et al., 2016; Zhao et al., 2010).

According to the consumer response hierarchy in Jacoby (2002), the role of external stimuli in organising the consumer assessment of a brand may not always follow the direct route. Consumers validate their long-lasting assessment of consumer experience based on implicit learning in a short-run. Thus, the current result reveals that the BA of an airline is also affected when passengers experience enjoyable airline service along with congruency across the airline service direct experience (ASDE) components. Although the indirect effect ($\beta = 0.154$) was small compared to the direct effect ($\beta = 0.437$), the total effect of 0.591 is large enough to demonstrate the importance of both direct and indirect effect in creating BA of the airline. This finding suggests that BA of airline among the experienced passengers emerges strongly through the pleasant encounter with ASDE components rather than via the assessment of BC of airline service. This is because, for the experienced passengers, the nature of ASDE in each encounter exerts an indication of airline service experience as a memorable, delightful experience which resides in the consumer's memory in the long-run. Hence, the direct path of ASDE → BA functions as a central route in creating a high level of airline BA compared to an indirect path through BC. As the magnitude of awareness is manifested by the repeated exposure of brand touchpoints and delightful experience derived in each touchpoint (Aaker, 1991; Berry, 2000; Keller, 1993), airline service experience via consistency across the ASDE components play a subordinate role. However, the indirect effect of airline service direct experience via BC of airline service cannot be discounted. An enjoyable airline service along with maintaining consistency across the ASDE components are necessary for creating an airline service BA.

6.3.5.2 Airline Service Direct Experience (ASDE), Brand Consistency (BC) and Brand Meaning (BM) [H6b]

The result demonstrates that the mediating role of BC between ASDE and BM is statistically significant with an indirect effect of 0.307. Hence, hypothesis H6b is supported; indicating that 30.7% changes in BM account for the indirect effect of ASDE on BM via BC (i.e., ASDE → BC → BM). The finding is consistent with the theoretical assumption in Aronson (1969), Jacoby (2002) and Mehrabian and Russell (1974). In contrast to the intervening effect of 0.307 between ASDE and BM through BC, the direct effect of ASDE → BM is estimated as 0.409 and significant, indicating that both the direct and indirect effects are essential for creating favourable brand meaning. Since both direct and indirect paths are statistically significant and positive, the type of mediation effect is referred to as complementary (partial) mediation with a strong variance of 42.87% ($VAF = 42.87\%$) (Hair, Hult, et al., 2017; Nitzl et al., 2016; Zhao et al., 2010).

In this study, airlines' BM is conceived as the favourable association of airline service, which represents the position of an airline brand in the consumer's mind. Berry (2000, 2016) stress that consumer experience with the company (i.e., ASDE) plays a dominant role in creating favourable BM. Passengers' experience with each encounter in the airline service experience journey was found to be the most crucial factor in creating favourable BM of the airline (H1c). Further, enjoyable airline service in each ASDE encounter along with congruence between service offerings and service performance in each touchpoint (i.e., BC) exert a strong effect ($\beta = 0.307$) in creating favourable BM. Such consistency is crucial in the service experience journey as inconsistency in each service encounter delivers an unfavourable meaning or association about the service experience (Aronson, 1969). Hence, the intervening role of BC is evident as an essential element between ASDE and BM in creating a favourable BM of airlines.

6.3.5.3 Airline Service Direct Experience (ASDE), Brand Consistency (BC) and Perceived Value (PV) [H6c]

Empirical investigation of this study also supports the intervening role of brand consistency between airline service direct experience and perceived value. The result has found that the indirect effect of ASDE on PV through BC (ASDE → BC → PV) is calculated as 0.339 and significant, which supports H6c. This reveals that 33.9% changes in PV account for the relationship of ASDE → BC → PV. The finding is consistent with the theoretical assumption in Aronson (1969), Jacoby (2002) and Mehrabian and Russell (1974). In contrast to the intervening effect of 0.339 between ASDE and PV through BC, the direct effect of ASDE → PV ($\beta = 0.430$) is also statistically significant reflecting that both the direct and indirect effect is vital for strengthening the perceived value of airline brand. Moreover, the type of mediation effect (ASDE → BC → PV) is referred to as complementary (partial) mediation with a large variance of 44.06% ($VAF = 44.06\%$), as both direct and indirect paths are statistically significant and similar in the direction as positive (Hair, Hult, et al., 2017; Nitzl et al., 2016; Zhao et al., 2010).

Value is central to market exchange which evolves through consumer experience with companies or products (Cronin, 2016; Helkkula et al., 2012; Vargo & Lusch, 2017). In the service experience journey, consumers encounter a series of direct and indirect touchpoints from which values are exchanged (Kumar & Reinartz, 2016; Sweeney et al., 1999; Zeithaml, 1988). In the current research, airline service direct experience is evidently the most influential predictor for creating positive value (i.e., PV) of airline brand (H1d). Whereas, passengers' assessment of BC combined with enjoyable airline service direct experience also plays a strong role ($\beta = 0.339$) in strengthening PV of the airline. This implies that the role of BC in airline service experience is undoubtedly vital in creating airline brand value. As marketers offer value to consumers through the various touchpoints (Helkkula et al., 2012; Kumar & Reinartz, 2016), congruence between the promise of value and actual consumer experience with touchpoints confirm the perception of value. Based on the study findings, the perceived value of airline service is realised when each ASDE encounter delivers the promised level of airline service. Consistency in service performance across ASDE touchpoints reduces passenger's costs, time, effort and increases the confidence of getting desired service which subsequently accentuates the value of airline brand. That is why the indirect effect of ASDE on PV through BC is found to be strong.

Overall, the mediating hypotheses (i.e., H6a, H6b and H6c) are supported. However, among the three indirect relationships of ASDE on brand equity components of airline service through BC, ASDE → BC → PV ($\beta = 0.339$) is stronger than ASDE → BC → BM ($\beta = 0.307$) and ASDE → BC → BA ($\beta = 0.154$). This suggests that both the direct effects between ASDE and brand equity elements and an indirect effect through BC are essential in creating service brand equity, specifically for creating PV and favourable BM of airline brand.

6.3.6 Research Objective 5 (RO5)

The fifth and final objective of this research is to suggest a service branding theory called as consumer-based service brand equity model as a strategic guideline for the airline industry.

Given the lack of a suitable service branding model which can be adapted by airline companies, this study suggests a theory called the consumer-based service brand equity or CBSBE model for branding airline. The proposed theory is argued to be more robust than the existing service branding theory of Berry (2000, 2016), as some integral components of brand equity such as brand consistency, perceived value along with the role of direct service experience in building service brand equity were largely ignored in past literature. This study incorporates the crucial role of direct service experience, BC and PV along with other brand equity elements in building service brand equity for airline companies.

Data was collected from full-service airline passengers and analysed using a partial least squares structural equational modelling (PLS-SEM) methodology. The results reported that the proposed relationships are statistically significant at 1% probability of error level. Specifically, among the thirteen hypotheses in the CBSBE model were proposed, none has shown an insignificant association. The model has shown a moderate to substantial level of prediction accuracy in explaining service brand equity in regards to in-sample prediction. The high predictive performance of the proposed model is also estimated based on out-of-sample prediction technique (i.e., PLS-Predict), demonstrating a potential for generalisability beyond the current sample group of airline passengers.

The theory suggests that building a strong airline brand follows a stimuli-organism-response (S-O-R) process. During the airline service experience journey, passengers encounter various airline service direct experience (ASDE) touchpoints. These touchpoints are the input in the passenger evaluation of airline brand for short-term to long-term. Therefore, a pleasant and enjoyable experience with the ASDE touchpoints could positively influence passengers' assessment of airline brands. These in turn strengthens the BC, increases BA, creates favourable BM and elevates the PV of airline brand. Among these four brand equity components, BC is the assessment of brand in the short-run (S) which also positively influences the other components, for instance - BA, BM and PV of airline brand in the long-run (O). Finally, favourable assessments of brand equity components (O) of airline brand will create positive service brand equity (R) for airline companies. Empirical findings also substantiate the underlying theoretical assumptions and may be extended to the full-service airline companies. Therefore, the

CBSBE model is recommended as an appropriate service branding theory for the airline industry.

6.4 Contributions of the Study

The following section discusses the theoretical/knowledge, methodological and practical implications of this research.

6.4.1 Contributions to the Theory and Knowledge

This study addresses some of the limitations of existing brand equity research, including previous service branding theory. Precisely, the popular service branding theory of Berry (2000, 2016) does not fully conceptualise the relevant relationships and omits two crucial brand equity components such as brand consistency and perceived value. This research addresses these limitations and offers an alternative service branding theory based on the direct service experience.

First, this research contributes to the service branding theory by extending Berry's (2000, 2016) theoretical model through the addition of BC and PV. Though previous literature highlight the significance of *brand consistency* (Delgado-Ballester et al., 2012; Duncan & Moriarty, 1998; Erdem & Swait, 1998, 2016; Kapferer, 2008; Keller, 1993; Keller et al., 2002) and *perceived value* (Boo et al., 2009; Brodie et al., 2009b; Lam et al., 2010; Lassar et al., 1995) in branding setting, little evidence has been found to integrate these two variables into the existing service branding model. Hence, the addition of BC and PV in the theoretical model (i.e., CBSBE) deepens the foundation of service banding theory. By emphasising direct service experience in creating strong service brand equity, this theory (CBSBE model) is considered suitable for other services which are intangible dominant (Shostack, 1982) and high in experience and credence quality (Zeithaml, 1981).

Second, although consumer experience with services is the nucleus of creating value of the service brand (Berry, 2016; Helkkula et al., 2012; Lusch & Vargo, 2011; Merz et al., 2009; Olsson et al., 2012; Vargo & Lusch, 2017), the role of direct service experience in building service brand equity has been marginally addressed in the past literature. Precisely, in the service branding theory, Berry (2000, 2016) explain the role of direct service experience in creating brand meaning (BM) only. The present study however argues that direct service experience strengthens all the brand equity components (i.e., brand consistency, brand awareness, brand meaning and perceived value). In a different sense, direct service experiences are the source of nourishing BC, BA, BM and PV of service brand. In services marketing, direct service experience is the crucial component of overall service evaluation as consumers are highly involved in the purchase decision process and perceived difference among the brands such as airlines, hotels, hospitals etc. are high. Therefore, the CBSBE model is suitable for building a strong airline brand as airline service direct experience components are crucial to airline service experience (A. H. Chen et al., 2008; S. Kim et al., 2016; Mikulić & Prebežac, 2011). Besides, this theory (i.e., CBSBE model) is argued to be applicable for branding other services if the direct service experience components are fine-tuned to the specific service category. Thus, this research is one of the pioneering studies expanding the role of direct service experience in CBSBE model and also incorporating BC and PV to the service branding theory in building strong service brand equity for airlines.

Third, the conceptual relationship between BC and other brand equity constructs (i.e., BA, BM and PV) also offer theoretical contributions. Previous research on BC such as Erdem and Swait (1998, 2016) suggest that BC signals clarity and credible brand image into the consumer's mind; still the influence of BC on BA and BM are not clear. Although, Delgado-Ballester et al. (2012) investigated the effect of brand message consistency between familiar and nonfamiliar brands based on brand recall, brand attitude and brand association, the conceptualisation of BC is limited only to the marketing communication message. This research conceives BC as the congruence between value propositions and actual experience encountered in various consumer touchpoints. Therefore, investigating the relationships of BC with BA, BM, PV opens up new understanding about the function of BC in materialising brand assets for the service brand.

Fourth, due to the absence of BC in previous service branding research, investigating the mediating effects of BC between ASDE and brand assets namely BA, BM and PV provide a deep understanding about the significance of BC in creating BA, BM and PV. Precisely, this research investigates both the direct and indirect relationships of ASDE with BA, BM and PV through BC, which divulge a conducive theoretical explanation in building a service brand for airlines.

Fifth, this study suggests that ASDE plays a leading role compared to BC in strengthening brand asset components (i.e., BA, BM and PV) of airline brands. While ASDE is the strong predictor of materialising BC, PV, BM and BA respectively, BC plays a strong role in creating PV and BM but a weak role for BA. Empirical investigation reveals that the direct influence of ASDE on BA is strong compared to the indirect influence through BC. However, the direct and indirect influence of ASDE on PV and BM via BC are largely similar regarding path coefficient, suggesting that airline service experience should be pleasant and consistent across the direct service touchpoints to increase PV and constitute favourable BM of the airline. Among the brand equity components (i.e., BA, BM and PV) directed toward creating service brand equity (SBE), PV is central in building a strong airline brand followed by BM, whereas, BA has a marginal role in creating SBE. Therefore, this study advances current knowledge of building a strong service brand; it also indicates that enjoyable ASDE and a higher level of BC across the service encounters are the keys to strengthening the brand assets of airline service which disproportionately influence service brand equity. Precisely, among the brand asset elements, PV followed by BM and BA are the critical aspects of building a strong service brand like airlines. Table 6.2 outlines the summary of the theoretical contribution of this research.

Table 6.2: Theoretical contributions of CBSBE model

CBSBE Model	Berry (2000)	Çifci et al. (2016)	Theoretical contributions (yes/no)?	
Airline Service Direct Experience (ASDE)	Customer experience with company *[only linked to BM]*	*Not Available*	*H1a+, H1b+, H1c+, H1d+ (RO1)*	***Yes***
Brand Consistency	*Not Available*	*Not Available*	*H2a+, H2b+, H2c+, H6a, H6b, H6c (RO2 & RO4)*	***Yes***
Brand Awareness	Brand Awareness	Brand Awareness		No
Brand Meaning	Brand Meaning	*Not Available*		No
Perceived Value	*Not Available*	*Not Available*	*H5+ (RO3)*	***Yes***
Service Brand Equity	Brand Equity	Brand Loyalty		No

Sixth, conceptualising direct service experience also brings up a new window to understand the nature of direct service encounters. In the past literature, direct service experience has been acknowledged as a theatrical concept which indicates four components such as the service employees, the audiences, the physical setting and the process to experience service (Grove et al., 1992; Grove et al., 1998). Whereas, Berry, Seiders, et al. (2002) identify five service convenience elements among which decision and access convenience are relevant to the current conceptualisation of direct service experience. Therefore, this research suggests that direct service experience as multidimensional components consist of five encounters which are: the purchase decision experience, the service employees (employee service), the audiences (interaction with other consumer), the servicescapes (core service) and the process (access to service). Although, Ali, Amin, et al. (2016) conceive and operationalise direct service experience with three components namely employee service, core service and other consumers in the hotel service setting, a comprehensive conceptualisation of direct service experience encounters is rare in services experience literature including airline. This study suggests five components of direct service experience starting from consumer purchase decision encounters to service consumption experience encounters which are tailored to the airline service setting (see Table 6.3).

Table 6.3: Theoretical contribution in regard to conceptualising direct service experience components in an airline setting

No.	**ASDE Components** (Direct service experience components)	**Conceptualised by Berry (2000)**	**Conceptualised by Grove et al. (1992) & Grove et al. (1998)**	**Operationalised by Ali, Amin, et al. (2016) in the hotel service context**	**Theoretical contributions**
1	***Purchase decision experience*** (Purchase decision)	Berry (2000) only conceptualised this variable as "Customer experience with the company", however, he did not specify the components in details	*Not available*	*Not available*	*Yes*
2	***Airport service experience*** (The process)		The process	*Not available*	*Yes*
3	***Employee service*** (Interaction with employee)		Interaction with employee	Interaction with staff	No

Table 6.3: (*Continued*)

No.	ASDE Components (Direct service experience components)	Conceptualised by Berry (2000)	Conceptualised by Grove et al. (1992) & Grove et al. (1998)	Operationalised by Ali, Amin, et al. (2016) in the hotel service context	Theoretical contributions
4	***Interaction with other passengers*** (The audiences)		The audiences	Interaction with other customers	No
5	***In-flight core service*** (Servicescapes)		Servicescapes	Physical environment	No

6.4.2 Methodological Contributions

This study contributes methodologically to the service branding literature in two ways. **First,** along with suggesting an alternative service branding theory which is illustrated by CBSBE model for the airline, the model is operationalised following a quantitative approach. Very few research, specifically, C.-F. Chen and Tseng (2010); Uslu et al. (2013) have investigated airline service brand equity, but, they follow brand equity conceptualisation in Aaker (1991) while ignoring the importance of service experience. Even though few research such as hotel branding (So & King, 2010), destination branding (García et al., 2012) operationalised service branding model in Berry (2000), still, these studies lack a comprehensive approach of testing this theory. In particular, García et al. (2012) examined only the role of indirect service experience component in building destination brand equity; while So and King (2010) tested the inter-construct relationships of Berry's model in which service experience was measured using a unidimensional scale. As consumers experience a series of direct encounters with companies (Berry, Carbone, et al., 2002), a unidimensional measure would discount the comprehensive understanding of direct service experience. This study is arguably the first to address the limitations of existing service branding theory along with missing links between the variables (see

Section 1.5, p. 12 and Section 2.5, p. 36) and operationalised the CBSBE model in the context of airline service. This study employs the partial least squares structural equation modelling (PLS-SEM) techniques to analyse the theoretical model. Precisely, along with traditional PLS-SEM analytical tools, the use of measurement invariance of composites (MICOM), partial least squared multigroup analysis (PLS-MGA) and PLS-Predict technique substantiates the robustness of CBSBE model's generalisability in airline service industry.

Second, the operationalisation of direct service experience in the airline service context also provides methodological contribution to construct measurement and operationalisation. Although Berry (2000, 2016) stress the significance of direct service experience in branding services, it was not empirically measured. Ali, Amin, et al. (2016) took an initiative to operationalise the construct following a higher-order formative conceptualisation with three dimensions such as servicescapes (i.e., CS), employee service (i.e., ES) and other consumers (i.e., OP), in a hotel setting. However, measuring direct service experience with additional two components e.g., purchase decision experience (i.e., PD) and the process (i.e., AS), is rare in the services marketing literature including airline service (refer to Table 6.3). Results in this study indicate that all the five components of airline service experience (ASDE) are significant and sufficiently converged to measure ASDE as a higher-order formative construct. Thus, this empirical investigation affirms that ASDE consists of five components, which could be applicable to measure service experience in other settings by tailoring the measurement scale of each component.

6.4.3 Managerial and Marketing Implications

Feiereisen, Hennig-Thurau, and Mitchell (2016) argue that managing an overall airline travel experience assures a desirable outcome to both passenger and company. However, the indispensable role of airline service direct experience in inducing brand asset components was largely neglected in C.-F. Chen and Tseng (2010). The findings also have practical implications for mitigating the managerial difficulties in developing branding strategy for airline companies.

6.4.3.1 Important Components of ASDE

Among the five components of ASDE, in-flight core service (CS) is the most crucial component of airline service followed by employee service (ES), airport service experience (AS), interaction with other passengers (OP) and purchase decision experience. The finding suggests the practical implications for branding airline service in a way that airline companies could assure a pleasant and enjoyable service inside the aeroplane cabin as well as service from the airline staff throughout the journey.

The following implications can be proposed concerning *in-flight core service (CS)* of airline.

- **First**, the airplane cabin must be clean and tidy. A clean airplane cabin is vitally important; also, cleanliness in each service encounter should be prioritised.
- **Second,** the basic amenities inside the cabin such as air-conditioning nozzle, reading light, call button, power ports, TV screen, blankets, pillow, airsickness bag, etc., must be available and in good condition. These amenities are the necessary tangible evidence inside the airline cabin which signals a sense of airline service standard. Airline authorities must investigate the functionality of these amenities regularly before operating any flight.
- **Third,** the atmosphere inside the cabin should be pleasant, which can be ensured by maintaining sweet aroma, soft lighting, soft music, etc. A pleasant atmosphere makes a journey enjoyable and could uplift the travellers' mood in evaluating the airline service favourably.

- **Fourth,** the cabin announcement should be clear and comprehensible to a diverse group of passengers. Airline companies may develop a database of passengers and should assess the proportion of international passengers group based on nationality and ethnicity. Following this, cabin announcement should be given in English along with other languages spoken by the majority of the airline passengers.
- **Fifth,** another vital aspect of airline service is the food served such as snacks, drinks etc. The choice of cuisine should be flexible, freshly cooked and delicious. The availability of cuisine can be catered based on the ethnic groups of passengers frequently travelling with the airline. Besides, airline companies should employ professional chefs to prepare the various cuisines for the airline passengers.
- **Finally,** the layout of sitting arrangement is important – seat comfort must be ensured; also, the availability of entertainment materials such as movies, songs, magazines, etc. inside the airline cabin is vital. Overall, investigation of these in-flight materials and services should be a regular strategic function of airline authorities while service innovation in the area of in-flight core service would give competitive edge over other airline brands in the market.

The presence of *employees in airline service* is almost ubiquitous except for the purchase decision stage where the employees are sometimes absent. Starting from check-in counters at both departure and arrival airports to inside airplane cabins, employee service is dominant in the airline journey. In the provision of airline, restaurant, hospitals, education, legal service, etc., service employees are available to provide human touch rather than machine-assisted service. This study reveals that politeness, feeling safe during transactions, trustworthiness, prompt service and quick response are the key aspects of employee service in airline. Such findings indicate that employee service throughout the journey must be friendly, cooperative, attentive and sincere. The employee should treat the passenger as guest rather than just meeting the passenger's needs. Therefore, airline employees must be trained enough to deliver hospitable service to passengers. Following this, on the job and off the job training must be organised regularly to equip the airline service employees with various skills. For example, handling unexpected situation, positive attitude, professionalism, language skills, knowledge about different customs and cultural values are the soft skills which must be learnt and practiced in airline service delivery. Management can reward the employees who are rated as the best service employees by the airline passengers during the journey. Airline management should also encourage the passengers raise complaints if any unexpected service is encountered during the journey and solve these complaints with utmost priority. Further, the outfit of the airline employee must be beautiful and eye-catching which must be aligned with the airline's image. Above all, airline employees must embrace the airline service value and deliver service to passengers with utmost sincerity.

The empirical findings in this study demonstrate that the importance of airport service experience, interaction with other passengers and purchase decision experience are almost at similar levels. Based on the findings, the following are suggested:

- The *service process in both departure and arrival airports* must be easily accessible and quick. Airline managers should work closely with airport authorities to place signage in strategic locations to facilitate locating relevant counters at the airport. Further, self-checking using airline website or kiosks at airport and luggage check-in service should be fast and user-friendly. Thus, a continuous effort should be devoted to revising, redesigning and innovating service provisions in this regard.

- Although it is quite challenging to manage the attitude and behaviours of *diverse group of international passengers (i.e., OP)*, airline employees should be prepared to address any such issues when they arise during travel. Cabin crew should announce some necessary instructions about the standard etiquette and behaviour expected during the journey and request passengers to seek help from the airline employee without disturbing other passengers.
- This study reports that the experience during ticket buying *i.e., purchase decision experience* from the agent and/or website matters in evaluating the airline brand equity. Passengers look for precise, accurate and less time to collect information during airline ticket booking. Hence, user-friendly websites and courteous airline agents are necessary to deliver a pleasant purchase decision experience. Management must be proactive to get regular feedback from passengers about the website and agent service experience and improve these accordingly.

6.4.3.2 Implications in Building Service Brand Equity (SBE) of Airlines

This research suggests some strategies and courses of action to the airline marketing managers for building a strong airline brand.

First, the direct service component of airlines must be congruent across the encounter concerning the level of service standard and promises made before delivering the actual service. Marketers propose value to the consumer by making promises which are planned to be delivered through products and services (Kotler & Armstrong, 2017). Indeed, value is communicated and delivered through each encounter until the products/services are consumed. A high level of brand consistency is perceived when consumers experience congruency between promises and experience in each encounter. Therefore, airline marketing managers must cultivate each touchpoint through carefully designing each

ASDE component (i.e., in-flight core service, employee service, airport service experience, purchase decision experience and interaction with other passengers). For example, if the airline manager wants to deliver warm and reliable airline service, the nature of such service must reflect in each encounter of the airline. Marketing communication must be harmonised with the level of service provided to the passenger. Also, the value propositions of airline brand should not be exaggerated. Thus, a suitable strategy would be: *"what we promise, we deliver."* Overall, ensuring enjoyable service experience across the ASDE encounter along with maintaining high level of BC is the key to strengthening brand assets of airline brand.

Second, PV is the key to creating a differential response towards the airline brand. In other words, passengers' incremental positive response to a previously experienced airline compared to other airline brands (i.e., SBE) strongly depends on the materialisation of PV. Thus, increasing the value of airline brand should be prioritised by airline marketing managers. As value emerges and materialises through customer experience (Helkkula et al., 2012; Kumar & Reinartz, 2016; Vargo & Lusch, 2017), delivering enjoyable, pleasant and consistent service would elevate the PV of airline brands. A higher level of airline brand value materialises when passengers' derived experiences (benefits) is higher (i.e., enjoyable, pleasant) compared to the investment of time, psychological and physical effort and money (sacrifices). Marketing managers of airline companies must understand the diverse sacrifices made by airline passengers in delivering the desired airline service. In this regard, CS and ES must be prioritised along with AS, OP and PD in delivering airline service.

Third, BM is in fact the brand position of an airline. A favourable BM indicates the inherent ability of a brand to meet up with consumers' psychological and functional needs which are constituted based on the service experience gained (Berry, 2000; Keller, 1993).

A positive meaning of airline brand helps in elevating the incremental positive response of the airline passenger (i.e., SBE). Airline service must be reliable and credible; also, a strong brand personality must exist to ensure pleasant feelings in passengers' minds. Enjoyable airline service experience and the consistency of service delivery helps to create favourable meanings of airline. Thus, reliable, credible and pleasant airline services are the prerequisites for creating a positive brand image of airlines, while a competitive assessment is necessary to develop a distinct brand personality. The BM should be unique and identical; in this regard, Qatar Airways, Singapore Airlines, etc. hold some unique brand associations which are linked to the image of the respective countries along with the service performance. For instance, Singapore Airlines introduced a large and luxurious suite service in the airline cabin tagging them as luxury experience in the sky. Innovative service provisions, hospitable service, meals, waiting lounge service, airport service, flight booking service, brand name, colour, theme, etc., all deliver the meaning of airline brands. Thus, strategy makers of airline companies must decide which associations/meaning/image they want to establish in the passenger's mind, ensuring that each experience point is harmonised to create a unique BM.

Fourth, BA of airlines must maintain a dominant position in the minds of potential travellers. Although BA has little impact in creating airline SBE for experienced passengers, a brand with top-of-the-mind awareness possesses some comparative advantages over the competitors (Aaker, 1991; Keller, 1993). For the experienced airline passenger, since PV and BM feature prominently in decision making, BA does little to elevate positive differential response. This is because actual experience is vital in eliciting differential response compared to high awareness of airline (Berry, 2000). However, the role of BA in creating positive SBE of airline cannot be neglected; because high awareness among the experienced passengers would help recall previous travel experience and facilitate recognising the airline brand more strongly over others. In essence, awareness about previous experience plays an important role in eliciting positive differential response. Marketing managers can increase the BA of experienced passengers through delivering exciting airline service to create lasting impressions; satisfied passengers may, as a result, share the name of the airline among their network of friends and relatives. Moreover, brand name, logo, theme colour, tagline, unique image, etc., of the airline must be displayed frequently and repeatedly during the ASDE encounters so that passengers are exposed in every touchpoint which would expedite storing brand-related information in their long-term memory.

Finally, marketing communication programs must be integrated to provide consistency of information about the airline service provisions to the target market. As this study highlights the significance of direct service experience in building an airline brand, the nature of experience in each encounter should be conveyed effectively to the target market. This would not only build the confidence of experienced passengers about the unique presence of the brand in the industry, it would also attract new passengers. Along with traditional media such as television, print and outdoor advertisements, service provisions of airline companies should also be communicated through social media platforms, online travel portals and own website. The message contents of such communication programs should emphasise more on the point of difference (POD) of airline service experience so that the communication message conveys a unique and favourable brand meaning to the target passengers. For example, the marketing manager of an airline company may highlight the speciality of in-flight core service such as gourmet meal, exclusive entertainment facilities, safety facilities, seating comfort etc., in the communication contents. Likewise, warm and welcoming airline crew service, the convenience of ticket buying experience, easy and quick access to the airport service, reliable luggage handing service etc., could be incorporated into the communication strategy. Further, consumer engagement programs (social media engagement, sponsoring events, loyalty programs, coupons, etc.) might be introduced to connect both current and potential airline passengers.

Overall, this study has theoretical, methodological and practical significance from which academics, researchers, students of the business and marketing domain may furnish their understanding about branding services. Also, findings of this study may help airline industry practitioners reformulate their existing airline branding strategy and/or build a strong airline brand.

6.4.4 Usefulness of CBSBE Model in other Services

The CBSBE model of service branding theory is mostly applicable for airline services given that measures of direct service experience components were calibrated to the airline service setting. However, this model is recommended for other services such as medical service, education service, restaurant service, hotel service and consulting service which are also intangible dominant (Shostack, 1982) and high in experience and credence quality (Zeithaml, 1981). This study measures airline service direct experience using five components which are specific to the airline companies (i.e., purchase decision experience, airport service experience, employee service, interaction with other passengers and in-flight core service). In many ways, other brand asset components (i.e., brand consistency, brand awareness, brand meaning, perceived value and service brand equity) of the CBSBE model are common to any other service brands and can be adaptable straightway. Thus, the theoretical conceptualisation and empirical findings of CBSBE model are argued to be suitable for branding services if the direct service experience components of CBSBE model are tailored to the specific service categories. This research conceptualises ASDE based on the five fundamental direct service components such as purchase decision convenience, service process (access convenience), interaction with service employees, other consumers (audience) and servicescapes. By tailoring these elements to a specific service category (refer to Table 6.4), the CBSBE model would provide useful guidance to brand managers of service organisations in developing a strong service brand. Hence, future studies are welcomed to validate the CBSBE model by examining other service settings similar to airline service.

Table 6.4: Fundamental components of direct service experience

No	Direct service experience components in airlines	Direct service experience components in services
1	Purchase Decision Experience	Purchase Decision Convenience
2	Airport Service Experience	The Service Process (Access Convenience)
3	Employee Service	Interaction with Service Employee
4	Interaction with other Passengers	Other Consumers (Audiences)
5	In-flight Core Service	Servicescapes

6.5 Study Limitations and Suggestions for Future Research

While this study offers an alternative service branding theory, namely CBSBE model for airline and advocates theoretical, methodological and practical implications, some limitations are however noted.

First, this study suggests service branding strategy for the airline based on direct service experience. Berry et al. (2006) assert that consumers' assessement of services depend on the various clues engrained in service performance rather than objects. Futher, indirect service experience components such as advertisement, publicity, word-of-mouth etc., are meant to deliver various types of information related to brands for promoting, persuading and informing the target audience (Belch & Belch, 2018). Thus, it is assumed that consumers assess the difference between products and services based on the experience encountered with direct service components instead of indirect encounters. Hence this research develops the CBSBE model for airline industry focusing on airline service direct experience elements. However, the role of indirect service experience cannot be totally neglected in the service branding context. Future studies may incorporate the indirect service experience and examine the effect on brand equity components in developing an integrated service branding model.

Second, although the inclusion of indirect service experience may provide a broad understanding of service branding in future research, caution must be exercised when extending the service branding theory to both experienced and inexperienced consumers. Specifically, the study had collected data from experienced airline passengers and examined the service branding theory for airline service setting. Thus, careful attention should be given when applying these findings to passengers with no previous travel experience.

Third, the data was collected from the Kuala Lumpur International Airport (KLIA), where the majority of the survey respondents were Asian (43.60%) and European (31%). Therefore, the findings may be more suitable for the sample group. Research on airline service branding should be conducted in other destinations such as Europe, America and Australia and quota sampling technique can be executed to include a proportional number of passengers of different nationalities.

Fourth, this research deliberately discarded limited-service airlines from the study, as the service provided by budget airlines differ from the ones provided by full-service airlines. Thus, findings of this research are more applicable to full-service airlines compared to low-cost carriers. Perhaps future research may include both full-service and limited-service airlines and compare the findings between the two in relation to branding airline service.

Finally, this study investigates the impact of airline service experience in building service brand equity of airlines. According to the scholars, survey research with cross-sectional design is deemed to be suitable for assessing consumer experience, learning, attitude, feelings, behaviour in short-term and long-term (Bryman & Bell, 2011; Creswell, 2014). Thus, this research adopts a cross-sectional research design to execute the survey. However, an experimental study in which data will be collected from a fixed sample group in a longitudinal time horizon may offer a new understanding of building service brand equity.

6.6 Conclusion

The airline industry has been experiencing steady growth all over the world with a substantial contribution of USD 854 billion in global GDP in 2018 (IATA, 2019a). While air transportation has become the most preferred travel option among all kinds of travellers such as business and pleasure travellers, this industry is facing intense competition which has challenged the survivability of many airline companies in the long-run (Koklic et al., 2017). Given this reality, there is an implicit need to revitalise existing marketing strategies, especially for companies struggling to survive the competitive challenge. However, previous studies have failed to offer an appropriate and comprehensive branding strategy for airlines. This is because, the role of direct service experience and few important brand asset components (e.g., brand consistency and perceived value) are disregarded in creating service brand equity. Addressing these limitations, this study suggests an alternative service branding theory named consumer-based service brand equity (CBSBE) model focusing on direct service experience and operationalised in the airline service industry context.

In many ways, this study provides insight on strategies for creating a strong airline brand. The effect of airline service direct experience on brand equity components, especially brand consistency (BC), perceived value (PV), brand meaning (BM) and brand awareness (BA) are powerful, indicating that direct service experience is crucial to building strong airline brands. This study also explored how the brand equity components function as the internal consumer assessment in a long-run. The results demonstrate that BC is the crucial antecedent of PV and BM than BA, suggesting that strategy makers of airline companies should maintain consistency across the ASDE components in strengthening the brand asset components of airlines. While the direct effect of ASDE and BC on PV, BM and BA are found significant, the significant indirect effects of ASDE on PV, BM and BA through BC confirm that consumer assessment of airline brand in the long-run is influenced directly and indirectly by ASDE. Therefore, the role of BC on the positive assessment of airline brand is equally important together with enjoyable direct service experience. Finally, among the brand asset components, PV and BM were found to have strong positive effects on service brand equity (SBE), while BA has a marginal effect in creating positive SBE of airline. Such findings suggest that direct experience-based assessment is important in creating a positive differential response for experienced consumers than having only a high level of awareness.

This research will be a useful resource for Marketing and Business academics along with practitioners in the service industries in particular airline companies. By developing a service branding theory (i.e., CBSBE model), the research suggests that direct service experience, brand consistency, perceived value and brand meaning are the vital aspects of branding services like airline. Brand awareness on the other hand plays a latent role for the experienced consumer in creating incremental effect on the service brand. Managing the direct touchpoints properly with a high level of consistency across the consumer experience journey is mandatory for service organisations, while creating value and favourable meaning through the direct experience are the critical success factors in building a strong airline brand. These findings are assumed to be applicable for airline companies experiencing intense competition to survive in the industry. Beyond the suitability of CBSBE in the airline context, the model may also be extended to other intangible dominant services if the direct service experience components are fine-tuned specifically to the service category. Therefore, a useful service branding theory will be established once this model is validated in the other service settings.

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